**State Demonstrations Group**

Jaycee Cooper
Chief Deputy Director, Health Care Programs
California Department of Health Care Services
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Sacramento, CA 95814

FEB 2 5 2020

Dear Ms. Cooper:

This letter is to inform you that the Centers for Medicare & Medicaid Services (CMS) has approved the final interim evaluation covering the 2016-2018 period of the Public Hospital Redesign and Incentives in Medi-Cal (PRIME) component of California's section 1115 Medicaid demonstration, entitled "Medi-Cal 2020" (Project Number 11-W-00193/9, approved from December 30, 2015 through December 31, 2020). We appreciate the thoughtful work you and your staff put into conducting and finalizing the evaluation. The final interim evaluation will be posted to Medicaid.gov shortly.

Despite the limitation of a small time period with which to measure outcomes, there are a number of important quality and structural improvements noted in this report. The PRIME program has helped to motivate expanded partnerships with external service providers to improve care coordination and enhance the integration of physical and behavioral health. The difference-in-differences analysis of quality metrics show improvement across a variety of quality care measures such as lower rates of C-section deliveries, increased rates of cancer screenings, and follow-up visits after hospitalizations. While some metric results show room for improvement, we look forward to the further analysis that will be possible with the additional years of measurement that will be included in the summative evaluation.

If you have any questions, please contact your CMS project officer, Mrs. Heather Ross at 410-786-3666, or by email at Heather.Ross@cms.hhs.gov. We look forward to our continued partnership on the California Medi-Cal 2020 section 1115 demonstration.

Sincerely,

Danielle Daly
Director
Division of Demonstration
Monitoring and Evaluation
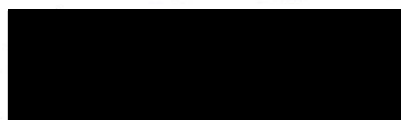
Angela Garner
Director
Division of System Reform
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cc:     Cheryl Young, State Monitoring Lead, CMS Medicaid and CHIP Operations Group

# UCLA CENTER FOR HEALTH POLICY RESEARCH

## HEALTH ECONOMICS AND EVALUATION RESEARCH

# Interim Evaluation of California's Public Hospital Redesign and Incentives in Medi-Cal (PRIME) Program

**Prepared for:**
**California Department of Health Care Services**
**August 2019**

UCLA CENTER FOR
HEALTH POLICY RESEARCH

# Interim Evaluation of California's Public Hospital Redesign and Incentives in Medi-Cal (PRIME) Program

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## Executive Summary

### PRIME Overview

Public Hospital Redesign and Incentives in Medi-Cal (PRIME) is a part of California's Section 1115 Medicaid Waiver called "Medi-Cal 2020." PRIME includes 18 projects organized under 3 domains. Domain 1 projects were focused on outpatient delivery system transformation and preventive services, Domain 2 projects were focused on high-risk or high-cost populations, and Domain 3 projects were focused on resource utilization efficiency. Collectively these projects were intended to achieve five goals: (1) increase provision of patient-centered, data-driven, team based care; (2) improve provision of point of care services, complex care management, population health management, and culturally competent care; (3) improve population health and patient experience in Medi-Cal; (4) integrate physician and behavioral health and coordinate care for vulnerable populations; and (5) transition public hospitals to value-based care (Exhibit 1 of the PRIME Evaluation Design, Exhibit 4 of this document).

A total of 17 designated public hospitals (DPHs) and 37 district and municipal public hospitals (DMPHs) elected to participate in PRIME, though 2 DMPHs discontinued their participation during PRIME for various reasons. In collaboration with stakeholders, the California Department of Health Care Services (DHCS) provided core components as suggested elements for implementation of the PRIME projects (Attachment Q). DHCS also approved metric specifications, standardized reporting instructions, and defined reimbursement methodologies for hospitals' achievements on metric performance. The PRIME implementation plan was approved by Centers for Medicare and Medicaid Services (CMS), which included a comprehensive and rigorous evaluation of PRIME in the interim and at the end of the program.

## Evaluation Overview

The UCLA Center for Health Policy Research (UCLA) was selected to evaluate PRIME. The interim evaluation was designed to assess the goals of PRIME using a conceptual framework adapted from the Triple Aim: enhanced infrastructure, better care, better health, and lower costs (Exhibit 2 of the PRIME Evaluation Design, Exhibit 3 of this document). Measurement of progress of participating hospitals in implementing PRIME was based on a combination of qualitative and quantitative data analysis. UCLA conducted surveys and interviews with PRIME hospitals, assessed self-reported metric achievements from hospital reports and independently analyzed Medi-Cal enrollment and claims data from DHCS as well as California discharge data from the Office of Statewide Health Planning and Development (OSHPD). These data provided detailed information on how hospitals developed the necessary infrastructure and undertook activities to implement PRIME projects, and the progress they made in meeting their targets, including a comparison to patients of hospitals not participating in PRIME.

Surveys and interviews reflected the early implementation efforts by hospitals. In addition to system-wide implementation of the core components, the evaluation included a detailed assessment of infrastructure development, implementation process, level of effort and difficulty, and solutions to data and metric challenges for each project under the three program domains. The analyses included an examination of two elements of metrics and progress towards meeting pre-determined targets. The metric achievement rate was the hospital-reported rate for the metric; the metric achievement value was assigned by DHCS and indicated the degree to which the hospital met the target (ranged from 0-1).The quantitative data allowed for a rigorous comparison of trends in metrics before and during PRIME and in comparison to patients of other California hospitals.

## PRIME Hospitals

The detailed assessment of the characteristics of participating hospitals (see Participating Hospital Characteristics) showed that they differed greatly in their characteristics. DPHs were generally large, tertiary or quaternary care institutions often located in highly populated urban areas. DPHs included county-owned and operated hospitals and University of California (UC) hospitals. The 12 county-owned and operated hospitals and had a payer mix that was dominated by Medi-Cal and uninsured patients. In contract, the 5 UC hospitals had a payer mix dominated by insured patients and a more complex case mix than the former group. DPHs also had significant capacity for delivery of outpatient primary and specialty care services. All DPHs had also participated in a prior California Section 1115 Waiver program, Delivery System Reform Incentive Payment (DSRIP), which was closely aligned with several PRIME projects. Under DSRIP, DPHs made significant strides in improved infrastructure and care processes in various areas, in addition to gaining valuable expertise in reporting metrics and accountability for

performance improvement. PRIME required the participation of DPHs in six mandatory projects in Domains 1 and 2 but DMPHs did not have this mandatory project requirement. This facilitated the implementation of synergistic projects on system transformation and care of complex patients by DPHs.

In contrast, DMPHs consisted of smaller hospitals owned and operated by districts and municipalities, most often in less densely populated or rural areas. Compared to DPHs, the great majority of DMPHs had limited or no capacity for delivery of outpatient primary and specialty care services. Among these hospitals, 17 were Critical Access Hospitals (CAHs), defined by having fewer general-acute care beds and located in rural areas. Thus, the CAHs were smaller hospitals with more limited internal capacity and lower case mix than the other DMPHs. DMPHs had not participated in other prior Waiver programs and did not have the same experience as DPHs in performance accountability. The level of prior experience was particularly important for the ability of the hospitals to gather data and report on performance metrics.

## System-Wide Infrastructure Development

A detailed assessment of infrastructure development is provided in the Organizational Infrastructure section. This data showed that PRIME hospitals developed or enhanced their infrastructure system-wide and for specific projects during PRIME, building on their past progress in various areas. Available data indicated system-wide advances in developing administrative capacity and personnel; improving EHR content and functioning; expanding use of tools such as registries and telehealth to manage patients and increase access; increasing capacity through formalized working relationships with external providers; and building on synergies with other initiatives and programs that were concurrently implemented (.e.g. Whole Person Care).

An assessment of project-specific infrastructure development activities and underlying variations in their scope can be found in "Summary of Key Findings" for each PRIME project in this report. This assessment showed that the advances in project-specific infrastructure generally included a preliminary assessment of the status quo, adoption of evidence-based models, development of decision-support tools and referral protocols, increasing staffing capacity, IT solutions, development of comprehensive multi-disciplinary teams, and development of population management tools.
In the interim and within the first two years of PRIME implementation, existing evidence indicated that hospitals had succeeded in establishing this infrastructure, though with varying success in different areas. For example, most hospitals significantly restructured administrative teams and several developed partnerships with external providers to

prepare for PRIME implementation and reported building on synergies with other ongoing initiatives. Fewer implemented major changes in IT capacity during PRIME.

## System-Wide Implementation Processes

A detailed assessment of implementation processes is provided in the Overall Project Implementation Strategies. This data showed that PRIME hospitals instigated system-wide changes and conducted project-specific activities to implement PRIME. System-wide efforts in PRIME implementation included promoting change in organizational culture and function by training and organizing providers in teams and expanding capacity to deliver collaborative team-based care. Assessment of these processes indicated accelerated efforts in training and organizing providers in teams; engaging all stakeholders including providers, clinical and administrative staff, and senior leadership in the process; initiating quality improvement activities and participating in multiple quality improvement collaboratives; and standardizing protocols for service delivery.

Assessment of these processes indicated accelerated efforts in training and organizing providers in teams and engaging all stakeholders including providers, clinical and administrative staff, and senior leadership in the process. The majority of hospitals also engaged in multiple quality improvement collaboratives and used rapid cycle improvement exercises to implement various projects. In addition, about a third of hospitals developed new capacity to address racial/ethnic, language, sexual orientation, and gender identity disparities and promoted systematic screening during PRIME. Further detail on these activities and underlying variations in their scope can be found in Overall Project Implementation Strategies.

## Project-Specific Implementation Processes

A detailed assessment of implementation processes is provided in each Project-specific section. PRIME implementation was guided by a series of core components per project that proposed the development of infrastructure and activities to be undertaken to implement projects. The analyses of data showed that hospitals nearly always followed these core components and that many hospitals had begun work on these components prior to PRIME. The actual activities hospitals engaged in depended on whether they had begun working on a given project prior to PRIME and the progress they had made when PRIME started. Additional detail on the selection of core components per project and past efforts can be found in the Project Overview of each section.

The project-specific implementation processes included progress in integration and redesign activities such as warm handoffs and colocation of multi-disciplinary teams, successful systematic implementation of activities such as preventive screening,

significant effort in stakeholder and provider engagement and buy-in to promote project implementation, and monitoring and feedback to ensure provider adherence to protocols and enhanced performance.

The assessment of data and metric challenges and the solutions devised to address them consistently showed the same themes across all projects. Hospitals consistently reported a lack of adequate IT infrastructure, variations in documentation by providers and staff in different departments, variations in care processes within departments, and departmental silos that prevented collaboration as a barrier to success. But they also reported addressing these challenges by developing IT and workarounds; standardizing data collection tools and training providers; and promoting provider engagement and cross-departmental collaboration. Hospitals also reported the volume of metrics, simultaneous implementation of projects, and concerns over whether metrics adequately reflected hospital efforts as other general barriers.

An indicator of project implementation was the level of effort and difficulty. An examination of the overall effort towards project implementation across all hospitals and projects indicted hospitals spent more effort engaging stakeholders, identifying resources, and training staff and comparatively less effort towards personnel reorganization and modifications to projects and metrics. The overall level of effort was similarly high for all projects, but the overall level of difficulty was more frequently high for DMPHs, particularly DMPH CAHs, across most projects. Further detail on these activities and underlying variations in their scope can be found in "Summary of Key Findings" for each PRIME project in this report.

Progress of hospitals in better care and better health were based on self-reported performance metrics and assessment of trends in metrics achievement levels between PRIME and comparison hospitals. The ability of DPHs and DMPHs in implementing fundamental changes depended on multiple factors including organizational characteristics and resources, patient characteristics, past experience in quality improvement and stakeholder engagement among others.

## Metric Achievement Values

An overview of metric achievement values (AVs) is provided in the Metric Achievement Values in PRIME  section, and a detailed assessment of implementation processes is provided in each project-specific section. Hospitals achieved metrics under PRIME in a value-based payment structure of pay-for-reporting (P4R) and pay-for-performance (P4P). In the first year or more, hospitals achieved metrics by reporting metric performance rates, which transitioned in later years to making progress toward pre-defined target rates. The P4P metrics targets typically reset annually to be more

challenging, based on the prior year's performance rates and the applicable benchmarks. Achievement values ranged from 1 (full achievement) to 0 (not achieved). All metrics that were partially or fully achieved (a value greater than 0) positively contributed to the proportion of AVs partially or fully achieved. If a hospital's denominator for a metric did not have a minimum of 30 patients, the metric was excluded from the proportion of AVs partially or fully achieved, because the metric data was considered statistically unstable. Achievement values determined incentive payments under the methodology described in Achievement Value Analysis: Methodology and Metric-Specific Averages, by Hospital Type.

Examining the proportion of AVs partially or fully achieved for the metrics in each domain provided an approximate overview of progress. Among DPHs, metric achievement for P4R metrics in all domains remained stable at or near 100% (Exhibit 52). However, P4P metric achievement in Domain 1 decreased in 4 of 7 projects (1.1, 1.3, 1.4, and 1.6) between DY 12 and DY 13, possibly reflecting the difficulty of meeting increasingly challenging target rates (Exhibit 53). In Domains 2 and 3 the P4P metric achievement among DPHs remained the same or increased for all but 2 projects (2.5, 3.2) (Exhibit 53).

Metric achievement pattern analysis for DMPHs was based on DY 12 (P4R for all but 2 hospitals who reported in DY 11) and DY 13 (a mix of P4R and P4P); most DMPHs did not report metric data in DY 11 (Exhibit 414). Examination of metric achievement patterns among DMPHs produced mostly stable results at or near 100% for metrics based on P4R, except for one (Project 3.4, Exhibit 54; lower rates were observed for P4P metrics (Exhibit 55). Results for DMPHs metric achievement, therefore, showed a divided pattern depending on the metric payment method. DMPH metric AV aggregate results were impacted by the lower number of DMPH entities participating in each PRIME project as well as having more metrics with denominators of less than 30 patients (PRIME Entities That Did Not Meet the 30 Patient Denominator Volume Criteria). Results likely reflect the challenges of collecting data and implementing complex projects in small and frequently suburban and rural community hospitals that may be implementing such projects for the first time.

## Examining the Achievements of PRIME Hospitals in Contrast to Patients of Comparison Hospitals

Progress of PRIME hospitals in the achievement of metrics was independently measured by analyzing Medi-Cal and California OSHPD discharge data using a difference-in-difference (DD) methodology (Trends in Achievement of Metric Rates for PRIME and Comparison Patients and Summary of Difference-in-Difference Analysis). The analysis included periods before PRIME (July 2013 through June 2016) and during PRIME (DY 12

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and DY 13, state fiscal years July 2016 through June 2018) for DPHs versus their comparison groups and DMPHs versus their comparison groups using the difference-in-difference methodology. UCLA carefully examined the feasibility of creating each metric following the PRIME specifications and identified 10 metrics that could be created using claims data following metric specifications exactly or with a minor change (Exhibit 370). Supplementary alternate and optional metrics were also developed to further assess the impact of PRIME (Exhibit 369).

The overall results broadly indicated greater progress in the process measures in Domains 1 and 2 indicating greater improvements in the delivery of preventive and prenatal services for patients of DPHs and DMPHs than their respective comparison groups (Exhibit 376). The examination of additional metrics showed similar progress among patients of PRIME hospitals. Progress in process measures was also observed in Domain 3 but this progress was statistically similar between PRIME and comparison groups.

The DD analyses did not indicate progress in PRIME required metrics classified as outcomes using Medi-Cal data. However, analyses of two optional metrics showed greater improvements in 2 Domain 2 outcomes for DPH and DMPH patients compared to their comparison groups. PRIME hospitals (outpatient follow-up after inpatient discharge rates at 7 and 30 days for DPH and DMPHs). Assessment of all hospital discharges added a different perspective, by showing an overall reduction in all-cause readmissions at both PRIME and their comparison hospitals at a similar rate. Further detail on the progress of PRIME hospitals and patients versus their comparison groups can be found in "Trends in Achievement of Metric Rates for PRIME and Comparison Patients" section of this report.

The progress of PRIME hospitals in process measures were consistent with other findings in this report that reflect successes in implementation of related PRIME projects. Lack of success in improving the outcome metrics were also consistent with the challenges of implementation and the lack of adequate time to reap the benefits of project implementation in the interim. The full impact of PRIME on outcomes can be more accurately assessed by the end of PRIME when efforts to fully implement all projects and address challenges to achieving metrics are finalized.

Aligning the DD analyses with the overarching PRIME goals, found in Exhibit 1 of the PRIME Evaluation Design (Exhibit 3 of this document) demonstrated progress of towards these goals in the interim period (results are in Exhibit 376). The first goal was to increase provision of patient-centered data-driven team-based care. Of the 5 metrics that

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were calculated, all pertained to Projects 1.2 and 1.3 to redesign ambulatory care, and 4 metrics were alternate or optional rather than directly specified by PRIME. The PRIME specified metric showed a higher percentage point increase (1.89) in post procedure ED visits or admissions for DPH PRIME patients of hospitals participating in Project 1.3 than comparison patients. However, the alternate and optional metrics showed improvements for PRIME patients such as primary care follow-up rates for hypertension (6.29 DPH and 1.56 DMPH) and Primary Care Visits per 1,000 Medi-Cal Enrollees (58.33 DPH and 75.33 DMPH).

Goal 2 was to improve provision of point-of-care services, complex care management, population health management, and culturally-competent care. 11 metrics were calculated for Project 1.6, 2.1, 2.2, 3.1, and 3.2. Of these, 7 were created as specified by PRIME, and the rest were alternate or optional metrics. Overall, 9 metrics had significantly improved among PRIME DPH patients compared to comparison patients, including significant increases in rates of breast cancer screening (5.53 percentage points) and cervical cancer screening (3.10), reduced rates of Cesarean section (1.33), increased rates of perinatal care (7.12), and increased rates of follow up visits within 7 days following hospitalizations (5.84). Among DMPHs, 5 metrics had improved, including higher rates of outpatient follow up visits within 7 days of hospitalization (2.52) and avoidance of antibiotic treatment in adults with acute bronchitis (5.52). The rates of breast cancer (-4.94) and cervical cancer (-3.01) screening had not improved as much as among comparison patients.

Goal 3 was to improve population health and patient experience in Medi-Cal. Two metrics were created as specified by PRIME pertaining to Projects 1.2 and Project 2.2, and neither showed an improvement for DPH and DMPH patients versus comparison patients. The Prevention Quality Indicators metric was expected to decrease but increased among PRIME patients at higher percentage points than comparison patients (DPH 0.73 and DMPH 1.00). Similarly, all-cause readmission rates did not improve and increased for DMPHs (1.87).

PRIME Goals 4 and 5 were not assessed in the DD analysis. Goal 4 was to integrate physical and behavioral health and care coordination for vulnerable populations. This goal is extensively evaluated with survey and metric analysis within this report. Goal 5 was to transition hospitals to value-based payments and this has two evaluation components. First, all hospitals reported metric data and were paid based on achievement in PRIME project metrics. Findings in the interim are presented in Metric Achievement Values in PRIME . Additionally, starting in 2018 DPHs must establish alternative payment methodology arrangements (including capitation, risk-pool payments,

or other risk-sharing arrangements) with Medi-Cal managed care plans. The latter analysis will be presented in the final report, as there was not sufficient implementation data at the time this report was prepared.

The DD analyses had limitations, including challenges of selecting an appropriate comparison group and available data for construction of metrics and overall impact of PRIME. Specifically, PRIME included all public hospitals in California that provide care to the great majority of Medi-Cal patients in the state. Therefore, identification of an appropriate comparison group was challenging due to fundamental differences in payer and case mix as well as financing and operational aspects of care between public and private hospitals. In addition, metrics were constructed using administrative claims data and without the benefits of clinical information. This led to likely differences with self-reported metrics constructed by PRIME hospitals. Furthermore, PRIME hospitals included privately-insured and uninsured patients when reporting on metrics and these data were not available to UCLA for the great majority of the metrics. UCLA used OSHPD data to address this limitation for metrics associated with hospitalization.

## Lessons Learned and Next Steps

The lessons learned from PRIME in the interim indicate the importance of setting up comprehensive and functional electronic health information systems, continuous improvement efforts to meet the evolving needs of various projects, using evidence-based models and practice protocols and training staff and providers on adherence to them, promoting stakeholder engagement and buy-in, and participating in learning collaboratives. PRIME hospitals are likely to have made further progress in project implementation and metric rates by the end of DY 15, although metric achievement values may not reflect this trend due to the transition of more metrics to P4P.

The overview of PRIME provided in this report highlights the interim progress under this program. Findings identify the hospitals' approach to PRIME implementation including investments of PRIME hospitals in specific areas of care and quality improvement, as well as their success in achieving better care by the end of DY 13. The findings provide a detailed overview of the extensive level of effort and types of activities required to redesign and integrate care, improve the care and outcomes of complex patients, and promote resource use efficiency within these public institutions that were the primary providers of care to low-income and uninsured patients in California.

Lessons learned from PRIME in the interim indicate the importance of setting up the needed infrastructure, particularly comprehensive and functional electronic health

information systems to allow for systematic availability of resources, promoting change in practice, and monitoring and tracking that change to promote further progress. Evidence shows that data and system functionality needed for implementation of different projects can vary greatly and requires continuous improvement to meet the evolving needs of each project. Another lesson learned is the importance of guiding desired improvements by establishing clear guidelines using evidence-based models or practice and designing or adopting practice protocols to promote behavior change by providers. Yet, adoption of models and protocols alone would not effectively change practice and should be combined with training staff and providers and monitoring adherence. Perhaps, the most important lesson learned in promoting success in multifaceted and system-wide programs such as PRIME is the role of stakeholder engagement and buy-in, addressing competing priorities, and promoting synergies between projects when possible. Another tool to achieving progress in PRIME was promoting shared learnings across participating hospitals through learning collaboratives. The direct impact of these collaboratives on PRIME could not be assessed, but they were designed to address the difficult or most challenging areas identified by participating hospitals. Another lesson learned is that improving the processes of care were achievable in a shorter timeframe and achieving better outcomes may require more time.

These lessons should be revisited after PRIME has concluded. Participating hospitals are likely to have made further progress in project implementation and metric values by the end of DY 15. Given the multifaceted projects implemented under PRIME, changes in process and outcome measures cannot be directly attributed to specific activities but could be assessed as a whole using the required PRIME metrics. The final report will include a number of methodological changes such as a different approach to identifying a more comprehensive comparison group, developing additional optional metrics, and assessing trends in Medi-Cal expenditures. Trends in cost and inpatient and emergency department utilization were not included in the interim report, as there was not sufficient implementation time to assess trends in these types of outcome variables.

The final summative evaluation report will reassess the progress of PRIME hospitals in their achievement of project goals and metrics, trends in Medi-Cal expenditures, changes in costs relative to the comparison group, changes in all-cause Emergency Department visit rates, and hospitalization rates, and will examine synergies between PRIME projects, best practices that led to successful implementation, and sustainability of projects after the conclusion of PRIME.

# Introduction

On December 30th, 2015 California received approval for an §1115 Medicaid "Medi-Cal 2020" waiver. The waiver allows the California Department of Health Care Services (DHCS) to make specific changes to the State's Medicaid plan as approved by the Centers for Medicare and Medicaid Services (CMS). This waiver followed two previous waivers that had allowed California to modify its Medicaid programs to implement innovative delivery reforms. Medi-Cal 2020 includes a total of 11 programs including one called Public Hospital Redesign and Incentives in Medi-Cal Program (PRIME). Under the previous §1115 Medicaid "Bridge to Reform" waiver, California implemented an earlier program (2010 to 2015) called Delivery System Reform Incentive Payments (DSRIP). Under DSRIP, designated public hospitals (DPHs) implemented projects to develop infrastructure, innovation and integrated care delivery redesign at hospital systems serving a disproportionate share of low-income patients, particularly in anticipation of the influx of newly insured patients as a result of the Affordable Care Act.

Activities supported by the PRIME program are designed to accelerate efforts by participating PRIME hospitals to change processes of care delivery. These changes are intended to improve patient outcomes and prepare public hospitals to successfully function under risk-based alternative payment models (APMs) in the long term. The PRIME program is intentionally designed to be ambitious in scope but time-limited. Using evidence-based quality improvement (QI) methods, PRIME requires hospitals to establish performance baselines, achieve established targets for improvement, and evaluate the success of quality improvement interventions on an ongoing basis. The guiding principles and specific rules of the PRIME program are specified in the Special Terms and Conditions (STCs).

## PRIME Hospitals

PRIME participating hospitals include two major types of hospitals. DPHs include 12 county-owned and operated hospital systems (DPH-county) and five University of California hospital systems (DPH-UC; Exhibit 1).

**Exhibit 1. Participating Designated Public Hospitals (DPHs)**

| Designated Public Hospitals | Abbreviated Name | Hospital Type |
|---|---|---|
| **1. Alameda Health System** | Alameda | County |
| **2. Arrowhead Regional Medical Center (San Bernardino County)** | Arrowhead | County |
| **3. Contra Costa Health Services** | Contra Costa | County |
| **4. Kern Medical Center** | Kern Medical | County |

| Designated Public Hospitals | Abbreviated Name | Hospital Type |
|---|---|---|
| **5. Los Angeles County Department of Health Services** | Los Angeles | County |
| **6. Natividad Medical Center (Monterey County)** | Natividad | County |
| **7. Riverside County Regional Medical Center** | Riverside | County |
| **8. San Francisco Health Network** | San Francisco | County |
| **9. San Joaquin General Hospital** | San Joaquin | County |
| **10. San Mateo Medical Center** | San Mateo | County |
| **11. Santa Clara Valley Medical Center** | Santa Clara | County |
| **12. University of California, Davis Medical Center** | UC Davis | UC |
| **13. University of California, Irvine Medical Center** | UC Irvine | UC |
| **14. University of California, Los Angeles Hospitals** | UC Los Angeles | UC |
| **15. University of California, San Diego Health Systems** | UC San Diego | UC |
| **16. University of California, San Francisco Medical Center** | UC San Francisco | UC |
| **17. Ventura County Medical Center** | Ventura | County |

Notes: This includes rehabilitation hospitals, although they may not be implementing PRIME-specific projects. UC: University of California. DPH: Designated Public Hospitals

The second group include the District and Municipal Public Hospitals (DMPHs), which consist of 17 rural institutions designated as critical access hospitals (DMPH CAH) and 20 other DMPHs (non-CAH; Exhibit 2). DHCS ended the participation of 2 hospitals (Tulare 10/29/2017 and Coalinga 6/12/2018) due to their plans to change ownership or close. One hospital (Tehachapi Valley Healthcare District) was intended to be in PRIME, but converted to private ownership before PRIME was implemented.

**Exhibit 2. Participating District and Municipal Hospitals (DMPHs)**

| District and Municipal Public Hospitals | Abbreviated Name | Hospital Type |
|---|---|---|
| • Bear Valley Community Hospital | Bear Valley | Critical Access |
| • Eastern Plumas Health Care | Eastern Plumas | Critical Access |
| • Healdsburg District Hospital | Healdsburg | Critical Access |
| • Jerold Phelps Community Hospital | Jerold Phelps | Critical Access |
| • John C. Fremont Healthcare District | John C. Fremont | Critical Access |
| • Kern Valley Healthcare District | Kern Valley | Critical Access |
| • Mammoth Hospital | Mammoth | Critical Access |
| • Mayers Memorial Hospital District | Mayers | Critical Access |
| • Mendocino Coast District Hospital | Mendocino | Critical Access |
| • Modoc Medical Center | Modoc | Critical Access |
| • Northern Inyo Hospital | Northern Inyo | Critical Access |
| • Plumas District Hospital | Plumas | Critical Access |
| • San Bernardino Mountains Community Hospital | San Bernardino | Critical Access |
| • Seneca Healthcare District | Seneca | Critical Access |
| • Southern Inyo Hospital | Southern Inyo | Critical Access |
| • Tahoe Forest Hospital District | Tahoe | Critical Access |

| District and Municipal Public Hospitals | Abbreviated Name | Hospital Type |
|---|---|---|
| • Trinity Hospital | Trinity | Critical Access |
| • Antelope Valley Hospital | Antelope Valley | Not Critical Access |
| • Coalinga Regional Medical Center* | Coalinga | Not Critical Access |
| • El Camino Hospital | El Camino | Not Critical Access |
| • El Centro Regional Medical Center | El Centro | Not Critical Access |
| • Hazel Hawkins Memorial Hospital | Hazel Hawkins | Not Critical Access |
| • Kaweah Delta Health Care District (system) | Kaweah Delta | Not Critical Access |
| • Lompoc Valley Medical Center | Lompoc Valley | Not Critical Access |
| • Marin General Hospital | Marin | Not Critical Access |
| • Oak Valley Hospital District | Oak Valley | Not Critical Access |
| • Palo Verde Hospital | Palo Verde | Not Critical Access |
| • Palomar Medical Center (including Pomerado Hospital) (system) | Palomar | Not Critical Access |
| • Pioneers Memorial Healthcare District | Pioneers | Not Critical Access |
| • Salinas Valley Memorial Healthcare System | Salinas Valley | Not Critical Access |
| • San Gorgonio Memorial Hospital | San Gorgonio | Not Critical Access |
| • Sierra View District Hospital | Sierra View | Not Critical Access |
| • Sonoma Valley Hospital | Sonoma Valley | Not Critical Access |
| • Sonoma West Medical Center | Sonoma West | Not Critical Access |
| • Tri-City Medical Center | Tri-City | Not Critical Access |
| • Tulare Regional Medical Center * | Tulare | Not Critical Access |
| • Washington Hospital Healthcare System | Washington | Not Critical Access |

Notes: * indicates the hospital is no longer participating in PRIME due to closure.

## PRIME Program Goals and Design

Five main goals were identified in the design of the PRIME Program. These goals included improvements in how care is delivered and what services are delivered, whether health care outcomes improved, and hospitals transitioning toward value-based payment models (Exhibit 3). For example, goal 1 included changing the care delivery to patient-centered and data driven approaches and goal 2 included providing specific services such as complex care management and culturally competent care. Similarly, goal 3 anticipated improving patient outcomes and experiences and goal 4 anticipated physical and behavioral health integration. As PRIME payments were designed to promote accountability for outcomes in the form of pay-for-performance reimbursement, goal 5 anticipated improvements in the ability of participating hospitals to function under such alternative payment methodologies.

To achieve these goals, PRIME was designed with projects in 3 domains. **Domain 1** is called **Outpatient Delivery System Transformation and Prevention** and focuses on projects that would transform care delivery in the primary and specialty care spheres and integrate physical and behavioral health by breaking down siloes between these fields. Four more projects in this domain focus on specific areas of outpatient care in need of change such as cancer screening and obesity prevention. **Domain 2** is called **Targeted High-Risk or High-Cost Populations** and focuses on projects that would improve delivery of specific services considered essential to preventing high need and complex patients' over-utilization of care. Examples include improving transitions of care from acute to outpatient settings to prevent avoidable readmission, better management of complex and high-risk patients to reduce avoidable acute care utilization, and changing chronic non-malignant pain management to reduce use of opioids and avoid acute care utilization associated with opioid overdose. **Domain 3** is called **Resource Utilization Efficiency** and focuses on overarching and system-wide improvements in appropriate use of antibiotics, high cost pharmaceuticals, imaging services, and blood products, and reducing unwarranted variations that are not supported by evidence.

**Exhibit 3. PRIME Program Goals, Domains, and Projects**

### Goals

1. Increase provision of patient-centered, data-driven, team-based care

2. Improve provision of point of care services, complex care management, population health management and culturally-competent care

3. Improve population health and patient experience in Medi-Cal

4. Integrate physical and behavioral health and coordinate care for vulnerable populations

5. Transition public hospitals to value-based payments

### Domains

1. Outpatient delivery system Transformation and Prevention

2. Targeted High-Risk or High-Cost Populations

3. Resource Utilization Efficiency

### Projects

1.1. Integration of Physical and Behavioral Health
1.2. Ambulatory Care Redesign: Primary Care
1.3. Ambulatory Care Redesign: Specialty Care
1.4. Patient Safety in the Ambulatory Setting
1.5. Million Hearts Initiative
1.6. Cancer Screening and Follow-up
1.7 Obesity Prevention and Healthier Foods Initiative

2.1. Improved Perinatal Care
2.2. Care Transitions: Integration of Post-Acute Care
2.3. Complex Care Management for High Risk Medical Populations
2.4. Integrated Health Home for Foster Children
2.5.Transition to Integrated Care: Post Incarceration
2.6. Chronic Non-Malignant Pain Management
2.7. Comprehensive Advanced Illness Planning and Care

3.1. Antibiotic Stewardship
3.2. Resource Stewardship: High-Cost Imaging
3.3. Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals
3.4. Resource Stewardship: Blood Products

PRIME Projects, their goals and objectives, core components, metrics to measure performance, and metric specifications were developed in collaboration with clinical and quality experts, public hospital leadership, DHCS leadership, CMS leadership, technical experts, and public stakeholders over the course of 18 months prior to PRIME implementation (Exhibit 4).

**Exhibit 4. PRIME Domains and Project Names**

| Domain: | Number | Name | Abbreviated Name | Required for DPHs |
|---|---|---|---|---|
| **1: Outpatient Delivery System Transformation & Prevention** | 1.1 | Integration of Behavioral Health & Primary Care | Behavioral Health Integration | Yes |
| | 1.2 | Ambulatory Care Redesign: Primary Care | Primary Care Redesign | Yes |
| | 1.3 | Ambulatory Care Redesign: Specialty Care | Specialty Care Redesign | Yes |
| | 1.4 | Patient Safety in the Ambulatory Setting | Patient Safety | No |
| | 1.5 | Million Hearts® Initiative | Million Hearts | No |
| | 1.6 | Cancer Screening & Follow-Up | Cancer Screening | No |
| | 1.7 | Obesity Prevention & Healthier Foods Initiative | Healthier Foods | No |
| **2: Targeted High Risk Or High Cost Populations** | 2.1 | Improvements in Perinatal Care | Perinatal Care | Yes |
| | 2.2 | Care Transitions: Integration of Post-Acute Care | Care Transitions | Yes |
| | 2.3 | Complete Care Management for High-Risk Medical Populations | CCM for High Risk Populations | Yes |
| | 2.4 | Integrated Health Home for Foster Children | Foster Children | No |
| | 2.5 | Transition to Integrated Care: Post Incarceration | Post Incarceration | No |
| | 2.6 | Chronic Non-Malignant Pain Management | Pain Management | No |
| | 2.7 | Comprehensive Advanced Illness Planning & Care | Advance Care Planning | No |
| **3: Resource Utilization Efficiencies** | 3.1 | Antibiotic Stewardship | Antibiotic Stewardship | No |

| Domain: | Number | Name | Abbreviated Name | Required for DPHs |
|---|---|---|---|---|
| | 3.2 | Resource Stewardship: High-Cost Imaging | High Cost Imaging | No |
| | 3.3 | Resource Stewardship: Therapies Inv. High-Cost Pharmaceuticals | High Cost Pharmaceuticals | No |
| | 3.4 | Resource Stewardship: Blood Products | Blood Products | No |

PRIME performance metrics were standardized for uniform measurement of improvements across all hospitals ([Attachment Q](#)). The majority of PRIME metrics were those endorsed and specified by national organizations such as the National Quality Forum (NQF), Agency for Health Care Research and Quality (AHRQ), Centers for Medicare and Medicaid Services (CMS), Healthcare Effectiveness Data and Information Set (HEDIS), and National Committee for Quality Assurance (NCQA). Additional innovative metrics from other sources were also included when available standard measures did not adequately assess successful transformation in a project. However, these metrics had not yet been tested for use broadly and were not endorsed by a qualifying body such as NCQA. Metrics were chosen to be clinically relevant, feasible, and appropriate and each metric was clearly defined in the PRIME Metric Specification Manual. Definitions included denominator, numerator, measure steward, target population, codes (such as CPT and ICD), and explicit reporting instructions. Extensive documentation of rationale, goals and objectives, key activities that guide project development and implementation, and specific metrics are provided in Attachment Q. The PRIME implementation period is from January 1, 2016 to June 30, 2020.

## PRIME Funding and Payment Methodology

PRIME was funded with a combination of federal, state, and local funds. The incentive payment methodology was specifically designed to phase in accountability for outcomes with a combination of pay-for-reporting and pay-for-performance value-based payments for specific metrics.

### *PRIME Funding*

PRIME included up to $7.5 billion in total funding, with $3.7 billion available from the federal government and the remaining from a combination of state contribution in the form of administrative oversight and local funds provided by PRIME hospitals. Of the total PRIME funding, 21.44% per year was projected for the first 3 demonstration years (Exhibit 5). Funding was planned to be phased down by 10 percent (2.14% point decrease) in DY 14 and an additional 15 percent (2.89% point decrease) in DY 15. Of the total available funds, DPHs were projected to receive 87.5% ($6.531 billion) and the DMPHs were projected to receive 12.5% ($933 million).

**Exhibit 5. Annual Potential PRIME Payments, by Hospital Type**

| Year | DPH | DMPH | Total | Annual percentage of the total |
|------|------|------|-------|-------------------------------|
| **DY 11** | $ 1,400,000,000 | $ 200,000,000 | $ 1,600,000,000 | 21.44% |
| **DY 12** | $ 1,400,000,000 | $ 200,000,000 | $ 1,600,000,000 | 21.44% |
| **DY 13** | $ 1,400,000,000 | $ 200,000,000 | $ 1,600,000,000 | 21.44% |
| **DY 14** | $ 1,260,000,000 | $ 180,000,000 | $ 1,440,000,000 | 19.29% |
| **DY 15** | $ 1,071,000,000 | $ 153,000,000 | $ 1,224,000,000 | 16.40% |
| **Total** | $ 6,531,000,000 | $ 933,000,000 | $ 7,464,000,000 | 100.00% |

Source: STC Attachment II

### *Payment Methodology*

PRIME was designed to prepare participating hospitals for alternative models of payment that promote providing high value services, rather than a high volume of services. This goal was implemented by pay for reporting (P4R) and pay for performance (P4P) payments for achievement of metrics.

Hospitals submitted their PRIME program data biannually in interim mid-year (measurement period: January 1 – December 31) and final year-end (measurement period: July 1 to June 30) reports to DHCS. DHCS used the following calculations to assign an Achievement Value (AV), which determined the level of payment. Hospitals were eligible to receive up to 50% of their allocated amount for the DY if all P4R and P4P targets were met according to their mid-year data reports. The remaining 50% was eligible for payment after the final year-end data reports were submitted to DHCS. P4R metrics progress was categorized as either not achieved or fully achieved, with the AV

being either 0 (not met) or 1 (fully met). P4P payments were dependent on the level of achievement compared to performance targets using AVs ranging from 0 (not met), 0.5, 0.75, to 1 (fully met). Achievement targets were based on established 25th and 90th percentile benchmarks for metrics, if available. Hospitals were paid based on their progress in closing the gap towards benchmarks. When rankings were not established, hospitals were paid based on the level of gap closed between the prior year's performances to their current year target. For more details please see STC Attachment II, 4 – Tables 6, 7, 8 and 9. Below are target setting scenarios based on the prior year's baseline performance.

1. **≥ 90th percentile:** Hospitals that performed above 90th percentile in the prior year were paid at full AV if they maintained performance at least the 90th percentile (Exhibit 6).

**Exhibit 6. PRIME P4P Example if the Baseline for the Metric was above the 90th Percentile**

| Calculation Elements | Rate |
|---|---|
| A. 90th Percentile Benchmark | 0.70 |
| B. 25th Percentile | 0.10 |
| C. Baseline | 0.72 |
| D. Target to meet full Achievement Value | 0.70 |

Source: DHCS example, received August 2019.

2. **≥ 25th percentile and < 90th Percentile:** Hospitals that performed in between the 90th and 25th percentiles in the prior year were paid at full AV if they closed a 10% gap between prior year performance and the 90th percentile (Exhibit 7).

**Exhibit 7. PRIME P4P Example if the Baseline for the Metric was between the 25th and 90th Percentile (Gap Closure Example)**

| Calculation Elements | Rate |
|---|---|
| A. 90th Percentile Benchmark | 0.70 |
| B. 25th Percentile | 0.10 |
| C. Baseline | 0.20 |
| D. Gap (A-C=D) | 0.50 |
| E. 10% Gap Closure (D*10%=E) | 0.05 |
| F. Target to meet 10% Gap Closure (C+ E=F) | 0.25 |

Source: DHCS example, received August 2019.

3. **< 25th percentile Track 1:** If the gap between the baseline and the 25th percentile was greater than or equal to 10% of the gap between the hospital's baseline and the 90th percentile, the hospital needed to perform at or above the 25th percentile to get an AV = 1.0 (Exhibit 8).

**Exhibit 8. PRIME P4P Example if the Baseline for the Metric met Track 1 Criteria (Baseline Below the 25ᵗʰ Percentile)**

| Calculation Elements | Rate |
|---|---|
| A. 90th Percentile Benchmark | 0.70 |
| B. 25th Percentile | 0.10 |
| C. Baseline | 0.02 |
| D. Gap Between Baseline and 25th (B-C=D) | 0.08 |
| E. 10% Gap Between Baseline and 90th ([A-C]*10%= E) | 0.068 |
| F. Target to meet Track 1 Target (C+D=F) | 0.10 |

Source: DHCS example, received August 2019.

4. **< 25ᵗʰ percentile Track 2:** If the gap between the baseline and the 25th percentile was less than 10% of the gap between the hospital's baseline and the 90th percentile, the hospital needed to close this 10% gap in order to get an AV = 1.0 (Exhibit 13).

**Exhibit 9. PRIME P4P Example if the Baseline for the Metric met Track 2 Criteria (Baseline Below the 25ᵗʰ Percentile)**

| Calculation Elements | Rate |
|---|---|
| A. 90th Percentile Benchmark | 0.70 |
| B. 25th Percentile | 0.10 |
| C. Baseline | 0.08 |
| D. Gap Between Baseline and 25th (B-C=D) | 0.02 |
| E. 10% Gap Between Baseline and 90th ([A-C]*10%= E) | 0.062 |
| F. Target to meet Track 2 Target (C+E=F) | 0.142 |

Source: DHCS example, received August 2019.

5. In DY 11 and DY 12, DPH and DMPHs were on two separate payment tracks. Both hospital types were eligible for 25% of funding for submission of the 5-year project plans. DPHs could earn the remainder for submission of data, whereas DMPHs could earn the remainder for completion of infrastructure building process measures. For DMPHs' DY 12 payments, up to 40% of funds were available for achieving infrastructure building metrics and the remaining 60% was available based on submission of data.

PRIME also had two additional pools of funds:
- The unearned funds pool, specific to each hospital system's unearned funds, was available if a P4P project metric target was not met and the hospital system was unable to fully claim funds that otherwise would have been earned for meeting the metric target; this provided a second opportunity to earn up to 90% of the funds by over performing on other P4P metrics. If a hospital system was unable

to earn all of these funds, then they had a third opportunity to earn any remaining funds the following DY by over performing on the metric that it under performed in in the previous DY.

- High performance pools (separate DPMH and DPH) for DY 13-15 were available for hospitals that achieved ≥90th percentile benchmark performance or 20% gap closure in any of the eligible 19 National Quality Forum (NQF) metrics in the six DPH required PRIME projects, 1.1, 1.2, 1.3, 2.1, 2.2 or 2.3.

## UCLA Evaluation

The UCLA Center for Health Policy Research was selected by DHCS to evaluate the PRIME program. The evaluation was designed to examine the progress of hospitals in implementing PRIME projects, the process of implementation and challenges faced by hospitals, and whether PRIME projects improved quality of care and patient outcomes and increased cost containment or efficiency. UCLA examined the implementation of each project as well as the impact of projects on each other. The evaluation also considered barriers to implementation and the best practices hospitals employed to overcome these challenges. This interim evaluation reports on progress towards these goals for DY 11-13, using available information at the time of production of this evaluation.

## PRIME Evaluation Conceptual Framework

PRIME is designed to achieve the Triple Aim of better care, better health, and lower costs. Under the evaluation conceptual framework, PRIME projects will develop or enhance the infrastructure needed to achieve PRIME goals, deliver better care by improving the process of care delivery overall, achieve better outcomes for patients, and promote efficiencies and reduce costs (Exhibit 10). PRIME Projects include objectives that can be defined as process and outcome indicators. Process objectives indicate achievement of changes in processes demonstrating successful implementation of Project activities. Outcome objectives demonstrate (1) improvements in patient health that have implications for efficiency and cost reduction and (2) improvements in efficiencies and cost reduction directly. For example, Project 1.1 in Domain 1 is designed to increase use of behavioral health screening tools (better care). Early identification and intervention of behavioral health problems is expected to reduce emergency department (ED) visits (better health, lower cost). These improvements will ultimately lead to PRIME hospitals that are efficient safety net providers that can operate under alternative payment methods such as those employed by MCPs.

**Exhibit 10. PRIME Evaluation Conceptual Framework, Selected Elements of PRIME Interventions**

| Infrastructure | → | Better Care | → | Better Health | → | Lower Cost |
|---|---|---|---|---|---|---|

**Infrastructure**
- 1.2. Increase the number of primary care practices undergoing Patient-Centered Medical Home transformation.
- 1.3. Provide resources to PCPs to increase their capacity to care for complex patients.
- 2.6. Develop safe and effective prescribing practices for providers caring for patients age 18 years and older with chronic pain.

**Better Care**
- 1.1. Increase use of behavioral health screening tools.
- 1.4. Ensure annual monitoring is done for patients on persistent medications.
- 2.1. Ensure women receive comprehensive, evidenced-based, and timely prenatal and postpartum care.
- 2.2. Improve communication and coordination between inpatient and outpatient care teams.

**Better Health**
- 1.1. Reduce emergency department visits for patient with physical and behavioral health conditions.
- 2.1. Improve maternal morbidity and mortality statewide.
- 2.3. Improve patients' functional status
- 2.6. Decrease the rate of ED visits/acute care utilization related to opioid overdose of patients age 18 years and older with chronic pain.

**Lower Cost**
- 1.6. Identify cost-effective standard approaches to Breast, Cervical and Colorectal Cancer screening and completion of follow-up on abnormal screening tests.
- 3.2. Reduce the number of unnecessary, inappropriate imaging studies.
- 3.3. Drive down health-care costs through improved use of targeted medications and prescribing behaviors.

Note: PRIME projects include infrastructure, better care, better health, and lower cost elements. The elements identified in the framework are illustrative examples of aspect of a given project that pertains to infrastructure development, delivery of better care, anticipated improvements in population health, and potential reduction in costs.

## Evaluation Questions

The evaluation questions were closely aligned with project objectives defined in PRIME STC Attachment Q. Specific hypothesis were developed for each project and a series of evaluation questions were developed to be assessed by quantitative and qualitative data (PRIME Evaluation Design). Specific questions using quantitative data were developed to assess the impact of each project on outcome metrics before and during PRIME implementation. Specific questions using qualitative data were developed to assess the process of implementation of each project at participating DPHs and DMPHs. Due to the iterative nature of the metric specifications and themes arising throughout the course of the qualitative analysis, evaluation questions were adapted throughout the course of the analysis.

For example, the hypothesis for the project on physical and behavioral health integration was:

*"Integration of behavioral and primary health care improved use of behavioral health (BH) services, reduced use of acute care services, and reduced overall expenditures. These changes were accomplished by improvements in BH screening, timely and accessible treatment, better primary care and BH provider communication to manage and coordinate patient care, and better patient engagement and activation."*

The impact of this project was assessed by examining the efforts undertaken by DPHs and DMPHs to implement this project and the level of integration achieved. The impact was also assessed by examining whether (1) the use of behavioral health services increased during PRIME; (2) rates of ED visits and hospitalizations and related expenditures for patients with mental health and substance use diagnosis declined during PRIME and in contrast to comparison data.

## Evaluation Data Sources

The interim evaluation of PRIME was completed using qualitative and quantitative data. The qualitative data was obtained from an interim structured questionnaire completed by all 52 PRIME hospitals followed by semi-structured telephone interviews with PRIME program leaders in all DPHs (17) and a representative subset of DMPHs (1 DMPH CAH and 5 DMPH non-CAHs). Interviews were conducted with the most knowledgeable individuals selected by the hospital and included medical directors, administrators of the PRIME projects and/or quality improvement initiatives, and clinicians. The interview protocol was individualized for each hospital and included questions related to their application, 5-year implementation plan, and survey responses. Interviews were used to obtain clarification and additional detail on various aspects of project implementation. A more detailed explanation of the methodology implemented for the surveys and interviews is available in Appendix C. Detailed Survey and Interview Methodology.

The qualitative evaluation data also included the self-reported narrative reports submitted to DHCS. These data included a brief summary of how the data was collected, project metric achievement rates, as well as challenges and successes in achievement of project metrics. These data were reviewed by DHCS for completeness and were used to determine payment based on assessment of achievement values. The qualitative data also included PRIME 5-year plans.

The quantitative data included patient-level data from the California Office of Statewide Health Planning and Development (OSHPD) and Medi-Cal claims and encounter data. These included two years of data prior to implementation of PRIME. OSHPD data included the confidential all-payer hospital inpatient discharges, emergency room visits, and outpatient surgery data. Medi-Cal data included both fee-for-service and managed care encounter data.

## Analysis Methods

UCLA used different methods for the analyses of qualitative and quantitative data.

### *Qualitative Analysis*

Using the qualitative data, UCLA reported on infrastructure and processes of PRIME implementation with descriptive analyses of the questionnaire data complemented with content analyses of hospital reports, and interviews. A more detailed description of the methodology for the qualitative analysis can be referenced in Appendix C. Detailed Survey and Interview Methodology.

### Interim Survey and Follow-up Survey:

From April to May 2018, 52 hospitals completed an Interim Survey (17 DPHs, 19 DMPH non-CAHs, 16 DMPH CAHs). Two DMPHs did not complete the survey: Tulare and Southern Inyo. The questionnaire included questions about health system capacity and overarching domains of PRIME implementation that were answered by all hospitals, as well as project-specific questions were only answered by hospitals participating in the specific PRIME projects.

From January to May 2019, a follow-up questionnaire was administered to stakeholders at participating hospitals (n=48 responded). Six hospitals did not complete the follow-up survey: Antelope Valley, Coalinga, John C. Fremont, Sierra View, Southern Inyo, and Tulare. Hospitals were asked to respond with regards to the timeframe during which they completed the interim survey (April to May 2018). Follow-up questions focused on (1) primary and specialty care capacity and (2) components of behavioral health integration.

Core components were recommended by DHCS as activities that hospitals could undertake to develop and implement the project. "The core components promote standardization across the program, while allowing participating PRIME entities to tailor program activities to meet local needs." (Attachment Q) The core components ranged from a single activity to a complex combination of activities. The interim survey questions were designed to examine the implementation of each project as defined in the core components. The survey allowed hospitals to self-identify whether they were completing each component. Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey, hospitals may have implemented or dropped activities under a core component.

### Key Informant Interviews

To gain in-depth perspectives of PRIME implementation, interviews were conducted with PRIME stakeholders and leadership with a purposive sample of participating

hospitals (n=23). From June to August 2018, interviews were conducted with key informants from 17 DPHs, 5 DMPH non-CAHs (Antelope Valley, Kaweah Delta, Palomar, Salinas Valley, Tri-City), and 1 DMPH CAH (Mammoth). Interviews focused on the general impact of PRIME, the synergy of the selected projects with existing projects and each other, leadership and staff buy-in, recommendations for ongoing implementation of the program, and clarification or expansion upon topics noted in the survey. UCLA developed hospital-specific interview questions based on the approved 5-year plans and survey responses. Additionally, selected questions were asked in all the interviews (Key Informant Interviews).

## Self-Reported Data

Furthermore, UCLA aggregated data from hospital reports to assess changes in care processes and outcomes of PRIME. Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. Unless otherwise noted, UCLA calculated the weighted average for each metric by summing the numerators and the denominators for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as pay for reporting (P4R) or pay for performance (P4P) in a given year, and this varied for DPHs and DMPHs. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. In general, DMPHs did not report data in DY 11.

## Limitations

The qualitative analysis in this report relied on self-reported data (survey responses, interviews) from key informants and leadership at participating PRIME hospitals. While efforts were made to validate responses and perspectives, there is potential for responses to have been subject to bias and for there to be changes over time. To keep response/participation burden appropriate, surveys and interviews focused on aspects of early PRIME implementation. Thus, topics such as sustainability, synergies, and policy implications will be covered in more depth in following analyses. A more detailed discussion of the limitations of the qualitative analysis can be referenced in Appendix C. Detailed Survey and Interview Methodology.

### *Quantitative Analysis*

The assessment of outcomes was complemented with analyses of Medi-Cal and OSHPD data when feasible. Of the 104 PRIME metrics reported by hospitals, UCLA successfully reproduced 11 for an independent assessment of PRIME outcomes. UCLA created metrics based on PRIME metric specifications in Attachment Q, or with minor modifications.

Metric specifications were modified by DHCS, in collaboration with the California Health Safety Net Institute (SNI) and District Hospital Leadership Forum (DHLF), approximately biannually (Exhibit 417). The majority of edits were to clarify issues implementing the metrics as specified. DHCS issued trend-break notices when the metric changed significantly enough that it could not be compared to the prior rates. UCLA used the DY 13 Year End PRIME Reporting Manual for the interim evaluation, unless otherwise noted. This strategy excludes variations in metric values due to changes in metric specifications, so it may not align with the self-reported metric methods for each time period. UCLA applied the same metric methodology across all demonstration years analyzed. However, this cannot be entirely avoided because adding or dropping codes to the measure specifications may change hospitals' reporting of those codes to OSHPD and Medi-Cal. In addition to PRIME metrics, UCLA also analyzed 3 other measures that were not targeted for PRIME reporting and were not expected to change as a result of PRIME projects. These included mortality due to stroke, sepsis, and surgical site infections.

UCLA used descriptive and a quasi-experimental pre-post, intervention-comparison group analytic design and difference-in-difference (DD) methodology for analyses of Medi-Cal and OSHPD data. The comparison group data were from Medi-Cal enrollee other California hospitals with most similar hospital and patient characteristics available in OSHPD financial and patient discharge data. UCLA used doubly robust propensity score matching methods and multi-level random effects models for the DD analyses. See Appendix D. Detailed Quantitative (Difference-in-Difference) Data and Methodology for further detail.

## Limitations
The selection of similar hospitals and the comparison population were limited by the fact that PRIME hospitals were fundamentally different from other California hospitals, as PRIME includes all of California's DPHs and most DMPHs.

The self-reported metrics constructed by PRIME hospitals included clinical information from the hospitals' medical records that were not available in OSHPD or Medi-Cal data. The DPH PRIME Eligible Population included patients who did not have Medi-Cal insurance, which was available in OSHPD data, but not in the Medi-Cal dataset. Finally, UCLA did not have access to the list of Medi-Cal managed care lives assigned to each hospital, and thus was not able to replicate the PRIME Eligible Population 2. Therefore, the comparisons in difference-in-differences models differ systematically from self-reported metrics and are not directly comparable.

The performance of California hospitals was not directly comparable to national benchmarks due to market, population, and institutional differences. However, PRIME benchmarks were used when available.

# Overview of PRIME Implementation

## PRIME Implementation Timeline

This chapter provides an overview of PRIME implementation. The PRIME implementation period was from January 1, 2016 to June 30, 2020 (Exhibit 11). The first Demonstration Year (DY 11) of PRIME started January 1, 2016 and was six months long because DSRIP was initially scheduled to end on October 31, 2015, at the end of DY 10, but was subsequently extended to December 31, 2015. The PRIME DY 11 measurement period was a full 12 months to ensure a complete year of baseline data capture. PRIME has a fiscal year calendar (July 1-June 30).

CMS approved the PRIME operational protocols in March 2016. Subsequently, DHCS released the PRIME 5-Year Plan Template and website with program information and updates, including stakeholder events and an inbox for questions and comments. PRIME hospitals submitted 5-year plans to DHCS in April 2016. In June 2016, DHCS approved plans from 54 PRIME hospitals (17 DPHs and 37 DMPHs). One DMPH hospital, Tehachapi, removed itself from the application process as it was beginning the process of being acquired by a private facility. Two DMPHs (Tulare and Coalinga) subsequently terminated PRIME participation, so 52 hospitals were in PRIME by the end of DY 13.

**Exhibit 11**. **Timeline of PRIME Reports**
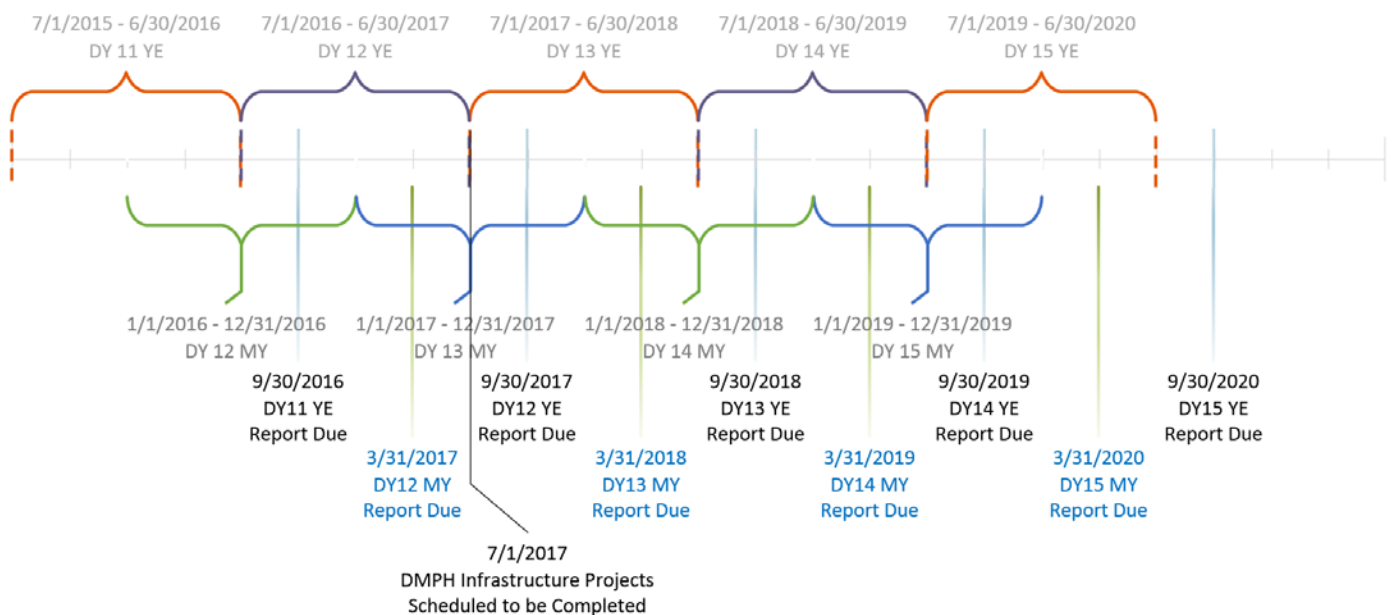


Notes. DY: demonstration year; MY: mid-year; YE: year end.

## Participating Hospital Characteristics

PRIME hospitals were located throughout California (Exhibit 12). DPHs are located in mostly dense inner-city and urban areas in Northern, Central, and Southern California. DMPHs are located in urban, suburban, and rural areas. CAHs are most commonly located in rural areas, particularly Eastern and Northern California.

## Exhibit 12. Map of PRIME Hospital Locations
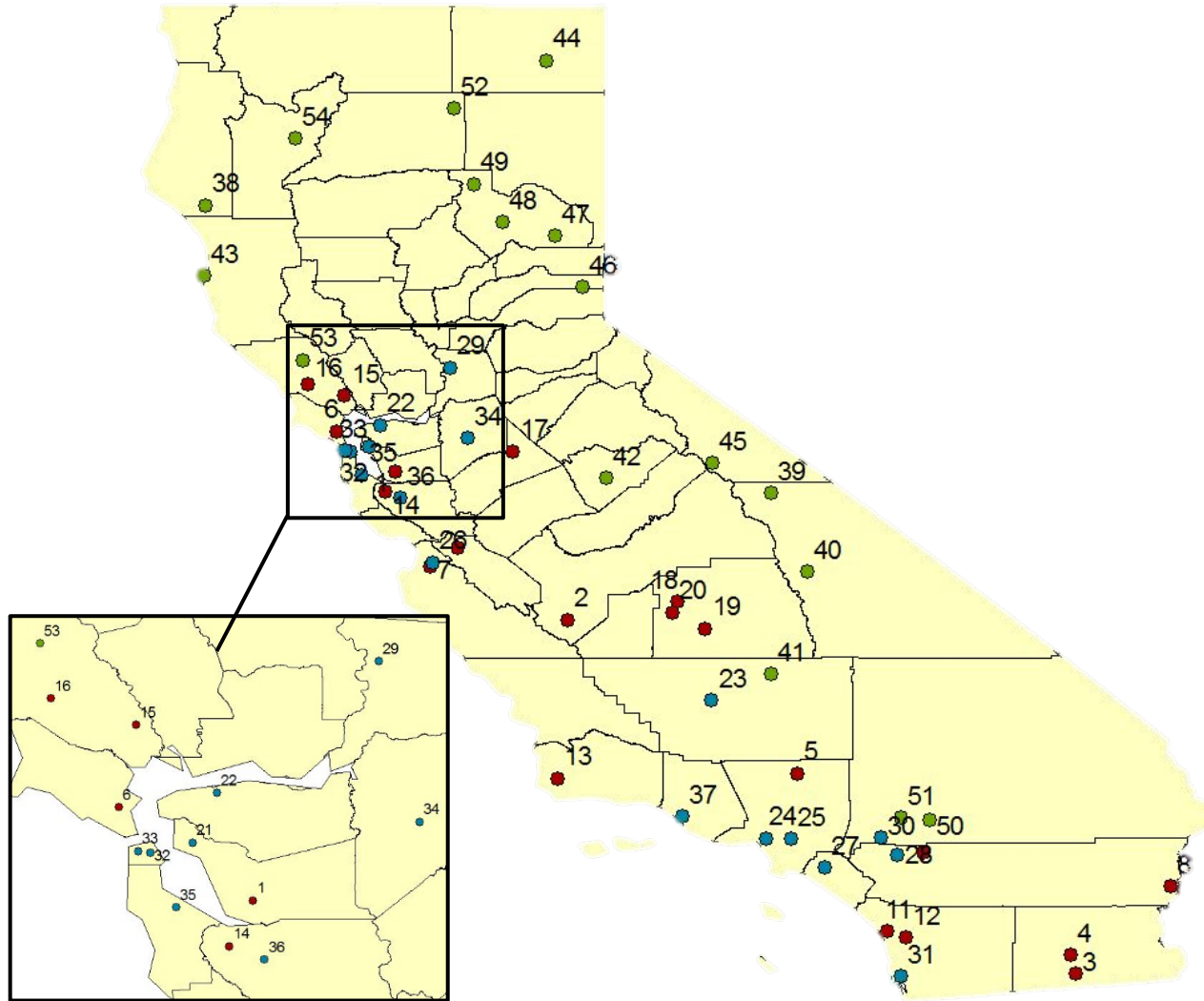


| Name | No. | Name | No. |
|---|---|---|---|
| Washington | 1 | Riverside | 28 |
| Coalinga | 2 | UC Davis | 29 |
| El Centro | 3 | Arrowhead | 30 |
| Pioneers Memorial | 4 | UC San Diego (Med Center) | 31 |
| Antelope Valley | 5 | San Francisco (Zuckerberg) | 32 |
| Marin General | 6 | UC San Francisco | 33 |
| Salinas Valley | 7 | | |
| Palo Verde | 8 | San Joaquin | 34 |
| San Gorgonio | 9 | San Mateo | 35 |
| Hazel Hawkins | 10 | Santa Clara | 36 |
| Tri-City | 11 | Ventura (Med Center) | 37 |
| Palomar | 12 | | |
| Lompoc Valley | 13 | Jerold Phelps | 38 |
| El Camino | 14 | Plumas | 39 |
| Sonoma Valley | 15 | Southern Inyo | 40 |
| Sonoma West | 16 | Kern Valley | 41 |
| Oak Valley | 17 | John C. Fremont | 42 |
| Kaweah Delta | 18 | Mendocino Coast | 43 |
| Sierra View | 19 | | |
| Tulare | 20 | Modoc | 44 |
| Alameda (Highland) | 21 | Mammoth | 45 |
| | | Tahoe Forest | 46 |
| Contra Costa | 22 | Eastern Plumas | 47 |
| Kern Medical | 23 | Plumas | 48 |
| UC Los Angeles (Reagan) | 24 | Seneca | 49 |
| | | Bear Valley | 50 |
| Los Angeles (LAC+USC) | 25 | Northern Inyo | 51 |
| | | Mayers | 52 |
| Natividad | 26 | Healdsburg | 53 |
| UC Irvine | 27 | Trinity | 54 |

Red- DMPH (non-CAH), Blue- DPH, and Green-DMPH CAH. Note: Hospital location is based on OSHPD data.

DPH: designated public hospital; DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation.

## Designated Public Hospitals (DPHs)

Seventeen DPHs participated in PRIME. DPHs consisted of five University of California (UC) and 12 County-owned and operated hospitals. The participating DPHs varied in size, structure, and other characteristics. Two systems had separate rehabilitation hospitals. Los Angeles was the largest system, with 3 acute care hospitals and 1 rehabilitation hospital providing over 1,700 beds, more than 60 thousand discharges, almost 1.2 million total visitors, and over 150 rehabilitation and psychiatric beds. UC Los Angeles had the most facilities (60) participating in PRIME. The UC DPHs generally had greater case mix averages than the county-owned DPHs, indicating that academic-owned systems provided more complex care. All DPHs provided care to over 100,000 people, all except for Natividad Medical Center had multiple facilities participating in PRIME, and 14 provided rehab or psychiatric services. All DPHs had multiple primary care facilities, and had multiple specialty clinics. With the exception of San Mateo, 16 DPHs were teaching hospitals and had residents on staff (data not shown).

## Exhibit 13. Characteristics of Designated Public Hospitals (DPHs) Participating in PRIME

| | Hospitals (N)* | Hospital Beds (N) | Non-Pediatric General Acute Care Beds (N) | Rehab Beds (N) | Psychiatric Beds (N) | Discharges (N) | Visits (N) | Case Mix** | Specialty Clinics (N) *** | Primary Care Facilities (N) *** |
|---|---|---|---|---|---|---|---|---|---|---|
| **County-Owned DPHs** | | | | | | | | | | |
| **Alameda** | 1 | 281 | 100 | 0 | 0 | 2,648 | 201,330 | 1.34 | 4 | 4 |
| **Arrowhead** | 1 | 456 | 343 | 0 | 90 | 21,776 | 371,273 | 1.16 | 40 | 4 |
| **Contra Costa** | 1 | 167 | 124 | 0 | 43 | 8,673 | 473,627 | 1.02 | 3 | 11 |
| **Kern (Medical)** | 1 | 222 | 173 | 0 | 25 | 9,261 | 132,074 | 1.19 | 67 | 10 |
| **Los Angeles** | 4 | 1,773 | 1,539 | 150 | 166 | 63,328 | 1,180,582 | 1.2-1.52 | 400 | 32 |
| **Natividad** | 1 | 172 | 138 | 20 | 22 | 8,072 | 160,175 | 1.08 | 4 | 1 |
| **Riverside** | 2 | 439 | 341 | 0 | 77 | 18,050 | 255,169 | 1.26 | 43 | 14 |
| **San Francisco** | 2 | 375 | 254 | 0 | 83 | 16,241 | 606,467 | 1.34 | 57 | 14 |
| **San Joaquin** | 1 | 196 | 188 | 0 | 0 | 9,211 | 237,432 | 1.25 | 32 | 9 |
| **San Mateo** | 1 | 509 | 93 | 0 | 34 | 4,224 | 345,991 | 1.16 | 1 | 12 |
| **Santa Clara** | 1 | 574 | 484 | 70 | 50 | 23,233 | 823,293 | 1.23 | 28 | 9 |
| **Ventura** | 2 | 272 | 213 | 0 | 43 | 19,842 | 919,450 | 1.19 | 22 | 18 |
| **University of California DPHs** | | | | | | | | | | |
| **UC Davis** | 1 | 621 | 581 | 19 | 0 | 31,154 | 1,026,228 | 1.78 | 212 | 14 |
| **UC Irvine** | 1 | 411 | 363 | 14 | 48 | 20,234 | 504,304 | 1.7 | 39 | 8 |
| **UC Los Angeles** | 2 | 731 | 662 | 11 | 0 | 40,451 | 756,225 | 1.38-2.11 | 200 | 60 |
| **UC San Diego** | 2 | 563 | 531 | 0 | 32 | 28,043 | 793,578 | 1.82 | 100 | 9 |
| **UC San Francisco** | 3 | 720 | 633 | 0 | 0 | 29,963 | 1,048,331 | 2.01 | 40 | 13 |

*Source: UCLA analysis of 2014 hospital financial and utilization data from the California Office of Statewide Health Planning and Development. This year was selected to indicate the hospital status at the start of PRIME.*

*Notes: DPH: designated public hospital. UC: University of California. *Some multi-hospital do not report facility-level data. In such cases, UCLA used parent organization-level data for all hospitals within the system using OSHPD ID. **Case mix, as reported in OSHPD, is a measure of the relative cost or resources needed to treat the mix of patients in each designated public hospital during the calendar year. Higher scores indicate greater level of complexity. Some of the factors that go into calculating case mix include: principal and secondary diagnoses, age, procedures performed, the presence of co-morbidities and/or complications, discharge status, and gender. The case mix range is reported for systems with multiple hospitals in OSHPD data. A detailed explanation is available here: http://www.oshpd.ca.gov/HID/Products/PatDischargeData/CaseMixIndex/default.asp *** Denotes data was obtained from the PRIME interim survey, data collected from Jan to May 2019.*

## District/Municipal Hospitals (DMPHs), including Critical Access Hospitals (DMPH CAHs)

At the end of DY 13, 36 DMPHs were participating in PRIME. Two DMPHs started PRIME, but stopped participation (Tulare 10/29/2017 and Coalinga 6/12/2018). Tehachapi applied, but was unable to participate. DMPHs varied significantly in size (from approximately 3 to 500 beds) and in the range of services provided. Many of these hospitals served rural and se mi-rural populations. A subset of the DMPHs were designated by CMS as Certified Critical Access Hospitals (DMPH CAHs). DMPH CAHs included those with a maximum of 25 beds if they were located in a rural area over 35 miles from another hospital. DMPH CAH also included rural hospitals that were 15 miles from another hospital and were located in difficult terrain.

The size of DMPHs varied greatly, ranging from 17 hospital beds at both Mammoth and Jerold Phelps to 816 beds at Palomar. Kaweah Delta was the largest system, with 581 total hospital beds, over 20,000 discharges, over 650,000 total visitors, 77 specialty clinics, and five participating facilities. Twelve DMPHs reported having no specialty clinics. The case mixes ranged from 0.88 to 1.46 across all DMPHs.

**Exhibit 14. Characteristics of District and Municipal Hospitals (DMPHs), including Certified Critical Access Hospitals (CAHs) Participating in PRIME**

| | Hospitals* | Hospital Beds | Non-Pediatric General Acute Care Beds | Rehab Beds | Psychiatric Beds | Discharges | Visits | Case Mix** | Specialty Clinics*** | Primary Care Facilities *** |
|---|---|---|---|---|---|---|---|---|---|---|
| **DMPH Non-CAHs** | | | | | | | | | | |
| Antelope Valley | 1 | 420 | 368 | 0 | 30 | 20,325 | 189,334 | 1.17 | N/A | N/A |
| Coalinga^ | 1 | 123 | 24 | 0 | 0 | 233 | 27,452 | 0.94 | N/A | N/A |
| El Camino | 1 | 300 | 268 | 0 | 25 | 19,218 | 184,839 | 1.23 | 5 | 2 |
| El Centro | 1 | 161 | 149 | 0 | 0 | 4,925 | 140,790 | 1.17 | 2 | 2 |
| Hazel Hawkins | 1 | 119 | 62 | 0 | 0 | 2,337 | 163,733 | 1.08 | 2 | 4 |
| Kaweah Delta | 1 | 581 | 436 | 45 | 63 | 23,753 | 654,430 | 1.29 | 77 | 5 |
| Lompoc Valley | 1 | 170 | 60 | 0 | 0 | 2,853 | 78,738 | 1.01 | 5 | 2 |
| Marin | 1 | 235 | 204 | 0 | 17 | 8,774 | 200,634 | 1.36 | 0 | 0 |
| Oak Valley | 1 | 150 | 35 | 0 | 0 | 1,162 | 120,814 | 1.08 | 5 | 4 |
| Palo Verde | 1 | 51 | 51 | 0 | 0 | 964 | 19,448 | 0.96 | 0 | 1 |
| Palomar (and Pomerado) | 3 | 816 | 650 | 18 | 37 | 34,725 | 281,257 | 1.22-1.36 | 5 | 5 |
| Pioneers | 1 | 107 | 95 | 0 | 0 | 5,598 | 118,919 | 0.92 | 5 | 3 |
| Salinas Valley | 1 | 269 | 261 | 0 | 0 | 10,116 | 101,322 | 1.36 | 1 | 3 |
| San Gorgonio | 1 | 71 | 71 | 0 | 0 | 3,818 | 52,719 | 1.15 | 1 | 3 |
| Sierra View | 1 | 167 | 132 | 0 | 0 | 6,245 | 161,298 | 1.04 | N/A | N/A |
| Sonoma Valley | 1 | 75 | 48 | 0 | 0 | 1,547 | 70,509 | 1.34 | 0 | 0 |
| Sonoma West | 1 | 37 | 37 | 0 | 0 | 440 | 18,310 | 1.18 | 0 | 0 |
| Tri-City | 1 | 397 | 368 | 10 | 29 | 15,690 | 198,620 | 1.46 | 0 | 3 |
| Tulare^ | 1 | 112 | 102 | 0 | 0 | 3,726 | 107,947 | 1.04 | N/A | N/A |
| Washington | 1 | 341 | 324 | 0 | 0 | 12,213 | 140,678 | 1.41 | 17 | 9 |
| **DMPH CAHs** | | | | | | | | | | |
| Bear Valley | 1 | 30 | 9 | 0 | 0 | 182 | 48,743 | 0.97 | 0 | 2 |
| Eastern Plumas | 1 | 75 | 9 | 0 | 0 | 256 | 47,659 | N/A | 0 | 4 |
| Healdsburg | 1 | 43 | 26 | 0 | 0 | 944 | 38,183 | 1.33 | 4 | 1 |
| Jerold Phelps | 1 | 17 | 9 | 0 | 0 | 71 | 9,622 | 0.96 | 0 | 1 |
| John C. Fremont | 1 | 34 | 18 | 0 | 0 | 260 | 32,985 | N/A | N/A | N/A |
| Kern Valley | 1 | 101 | 27 | 0 | 0 | 702 | 24,603 | 0.98 | 1 | 1 |
| Mammoth | 1 | 17 | 17 | 0 | 0 | 685 | 41,302 | 1.26 | 5 | 3 |

| | Hospitals* | Hospital Beds | Non-Pediatric General Acute Care Beds | Rehab Beds | Psychiatric Beds | Discharges | Visits | Case Mix** | Specialty Clinics*** | Primary Care Facilities *** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Mayers** | 1 | 121 | 22 | 0 | 0 | 515 | 18,069 | 0.92 | 0 | 0 |
| **Mendocino** | 1 | 49 | 49 | 0 | 0 | 1,276 | 47,123 | 1.13 | 1 | 1 |
| **Modoc** | 1 | 87 | 16 | 0 | 0 | 233 | 16,539 | 0.89 | 0 | 1 |
| **Northern Inyo** | 1 | 25 | 25 | 0 | 0 | 1,069 | 68,274 | 0.99 | 2 | 4 |
| **Plumas** | 1 | 25 | 25 | 0 | 0 | 455 | 35,884 | 0.88 | 0 | 2 |
| **San Bernardino** | 1 | 37 | 17 | 0 | 0 | 359 | 34,526 | N/A | 2 | 2 |
| **Seneca** | 1 | 26 | 10 | 0 | 0 | 189 | 17,142 | 0.93 | 1 | 1 |
| **Southern Inyo** | 1 | 37 | 4 | 0 | 0 | 50 | 9,105 | 1.02 | N/A | N/A |
| **Tahoe** | 1 | 72 | 35 | 0 | 0 | 1,749 | 118,040 | 1.16 | 7 | 4 |
| **Trinity** | 1 | 51 | 25 | N/A | N/A | 363 | 32,054 | 0.94 | 0 | 2 |

DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation.

Source: UCLA analysis of 2014 hospital financial and utilization data from the California Office of Statewide Health Planning and Development and PRIME interim survey, data collected from Jan to May 2019.

^ Two hospitals (Tulare and Coalinga) are no longer in PRIME. One hospital (Tehachapi Valley Healthcare District) applied to be in PRIME, but discontinued before PRIME was implemented.

* Some multi-hospital do not report facility-level data. In such cases, UCLA used parent organization-level data for all hospitals within the system using OSHPD ID.

**Case mix is a measure of the relative cost or resources needed to treat the mix of patients in each designated public hospital during the calendar year. Higher scores indicate greater level of complexity. Some of the factors that go into calculating case mix include: principal and secondary diagnoses, age, procedures performed, the presence of co-morbidities and/or complications, discharge status, and gender. The case mix range is reported for systems with multiple hospitals in OSHPD data. A detailed explanation is available at http://www.oshpd.ca.gov/HID/Products/PatDischargeData/CaseMixIndex/default.asp

*** Denotes data was obtained from the PRIME interim survey, data collected from Jan to May 2019.

## Organizational Infrastructure

### Program Administration, Team Structure, and Cross-Team Collaboration

In interviews, key informants discussed their administrative structure and strategies for PRIME implementation (Exhibit 15). Hospitals employed different approaches to implement PRIME, with some creating entirely new positions or departments dedicated to PRIME implementation and others assigning responsibilities to existing staff. All hospitals were required to have a main contact responsible for overseeing PRIME implementation. Centralized administration roles for PRIME included a Director of Population Health, PRIME Director, or PRIME Steering Committee. In some hospitals, PRIME implementation was also decentralized to workgroups or champions who would work on specific metrics, in which work was often divided by PRIME project, clinical department (e.g., primary care, specialty care, behavioral health), or subject matter expertise (e.g., medical assistants guiding implementation of multiple projects that would ultimately involve medical assistant workflow changes). Among many hospitals, creation and reorganization of teams as needed, as well as cross-team collaboration, was key for successful PRIME implementation. Notably, among a few hospitals, PRIME spurred the creation of entirely new departments and leadership positions formally focused on transforming ambulatory care and promoting population health.

**Exhibit 15. PRIME Administration Structure and Strategies**

| Structure | Theme | Illustrative Example |
|---|---|---|
| Leadership | Centralized PRIME administration (Roles include PRIME program director; PRIME steering committee; director of population health) | *"I'm the PRIME program manager, so I centrally manage PRIME … the administrative side of all the PRIME communications, I coordinate with the clinical teams largely in ambulatory primary care and specialty but also inpatient… I don't [do] many things directly. I work through the other departments who actually perform the real work of changing practice and engaging patients." (UC Irvine)* |
| | Decentralized administration by project (Roles include project director; project champion) | *"In total we had, over the nine projects, well over 100 participants in each of the groups that have worked tirelessly in order to look at the core components and ultimately the aims of each program…From the team workgroups, we've assigned project leads and project champions for each team." (Riverside)* |
| | Decentralized administration by subject-matter expertise (Roles include nurse manager; case management supervisor; medical assistants; outpatient pharmacy manager) | *"About early in DY12, we realized that it made more sense to align the PRIME efforts with where the work was actually happening. For example, at cancer screening, it's taking place by our medical assistants, and the behavioral health screening is going to take place by our medical assistants. We should have a working group that's really about medical assistant standard work at intake as opposed to different [project] working groups working on different pieces that all might catch the medical assistants."* (Alameda) |

| Structure | Theme | Illustrative Example |
|---|---|---|
| | Mixed or Alternate Structures | *"We don't really think of all these measures within the different projects. We kind of have project leads on the measures that cross projects…With our team, there's a couple people who are members of both teams." (Contra Costa)* |
| Team Structure | Staff Reorganization | *"The approach I took was like, this is what's happening. This is what we can do better. And I put it in their court. What do you guys think we can do better because this is what's happening? And [the staff] came up with their plans. They reorganize themselves based on some of the information I give them." (Arrowhead)* |
| | Hiring of New Staff | *"…We did create and draft job descriptions that did not exist and hired people that did not exist prior to be focused solely on PRIME…and not pulled off into other projects unless able, but that's on a very controlled and intentional approach." (Kaweah Delta)* |
| Collaboration | Cross-Team Collaboration | *"We reached out to partners in all the difference spaces and then got our IT team involved." (Palomar)* |

*Source: In-depth key informant interviews, data received June to August 2018.*

## Electronic Health Record (EHR) Infrastructure

### *Status of EHR infrastructure Among DPHs in DSRIP, Prior to PRIME*

All 17 DPHs had previously participated in DSRIP, a precursor to the PRIME program that prompted significant EHR development (Pourat et al, 2016). DPHs did not use DSRIP funds to purchase their EHRs directly but DSRIP data reporting requirements were a significant motivation to complete EHR infrastructure development and enhance data reporting capabilities. However, during PRIME interviews, most (13 of 17; 76%) DPHs reported that DSRIP had a more significant impact by preparing their hospitals for change by transforming system culture and developing the requisite infrastructure to implement PRIME. Among these hospitals, the infrastructure for ambulatory care redesign, sexual orientation and gender identity (SO/GI) and race, ethnicity and language (REAL) data collection, cancer screening, and patient-centered medical home (PCMH) recognition/recertification had been built during DSRIP, to be bolstered by PRIME. As a result, less effort was expended on creating infrastructure, engaging internal stakeholders, and structuring workflows during PRIME because the initial push towards these goals had begun years prior. For example, one hospital described how DSRIP established foundational infrastructure and processes for restructuring workflows with the aim of encouraging a culture of data-informed decision making:

> *"Before PRIME there was DSRIP… The organization had already developed, the basis to be able to implement PRIME in a bigger scale ... There was already knowledge and understanding that all these things, all these changes, were going to*

*happen. That we were going to be restructuring the workflows. That this was not just a reporting thing, what we were doing. But, there was actually a lot more involved that we were going to have to look at, pretty much the way we do business and change and mold it to record what we're doing better. And to improve what we're doing and to be able to become a data driven organization." (Arrowhead)*

## Status of EHR during PRIME

In the interim survey, hospitals provided information about the status of their EHRs, including number of EHRs they used for PRIME, functionality, interoperability, Meaningful Use attestation, and use of health information technology (e.g., registries, telehealth) for population health management. Furthermore, hospitals expanded upon the impact of their EHR structures on PRIME implementation in in-depth interviews.

## Number of EHRs Used for PRIME Implementation

In inpatient settings, the majority of hospitals reported having 1 EHR (41) and the rest (11) had 2 or more (Exhibit 16). In the emergency department, the majority of hospitals reported having a single EHR (45) or multiple EHRs (6); only one hospital reported having no EHR in the emergency department. In outpatient settings, although most hospitals reported having a single EHR (37), almost a quarter (12, 23%) had more than one outpatient EHR in use; 3 DMPHs noted that they did not have any outpatient clinics within the system, thus having no EHRs within this setting.

**Exhibit 16. Number of Electronic Health Records within Hospital, Emergency Department, and Outpatient Clinic Settings**
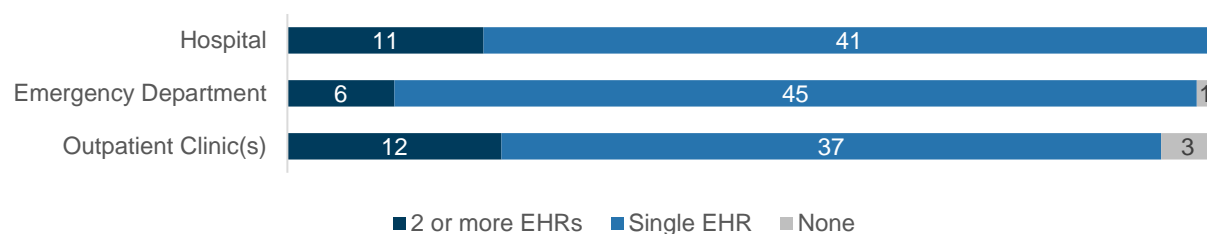


Source: UCLA analysis of the Interim survey, data received April to May 2018.
Notes: N=52 hospitals who participated in the interim survey.

Among a few hospitals, PRIME implementation required access of fewer or more EHRs than were currently in use (Data not shown). For example, to assess outpatient data, two hospitals that had recently transitioned to an enterprise-wide EHR reported that PRIME implementation required them to also obtain data from the previous EHR that was no longer in use.

In interviews, hospitals noted the difficulties of recent or upcoming transitions to enterprise-wide electronic health records. However, hospitals expressed optimism about the potential for improved management of data and population health under a consolidated EHR. One hospital described their effort to establish a single EHR as follows:

> *"There's always change fatigue and we're going through one right now in terms of bringing on this transformational [Cerner] EHR. ... This is a marathon and not a sprint, … the messaging should be loud and clear … these are growing pains that we're experiencing at this … but if you were to look at this as you said, probably two, three years … I think we will be in a better place in terms of having one unified enterprise EHR and all the analytics that go with it to kind of refine and present to a provider at the point of care, the kind of intelligence that was needed… it could get really painful in a short-term perspective." (San Joaquin)*

Manual chart extraction for tracking of PRIME metrics was a challenge among hospitals still utilizing multiple EHRs, those who had transitioned to an enterprise EHR during PRIME, or those that had not yet built out the data-sharing capabilities of their EHRs. Hospitals also reported building internal data warehouses to aggregate multiple data sources.

### EHR Functionality

In the interim survey, hospitals reported the EHR functions they utilized in their outpatient, hospital, and emergency care settings. The vast majority of hospitals reported that they had already implemented basic functions of their EHR (e.g., patient demographics, clinical results, appointment scheduling) within outpatient clinics prior to PRIME. However, a few hospitals implemented these basic functions during PRIME (Exhibit 17). The EHR functions most commonly implemented during PRIME within outpatient clinics were pop-alerts or prompts (implemented by 12 hospitals during PRIME), real-time data access for frontline providers/staff (10 hospitals), and electronic registries (10 hospitals). Of note, fewer than half of hospitals had implemented electronic registries prior to PRIME.

**Exhibit 17. EHR Functionality in Outpatient Clinics among PRIME Hospitals**

| Functionality | Implemented Prior to PRIME | Implemented During PRIME | Not Yet Implemented | No Outpatient Clinics |
|---|---|---|---|---|
| Patient demographics | 43 | 3 | 3 | 3 |
| Clinical results (e.g., laboratory tests) | 43 | 2 | 4 | 3 |
| Patient information documentation | 43 | 2 | 4 | 3 |
| Appointment scheduling | 42 | 3 | 4 | 3 |
| Electronic patient chart | 42 | 3 | 4 | 3 |
| E-prescribing or computerized provider order entry | 41 | 3 | 5 | 3 |
| Clinical support tools | 35 | 7 | 7 | 3 |
| Pop-up alerts/prompts | 34 | 11 | 4 | 3 |
| Real-time data access for frontline staff | 34 | 9 | 6 | 3 |
| Inter-provider communication tools | 34 | 6 | 9 | 3 |
| Hospital discharge summary | 33 | 7 | 9 | 3 |
| Electronic referral management | 32 | 6 | 11 | 3 |
| Electronic registries | 22 | 10 | 17 | 3 |

■ Implemented Prior to PRIME  ■ Implemented During PRIME  ☐ Not Yet Implemented  ■ No Outpatient Clinics

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey.*

Within the emergency department and inpatient settings, the majority of hospitals reported having robust EHRs that had basic functions for tracking patient care (Appendix H. Electronic Health Record Functionality in Emergency Department and Hospital Settings, Exhibit 408, Exhibit 409). However, fewer hospitals (about half) reported having EHR functions within ED and inpatient settings for appointment scheduling, inter-provider communication, electronic referral management, and electronic registries, suggesting lower applicability of these functions within ED and hospital settings.

Hospitals reported the care management activities supported by their system-wide EHR, or their most comprehensive EHR if they employed more than one. The most common activities supported by EHRs were point of care delivery (i.e., documentation of patient information and care), communication with primary care providers, and patient engagement (Exhibit 18). About half of hospitals reported having EHRs that supported population/panel management or continual performance feedback.

**Exhibit 18. Activities Supported by Electronic Health Records among PRIME Hospitals**

| Activity | Value |
|---|---|
| Point of care delivery | 47 |
| Communication with primary care providers | 47 |
| Patient engagement | 45 |
| Pre-visit planning | 38 |
| Care coordination with other providers | 35 |
| Operational and strategic decisions | 34 |
| Population/panel management | 28 |
| Continual performance feedback & rapid cycle improvement | 26 |

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey.*

### Meaningful Use Standard Status

In the interim survey, hospitals reported whether they had met at least Stage 1 Meaningful Use (MU) requirements. All DPHs reported having EHRs that met MU standards (CDC). Among DMPHs, only 2 hospitals reported that their most comprehensive EHR did not meet any MU Standards. DPHs reported an average of 124 providers (range 0-450) that had attested to MU. The number of providers attesting to MU was much lower for DMPH non-CAHs (mean 9, range 0-100) and DMPH CAHs (mean 5, range 0-25). Overall, 2 DPHs (12%), 13 DMPH non-CAHs (59%), and 7 DMPH CAHs (54%) reported that none of their providers had attested to MU (Source: Interim PRIME survey).

### EHR Interoperability and Health Information Exchanges

In the interim survey, hospitals reported on EHR interoperability with outside systems and how they established linkages. Although the majority of hospitals noted that their EHR had the capacity to link to external pharmacies (45, 87%) and external labs (34, 65%), only one third had links to external specialists (8, 35%) and clinics (8, 35%; data not shown). In interviews, hospitals also discussed using data linkages for tracking patients in foster care. Difficulties in creating linkages to external organizations were largely driven by differences in EHR vendors, which required considerable investments in creating health information exchanges (HIEs) to facilitate the exchange of data between systems.

Based on the interim survey, DPHs were most likely to report participating in an HIE (76%), with an additional 18% planning future participation (Exhibit 19). In contrast, only half of DMPHs reported already participating or planning to participate in an HIE. Epic CareEverywhere was the most common HIE, particularly among DPHs. Examples of

statewide and localized HIEs included: Manifest Medex, Central Coast Health Connect, and San Diego Health Connect. Hospitals noting that they had an HIE were more likely to report linkages to external specialists (56 vs. 12%) and clinics (52 vs. 16%) compared to hospitals noting no HIE.

**Exhibit 19. Health Information Exchange Participation among PRIME Hospitals by Hospital Type**
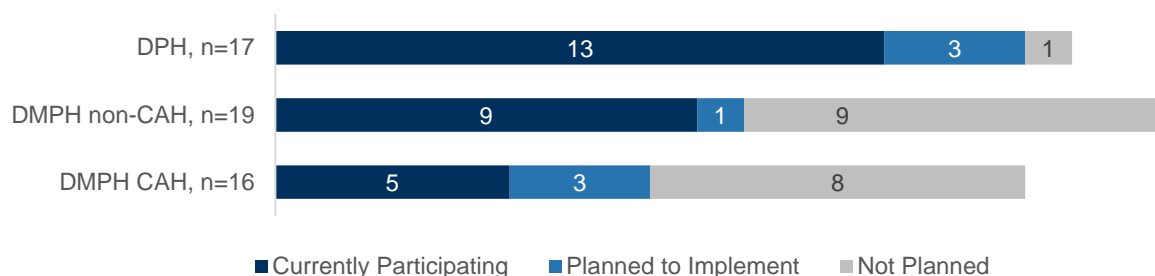


| | Currently Participating | Planned to Implement | Not Planned |
|---|---|---|---|
| DPH, n=17 | 13 | 3 | 1 |
| DMPH non-CAH, n=19 | 9 | 1 | 9 |
| DMPH CAH, n=16 | 5 | 3 | 8 |

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey. DPH: designated public hospital; DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation. Planned to implement indicates hospitals plans by May 2018 for future activities. These activities may have occurred by the publication date of this interim report.*

In interviews, hospital key informants discussed strategies for overcoming the lack of EHR linkages to outside organizations. Among hospitals who did not have electronic data linkages or HIEs set up, other methods of data sharing included use of view-only access between systems, conducting manual chart review of external data, and exchanging data via traditional methods, such as fax.

### Patient Registries

Patient registries, EHR-based systems used to track outcomes among specific patient populations, are an important tool in population health management. In the interim survey, hospitals were asked to report the types of conditions managed using patient registries. The majority of DPHs reported using patient registries to track patients by condition, but registry use was less common among DMPHs (Exhibit 20). Among DPHs, registries for patients with diabetes, tobacco use, and hypertension were most common. Of note, half of DMPH CAHs reported utilizing registries to track patients for pain management.

**Exhibit 20. Conditions Managed Using Patient Registries among PRIME Hospitals by Hospital Type**



**DPH, n=17**

| Condition | Value |
|---|---|
| Diabetes | 15 |
| Tobacco use | 15 |
| Hypertension | 15 |
| Depression | 13 |
| Colorectal cancer | 12 |
| Heart disease | 11 |
| Asthma | 10 |
| Breast cancer | 10 |
| Cervical cancer | 10 |
| Stroke | 9 |
| Pain management | 9 |
| COPD | 9 |
| High cholesterol | 8 |
| Substance use | 7 |
| Obesity | 6 |
| Childhood obesity | 5 |

**DMPH non-CAH, n=19**

| Condition | Value |
|---|---|
| Diabetes | 7 |
| Tobacco use | 7 |
| Hypertension | 6 |
| Depression | 5 |
| Colorectal cancer | 8 |
| Heart disease | 7 |
| Asthma | 4 |
| Breast cancer | 8 |
| Cervical cancer | 8 |
| Stroke | 5 |
| Pain management | 3 |
| COPD | 6 |
| High cholesterol | 4 |
| Substance use | 4 |
| Obesity | 5 |
| Childhood obesity | 3 |

**DMPH CAH, n=16**

| Condition | Value |
|---|---|
| Diabetes | 9 |
| Tobacco use | 4 |
| Hypertension | 5 |
| Depression | 7 |
| Colorectal cancer | 5 |
| Heart disease | 4 |
| Asthma | 2 |
| Breast cancer | 5 |
| Cervical cancer | 5 |
| Stroke | 1 |
| Pain management | 8 |
| COPD | 1 |
| High cholesterol | 2 |
| Substance use | 4 |
| Obesity | 1 |
| Childhood obesity | 1 |

Source: UCLA analysis of the Interim survey, data received April to May 2018.

*Notes: N=52 hospitals who participated in the interim survey. DPH: designated public hospital; DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation.*

In interviews, hospitals with established registries discussed using their registries for scheduling follow-up care with patients with chronic conditions, tracking wellness visits, identifying missed opportunities for evidence-based care, and stratifying outcomes by demographic characteristics to examine disparities in care.

One DPH followed-up with registry patients via automated calls and texts, then contacted patients who had indicated wanting to speak further with a member of their care team. This process allowed care management staff to maximize their time communicating with a targeted list of interested patients:

> *"And it was pretty clear that a lot of the work relied on manual registries and keeping track of patients over time, and a lot of staff effort was spent calling patients without getting a response… So we worked with [panel management staff] and with their nurse managers to design automated phone call and texting solution that essentially does the calling for them. And it helps to take away that manual effort, and also engage with patients and bring patients … to the panel managers who are ready to engage in their care." (UC San Francisco)*

### Telehealth Capacity

Telehealth, facilitated by digital communication technologies, has the potential for expanding patient care options and access to services. In the interim survey, hospitals reported on the scope of and settings in which they used telehealth. Regardless of hospital type, the majority of hospitals reported telehealth use (Exhibit 21). However, DPHs were most likely to report having internal telehealth capacity, while DMPHs and CAHs were more likely to report using a third party.

**Exhibit 21. Use of Telehealth under PRIME by Hospital Type**
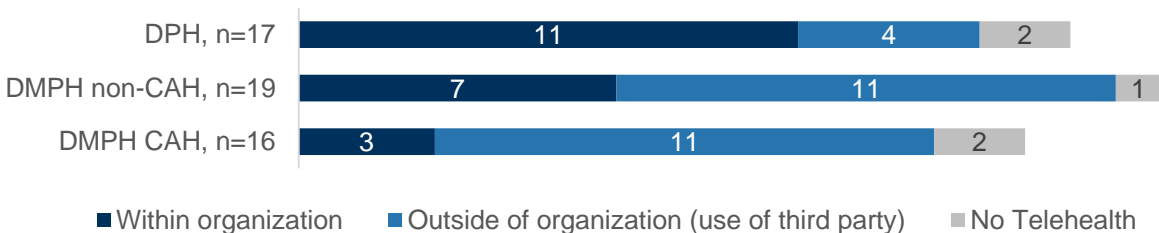


DPH, n=17: Within organization 11, Outside of organization 4, No Telehealth 2
DMPH non-CAH, n=19: Within organization 7, Outside of organization 11, No Telehealth 1
DMPH CAH, n=16: Within organization 3, Outside of organization 11, No Telehealth 2

■ Within organization   ■ Outside of organization (use of third party)   ■ No Telehealth

*Source: UCLA analysis of the Interim survey, data received April to May 2018. Notes: N=52 hospitals who participated in the interim survey. DPH: designated public hospital;*

*DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation.*

While telehealth was used within a wide range of specialties, it was most commonly used for psychiatry and radiology (Exhibit 22). Almost one fifth of hospitals (10, 19%) reported implementing telehealth for psychiatry during PRIME.

**Exhibit 22. Implementation of Telehealth Services among PRIME Hospitals**
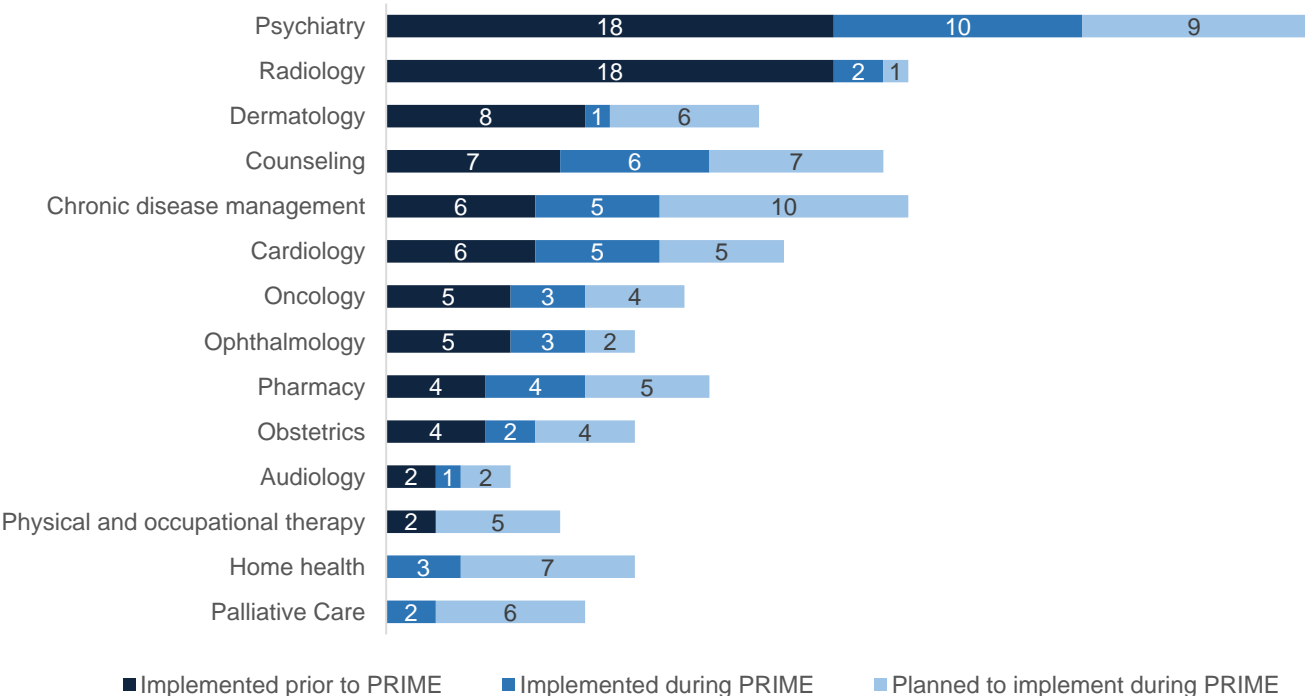


- Implemented prior to PRIME
- Implemented during PRIME
- Planned to implement during PRIME

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey. Planned to implement during PRIME indicates hospitals plans by May 2018 for future activities. These activities may have occurred by the publication of this interim report.*

In interviews, the majority of hospitals discussed telehealth as an effort still under consideration or development. Few hospitals discussed telehealth as a tool for structuring patient-provider visits. More commonly, telehealth was viewed as a strategy for facilitating communication and consultation between providers (e.g., between primary care and behavioral health providers):

> *"For example, you identify a patient with a high PHQ-9 and you e-consult the mental health professional… The psychiatrist writes back and says, 'It sounds like you're doing a really good job with that patient. But you know you're really not at an effective*

*dose of the antidepressant.' … So what e-consult affords us the ability to do is to instill that kind of co-management, still keeping the patient in the medical home, but with very robust and very individualized specialty input." (Los Angeles)*

Concordant with the interim survey results, discussion of telehealth that directly facilitated patient care was limited to that involving telepsychiatry. Among hospitals utilizing telehealth for direct provision of behavioral health care, there was acknowledgment that use of telehealth was limited to a small subset of behavioral health patients that met specific characteristics for telehealth use. Telepsychiatry was therefore viewed as a supplement to in-person integration of behavioral health care, rather than a comprehensive solution to increasing access to behavioral health care:

*"So the solution that we've used, I would say is not so much the Telehealth or Telemedicine, but more just having a collaborative care team, having really robust intake processes, being care navigators to help people link up with their community resources and better understand what's at their fingertips. And so, my view would be the Telemedicine part from psychiatry specifically as a care is probably a small sliver of just a few patients with a very specific demographic." (UC San Diego)*

Another hospital noted the potential use for telepsychiatry to address staffing difficulties:

*"System-wide, we have a shortage of psychiatrists and things like that in our county, so we have to rely on outside providers for a lot of those activities…We're looking into telemedicine." (Contra Costa)*

## Partnerships with External Providers

Hospitals developed partnerships with external providers to address potential gaps in capacity for delivery of services. In the interim survey, hospitals reported on the types of relationships they established with external providers (Exhibit 23). Hospitals most often relied on informal relationships with external providers. However, DPHs were more reliant on formal contractual agreements (59%) than DMPH non-CAHs (47%) and DMPH CAHs (31%). DMPHs most often (63%) relied on memoranda of understanding (MOUs), as formal non-binding agreements. Among DPHs, a larger proportion of DPH-UC hospitals reported both informal relationships (60% vs. 17%) and MOUs (80% vs. 42%) with community resource providers than DPH-County hospitals (Data not shown, Source: Interim PRIME survey, April to May 2018).

**Exhibit 23. Relationships between PRIME Hospitals & External Providers**



**DPH, n=17**
- Contractual agreement: 10
- Memorandum of understanding: 8
- Informal relationship with external providers: 12
- Only refer patients, but no direct relationship: 8
- External providers co-located within organization: 6
- Joint outreach and events: 6

**DMPH non-CAH, n=19**
- Contractual agreement: 9
- Memorandum of understanding: 12
- Informal relationship with external providers: 10
- Only refer patients, but no direct relationship: 5
- External providers co-located within organization: 9
- Joint outreach and events: 8

**DMPH CAH, n=16**
- Contractual agreement: 5
- Memorandum of understanding: 6
- Informal relationship with external providers: 12
- Only refer patients, but no direct relationship: 3
- External providers co-located within organization: 2
- Joint outreach and events: 8

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey. Responses were not mutually exclusive; hospitals could select more than one type of relationship. DPH: designated public hospital; DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation; MOU: memorandum of understanding (defined as a formal non-binding agreement).*

Three DMPHs reported that they had no primary or specialty care clinics that were owned or operated by the hospital. Among these hospitals, one reported partnering with external clinics for PRIME implementation, and two hospitals reported having data-sharing agreements with external clinics.

In interviews, hospitals most commonly discussed having partnerships with hospice or palliative care providers, followed by mental health service provided by the County. Other external partners included quality improvement consultants, external providers of primary care, skilled nursing facilities, and external agencies to facilitate the referral of special populations (e.g., foster children, corrections). In addition, hospitals discussed contracting with community-based organizations to provide in-home services but further detail on these relationships was not available.

## Participation in Other Program Initiatives – Hospital Perspectives

In the interviews, the county DPHs mentioned they had started participating in the Global Payment Program (GPP), designed to combine Disproportionate Share Hospital (DSH) and uncompensated care funding streams into a single global payment for treatment of the remaining uninsured patients in these hospitals. GPP is also designed to move the hospitals away from delivery of high cost specialty and acute services and towards preventive and primary care services. In addition, hospitals discussed their participation in Whole Person Care (WPC), a component of the Medi-Cal 2020 waiver designed to coordinate the medical, behavioral, and social service needs of Medi-Cal enrollees who are high utilizers of services, improve their health, and reduce costs.

One hospital discussed the overlap and differences between their participation in PRIME and Whole Person Care:

*The Whole Person Care population is going to fall into our PRIME population…that's one way that we directly address our project 2.5 for PRIME is through that Whole Person Care clinic and working on those transitions and really trying to get those people into our system. In terms of some of the differences, as Whole Person Care is set up specifically as its own patient-centered medical home whereas PRIME would impact any of our primary care clinics and those specialty clinics…The other big difference would be just the collaboration with our various county and community-based organizations for Whole Person Care where we're really looking to…manage a lot of those social aspects on a more intimate level. (Kern Medical)*

Additionally, some hospitals discussed being in the initial stages of participating in other programs implemented by DHCS which also involve payment redesign. These include Directed Payment Quality Incentives for Medi-Cal managed care, including the DPH Quality Incentive Program (QIP). Medicaid managed care plans make QIP payments for performance on metrics in 4 categories: primary care, specialty care, inpatient care, and resource utilization. QIP is structured similarly to PRIME – the measures are complementary, but do not overlap.

In interviews, hospitals reported that implementing simultaneous projects had positive outcomes on care delivery (e.g., moving away from siloes in their systems) and patient care (e.g., being able to connect patients who qualify for other relevant programs).

*"The health system convened this work group, and … once a month, we get together, and … share what's going on in each program (PRIME, QIP, BHRS [San Mateo County Behavioral Health and Recovery Services], Whole Person Care), ... It's a place to share and help support one another ... How do we help figure out a way to*

*work with all of them since they're patients that are in the priority population for each of these different programs, and so that's the next stage of what we're working towards." (San Mateo)*

*"The concept of operating in siloes from our system came together a couple years ago and those siloes have been slowly breaking down. As regards to interacting with public health and behavioral health, we've put together some initiatives on putting together a data set … trying to create some architecture around data warehousing, trying to normalize the data on a patient level by matching the patient information and then trying to apply some analytics on top of that." (Arrowhead)*

Hospitals reported struggling with identifying the best systems to manage their metrics and avoid "metric fatigue" when participating in multiple programs. A few hospitals described their solution to be identifying synergies. For example, hospitals could standardize metrics and workflows, even though the populations for each program were different. The selection of goals was consistent and the quality improvement activities impacted their full patient population.

*"(One of the things) that we've done in the last year is we're actually in nine different ambulatory metric programs and probably 14 different in-patient ones. There's a 120 measures for tracking for ambulatory and 145 that we're tracking for in-patient. Many are similar or duplicated in different programs. This has been kind of a harmonization process we've done which is to take all the different quality programs and put them into one bucket. And we're looking at commonalities... so less program-centric views and more globally performance views... for the last year we've been consolidating it all together and attacking it together... Our manage care plan created a similar initiative to be able to target patients who are diabetic and have behavioral health issues, and also substance abuse issues. But they will only allow us to use the therapies that they have for their patients specifically. That created some issues because it's like, we want to be able to introduce this to our total population…That has created some issues on work flows, some issues on standard of care all throughout." (UC Irvine)*

*"Especially for QIP. I try to match them to some of the initiatives we have going on currently. Although, they're looking at different population, the approach that I've had…I look for example, PRIME looks at A1C greater than nine. QIP looks at A1C less than eight. We have some other [programs] that are also looking greater than eight or what not. So, the way we structure the work flow, the quality improvement initiative is based on an A1C of eight." (Arrowhead)*

The hospitals also reported engagement in other kinds of capitation and metric-based programs such as MIPS, the Merit-based Incentive Payment System with CMS. Many of the hospitals also participated in EHR Meaningful Use.

In interviews, multiple UCs spoke to the benefit of in-depth collaboration and support between UC hospitals in idea formation and process design during PRIME. Notably, the UC Primary Care Collaborative began during DSRIP and furthered its purpose during PRIME, allowing for cross-learning and discussion on topics such as addressing social determinants of health, improving patient engagement, and strategies for implementing specific processes during PRIME (e.g., REAL/SO/GI data collection, perinatal care processes). UCs also discussed developing a dashboard to calculate and visualize metrics in a standardized and consistent method.

## PRIME Infrastructure Building Metrics

The DMPHs were able to self-identify infrastructure building goals, called Process Measures and the steps to achieve these were Milestones. Entities were paid based on their achievement of Process Measures during the first 18 months of PRIME. More than 400 Milestones were selected and the majority were for DY 11 in Domain 1 and 2 (Exhibit 24). On average, the entities selected about 3 Milestones, but some entities did not select any Milestones. Kaweah had the highest number of Milestones (44, data not shown), followed by Oak Valley (24). Some Milestones included multiple tasks; the most frequent tasks included conducting a gap analysis (55, data not shown); developing and disseminating literature reviews regarding best practices (32); identify screening tools (31); documenting protocols, writing or editing job descriptions (21); hiring key staff (20); identifying, engaging, educating, and meeting with groups of stakeholders (17). Other common tasks included making changes to the EHR to identify and collect data about PRIME patients. In DY11 only one Milestone was not achieved. In DY12 about 60% were achieved at the mid-year and about 94% were achieved by the end of DY12 (data not shown).

**Exhibit 24. Total Number of DMPH Milestones for Infrastructure Metrics**
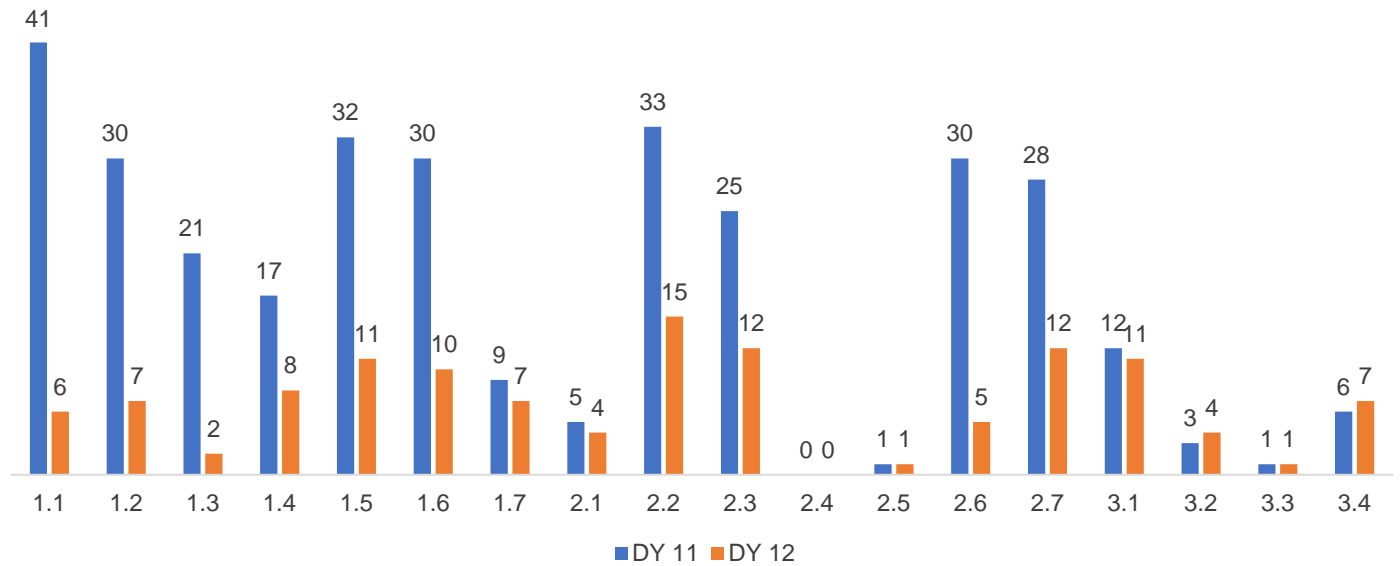


*Source: PRIME self-reported data to DHCS. No DMPHs selected 2.4 for implementation; 1 selected and subsequently dropped 2.5 and 1 selected 3.3.*

## Project Selection

DPHs were required to select at least 9 projects, including 6 required projects in Domains 1 and 2, and at least 1 extra project from each domain. DMPHs were required to select at least 1 project from any domain. In the interim survey, hospitals identified the projects they had selected (Exhibit 25). The most commonly selected projects by DPHs were the required Behavioral Health Integration, Primary Care Redesign, Specialty Care Redesign, and Care Transitions projects. Among optional projects, DPHs most commonly selected Million Hearts (7), Pain Management (9), and High Cost Imaging (7). DMPH Non-CAHs most often selected Care Transitions (12) and Complex Care Management for High-Risk Populations (9) and DMPH CAHs most often selected Pain Management (4), Behavioral Health Integration (3), and Primary Care Redesign (3).

From DY 11 to DY 13, some hospitals added or dropped PRIME projects. Among DPHs, reasons for dropping or switching to alternative projects include low baseline rates or having numerators too small to meet the 30-patient criteria. The 2 DPHs that dropped projects subsequently added projects to comply with the minimum required number of 9 projects. Fewer DPHs switched projects and did so at a lower frequency than DMPHs. Among DMPHs, the main reason cited for dropping projects was inability to access outpatient data required to report on the PRIME metrics. DMPHs did not always add replacement projects for the ones that they dropped, and only had to ensure that they met a minimum of 1 project. Between DY 11 and DY 13, 9 of 32 DMPHs dropped or changed projects from what was in their original 5-Year PRIME Plan. Two of these DMPHs dropped more than 3 projects without replacing them. A complete listing of the projects that were selected, added, or dropped is in Exhibit 358 (DPH) Exhibit 359 (DMPH-non CAH) and Exhibit 360 (DMPH-CAH). The most commonly dropped projects were 1.4 Patient Safety and 1.5 Million Hearts (4 each), and 1.6 Cancer Screening (3). There was not a specific project that was commonly added; 1.5 Million Hearts, 1.7 Healthier Foods, and 2.6 Pain Management were the most common at 1 addition each.

**Exhibit 25. PRIME Project Selection by Hospital Type**



Legend: ■ DPH County  ■ DPH UC  ■ DMPH non-CAH  ■ DMPH CAH
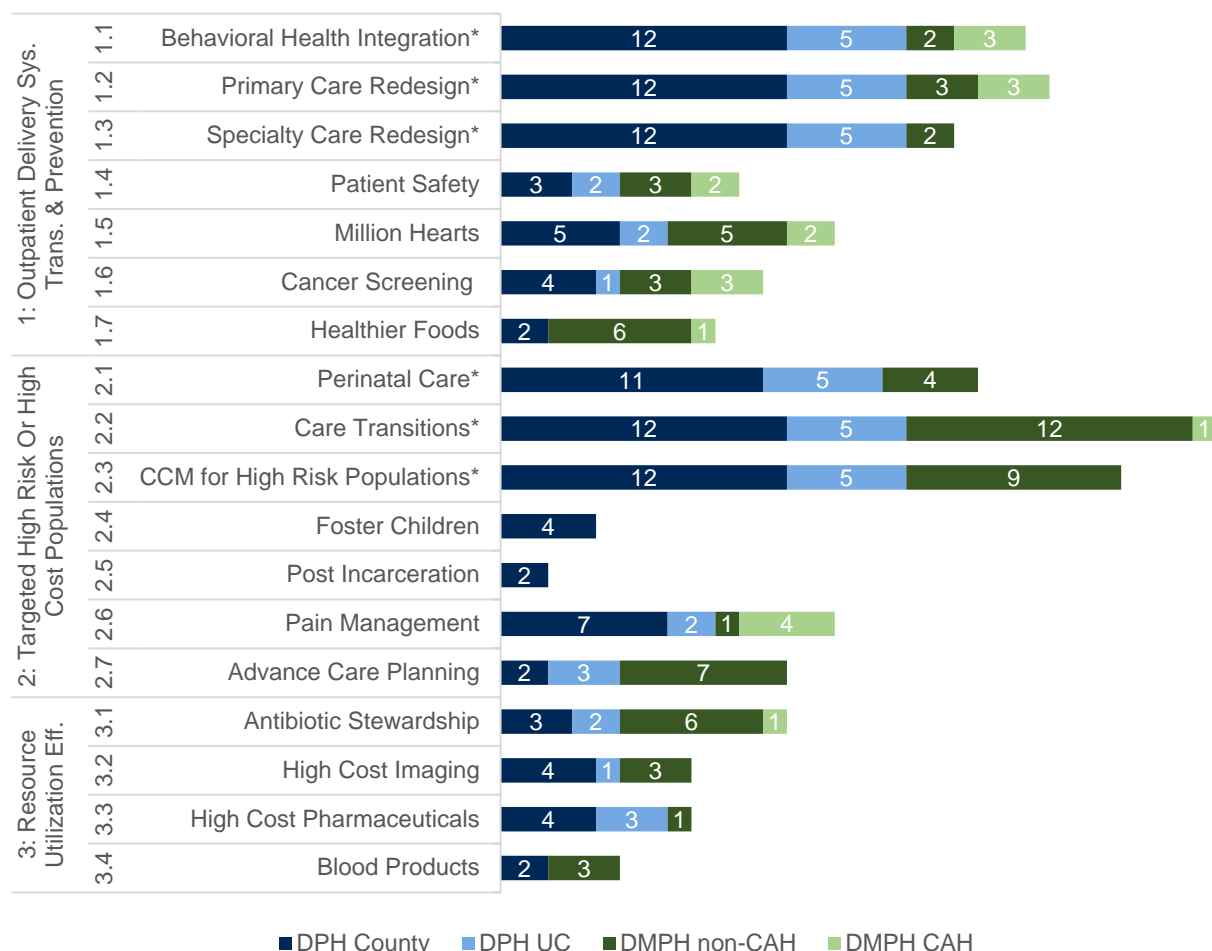
*Source: DHCS 5 year project selection (2/4/2019).*

*Note: * indicates the project is required for DPHs. Project 2.1 was a required project, but San Mateo does not provide labor and delivery and thus did not participate in the project.*

In the interim survey, hospitals reported reasons for selection of optional projects. DPHs reported alignment with organizational aims and goals for 93% of projects they selected (Exhibit 26). This reason was also most frequently cited by DMPHs (76%). Ease of implementation and low resource requirements were least frequently cited by both types of hospitals. For project-specific motivators for selection of projects, see Exhibit 400.

In interviews, hospitals also noted selecting projects that presented an opportunity for advancement in a domain they considered a priority but might not have had the capacity to achieve if not for PRIME funding and support.

**Exhibit 26. Motivators for Choosing PRIME Projects by Hospital Type**
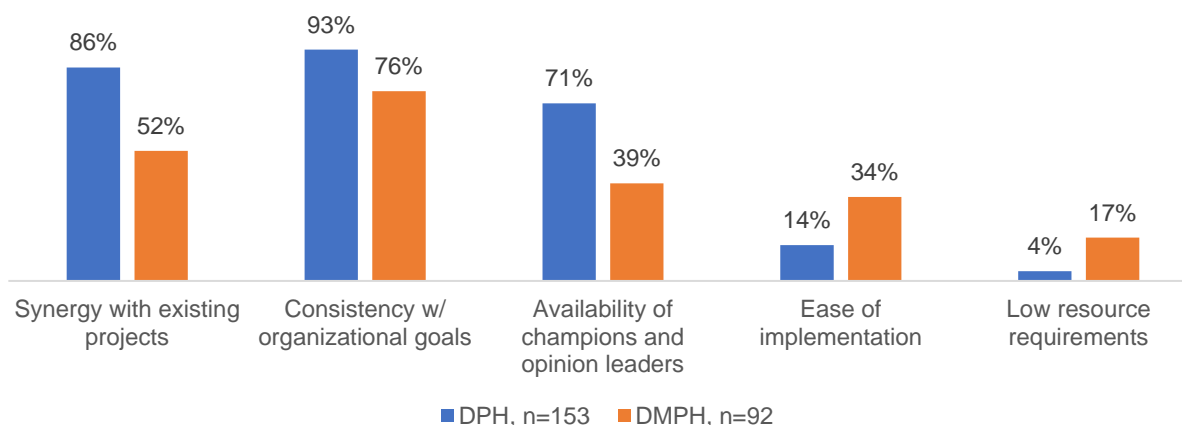


Source: UCLA analysis of the Interim survey, data received April to May 2018.
Notes: N=245 project selections among 52 hospitals who completed interim survey.
Analysis is based on total of 153 projects selected by DPHs and 92 projects selected by DMPHs, excluding Projects 2.4 and 2.5. Percentages do not add up to 100% because hospitals were able to select more than one reason for choosing PRIME projects. Analysis includes participation by DPHs in required projects. DPH: designated public hospital; DMPH: district and municipal public hospital, includes CAHs.

In the interim survey, DPHs (28%) most commonly reported not identifying or examining project goals and DMPHs (45%) most commonly identified lack of resources as reasons for not selecting projects (Exhibit 27). Project-specific motivators for choosing PRIME projects are presented in Exhibit 401 and are discussed in more detail in the project-specific sections of this report.

**Exhibit 27. Reasons for Not Choosing PRIME Projects, by Hospital Type**
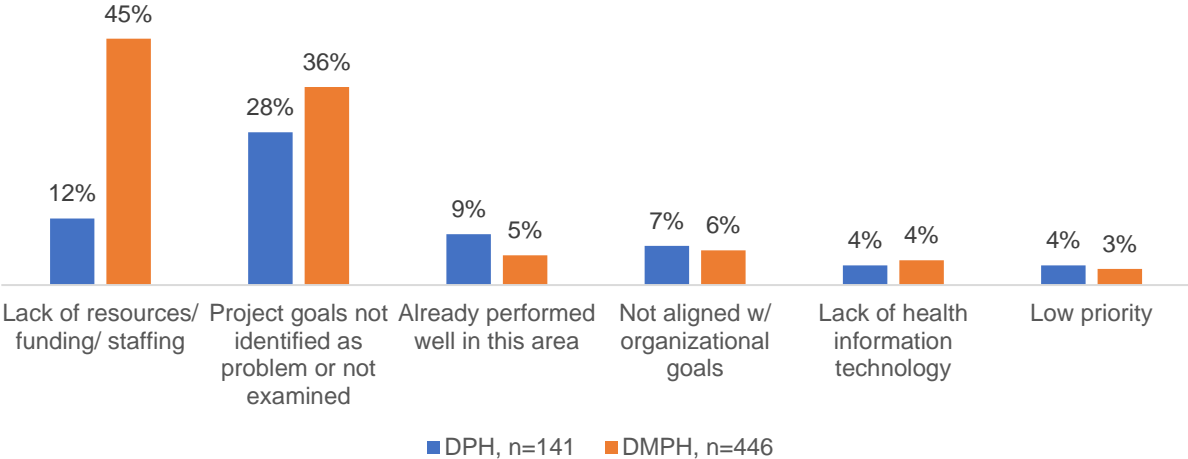


*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=587 instances of project non-selection among 52 hospitals who completed interim survey. Analysis is based on total of 141 projects not selected by DPHs and 446 projects not selected by DMPHs, excluding Projects 2.4 and 2.5 which were not assessed in the interim survey. Percentages do not add up to 100% because hospitals were able to select more than one reason for not selecting PRIME projects. DPH: designated public hospital; DMPH: district and municipal public hospital, includes CAHs.*

## Overall Project Implementation Strategies

### Staff Development and Training

#### Team-Based Care Capacity

In the interim survey, hospitals reported on organization of providers in teams and training of providers in team-based care. Among the 17 DPHs, all reported training providers in team-based care delivery before and during PRIME; five DPHs reported expanding this training from some to all of their providers during PRIME (Exhibit 28). All but one DPH reported organizing their providers in care teams during PRIME. Among the 35 DMPHs, training and organization in care team delivery expanded during PRIME; half of DMPHs reported that they provided training (17) and organized their providers in care teams (19) during PRIME.

**Exhibit 28. Team-Based Care Before and During PRIME, by Hospital Type**
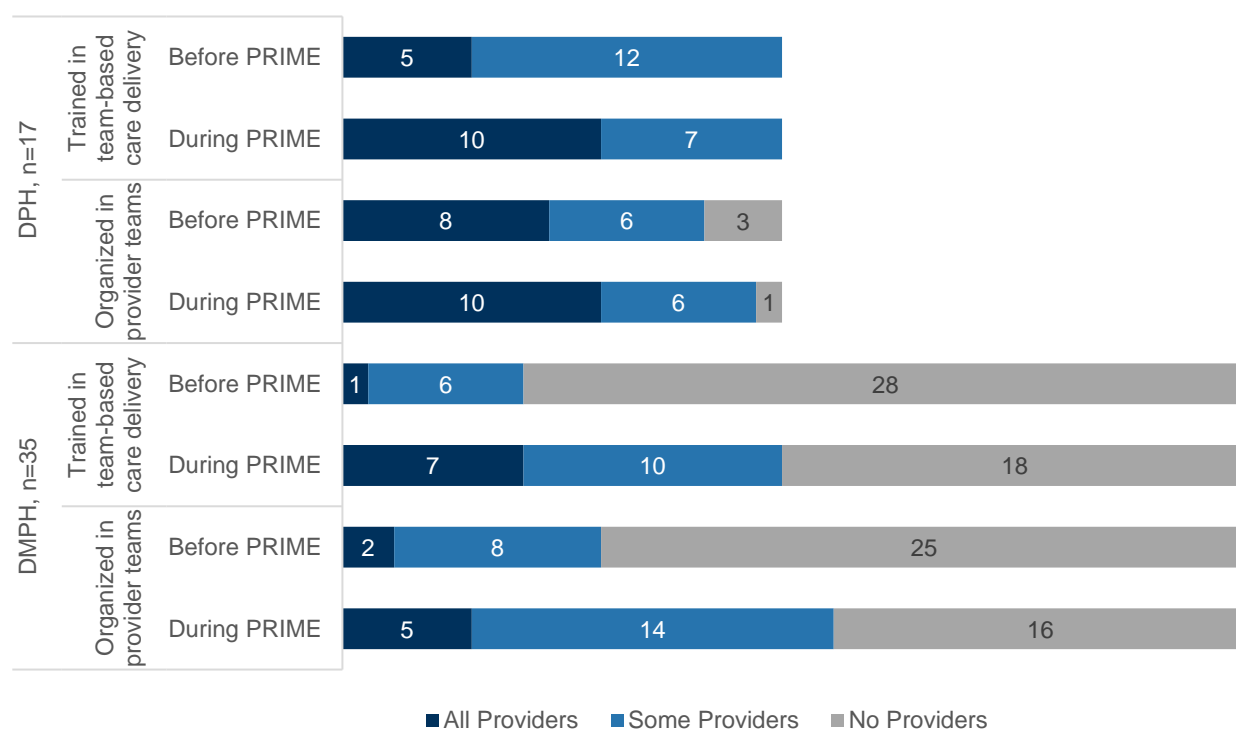


■ All Providers   ■ Some Providers   ■ No Providers

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey. DPH: designated public hospital; DMPH: district and municipal public hospital, includes CAHs.*

### Level of Effort in Implementing PRIME Projects

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings

were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10.0). All types of hospitals reported spending the highest level effort in implementing projects (DPH 7.6, DMPH-non CAH 7.5, CAH 8.5; Exhibit 29).

For project-level ratings of effort, see Exhibit 403 (Appendix G. Project-Specific Survey Results).

**Exhibit 29. Average Level of Effort across All PRIME Projects, by Hospital Type**
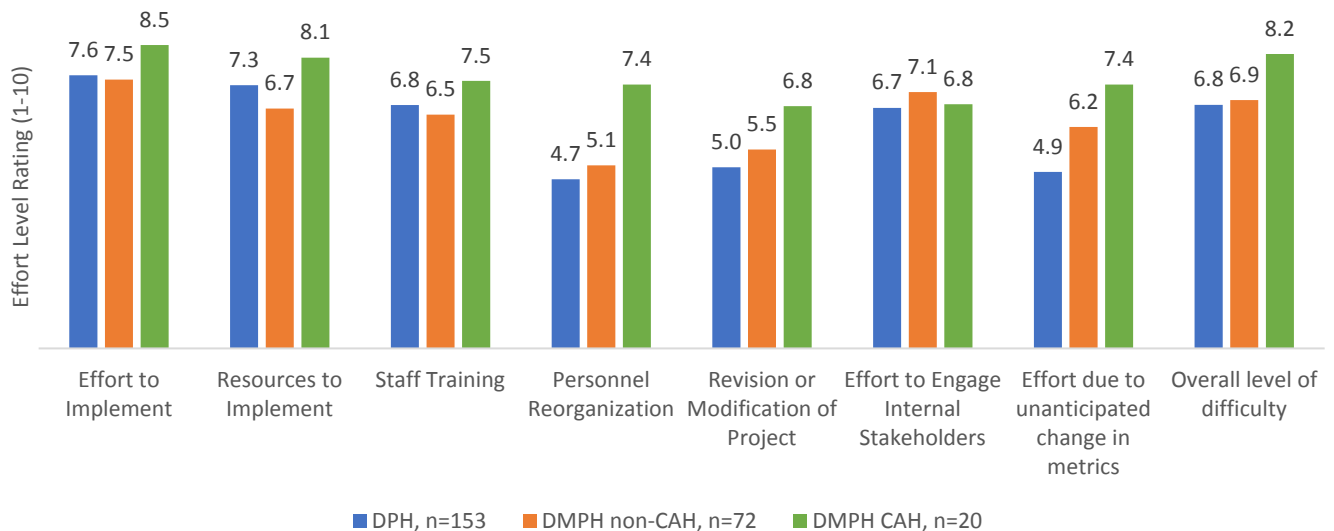


*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: Analysis is based on data from 52 hospitals who participated in the interim survey. Values represent mean ratings of effort level (range 1-10, with higher value representing higher effort) pertaining to each category of effort. Analysis is based on total of 153 projects selected by DPHs, 72 projects selected by DMPHs (with no critical access hospital designation), and 20 projects selected by CAHs (DMPHs with critical access hospital designation), excluding Projects 2.4 and 2.5. DPH: designated public hospital; DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation.*

In interviews, most hospitals discussed struggles with a specific project or with an infrastructural insufficiency, including difficulties with staff capacity, challenges related to health information technology, and the scope or work required to successfully meet metrics. Perspectives about how to gauge difficulty implementing PRIME projects differed both within hospitals and across hospitals. More specific description of effort ratings are presented within project-specific sections of the evaluation.

### Staff Hiring and Reassignment

In interviews, the majority of hospitals noted the importance of PRIME funding on their ability to expand staff capacity, both in establishing dedicated leadership positions and in hiring additional frontline staff to implement PRIME processes. For example, a DMPH noted:

> *"Just directly funded by PRIME budget at our facility, you have 54 added FTEs [full-time equivalent] that did not exist prior to PRIME." (Kaweah Delta)*

In contrast, a DPH discussed their intention to implement PRIME projects using only existing staff time and resources:

> *"One of the goals of PRIME was not to add additional workforce. It was supposed to be within the number that we had, and so you've added on, we have added on, lots of projects without adding on multiple people." (Contra Costa)*

As workflows for PRIME processes evolved and were formalized, hospitals often reassigned responsibilities to dedicated staff members. One hospital noted how workflow reorganization highlighted the importance of filling specific staff roles:

> *"Screening before was, I think, ad hoc and provider-driven. Now, it's universal and driven by the registration staff…I think PRIME helped motivate us to fill vacant positions and increase the number of positions where we felt like there was a gap, and created a lot of momentum." (Alameda)*

For a few hospitals, reassignment of PRIME duties to existing staff led to competing priorities and pushback, particularly for staff members splitting their time between PRIME implementation activities and clinical duties.

### Staff Training, Monitoring, and Feedback

In the interim survey results, frequency of provider training varied across PRIME projects. Provider training most commonly occurred quarterly or annually, with a few exceptions (Exhibit 30). For example, training for ambulatory patient safety and cancer screening and follow-up most commonly occurred at the point of hire. There were 7 projects in which at least one hospital reported not training providers.

**Exhibit 30. Frequency of Provider Training for PRIME Projects**



Horizontal stacked bar chart showing frequency of provider training by project. Legend: Quarterly, Annually, When hired, Never, Not reported.

| Project | Quarterly | Annually | When hired | Never | Not reported |
|---|---|---|---|---|---|
| 3.4: Blood Products, n=5 | 2 | 2 | 1 | | |
| 3.3: High-Cost Pharmaceuticals, n=8 | 6 | 2 | | | |
| 3.2: High-Cost Imaging, n=8 | 2 | 3 | 1 | 2 | |
| 3.1: Antibiotic Stewardship, n=12 | 6 | 3 | 3 | | |
| 2.7: Advance Care Planning, n=13 | 3 | 7 | 2 | | 1 |
| 2.6: Pain Management, n=14 | 3 | 7 | 4 | | |
| 2.3: CCM for High Risk Populations,… | 11 | 4 | 7 | 3 | 1 |
| 2.2: Care Transitions, n=30 | 12 | 9 | 6 | 1 | 2 |
| 2.1: Perinatal Care, n=20 | 6 | 7 | 5 | 1 | 1 |
| 1.7: Healthier Foods, n=10 | 2 | 6 | 1 | 1 | |
| 1.6: Cancer Screening, n=11 | 3 | 3 | 4 | 1 | |
| 1.5: Million Hearts, n=17 | 6 | 7 | 2 | | 2 |
| 1.4: Patient Safety, n=12 | 2 | 2 | 7 | | 1 |
| 1.3: Specialty Care Redesign, n=19 | 6 | 6 | 5 | 1 | 1 |
| 1.2: Primary Care Redesign, n=23 | 8 | 5 | 6 | 2 | 2 |
| 1.1: Behavioral Health Integration,… | 7 | 8 | 6 | | 1 |

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey. CCM: complex care management.*

In interviews, discussions about training focused on training providers to implement new or revised screening or data collection protocols (e.g., depression, substance abuse). Hospitals also discussed efforts to train staff in health coaching and motivational interviewing to facilitate care coordination and panel management.

Across all PRIME projects, participating hospitals most commonly reported monitoring and providing feedback to providers at least quarterly (Exhibit 31). Few hospitals reported conducting no monitoring or feedback for providers under PRIME.

**Exhibit 31. Frequency of Monitoring and Feedback for Providers by PRIME Project**
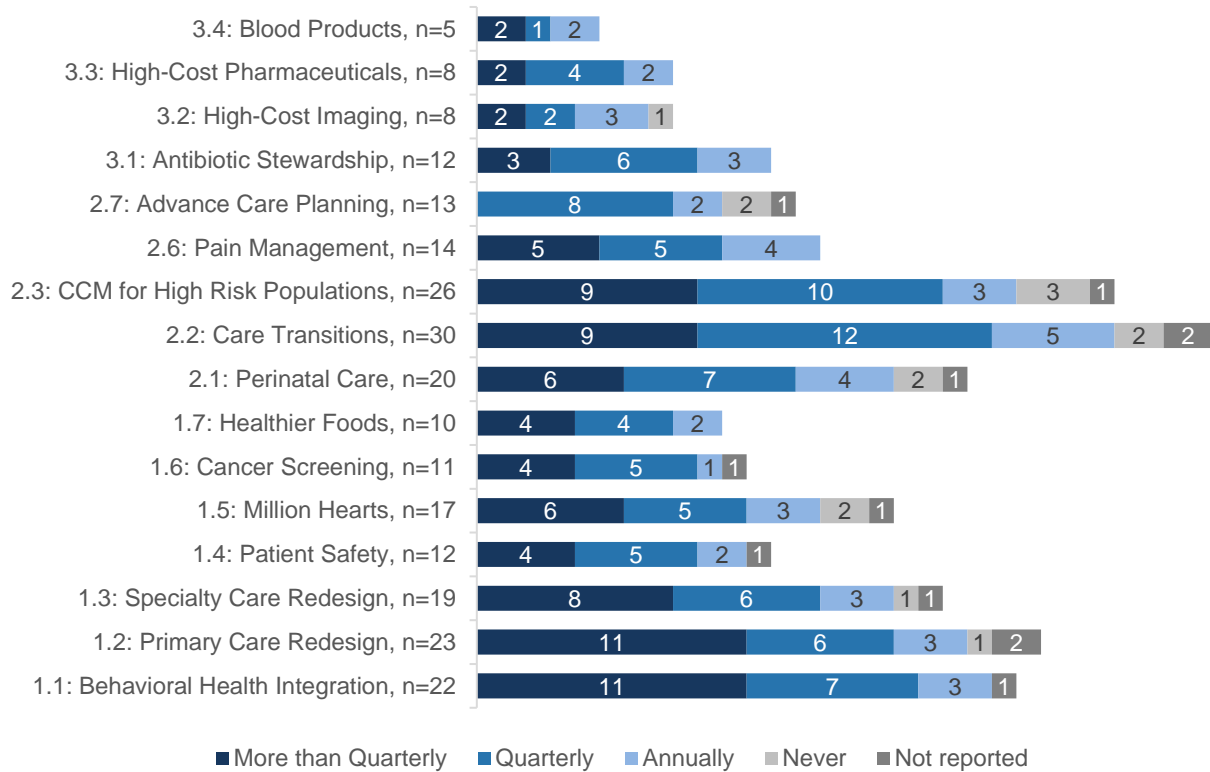


Source: UCLA analysis of the Interim survey, data received April to May 2018.
Notes: N=52 hospitals who participated in the interim survey.

Over three quarters of hospitals reported that they provided monitoring and feedback for PRIME projects to medical directors (46, 88%), physicians (43, 83%), clinic administrators (44, 85%), and care teams (40, 77%). Clinical staff most commonly received feedback based on project benchmarks, while comparison to peers was less common (Exhibit 32).

**Exhibit 32. Types of Feedback Given to Hospital Staff about PRIME Projects**
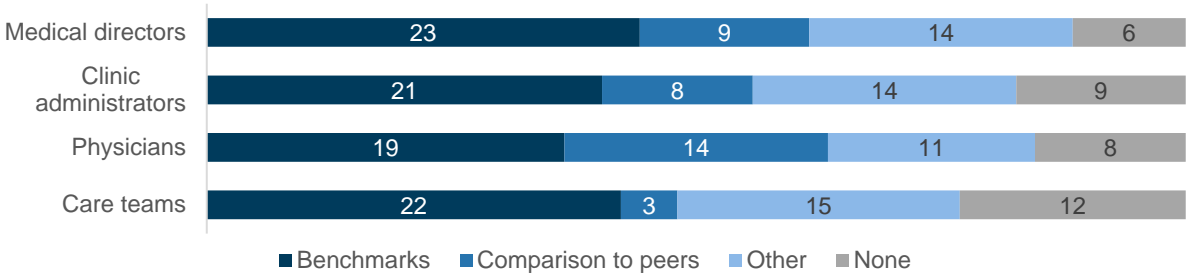


| | Benchmarks | Comparison to peers | Other | None |
|---|---|---|---|---|
| Medical directors | 23 | 9 | 14 | 6 |
| Clinic administrators | 21 | 8 | 14 | 9 |
| Physicians | 19 | 14 | 11 | 8 |
| Care teams | 22 | 3 | 15 | 12 |

*Source: UCLA analysis of the Interim survey, April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey. "Other" responses included hospitals who noted providing chart review or audit results, reports on global quality measures not specific to PRIME, or multiple types of feedback to hospital staff.*

In interviews, strategies for monitoring and reporting feedback to staff included using data dashboards, sending periodic overview reports, offering in-person feedback and coaching, and integrating PRIME metrics into job performance reviews. Data dashboards were often structured to allow staff to examine their own individual-level performance in comparison to aggregate measures of performance among others in their clinics or departments.

In addition to reporting benchmarks and comparison to peers, other types of feedback provided to medical directors, clinic administrators, physicians, and care teams included: chart review or audit results and reports on global quality measures not specific to PRIME. In interviews, examples of feedback included offering one-on-one feedback and coaching to improve performance, coupling performance reports with tip sheets, and discussing PRIME metric performance during performance reviews.

## Staff and Patient Engagement in PRIME Implementation

In the interim survey, hospitals reported whether they involved staff and patients in planning PRIME projects. Overall, almost all DPHs and the majority of DMPHs reported involving senior leadership, administrative staff, clinical support staff, and providers in quality improvement projects related to PRIME (Exhibit 33).

## Exhibit 33. Involvement of Staff in PRIME-Related Quality Improvement

| | | |
|---|---|---|
| **DPH, n=17** | Providers | 17 |
| | Clinical support staff | 16 |
| | Administrative staff | 16 |
| | Senior leadership | 15 |
| **DMPH, n=35** | Providers | 28 |
| | Clinical support staff | 30 |
| | Administrative staff | 26 |
| | Senior leadership | 26 |

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey. DPH: designated public hospital; DMPH: district and municipal public hospital, includes CAHs.*

Patient engagement in PRIME planning varied across projects (Exhibit 34). In general, engagement of patients was lower than that of hospital staff. In the survey, hospitals reported that their patient engagement in project planning was highest for Projects 1.1 (Behavioral Health Integration, 45% of hospitals), 1.2 (Primary Care Redesign, 52%), 1.7 (Obesity Prevention, 44%), and 2.6 (Chronic Pain Management, 43%). In contrast, very few hospitals reported engaging patients in planning for projects within Domain 3.

## Exhibit 34. Engagement of Patients in PRIME Planning
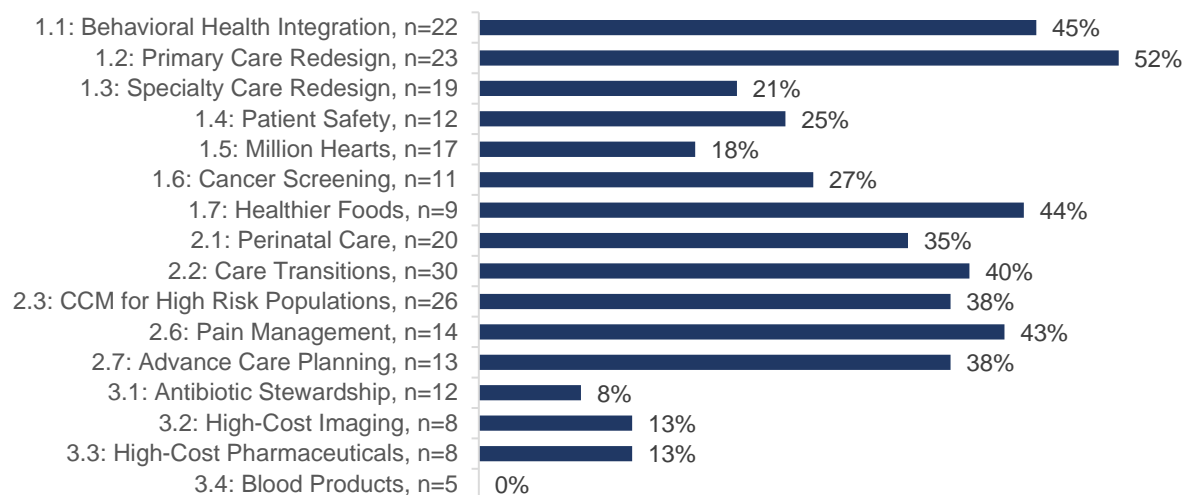
| Project | Percentage |
|---|---|
| 1.1: Behavioral Health Integration, n=22 | 45% |
| 1.2: Primary Care Redesign, n=23 | 52% |
| 1.3: Specialty Care Redesign, n=19 | 21% |
| 1.4: Patient Safety, n=12 | 25% |
| 1.5: Million Hearts, n=17 | 18% |
| 1.6: Cancer Screening, n=11 | 27% |
| 1.7: Healthier Foods, n=9 | 44% |
| 2.1: Perinatal Care, n=20 | 35% |
| 2.2: Care Transitions, n=30 | 40% |
| 2.3: CCM for High Risk Populations, n=26 | 38% |
| 2.6: Pain Management, n=14 | 43% |
| 2.7: Advance Care Planning, n=13 | 38% |
| 3.1: Antibiotic Stewardship, n=12 | 8% |
| 3.2: High-Cost Imaging, n=8 | 13% |
| 3.3: High-Cost Pharmaceuticals, n=8 | 13% |
| 3.4: Blood Products, n=5 | 0% |

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey.*

While patient engagement was seldom discussed in interviews, a few hospitals discussed efforts to engage patients in PRIME planning. Strategies to engage patients

in planning included gaining perspectives from patient focus groups, engaging ongoing patient advisory councils, and using existing (e.g., CAHPS) and self-developed questionnaires to gain patient perspectives about receipt of and satisfaction with care.

## Quality Improvement Activities

### *Learning Collaboratives*

PRIME includes a learning collaborative component in order to promote peer-to-peer learning and system transformation. DHCS contracted with Harbage Consulting to host learning collaboratives to support participating hospitals as they implemented PRIME projects. These included in-person and web-based sessions. In addition to learning collaboratives covering overarching PRIME implementation, topic-specific learning collaboratives (TLCs) were convened to focus on implementation of specific PRIME projects. The activities were designed to bring together PRIME project leaders to share promising practices and lessons learned. Topics for discussion and technical assistance were based on input from PRIME hospitals. Furthermore, the Safety Net Institute and the California Association of Public Hospitals also provided technical assistance to their member hospitals. PRIME hospitals also reported participating with other learning collaboratives including the California Maternal Quality Care Collaborative (CMQCC), which supports the data abstraction for a majority of metrics in Project 2.1. Annual PRIME Learning Collaborative (PRIMEd) conferences were held in 2016, 2017, and 2018 in South San Francisco (2016) and Sacramento, California (2017 and 2018) (Exhibit 35).

The first conference, the PRIME Reporting DY 11 Data Summit, was co-hosted by DHCS, SNI, and DHLF on October 18, 2016. The conference included representatives from all 54 PRIME entities. The conference focused on discussion of strategies, successes, and lessons gained from PRIME implementation in DY11, as well as data-related strategies for approaching the shift from pay-for-reporting to pay-for-performance.

The second conference, held November 14-15, 2017, welcomed representatives from all 54 PRIME entities, as well as hospital associations. The conference focused on topics around patient-centered health care and integration of care. The majority of speakers were part of PRIME entities (80%), while 20% of the conference time was allocated to speakers from DHCS providing insights on provider and community engagement in health care. The time assigned to speakers from PRIME entities was split equally between the conference topics of patient-centered care and integration of care.

The third conference, held October 29-30, 2018, was framed around quality improvement strategies. Around 70% of the conference time was allocated to QI related topics, including 30% of the talks covering it exclusively. Another 30% of the time had been split up to cover topics around patient engagement (10%), performance data presentation (10%) and lessons learned from DSRIP, the precursor to PRIME (10%). Overlapping with QI talks, topic-specific learning collaboratives (TLC) included meetings on mental health, obesity prevention, care transitions, and health disparities the first day of the conference. The majority of speakers in the third annual conference were not part of PRIME hospitals (75%). DHCS representatives gave talks on QI strategies in health disparities, medication assisted treatment (MAT), data presentation, and communication. Other speakers from the Institute of Healthcare Improvement, Partners HealthCare, and OneCity Health at NY Health complemented the information from PRIME and DHCS speakers on QI strategies and reflected on lessons PRIME could learn from DSRIP implementation. Harbage Consulting conducted post-conference evaluations of PRIMEd Annual Conference attendees. In Harbage Consulting's analysis of the evaluation feedback provided about the 2018 PRIMEd Annual Conference, the overall rating was 4.4 out of 5; the highest rated breakout session was about identifying health disparities and achieving health equity (5/5) and the highest rated plenary session was about California's Medication Assisted Treatment Expansion Project (4.4/5).

**Exhibit 35. Timeline for PRIME Learning Collaboratives**



*Source: TLC meeting notes, data received April 2019.*

Twelve topic-specific learning collaboratives (TLC) have been formed to address topics related to PRIME projects (Exhibit 36). The TLCs are designed to support PRIME entities in undertaking quality improvement projects through active, team-based learning and dissemination of best practices to address common challenges. Meetings started in April 2018 with all 12 groups meeting regularly through December 2018. As of the date of this report (August, 2019), 6 TLC groups continued to meet regularly. Some TLCs focused on specific projects while others addressed topics that are overarching, such as patient engagement.

**Exhibit 36. PRIME Topic-Specific Learning Collaboratives through DY13**

| TLC Name | PRIME Project | Number of Participants | Meeting Timeline | Number of Entities in Meetings | Number of Meetings | Meeting Topics |
|---|---|---|---|---|---|---|
| Mental Health[2] | Multiple | 10<br>DPH 3; DMPH 7 | 4/30/2018 – 12/10/2018 | 5-8* | 8 | TLC goals, objectives and resources<br>Integrating mental health and primary care<br>Depression screening and treatment<br>Tobacco use, substance use screening and treatment<br>PRIME improvement efforts |
| Diabetes Management | 1.2 | 22<br>DPH 7; DMPH 8 | 4/16/2018 - 10/26/2018 | 3-6* | 5 | TLC goals and objectives<br>TLC Charter<br>Entity infrastructure/resources<br>PRIME improvement efforts<br>The value of community coalitions in addressing diabetes<br>HbA1c poor control<br>PRIME speaker<br>Future TLC meeting topics<br>Health disparities and diabetes (with CMS and DHCS speakers) |
| Health Disparities | 1.2 | 26<br>DPH 6; DMPH 9 | 4/17/2018 - 10/29/2018 | 3-14* | 5 | TLC goals, objectives and Charter<br>Performance data<br>PRIME improvement efforts<br>REAL, SO/GI<br>Future TLC meeting topics<br>Health disparities and diabetes (with CMS and DHCS speakers) |
| Patient Safety | 1.4 | 10<br>DPH 2; DMPH 8 | 5/16/2018 - 9/19/2018 | 3-5* | 4 | TLC goals and objectives<br>TLC Charter<br>Performance data<br>PRIME speakers |
| Cancer Screening | 1.6 | 13<br>DPH 4; DMPH 9 | 4/18/2018 - 6/27/2018 | 2-6 | 3 | TLC goals and objectives<br>TLC Charter<br>Entity resources |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | PRIME improvement efforts<br>Performance data |
| Obesity Prevention and Healthier Food Initiatives | 1.7 | 9<br>DPH 1; DMPH 8 | 4/24/2018 - 8/28/2018 | 4-6 | 4 | TLC goals and objectives<br>State speaker (DHCS)<br>Performance data<br>PRIME improvement efforts |
| Maternal and Infant Health | 2.1 | 7<br>DPH 4; DMPH 3 | 4/16/2018 - 11/9/2018 | 6-7 | 7 | TLC goals and objectives<br>TLC Charter<br>Entity infrastructure/resources<br>Expert speaker<br>C-section reduction<br>Donor breastmilk<br>Prenatal and postpartum care<br>Exclusive breastfeeding<br>Addressing disparities in maternal mortality<br>PRIME improvement efforts<br>Future TLC meeting topics |
| Care Transitions | 2.2 | 22<br>DPH 6; DMPH 16 | 4/16/2018 - 12/10/2018 | 8-14* | 6 | TLC goals and objectives<br>TLC Charter<br>Entity infrastructure/resources<br>Performance data<br>HCAHPS<br>PRIME speaker<br>Ensuring a positive and seamless patient experience<br>Communicating with outpatient providers |
| Health Homes for Foster Children | 2.4 | 3<br>DPH 3 | 4/18/2018 – 12/14/2018 | 3 | 6 | TLC goals, objectives, performance data<br>Psychotropic medications<br>EHR integration across agencies<br>Oral health<br>PRIME speaker<br>Depression screening<br>State-level foster care reform efforts |

| Substance Use Disorders; Pain Management | 2.6 | 11<br>DPH 3; DMPH 8 | 5/24/2018 - 8/23/2018 | 6-7* | 5 | TLC goals and objectives<br>Chronic pain management teams<br>Patient engagement strategies<br>Multi-modal therapies<br>Safe prescribing guidelines<br>CA's Opioid Overdose Surveillance Dashboard |
|---|---|---|---|---|---|---|
| Patient Engagement | Multiple | 18<br>DPH 6; DMPH 12 | 5/15/2018 - 10/16/2018 | 3-10 | 5 | TLC goals and objectives<br>TLC Charter<br>Communicating with patients<br>Identifying and engaging high-risk patients<br>Integrating patient engagement into hospital processes<br>Engaging patients on screening and preventive services<br>Entity infrastructure/resources |
| Tobacco Cessation | Multiple | 6<br>DMPH 6 | 5/31/2018 - 9/27/2018 | 4-6* | 5 | TLC goals and objectives<br>TLC Charter<br>PRIME improvement efforts<br>PRIME speakers<br>Expert speaker<br>Performance data |

*Source: TLC meeting notes, data obtained in April 2019. Notes were not available for all TLC meetings. Data validated by Harbage Consulting.*

*Notes: * Indicates information of attendees was not available for one or more meetings.*

*[1]: DY13 is from July 1, 2017 to June 30, 2018. The TLCs operate on a calendar year versus demonstration year basis.*

*[2]: In May 2018, this TLC began meeting twice monthly.*

Webinars were held on a series of TLC related topics, including quality improvement opportunities for Learning Collaboratives, how to measure and calculate PRIME metrics, and a description of the payment protocols (Exhibit 37).

**Exhibit 37: PRIME Webinars through DY13**

| Webinar | Related TLC group/s | Date |
|---|---|---|
| Baby Friendly Hospital Webinar | Maternal and Infant Health | 1/17/2017 |
| Tobacco Cessation and Counseling Webinar | Tobacco Cessation | 1/20/2017 |
| PRIME Learning Collaborative Kick-off Webinar | All | 2/24/2017 |
| PRIME Platform Webinar Document Guide | All | 8/22/2017 |
| Unearned Funding Webinar | All | 9/28/2017 |
| Hypertension QI Collaborative Webinar | Multiple | 10/26/2017 |
| External Evaluation Webinar | All | 11/11/2017 |
| Fundamentals of Quality Improvement – Getting Started | All | 2/27/2018 |
| Fundamentals of Quality Improvement – Applying QI Data and Improvement | All | 4/6/2018 |
| Fundamentals of Quality Improvement – Supporting QI Projects | All | 5/4/2018 |
| Unearned Funding Webinar | All | 8/30/2018 |

*Source: PRIMEone and TLC meeting notes, data received April 2019.*

*Rapid Cycle Improvement*

Hospitals reported on their use of quality improvement strategies in the interim survey. Use of rapid cycle improvement was common across all projects, with a few exceptions (Exhibit 38). For example, although all participating hospitals reported using rapid cycle improvement for Projects 3.3 (High-Cost Pharmaceuticals) and 3.4 (Blood Products), few reported doing so for Projects 1.7 (Obesity Prevention, 33%) and 2.7 (Advanced Care Planning, 46%).

**Exhibit 38. Use of Rapid Cycle Improvement for PRIME Projects**



| Project | % |
|---|---|
| 1.1: Integration of Behavioral Health and Primary Care, n=22 | 73% |
| 1.2: Ambulatory Care Redesign: Primary Care, n=23 | 70% |
| 1.3: Ambulatory Care Redesign: Specialty Care, n=19 | 84% |
| 1.4: Patient Safety in the Ambulatory Setting, n=12 | 92% |
| 1.5: Million Hearts Initiative, n=17 | 71% |
| 1.6: Cancer Screening and Follow-Up, n=11 | 82% |
| 1.7: Obesity Prevention and Healthier Foods Initiative, n=9 | 33% |
| 2.1: Improvements in Perinatal Care, n=20 | 70% |
| 2.2: Care Transitions: Integration of Post-Acute Care, n=30 | 67% |
| 2.3: Complex Care Management for High Risk Medical… | 69% |
| 2.6: Chronic Non-Malignant Pain Management, n=14 | 64% |
| 2.7: Comprehensive Advanced Illness Planning and Care,… | 46% |
| 3.1: Antibiotic Stewardship, n=12 | 92% |
| 3.2: Resources Stewardship: High-Cost Imaging, n=8 | 50% |
| 3.3: Resource Stewardship: High-Cost Pharmaceuticals, n=8 | 100% |
| 3.4: Resource Stewardship: Blood Products, n=5 | 100% |

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
Notes: N=52 hospitals who participated in the interim survey.

During interviews, many hospitals discussed PRIME as a driving factor in transforming their culture of quality improvement, and utilized established quality improvement principles (e.g., Lean Six Sigma) in planning for and implementing PRIME projects. For example, one hospital discussed how medical residents were encouraged to examine PDSA cycles for PRIME projects:

> *"Something that helps us out, … was the new requirements for ACGME, for medical residents…we work with the department of medical graduate education to utilize the medical residents to do PDSAs, to do little workflow changes, to try to measure, because they have to do it anyway." (Arrowhead)*

### REAL/SO/GI Implementation

In the interim survey, hospitals reported the status of their data collection processes for race, ethnicity and language/sexual orientation/gender identity (REAL/SO/GI; Exhibit 39). Over one third of hospitals (22 of 52) reported that they collected granular REAL/SO/GI data, trained staff to gather complete and accurate REAL/SO/GI data, and captured REAL/SO/GI data through the EHR prior to PRIME; another third reported implementing such processes during PRIME. Although use of validation, stratification, disparity identification, and dashboards for REAL/SO/GI data were less common, use of such processes expanded greatly during PRIME.

## Exhibit 39. Race, Ethnicity, and Language (REAL) and Sexual Orientation/Gender Identity (SO/GI) Processes under PRIME

| Process | Implemented Prior to PRIME | Implemented During PRIME | Planned to Implement During PRIME |
|---|---|---|---|
| Demographic data collection include granular REAL/SO/GI data | 22 | 18 | 5 |
| Staff trained to gather complete and accurate REAL/SO/GI data | 22 | 19 | 5 |
| REAL/SO/GI data captured through EHR/EMR | 22 | 17 | 7 |
| Validation process for REAL/SO/GI data | 15 | 15 | 9 |
| Have capacity to stratify performance metrics by REAL/SO/GI data | 10 | 19 | 7 |
| REAL/SO/GI data used to identify disparities for targeted interventions | 4 | 20 | 10 |
| Dashboards are used to share stratified performance measures with providers | 2 | 14 | 17 |

■ Implemented Prior to PRIME  ■ Implemented During PRIME  ■ Planned to Implement During PRIME

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey. REAL/SO/GI: Race, ethnicity, and language/Sexual orientation/Gender identity. Planned to implement during PRIME indicates hospitals plans by May 2018 for future activities. These activities may have occurred by the publication of this interim report.*

In interviews, hospitals often described the implementation of REAL/SO/GI data collection processes as a difficult and resource-intensive endeavor. For many, standardized REAL/SO/GI data collection processes were implemented for the first time during PRIME, which required careful consideration and piloting of workflows to determine the appropriate settings and protocols for data collection. Hospitals commonly discussed difficulties related to the sensitivity of REAL/SO/GI questions, which required comprehensive staff training to respond to pushback or confusion from patients about why they were being asked such questions. In particular, a few hospitals noted their intentions to be sensitive to cultural considerations regarding REAL/SO/GI collection, including patients' undocumented status and cultural preferences for privacy. While EHR systems had the potential to facilitate REAL/SO/GI data collection for some hospitals (e.g., patient reporting of REAL/SO/GI responses via patient portal), EHR limitations (e.g., limited ability to adjust data collection fields to include updated REAL/SO/GI questions) also posed as a hindrance to systematic data collection.

Illustrating the difficulties associated with implementing REAL/SO/GI data collection processes, one hospital noted:

*"Thinking about this, the one metric that really stands out to me is the SO/GI question. Internally, that was a struggle of how we collect that, how we ask the questions, who asked the questions, where we ask the questions that was put back when various parts of the organization in terms of who should ask it. Just that question alone has made this challenging. That's something that we have never collected before. That was a completely new process whereas REAL data, we collected that to some level just not the detailed level like we collected for PRIME. That was much of a change with SO/GI, very specifically stands out as a very challenging metric culturally for us to address." (Kern Medical)*

## Tobacco Screening

Given its impact on health outcomes and relevance to multiple PRIME projects, hospitals were asked to report detailed information about the frequency and settings in which they implemented tobacco screening, counseling, and cessation in the interim survey. All 17 DPHs reported having a standardized approach to tobacco screening and counseling (Exhibit 40). While the majority of DMPH non-CAHs (16 of 19) reported having a standardized approach to tobacco screening and counseling, two thirds of DMPH CAHs (12 of 16) did so.

**Exhibit 40. Frequency of Tobacco Screening and Counseling under PRIME by Hospital Type**
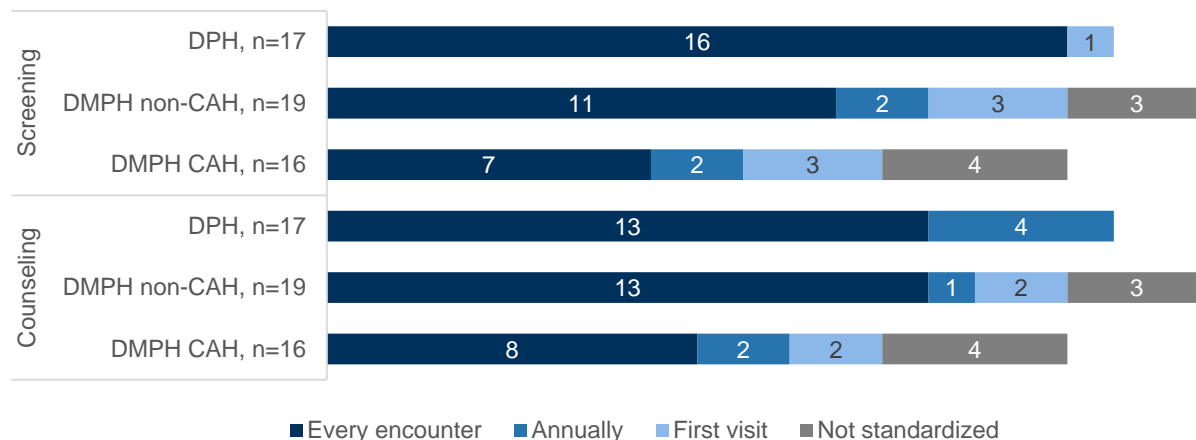


*Source: UCLA analysis of the Interim survey, data received April to May 2018. Notes: N=52 hospitals who participated in the interim survey. DPH: designated public hospital; DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation.*

There was variation in tobacco screening and counseling frequency in different clinical settings. Almost all DPHs reported having standardized processes for tobacco screening and counseling in primary, specialty, and inpatient care settings (Exhibit 41). Fewer than half of DMPH non-CAHs reported having standardized tobacco screening/counseling processes in primary and specialty care, although screening in the ED and inpatient settings was more common. Among DMPH CAHs, few reported screening for tobacco among specialty care patients.

**Exhibit 41. Settings of Standardized Tobacco Screening and Counseling under PRIME by Hospital Type**
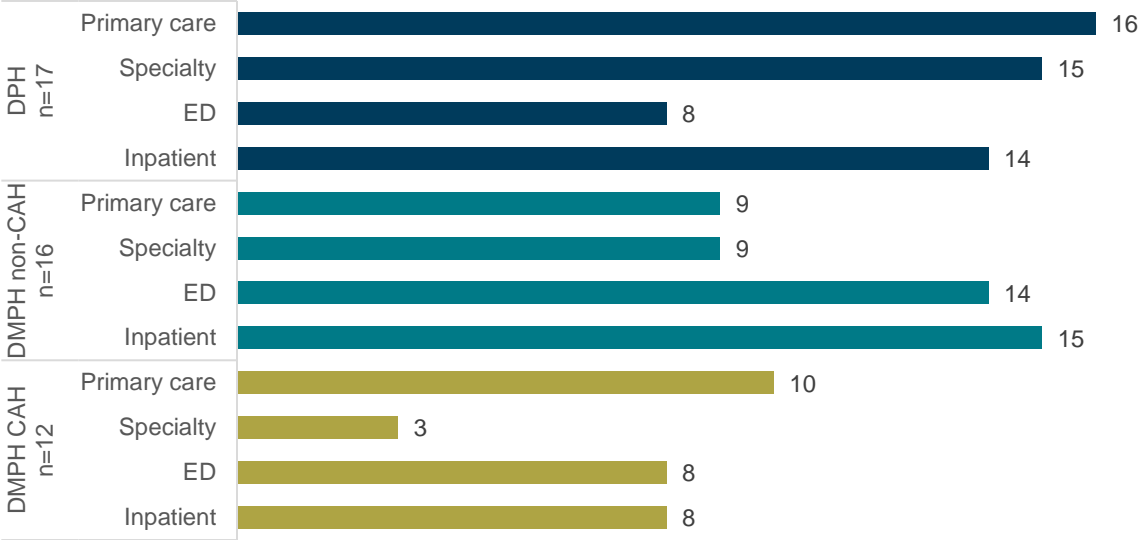


*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=45 hospitals that noted having a standardized approach to tobacco screening and counseling. DPH: designated public hospital; DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation.*

A high proportion of DPHs reported assessing history, type, and amount of tobacco used (16 of 17); providing education about risks and effects of tobacco products (14); and assessing patient desire for tobacco cessation assistance (12). Among DMPHs, the majority reported use of pharmacotherapy and appointment follow-up to assess adherence; few reported referral to tobacco cessation programs or outside resources. Among all hospital types, the most common strategy for tobacco cessation was pharmacotherapy (Exhibit 42).

**Exhibit 42. Use of Tobacco Cessation Processes under PRIME by Hospital Type**
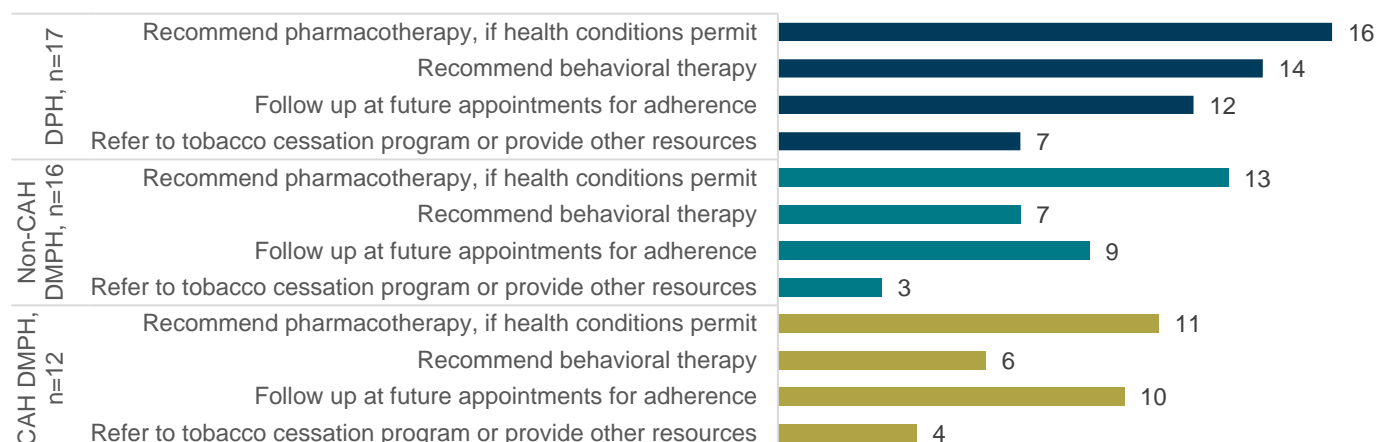


| DPH, n=17 | | |
|---|---|---|
| Recommend pharmacotherapy, if health conditions permit | | 16 |
| Recommend behavioral therapy | | 14 |
| Follow up at future appointments for adherence | | 12 |
| Refer to tobacco cessation program or provide other resources | | 7 |

| Non-CAH DMPH, n=16 | | |
|---|---|---|
| Recommend pharmacotherapy, if health conditions permit | | 13 |
| Recommend behavioral therapy | | 7 |
| Follow up at future appointments for adherence | | 9 |
| Refer to tobacco cessation program or provide other resources | | 3 |

| CAH DMPH, n=12 | | |
|---|---|---|
| Recommend pharmacotherapy, if health conditions permit | | 11 |
| Recommend behavioral therapy | | 6 |
| Follow up at future appointments for adherence | | 10 |
| Refer to tobacco cessation program or provide other resources | | 4 |

*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: N=52 hospitals who participated in the interim survey. DPH: designated public hospital; DMPH non-CAH: district and municipal public hospital without critical access hospital designation; DMPH CAH: district and municipal public hospital with critical access hospital designation.*

## Other Primary Care Processes

All 17 DPHs reported that their primary care physicians practiced medication reconciliation, compared to 74% (26) of DMPHs. While almost three quarters (12, 71%) of DPHs reported that their primary care providers provided group visits (i.e., coordinated visits or education sessions with multiple patients sharing a similar condition or issue), fewer (4, 11%) DMPHs did.

In interviews, one hospital described their development of a group visit to improve diabetes control:

> *"We started a diabetes group visit. So titration could refer to that, but other providers could refer to that as well, and again, it's targeting patients who seem to have trouble controlling their hemoglobin A1C and when they come to the diabetes clinic they have the health education, a conversation with a pharmacist, a doctor, and a dietician." (San Joaquin)*

## Challenges and Solutions to Project Implementation

To gauge overall barriers and facilitators to PRIME implementation, hospitals were asked to report in the interim survey the types of challenges and solutions they encountered in each PRIME project in which they participated. Hospitals were asked to report challenges and solutions regarding PRIME data and metrics.

## Data-Related Challenges and Solutions

Across all projects, over half of hospitals reported that IT/EHR infrastructure lacking data query, tracking, or reporting functionality was the most challenging data issue in PRIME implementation (Exhibit 43). While variation in documentation was a major challenge among many DPHs, over half of DMPH/CAHs reported that manual tracking or chart review was one of their top two data-related challenges.

**Exhibit 43. Data-Related Challenges to Implementing PRIME across All Projects**
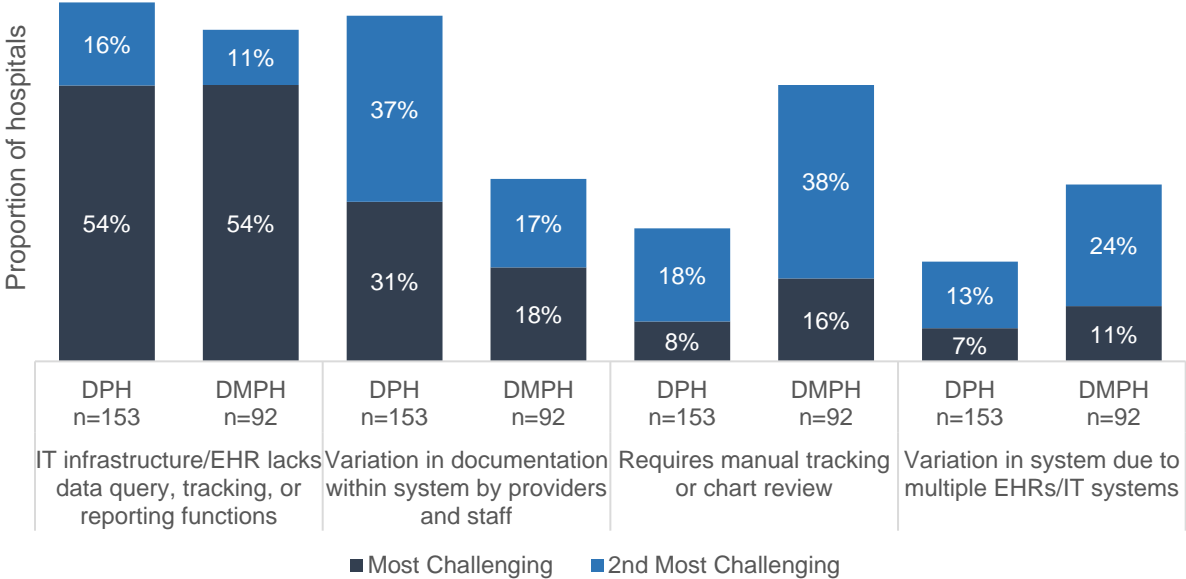


*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: Analysis is based on total of 153 projects selected by DPHs and 92 projects selected by DMPH/CAHs, excluding Projects 2.4 and 2.5. Hospitals only selected their top two challenges for each project. DPH: designated public hospital; DMPH: district and municipal public hospital.*

In interviews, discussion about data-related challenges focused on transitions to new enterprise EHRs, which required system-wide training and restructuring of workflows. Consistent with the survey results (Exhibit 43), many hospitals discussed the limitations of existing EHRs in data collection and reporting for PRIME metrics. The majority of hospitals reported that the most successful solutions to data-related challenges were system-wide EHR standardization and standardized processes for documentation (Exhibit 44), particularly among DPHs.

**Exhibit 44. Data-Related Solutions to Implementing PRIME across All Projects**
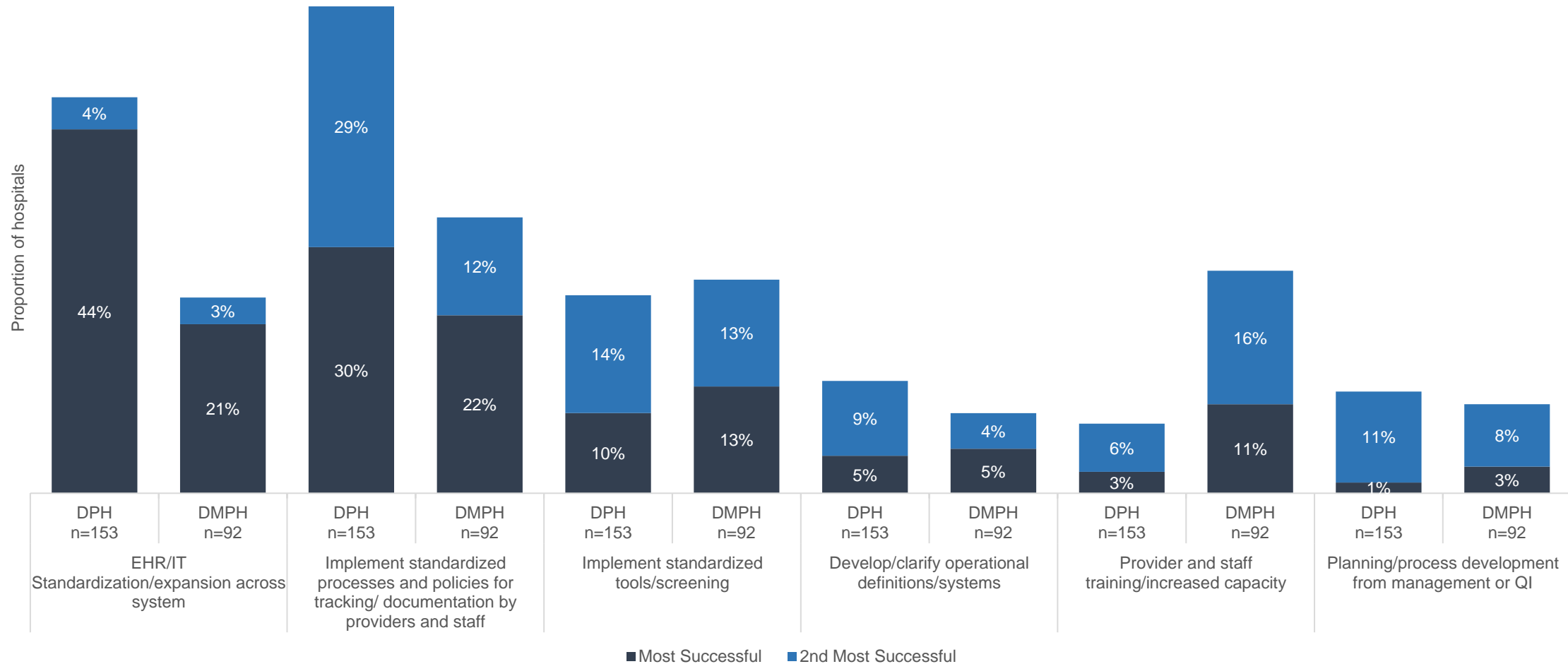
Source: UCLA analysis of the Interim survey, data received April to May 2018.

*Notes: Analysis is based on total of 153 projects selected by DPHs and 92 projects selected by DMPH/CAHs, excluding Projects 2.4 and 2.5. Hospitals only selected the top 2 most successful solutions for addressing challenges in each project. DPH: designated public hospital; DMPH: district and municipal public hospital.*

*Metric-Related Challenges and Solutions*

Top metric-related challenges to implementing PRIME projects included non-uniformity of processes (particularly among DPHs) and inadequate availability of services (Exhibit 45). Few DPHs reported small numerator/denominator or staff turnover as one of their top two metric-related challenges. Project specific metric related challenges are in Exhibit 406: .

**Exhibit 45. Metric-Related Challenges to Implementing PRIME across All Projects**
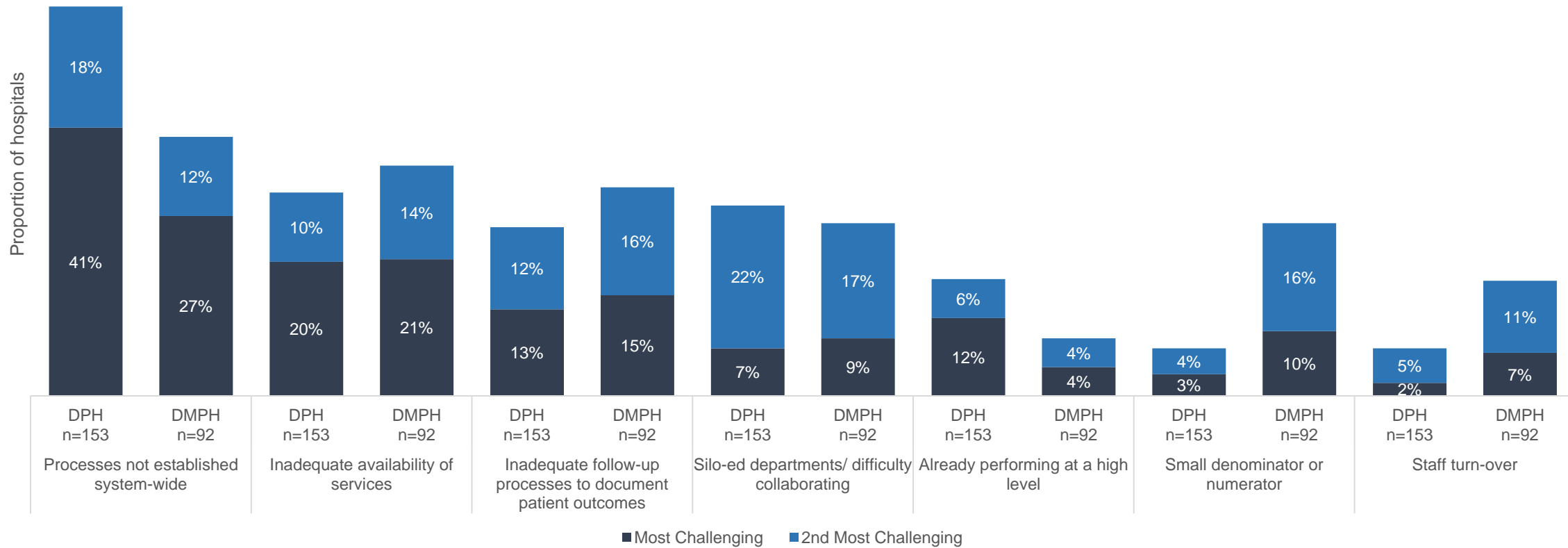


*Source: UCLA analysis of the Interim survey, data received April to May 2018.*
*Notes: Analysis is based on total of 153 projects selected by DPHs and 92 projects selected by DMPH/CAHs, excluding Projects 2.4 and 2.5. Hospitals only selected their top two challenges for each project. DPH: designated public hospital; DMPH: district and municipal public hospital.*

In interviews, hospitals discussed how implementation of PRIME required alignment and prioritization of PRIME metrics with those required for other quality improvement or pay-for-performance activities (e.g., HEDIS, CMS's Merit-based Incentive Payment System, and ACO measures).

> *"When we looked at all those different quality improvement programs, we took all of those different quality metrics, threw them in Excel, prioritized … [the metrics] that aligned with most programs, those that we were more at risk for in terms of financial incentives, and then those where we are performing below the benchmark, and we are able to rate or score them and prioritize them. We had over 400 quality metrics when we started and we narrowed it down to about 100." (Salinas Valley)*

For some hospitals, discordance between core components and PRIME metrics made it difficult to prioritize their efforts:

> *"There's sometimes a dichotomy or chasm or disconnect between the measure and what it's measuring, and the intent of the core component. And the measures are not measuring those core components, or they're not measuring activities that speak to the core component. But overall, I think we all really believe in the essence of the core component, and the intent of them." (Los Angeles)*

Hospitals also discussed how initial selection of PRIME projects preceded the first release of metrics, which complicated the task of planning and prioritization of PRIME projects in the context of competing projects and initiatives. While subsequent iteration of metrics allowed for the opportunity to build more realistic or pertinent metrics, hospitals discussed the difficulties of adjusting their processes for clinical care, data capture, and reporting to respond to these changes.

Top strategies for addressing metric-related challenges included expanding availability of services and implementing additional training for providers and staff (Exhibit 46). Establishing meetings across teams was rated highly among DPHs, while DMPHs were more likely to report that enhancing outreach or follow-up with patients was a successful strategy for reaching PRIME metrics.

**Exhibit 46. Metric-Related Solutions to Implementing PRIME across All Projects**
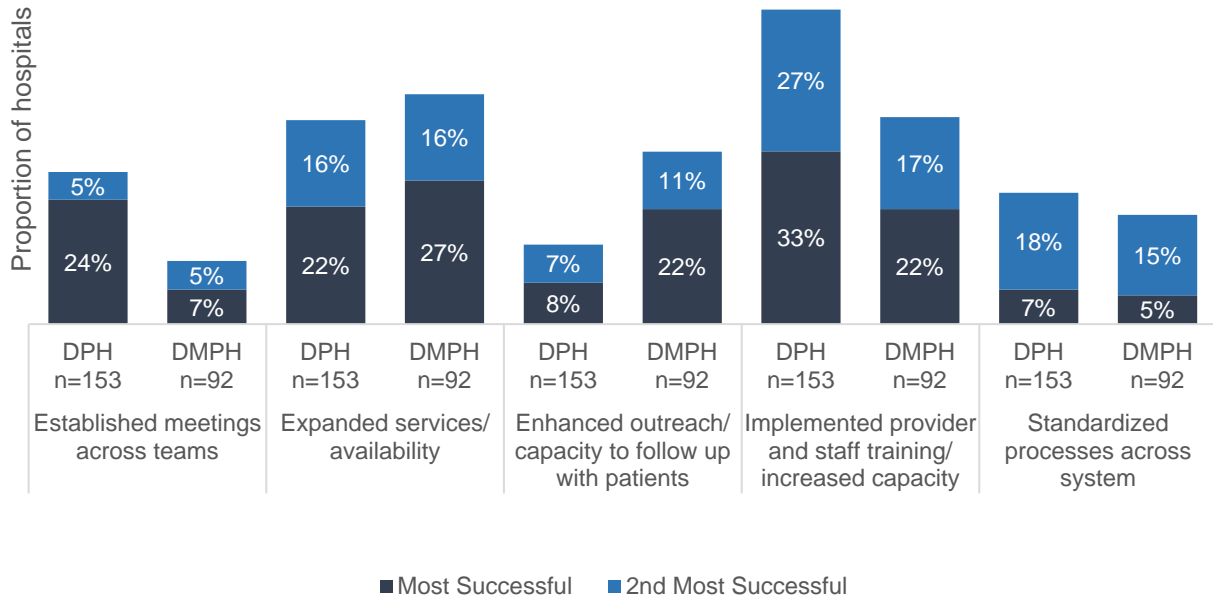


Source: UCLA analysis of the Interim survey, data received April to May 2018.
Notes: Analysis is based on total of 153 projects selected by DPHs and 92 projects selected by DMPH/CAHs, excluding Projects 2.4 and 2.5. Hospitals selected the top 2 most successful solutions for addressing challenges in each project. DPH: designated public hospital; DMPH: district and municipal public hospital.

## Hospital Perspectives of the Overall Impact of PRIME

During interviews, each hospital was asked to describe the overall impact PRIME has had on their organization and care processes. Among hospitals who participated in interviews, it was apparent that PRIME was instrumental in driving progress forward in 4 domains: infrastructure development, process improvement, shaping of organizational goals and mission, and provision of sustained support for care redesign (Exhibit 47). Specific examples of PRIME's impact across each domain are presented in Exhibit 48 to

Exhibit 51.

**Exhibit 47. Areas of Overall Impact of PRIME**

| Infrastructure Development | Process Improvement | Shifting Priorities, Focus, or Mission | Sustained Funding |
|---|---|---|---|
| Staff capacity | Universal processes | Population health approach | Continuing care transformation after DSRIP |
| Community partnerships | Standardization of workflows | Prioritization of Medicaid patients | Supporting difficult and underresourced projects |
| Quality improvement infrastructure | Workflow efficiencies | Focus on high-risk or targeted populations | Improving ability to absorb risk |
| Data collection and reporting capacity | Improved care coordination | Culturing collaboration & synergism | |

*Source: UCLA analysis of in-depth key informant interviews, data received June to August 2018.*

**Exhibit 48. PRIME's Impact on Infrastructure Development**

| Area 1. Infrastructure Development | | |
|---|---|---|
| **Theme** | **Description** | **Illustrative Quote** |
| Staff capacity | PRIME funding allowed hospitals to increase **staff capacity** within **leadership, clinical staff, human resources, and information technology roles.** | *"When we embarked upon PRIME, the leadership clearly understood the level of resources that would be required, and therefore we did create and draft job descriptions that did not exist and hired people that did not exist prior to be focused solely on PRIME. We have a core PRIME team that is solely focused on that and not pulled off into other projects unless able, but that's on a very controlled and intentional approach." (Kaweah Delta)* |
| Community partnerships | Implementation of PRIME projects fostered the development of **formal and informal community partnerships** to leverage existing resources within communities to drive improvements in care | *"So, to help prevent readmission and to smooth the transition, we have engaged a community-based organization, an external one to UCLA. And we pay them, we partner with them to go to our patients' homes, these senior patients, and do an assessment of the patient's home, as well as look at conditions that may impact their ability to transition into their home." (UC Los Angeles)* |
| Quality improvement infrastructure | Hospitals built up and honed their **quality improvement infrastructure** under PRIME, including creating established roles for leading PRIME-driven quality improvement activities and expanding the use of quality improvement methodologies (e.g., Lean, PDSA cycles). | *"But on the inpatient side as well I think just across the board there's been a lot of QI culture but a real focus deliberate strategies and methodologies of using LEAN in terms of A3 thinking, real concise messaging using countermeasure summaries, developing PDSA cycles and monitoring them, our capacities for registries, and population health management across many capacities are all examples of ways that our QI capacity as an organization has really grown through PRIME." (San Francisco )* |
| Data collection and reporting capacity | PRIME was instrumental in improving **data collection and reporting capacity**, particularly in building improved health information technology systems, although some hospitals noted that this was still a work-in-progress. | *"…With PRIME and the way things are recorded and the data that's gathered, it's really built a competence in a data-driven culture behind what goes on in the PRIME metrics." (Arrowhead)* |

*Source: UCLA analysis of in-depth key informant interviews, data received June to August 2018.*

**Exhibit 49. PRIME's Impact on Process Improvement**

| Area 2. Process Improvement | | |
|---|---|---|
| Theme | Description | Illustrative Quote |
| Universal processes & standardization of workflows | PRIME was a key driver in increasing capacity to implement **universal processes** or **standardized workflows**, most notably in expanding collection of REAL/SO/GI data and the use of screening protocols for tobacco use, depression, and substance abuse. | *"In part because we have this data and we have process measure data, we've been able to really drive improvement and adherence to standard work. So, things like our cancer screening rate, our laboratory monitoring for chronic diseases, and things like that have really improved with the initiation of PRIME." (Alameda)* |
| Workflow efficiencies | Some hospitals noted that examination of existing processes allowed them to **improve workflow efficiencies** (e.g., screening, data documentation processes). | *"We spent a lot of time looking at best practices and how processes are done in the clinic, and trying to standardize them. Part of the standardization was coming up with the workflow that's most efficient for staff and renders the best outcome. I think that really drove improvements in efficiency." (Alameda)* |
| Improved care coordination | Many hospitals described ways in which PRIME projects facilitated improvements in **care coordination** (i.e., patient referral, outreach, and follow-up), supporting the ability of providers to facilitate warm hand-offs to other providers and "close the loop" with patients. | *"Those patients are having their blood pressure monitored and are in control now and they were not before. We didn't even know. So, the patients are coming in and getting their colonoscopies, they weren't ... there was no loop closure with getting the referral completed before and now we know. So, I think it's making a huge difference." (Natividad)* |

*Source: UCLA analysis of in-depth key informant interviews, data received June to August 2018.*

**Exhibit 50. PRIME's Impact on Organizational Priorities, Focus, or Mission**

| Area 3. Shifting Priorities, Focus, or Mission | | |
|---|---|---|
| **Theme** | **Description** | **Illustrative Quote** |
| Population health approach | Many hospitals noted that PRIME implementation ignited or strengthened a **population health approach** to managing the health and health care of their patient populations. | *"One of the things PRIME has really leveraged in the ambulatory setting is an even greater focus on building population health management and QI infrastructure capabilities across various new domains in specialty care that wasn't there before." (San Francisco )* |
| Prioritization of Medicaid patients | For some hospitals, PRIME implementation represented a noted shift to the **prioritization of Medicaid patients** from that of traditionally emphasized patients (e.g., Medicare, privately-insured). | *"I work in different facilities and what PRIME has helped us do is focus on the Medi-Cal population…I'm very thankful that PRIME has been here to help us focus on these things and kick off initiatives that I'm glad that all patients are receiving, but really importantly, we're measuring how it impacts the Medi-Cal lives. It's something I've never seen before, so this is truly above and beyond." (Kaweah Delta)* |
| Focus on high-risk or targeted populations | Hospitals noted PRIME's inclusion of measures targeting **high-risk or targeted populations** not often emphasized in other quality improvement programs. | *"Especially in particular with the populations that maybe aren't, that don't get a lot of visibility, and that don't get a lot of measures that have money tied to them. So like those targeted, high-risk patients for the advanced illness planning and care. That's something that was really innovative with PRIME, and as I mentioned, our project leads there were very excited and very happy that advanced illness planning and care was actually included in a statewide initiative." (UC Los Angeles)* |
| Culturing collaboration, synergism, breaking of silos | Planning for PRIME facilitated **collaboration** across departments, **synergism** between existing and new efforts, and **breaking of silos** within hospitals as they employed an "all hands on deck" approach. | *"We tried a number of times to build teams but found that it was very hard to implement or maintain… Now that we have all these other pieces in place, there's better understanding of the inherent value of having teams. Although we tried to implement team-based care for a long time, I would say that with PRIME, that's finally allowed us to be much more successful." (Riverside)* |

*Source: UCLA analysis of in-depth key informant interviews, data received June to August 2018.*

**Exhibit 51. PRIME's Impact through Sustained Funding**

| Area 4. Sustained Funding | | |
|---|---|---|
| Theme | Description | Illustrative Quote |
| Continuing care transformation after DSRIP | For DPHs, PRIME represented sustained financial support for the **continuation of care transformation after DSRIP**. For many hospitals, PRIME funding was viewed as crucial funding that had been built into their budgets, rather than supplementary funding they would receive as a result of their efforts. | *"It is a massive amount of money for us, and it is money that we've always received from the federal government through the state and it's already in our budget. None of this is new money, right? It is absolutely critical and central funding for us…Because PRIME gets all that attention, because it's finance, because of the money, it's also a tremendous lever to help us enact system-wide change and to do clinical care improvement at a very robust level with everybody's support."* (Alameda) |
| Supporting difficult and under-resourced projects | In addition to bolstering infrastructure to address population health system-wide, PRIME also served as a lever for **supporting difficult and under-resourced projects** that had been attempted prior to PRIME, including PCMH certification and behavioral health integration. | *"We actually tried to do a lot of these things before PRIME and we literally could not get them off the ground. You need a certain level of support. You have to make a huge commitment, you have to make a huge investment. You know we'd always dream that there would be the team and infrastructure to help us with improvement, performance improvement, and data analytics. You know prior to PRIME we couldn't get that before."* (Riverside) |
| Improving ability to absorb risk | A few hospitals noted that investments in infrastructure and care coordination efforts as a result of PRIME funding improved their **ability to absorb risk** within their patient populations. | *"Relationships with our health plan partners are beginning to develop and get deeper in terms of data sharing, et cetera. So there's development on an HIE at the community level that would be important infrastructure for us to do more with risk and alternative payment models."* (San Joaquin) |

*Source: UCLA analysis of in-depth key informant interviews, data received June to August 2018.*

## Metric Achievement Values in PRIME

During PRIME implementation, hospitals reported on their progress in mid-year and year-end reports, which included a self-reported rate for metrics (achievement rates). DHCS assigned an achievement value (AV) as an indication of the progress toward the target (see Payment Methodology for more information) and issued payments to hospitals. Thus, metric AV rates is one of the indicators of PRIME hospitals' success in improving or maintaining care processes and outcomes of care. UCLA identified the proportion of metrics achieved per project in each demonstration year by DPHs and DMPHs. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. All metrics that were partially or fully achieved (a value greater than 0) contributed to the achievement calculation. Metrics that had a denominator under 30 were excluded from analysis after the first year the data was reported. The AV calculation methodology varied slightly for 1.7.2, 2.1.1, and 2.1.9, as these were not based on patient-count data. Detailed methods are described in Achievement Value Analysis: Methodology and Metric-Specific Averages, by Hospital Type.

**Performance in P4R Metric Achievement for DPHs**

DPHs were required to participate in Projects 1.1, 1.2, 1.3, 2.1, 2.2, and 2.3. In DY 11, all DPHs fully achieved all metrics for all projects (AV=1), as the first year was P4R (Exhibit 52). In DY 12 and DY 13, the proportion of P4R metrics and sub-metrics achieved relatively remained the same for the majority of the projects.

**Exhibit 52: Proportion of Pay-for-Reporting (P4R) Metrics and Sub-Metrics Partially or Fully Achieved among DPHs, by Project**

| Project | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| 1.1 Integration of Behavioral Health & Primary Care | 100% | 99% | 100% |
| 1.2 Ambulatory Care Redesign: Primary Care | 100% | 99% | 100% |
| 1.3 Ambulatory Care Redesign: Specialty Care | 100% | 100% | 100% |
| 1.4 Patient Safety in the Ambulatory Setting | 100% | 100% | 100% |
| 1.5 Million Hearts Initiative | 100% | 100% | --- |
| 1.6 Cancer Screening & Follow-Up | 100% | 100% | 100% |
| 1.7 Obesity Prevention & Healthier Foods Initiative | 100% | --- | --- |
| 2.1 Improvements in Perinatal Care | 100% | 100% | 100% |
| 2.2 Care Transitions: Integration of Post-Acute Care | 100% | 100% | --- |
| 2.3 Complex Care Management for High-Risk Medical Populations | 100% | 100% | 100% |
| 2.4 Integrated Health Home for Foster Children | 100% | 100% | 100% |
| 2.5 Transition to Integrated Care: Post Incarceration | 100% | 100% | 100% |
| 2.6 Chronic Non-Malignant Pain Management | 100% | 100% | 100% |
| 2.7 Comprehensive Advanced Illness Planning & Care | 100% | 100% | 100% |
| 3.1 Antibiotic Stewardship | 100% | 100% | 100% |
| 3.2 Resource Stewardship: High-Cost Imaging | 100% | 100% | 100% |
| 3.3 Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals | 100% | 100% | 100% |
| 3.4 Resource Stewardship: Blood Products | 100% | 100% | 100% |

Notes: "---" means that all metrics within the PRIME project were phased out of P4R for that demonstration year. The Rate #2 values for Project 3.3 were not included, since AVs only applied to Rate #1. After the first year of reporting, if a hospital's denominator for a metric did not have a minimum of 30 patients, the metric was excluded from calculations in this exhibit.

**Performance in P4P Metric Achievement for DPHs**

Beginning in DY 12, some metrics transitioned from P4R to P4P. The proportion of P4P metrics and sub-metrics achieved remained the same from DY 12 to DY 13 at 100% for Projects 1.7, 2.4, 2.7, and 3.1. Metric achievement declined from DY 12 to DY 13 for Projects 1.1, 1.3, 1.4, 1.6, 2.5, and 3.2, which may be explained due to expected target value increases in later years. In contrast, the proportion of metrics achieved had increased from DY 12 to DY 13 for Projects 1.2, 1.5, 2.1, and 2.2.

**Exhibit 53: Proportion of Pay-for-Performance (P4P) Metrics and Sub-Metrics Partially or Fully Achieved among DPHs, by Project**

| Project | DY 12 | DY 13 |
|---|---|---|
| 1.1 Integration of Behavioral Health & Primary Care | 97% | 96% |
| 1.2 Ambulatory Care Redesign: Primary Care | 93% | 94% |
| 1.3 Ambulatory Care Redesign: Specialty Care | 91% | 88% |
| 1.4 Patient Safety in the Ambulatory Setting | 100% | 90% |
| 1.5 Million Hearts Initiative | 95% | 100% |
| 1.6 Cancer Screening & Follow-Up | 87% | 80% |
| 1.7 Obesity Prevention & Healthier Foods Initiative | 100% | 100% |
| 2.1 Improvements in Perinatal Care | 79% | 85% |
| 2.2 Care Transitions: Integration of Post-Acute Care | 69% | 79% |
| 2.3 Complex Care Management for High-Risk Medical Populations | --- | 88% |
| 2.4 Integrated Health Home for Foster Children | 100% | 100% |
| 2.5 Transition to Integrated Care: Post Incarceration | 100% | 67% |
| 2.6 Chronic Non-Malignant Pain Management | --- | 100% |
| 2.7 Comprehensive Advanced Illness Planning & Care | 100% | 100% |
| 3.1 Antibiotic Stewardship | 100% | 100% |
| 3.2 Resource Stewardship: High-Cost Imaging | 100% | 93% |
| 3.4 Resource Stewardship: Blood Products | --- | 100% |

Notes: "---" means that all metrics within the PRIME project were not constructed as P4P for that demonstration year. No metrics in Project 3.3 were P4P in DY 12 or DY 13. If a hospital's denominator for a metric did not have a minimum of 30 patients, the metric was excluded from calculations in this exhibit.

**Performance in P4R Metric Achievement for DMPHs**

DMPH participation in the various PRIME projects was voluntary. Most DMPHs did not report in DY 11, so the first year of complete data was DY 12. In DY 12, DMPHs almost fully achieved all metrics for all projects (AV=1). In DY 13, the proportion of P4R metrics and sub-metrics achieved remained the same for the majority of the projects. P4R metric achievement among DMPHs increased in DY 13 for Project 2.1 and 3.1 but decreased for Project 3.4 due to the removal of two project metrics by the PRIME Program.

**Exhibit 54: Proportion of Pay-for-Reporting (P4R) Metrics and Sub-Metrics Partially or Fully Achieved among DMPHs, by Project**

| Project | DY 12 | DY 13 |
|---|---|---|
| 1.1 Integration of Behavioral Health & Primary Care | 100% | 100% |
| 1.2 Ambulatory Care Redesign: Primary Care | 100% | 100% |
| 1.3 Ambulatory Care Redesign: Specialty Care | 100% | 100% |
| 1.4 Patient Safety in the Ambulatory Setting | 100% | 100% |
| 1.5 Million Hearts Initiative | 94% | --- |
| 1.6 Cancer Screening & Follow-Up | 100% | 100% |
| 1.7 Obesity Prevention & Healthier Foods Initiative | 100% | --- |
| 2.1 Improvements in Perinatal Care | 98% | 100% |
| 2.2 Care Transitions: Integration of Post-Acute Care | 100% | --- |
| 2.3 Complex Care Management for High-Risk Medical Populations | 100% | 100% |
| 2.6 Chronic Non-Malignant Pain Management | 100% | 100% |
| 2.7 Comprehensive Advanced Illness Planning & Care | 100% | 100% |
| 3.1 Antibiotic Stewardship | 100% | 100% |
| 3.2 Resource Stewardship: High-Cost Imaging | 100% | 100% |
| 3.3 Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals | 100% | 100% |
| 3.4 Resource Stewardship: Blood Products | 100% | 80% |

Notes: "---" means that all metrics within that PRIME project were phased out of P4R for that demonstration year. The Rate #2 values for Project 3.3 were not included, since AVs only applied to Rate #1. After the first year of reporting, if a hospital's denominator for a metric did not have a minimum of 30 patients, the metric was excluded from calculations in this exhibit. See Achievement Value Analysis: Methodology and Metric-Specific Averages, by Hospital Type for further information.

**Performance in P4P Metric Achievement for DMPHs**

In DY 13, DMPHs had mixed achievement of metrics across all projects. Higher proportions of metric achievement were found in Projects 2.6, 1.1, and 2.3, ranging from 88-100%, while lower proportions of metric achievement were found in Projects 3.4, 2.1, and 3.2, ranging below 60%.

**Exhibit 55: Proportion of Pay-for-Performance (P4P) Metrics and Sub-Metrics Partially or Fully Achieved among DPHs, by Project**

| Project | DY 13 |
|---|---|
| 1.1 Integration of Behavioral Health & Primary Care | 93% |
| 1.2 Ambulatory Care Redesign: Primary Care | 71% |
| 1.3 Ambulatory Care Redesign: Specialty Care | 63% |
| 1.4 Patient Safety in the Ambulatory Setting | 71% |
| 1.5 Million Hearts Initiative | 84% |
| 1.6 Cancer Screening & Follow-Up | 65% |
| 1.7 Obesity Prevention & Healthier Foods Initiative | 83% |
| 2.1 Improvements in Perinatal Care | 50% |
| 2.2 Care Transitions: Integration of Post-Acute Care | 77% |
| 2.3 Complex Care Management for High-Risk Medical Populations | 88% |
| 2.6 Chronic Non-Malignant Pain Management | 100% |
| 2.7 Comprehensive Advanced Illness Planning & Care | 84% |
| 3.1 Antibiotic Stewardship | 73% |
| 3.2 Resource Stewardship: High-Cost Imaging | 56% |
| 3.4 Resource Stewardship: Blood Products | 0% |

Notes: No metrics in Project 3.3 were P4P in DY 13. If a hospital's denominator for a metric did not have a minimum of 30 patients, the metric was excluded from calculations in this exhibit.

# Domain 1 - Outpatient Delivery System Transformation and Prevention

## Project 1.1 - Integration of Behavioral Health & Primary Care

### Project Overview

Project 1.1 was designed to promote behavioral health and primary care integration in order to improve outcomes of care for patients with behavioral health conditions. Main goals of the project included: 1) early identification of behavioral health conditions; 2) comprehensive and appropriate treatment of behavioral health conditions; and 3) improvement of outcomes for patients with chronic medical and behavioral health conditions (Attachment Q). Specific objectives can be found in Attachment Q.

For Project 1.1, 24 hospitals participated and reported metric performance data and it was required for all 17 DPHs. Five DMPHs participated in this project, including Palo Verde Hospital, El Camino Hospital, Kern Valley, Mammoth Hospital, and Eastern Plumas. The latter 3 were critical access hospitals (Exhibit 56). Initially, 7 DMPHs chose to participate in the project, of which 4 were Non-CAH and 3 were CAH. However, 2 DMPH Non-CAHs, Tulare and Tri-City, dropped Project 1.1 in DY 12, which brought the total number of hospitals down to 22 in DY 12 and DY 13.

**Exhibit 56: PRIME Project 1.1 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| Total Participating Hospitals | 24 | 22 | 22 |
| Total DPH | 17 | 17 | 17 |
| DPH UC | 5 | 5 | 5 |
| DPH County | 12 | 12 | 12 |
| Total DMPH | 7 | 5 | 5 |
| DMPH Non-CAH | 4 | 2 | 2 |
| DMPH CAH | 3 | 3 | 3 |

Participating hospitals reported whether and when they implemented the suggested core components of this project as an indication of their overall approach to behavioral health integration (Exhibit 57). In the interim survey, 12 hospitals reported that before PRIME, they had begun ensuring coordination and access to chronic disease (physical or behavioral) management, including self-management support to patients and their families, and 10 reported increasing team engagement by: a. implementing a model for team-based care in which staff performs to the best of their abilities and credentials, and b. providing ongoing staff training on care model prior to PRIME.

During PRIME, over half of all participating hospitals reported implementing all of the core components except for integrating appropriate screening tools and decision support into the emergency department; increasing access to Medication Assisted Treatment (MAT) for patients with alcohol and opioid addiction; and ensuring a culturally and linguistically appropriate treatment plan by assigning peer providers or other frontline workers to the care team to assist with care navigation, and treatment plan development and adherence (Exhibit 57).

### Exhibit 57: PRIME Project 1.1 Core Components

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
| --- | --- | --- |
| Implement a behavioral health integration assessment tool (baseline and annual progress measurement). | 6 | 21 |
| Implement a physical-behavioral health integration program that utilizes a nationally-recognized model (e.g., the Four Quadrant Model for Clinical Integration, the Collaborative Care Model, or other Integrated Behavioral Health (IBH) resources from SAMHSA). | 8 | 16 |
| Integrate appropriate screening tools and decision support into the emergency department to ensure timely recognition of patients with mental health and substance use disorder problems. Enhanced access to primary care and/or to behavioral health specialists will be integrated into discharge planning for these patents. Use of 24-7 care navigators (e.g., Community Physician Liaison Program) may be used to support linkages to PCPs, MH and SUD specialists and behavioral health and other community services through the discharge process. | 8 | 10 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Physical-behavioral health integration may be an implementation of a new program or an expansion of an existing program, from pilot sites to hospital and health system primary care sites or from single populations to multiple populations, (e.g., obesity, diabetes, maternal, infant, and child care, end-of-life care, chronic pain management). | 7 | 17 |
| Patient-Centered medical home (PCMH) and behavioral health providers will: a. Collaborate on evidence-based standards of care including medication management and care engagement process. b. Implement case conferences/consults on patients with complex needs. | 7 | 16 |
| Ensure coordination and access to chronic disease (physical or behavioral) management, including self-management support to patients and their families. | 12 | 15 |
| Ensure systems are in place to support patient linkage to appropriate specialty physical, mental and SUD services. Preventive care screenings including behavioral health screenings (e.g., PHQ-2, PHQ-9, and SBIRT) will be implemented for all patients to identify unmet needs. When screenings are positive, providers will take immediate steps, including provision of brief interventions (e.g., MI techniques) to ensure access for further evaluation and treatment when necessary. Preferably, this should include a warm transfer to the appropriate provider if the screening provider is unable to provide the service. | 9 | 20 |
| Provide cross-systems training to ensure effective engagement with patients with MH/SUD conditions. Ensure that a sufficient number of providers are trained in SBIRT and/or in other new tools used by providers to ensure effectiveness of treatment. | 6 | 18 |
| Increase access to Medication Assisted Treatment (MAT) for patients with alcohol and opioid addiction to assist in stabilizing their lives, reducing urges or cravings to use, and encourage greater compliance with treatment for co-morbid medical and mental health conditions. For alcohol use disorders these medications include naltrexone, acamprosate, and disulfiram. For opioid addiction, medication assisted treatment includes maintenance treatment with methadone and buprenorphine. | 3 | 10 |
| Ensure the development of a single Treatment Plan that includes the patient's behavioral health issues, medical issues, substance abuse, social and cultural and linguistic needs. This includes incorporating traditional medical interventions, as well as non-traditional interventions such as gym memberships, nutrition monitoring, healthy lifestyle coaching, or access to culturally and linguistically appropriate peer-led wellness and symptoms management groups. | 4 | 13 |
| Ensure a culturally and linguistically appropriate treatment plan by assigning peer providers or other frontline workers to the care team to | 5 | 10 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| assist with care navigation, treatment plan development and adherence. | | |
| Ensure that the Treatment Plan: a. Is maintained in a single shared EHR/clinical record that is accessible across the treatment team to ensure coordination of care planning. b. Outcomes are evaluated and monitored for quality and safety for each patient. | 8 | 15 |
| Implement technology-enabled data systems to support pre-visit planning, point-of-care delivery, care plan development, population/panel management activities, coordination and patient engagement. Develop programs to implement telehealth, eReferral/eConsult to enhance access to behavioral health services. | 7 | 17 |
| Demonstrate engagement of patients in the design and implementation of the project. | 5 | 14 |
| Increase team engagement by: a. Implementing a model for team-based care in which staff performs to the best of their abilities and credentials. b. Providing ongoing staff training on care model. | 10 | 18 |
| Ensure integration is efficient and providing value to patients by implementing a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | 7 | 16 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=22 hospitals participating in Project 1.1. Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey hospitals may have implemented or dropped activities under a core component.*

## Infrastructure for Behavioral Health Integration

### Health Information Technology

Health information infrastructure is needed to support behavioral health integration. In the interim survey, 12 DPHs and 3 DMPHs reported having a single EHR where both types of providers had full access to both types of patient records (Exhibit 58). A DPH had separate EHRs with bilateral access and 3 had behavioral health provider access to health records.

**Exhibit 58: Electronic Health Record (EHR) Health and Behavioral Health Integration under PRIME, by Hospital Type**
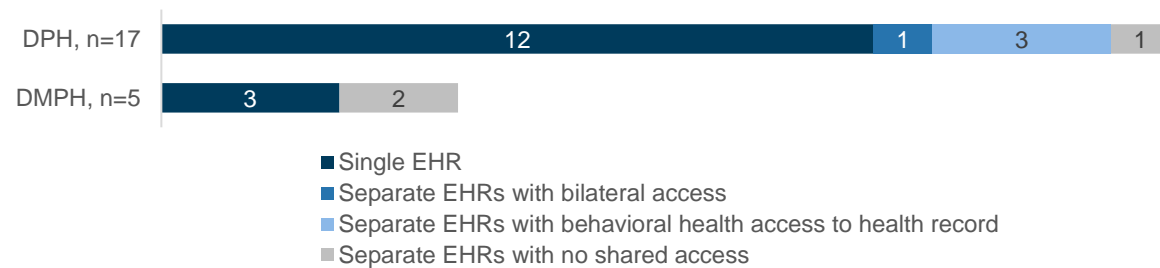


- ■ Single EHR
- ■ Separate EHRs with bilateral access
- ■ Separate EHRs with behavioral health access to health record
- ■ Separate EHRs with no shared access

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1.*

A hospital embedded County behavioral health providers and discussed their access to electronic health records:

> *"[the County Behavioral Health Department] … direct supervisor … actually has a view only access to our EHR. We don't have any access to their records at all, not electronically. But the [County] staff … are assigned to us, are actually integrated in our system…those providers of care actually have access and do use our EHR in the clinics." (San Joaquin)*

In the interim survey, 2 of 17 DPHs and no DMPHs reported that they had a patient registry for patients with any behavioral health issues prior to PRIME (Exhibit 59). However, 8 DPHs and 5 DMPHs developed a registry during PRIME. In interviews, some hospitals noted that use of a behavioral health registry signified a shift toward active population health management for patients with behavioral health needs:

> *"We track all these [depression] patients now, it's a registry, and are building the infrastructure to follow them. And that's a completely new lens to how behavioral health had been approached in the past." (San Francisco Department of Public Health)*

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Six DPHs used electronic decision support tools for referral of patients with behavioral health issues before PRIME (Exhibit 59). A few (3) DPHs and 1 DMPH implemented such a tool during PRIME, but 3 DPHs and 3 DMPHs did not plan to do so.

**Exhibit 59: Implementation of Behavioral Health Integration Infrastructure under PRIME, by Hospital Type**
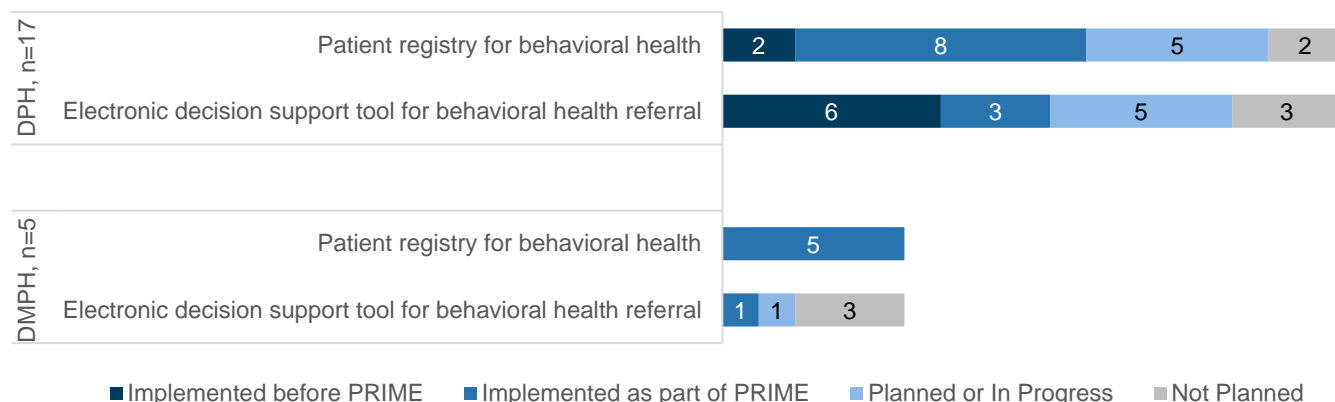


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1.*

Hospitals using a registry for patients with behavioral health conditions were asked to specify the type of provider assigned to manage patients with behavioral health issues. Hospitals most commonly assigned licensed clinical social workers to this task (11; Exhibit 60). Seven hospitals noted that their behavioral health registry was managed by more than 1 type of provider (Data not shown).

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**Exhibit 60: Provider Assigned to Manage Patients with Behavioral Health Issues under PRIME, Among Hospitals with a Behavioral Health Registry**
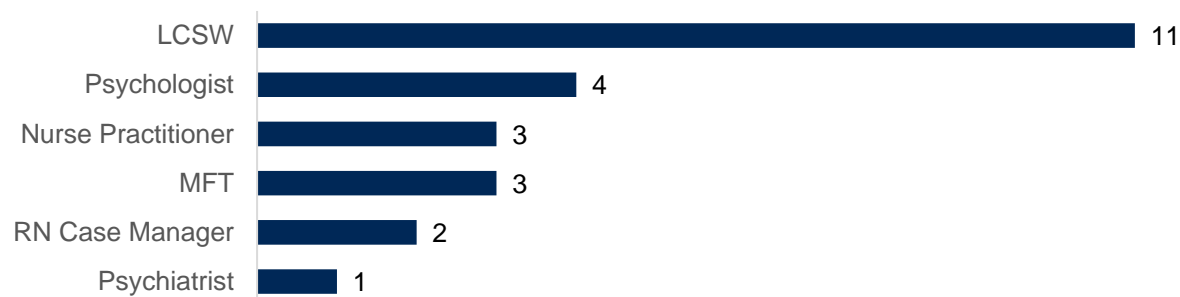
| Provider | Count |
|----------|-------|
| LCSW | 11 |
| Psychologist | 4 |
| Nurse Practitioner | 3 |
| MFT | 3 |
| RN Case Manager | 2 |
| Psychiatrist | 1 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=15 hospitals participating in Project 1.1 that noted having a behavioral health registry. LCSW: licensed clinical social worker; MFT: marriage and family therapist; RN: registered nurse.*

## Behavioral Health Referral Protocols

Prior to PRIME, 11 of 17 DPHs had explicit protocols for referral to behavioral health providers by primary care providers, with the remaining 6 reporting that it had been implemented during PRIME. Among participating DMPHs, 4 developed these protocols during PRIME and 1 reported availability of these protocols before PRIME (Data not shown).

## Project Implementation

### Institutional Support for PRIME

In the interim survey, hospitals reported a notable increase in the level of institutional support for behavioral health integration during PRIME across all domains including prioritization by leadership, financial resources, and staff time (Exhibit 61). During PRIME, all 22 participating hospitals reported that behavioral health integration was a high priority to senior leadership and was integrated into the organization's mission; 21 reported that behavioral health integration was a high priority among clinical leadership. Half of hospitals (11) reported such support before PRIME. The number of hospitals reporting that behavioral health integration was supported by sufficient financial resources increased from 9 before PRIME to 19 during PRIME. While few hospitals believed that the project was backed by an adequate amount of staff time before PRIME, the majority did so during PRIME.

**Exhibit 61: Perspectives of Institutional Support of Behavioral Health Integration before and During PRIME**

| Behavioral health integration is... | Before N | During N |
|---|---|---|
| ...a high priority to senior leadership among competing projects. | 11 | 22 |
| ...a high priority to clinical leadership among competing projects. | 11 | 21 |
| ...integrated into the organization's strategic mission. | 11 | 22 |
| ...backed by sufficient financial resources to ensure successful implementation. | 9 | 19 |
| ...supported by an adequate level of leadership time. | 6 | 21 |
| ...supported by an adequate level of clinical staff time. | 3 | 17 |
| ...supported by an adequate level of administrative staff time. | 2 | 20 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=22 hospitals participating in Project 1.1. Data show the number of hospitals reporting that they somewhat or strongly agreed with the statement.*

A hospital described the difficulty of promoting support for behavioral health integration efforts among competing priorities:

*"So we did a lot of presentations in our existing leadership meetings, for our nurse leadership, our physician leadership, we had to go to behavioral health...There's a lot of competing priorities in our system that just made that piece difficult…to get some of the system level improvements and integration with our outside providers, the time it takes to do that is substantial." (Contra Costa)*

Participation in DSRIP also created a basis for leadership support for population health efforts, including those related to Project 1.1:

*"Because we've already had or were exposed to DSRIP…our leadership has already bought in and is fully engaged into leading in population health… So a lot of these efforts … were very much supportive and they've been very flexible with giving us what we need to ensure that … we can provide good staff training--they'll give us resources when we need it." (UC Irvine)*

Hospitals were asked to rate the level of buy-in for behavioral health integration among their primary care and behavioral health providers in the interim survey. Hospitals more often reported that behavioral care providers were mostly supportive (17) than primary care providers (12; Exhibit 62). Of note, 1 DMPH reported that primary care providers were mostly not supportive of behavioral health integration.

**Exhibit 62: Buy-in among Behavioral Health Providers and Primary Care Providers for Behavioral Health Integration under PRIME**
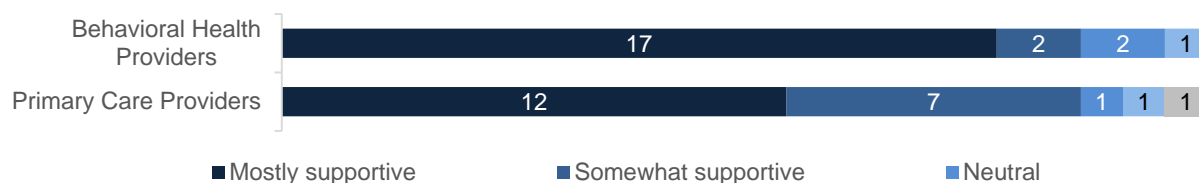


Behavioral Health Providers: 17 | 2 | 2 | 1
Primary Care Providers: 12 | 7 | 1 | 1 | 1

■ Mostly supportive    ■ Somewhat supportive    ■ Neutral

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1.*

In interviews, some hospitals reported initial pushback from providers on implementing standardized behavioral health screening processes without sufficient capacity to address the needs of patients who would ultimately screen positive for behavioral health conditions:

> *"Their concern was, "We're screening patients for mental health conditions, for substance abuse issues, and we don't have anywhere to send them." So it took a lot to kind of say, "Well, now we have these behavioral health specialists, now we do have resources and places where you can send patients." (Mammoth)*

Provider buy-in improved during PRIME implementation. A hospital maximized buy-in by involving providers in project planning and eliciting their opinions about needed resources and other issues:

> *"…we had what we call a clinician team meeting, which is where all of our outpatient providers come together for updates and questions and we asked if you could imagine a service that would make your work better and patient care better what might that be and essentially the answer we got back is, "We need a therapist and a care manager" so to a large extent, we tried to meet those needs…I don't know one provider who has not been happy with having that resource ..." (UC Riverside)*

In the interim survey, 21 of 22 hospitals reported involving primary care providers, behavioral health providers, and administrators in planning Project 1.1 (Exhibit 63). In contrast, 7 hospitals reported engaging patients in the development of the project; few hospitals reported engaging other types of clinical staff and health plan representatives in project planning.

**Exhibit 63: Stakeholder Involvement in Developing Behavioral Health Integration Project under PRIME**

| Stakeholder | Count |
|---|---|
| Primary care providers | 21 |
| Behavioral health providers | 21 |
| Administrators | 21 |
| Patient representatives | 7 |
| Other Clinical Staff | 2 |
| Health Plan | 2 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
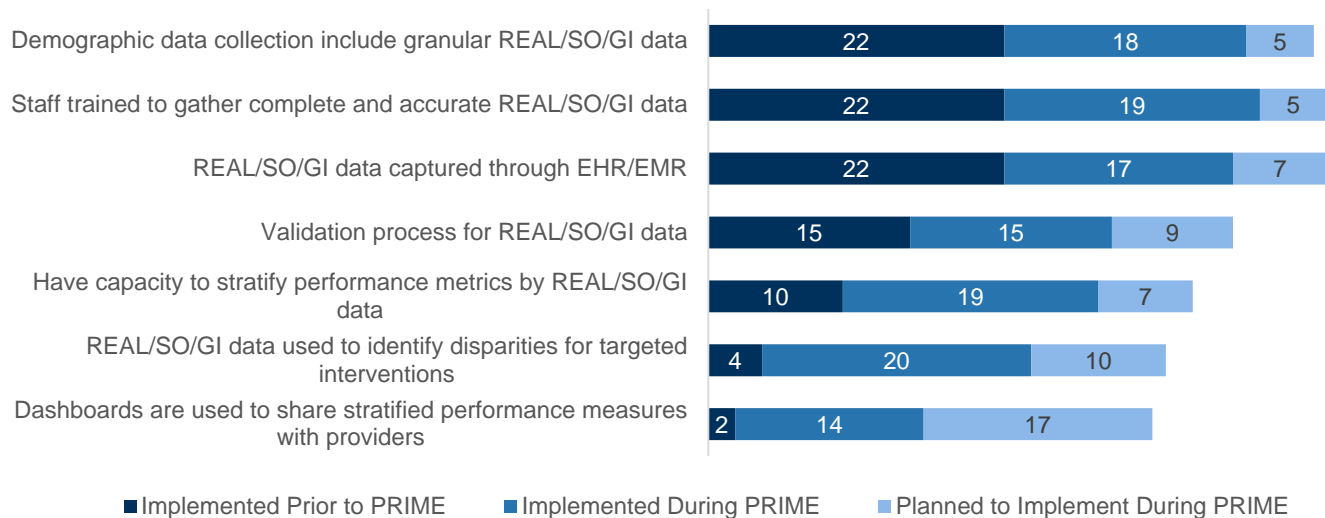*Notes: N=22 hospitals participating in Project 1.1.*

In interviews, a hospital discussed involving patients in project planning on a regular and ongoing basis:

> *"Across our institution, part of our strategic plan is to involve patients. They were part of helping design, they were part of our "brain trust" in designing our strategic plan for Contra Costa 2020 from 2015 to 2020…Behavioral health is one of the longest standing ones, where they have a weekly meeting of patients and families that help us redesign our behavioral health services and work flows." (Contra Costa)*

## Status of Behavioral Health Integration Prior to PRIME

PRIME hospitals started at different points along the continuum of behavioral health integration. In the interim survey and interviews, hospitals reported on the status of behavioral health integration before they embarked on PRIME. In the interim survey, 3 DPHs reported having co-located behavioral health and primary care providers with full collaboration and another 9 reported colocation with some interaction between providers before PRIME (Exhibit 64). Among DMPHs, 2 referred patients without coordination and another 2 coordinated with behavioral health providers at other locations.

**Exhibit 64: Level of Behavioral Health Integration Prior to PRIME**
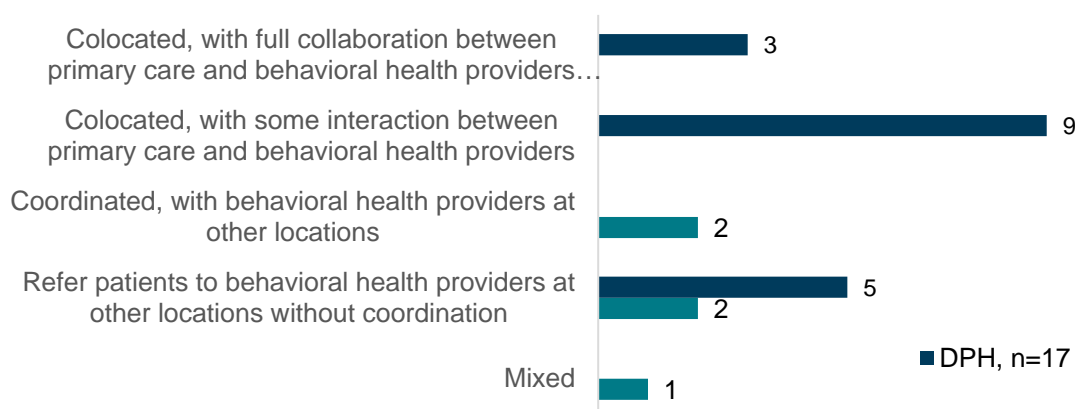
| | |
|---|---|
| Colocated, with full collaboration between primary care and behavioral health providers… | 3 |
| Colocated, with some interaction between primary care and behavioral health providers | 9 |
| Coordinated, with behavioral health providers at other locations | 2 |
| Refer patients to behavioral health providers at other locations without coordination | 5 / 2 |
| Mixed | 1 |

DPH, n=17

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1. Mixed response corresponds to 1 DMPH that noted that, prior to PRIME, they had a mix of sites with colocation and sites that referred patients to other locations without coordination.*

In interviews, a hospital described the impact of PRIME on promoting behavioral health integration:

*"… That journey had already started preexisting to PRIME. … it was a wobbly endeavor and always needing rooms and space and personnel and communication, and I think for us what PRIME did is make sure we didn't extinguish that effort, but just further help it a long a little bit." (UC San Diego)*

In the interim survey, hospitals reported whether they had assessed their level of behavioral health integration before and during PRIME using a formal tool. Eleven of 22 hospitals reported using a tool prior to PRIME and 8 reported use of an assessment tool during PRIME (Exhibit 65). Hospitals most commonly reported using an internally-developed tool to assess their behavioral health integration status.

**Exhibit 65: Use of Tool to Assess Behavioral Health Integration Before and During PRIME**
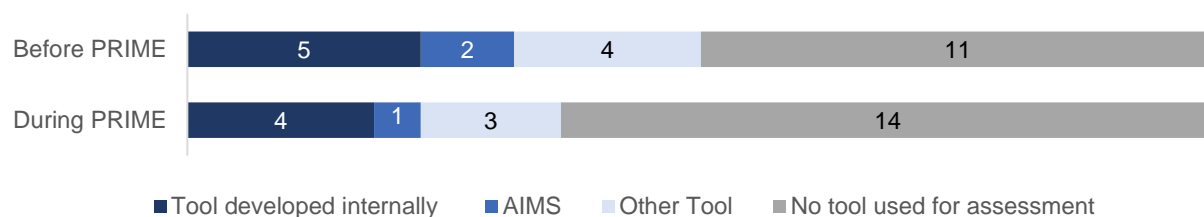
| | | | | |
|---|---|---|---|---|
| Before PRIME | 5 | 2 | 4 | 11 |
| During PRIME | 4 | 1 | 3 | 14 |

■Tool developed internally  ■AIMS  ■Other Tool  ■No tool used for assessment

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1. AIMS: Advancing Integrated Mental Health Solutions. Other tools included Behavioral Health Integration Capacity Assessment Tool, Integrated Practice Assessment Tool, Patient-Centered Checklist, and Level of Integration Measure.*

A hospital discussed the utility of using the Level of Integration Measure on an annual basis:

> *"We found that it was really interesting, because if you look at it, people are really aspiring to hit that sixth level of complete integration. It was a very useful tool to help demonstrate through all of our continuous work that we are making progress even when we're not where we want to be." (UCLA)*

### Behavioral Integration Priorities

To assess prioritization of project components, hospitals were asked to report their top 2 priorities for implementing Project 1.1. Most hospitals most commonly reported systematic screening for depression as highest or second highest priority (18 hospitals), followed by colocation of behavioral health providers within primary care sites (11 hospitals; Exhibit 66). In contrast, few hospitals noted standardized referral, substance abuse screening, and Screening, Brief Intervention, and Referral to Treatment (SBIRT) as a highest or second highest priority.

**Exhibit 66: Institutional Priorities for Implementing Project 1.1 under PRIME**
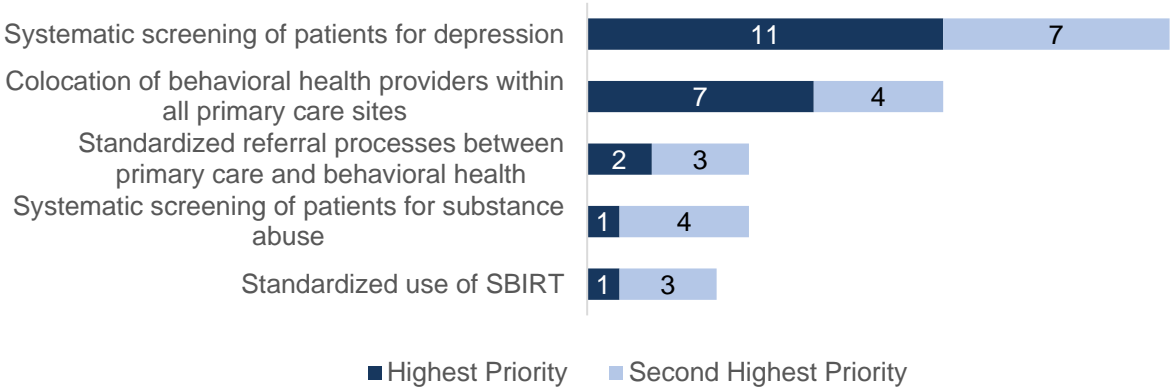
| Priority | Highest Priority | Second Highest Priority |
|---|---|---|
| Systematic screening of patients for depression | 11 | 7 |
| Colocation of behavioral health providers within all primary care sites | 7 | 4 |
| Standardized referral processes between primary care and behavioral health | 2 | 3 |
| Systematic screening of patients for substance abuse | 1 | 4 |
| Standardized use of SBIRT | 1 | 3 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1. Responses not stratified by hospital type due to low denominator for DMPHs. A hospital did not select a second highest priority.*

### Frameworks for Behavioral Health Integration

In the interim survey, 20 of 22 participating hospitals reported using an existing model for behavioral health integration (Exhibit 67). Hospitals most commonly reported using the Collaborative Care Model, including 9 DPHs and all 5 participating DMPHs. Ten hospitals (45%) reported using more than 1 model.

**Exhibit 67: Models of Behavioral Health Integration Implemented Under PRIME**
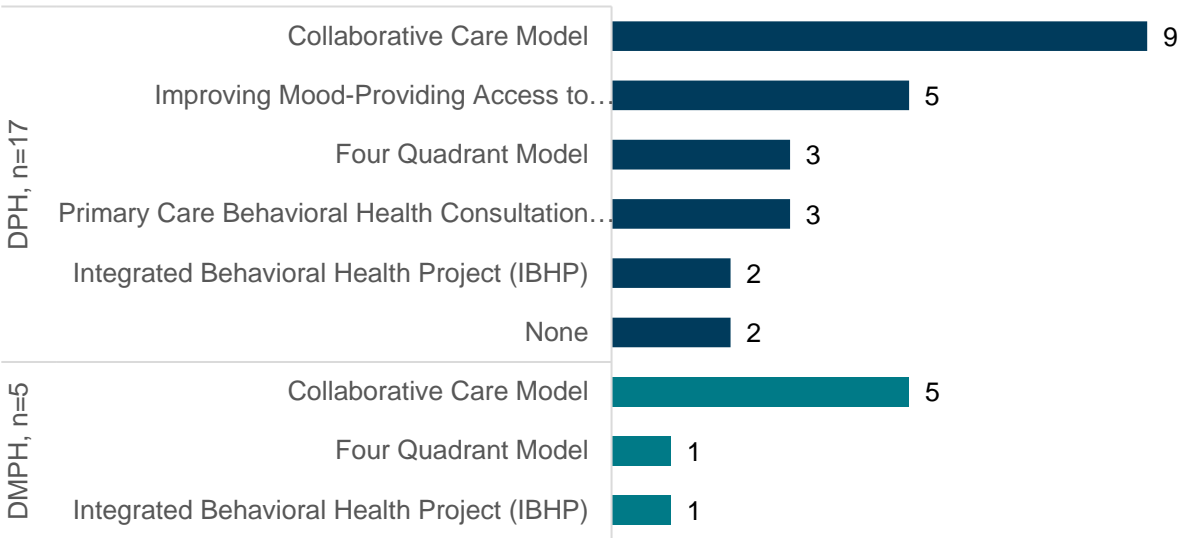


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1. Responses were not mutually exclusive; 10 hospitals noted use of more than 1 model.*

Established models of behavioral health integration were used as starting points in designing staffing and workflow models. During interviews, hospitals discussed the need to pilot and iterate their strategies for integration. For example, 1 hospital discussed efforts to tailor staffing models to fit variations in patient makeup and needs across their ambulatory care settings:

> *"Each of the clinics kind of determines their own staffing needs. And this particular clinic determined that's what they felt was helpful for them and they hired a psychiatrist for a very minimal amount of time." (Ventura)*

## Colocation of Behavioral Health Providers

At the time of the interim survey, all 22 DPHs reported having at least some colocation of behavioral health providers in primary care settings; 4 DPHs had implemented it during PRIME. Among DMPHs, 1 had co-located providers before PRIME, 2 did it during PRIME, and 2 had not yet co-located providers (Data not shown).

In interviews, many hospitals noted that colocation of behavioral health providers in primary care settings was a work in progress. Hospitals discussed the benefits of embedding behavioral health and primary care providers within the same office, including the ability to implement warm handoffs of patients to and from primary care and behavioral health providers, increased ability for providers to communicate or seek consultation, and increased collaboration in the management of chronic or mental health conditions. For example, a hospital discussed the benefits of warm handoffs for their patients:

> *"We are really going towards an integrated behavioral model and primary care which relies pretty heavily on the warm handoff method, so as patients are screened or a behavioral health issue is identified by a provider, our goal is that we have sufficient staffing … [so] that a provider can then literally hand off that patient to a behavioral health provider in that clinic visit even if only for a brief encounter. What we're finding is that really helps with the engagement of patients for future follow-up appointments and helps to close the loop with patients." (Alameda)*

Another hospital described the ways in which they restructured their clinic space in order to facilitate colocation of a licensed clinical social worker:

> *"[In] one of our older clinics … we took a closet. We created ducting to go into that to supply fresh air. We moved out the storage facility...We put in a desk and an office space. We created a hole in the door so we can have a glass insert so our nursing staff or physicians can see the LCSW if she was with or not with a patient…we frosted the glass so the patient can have some privacy…That's one example of how we modified an older clinic to embed one LCSW." (Santa Clara)*

In addition to the colocation questions above, hospitals reported on the number of primary care clinics that had behavioral health providers within the primary care clinic and behavioral health providers within the same building before and during PRIME. Before PRIME, each hospital on average reported having co-located behavioral health providers within a third of their primary care clinics (33%, range 0-93%). At the time of the interim survey, this proportion increased to 54% of clinics on average (range 0-100%), demonstrating that hospitals expanded their scope of behavioral health

integration among their primary care clinics during PRIME (Data not shown). Among DPHs, the proportion of clinics with colocation in the same office increased from 37 to 61%; among DMPHs, colocation in the same office increased from 20 to 32% of primary care clinics (

Exhibit 68). On average, DMPHs reported having behavioral health providers co-located in the same building among 33% of their primary care clinics compared to only 7% among DPHs during PRIME, suggesting a difference in behavioral health provider staffing models between hospital types.

**Exhibit 68: Proportion of Primary Care Clinics with Co-Located Behavioral Health Providers by Type of Colocation before and During PRIME, by Hospital Type**

|  | Before PRIME | During PRIME |
|---|---|---|
| Colocation in same office | | |
| DPH, n=16 | 37% | 61% |
| DMPH, n=5 | 20% | 32% |
| Colocation in same building | | |
| DPH, n=16 | 6% | 7% |
| DMPH, n=5 | 20% | 33% |

*Source: UCLA analysis of the interim survey, data received Jan to May 2019.*
*Notes: N=21 hospitals participating in Project 1.1 (San Mateo did not provide this information). BHP: behavioral health provider.*

Further examination of the proportion of clinics at DPHs with any form of colocation showed that 3 DPHs and 1 participating DMPH had co-located behavioral health providers within all of their primary care clinics (Exhibit 69). Most (8) DPHs, had co-located behavioral health providers in 1%-50% of their clinics. A couple of DMPHs had co-located behavioral health providers in 50% or fewer of their clinics and 2 had not yet implemented any colocation.

**Exhibit 69: Proportion of Primary Care Clinics with Co-Located Behavioral Health Providers in the Same Office under PRIME, by Hospital Type**
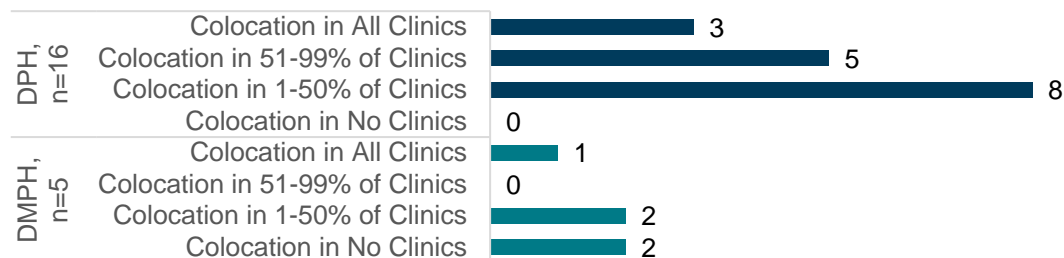


*Source: UCLA analysis of the interim survey, data received Jan to May 2019.*
*Notes: N=21 hospitals participating in Project 1.1 (San Mateo did not provide this information).*

## Behavioral Health Staffing

Given the wide range of providers involved in behavioral health care, hospitals were asked to report on the type and staffing levels of behavioral health providers co-located within their primary care settings. Within clinics with any colocation, both DPHs and DMPHs co-located a psychiatrist for approximately 11 hours/week per clinic on average (0.29 and 0.27 full-time equivalent, respectively;

Exhibit 70). Both DPHs and DMPHs employed clinical social workers and marriage and family therapists most frequently but the former relied on them more (1.24 FTE).

**Exhibit 70: Average Behavioral Health Staffing Levels within Clinics with Co-Located Behavioral Health Providers under PRIME**

| Type of Behavioral Health Provider | Average number of FTE within each clinic | |
|---|---|---|
| | DPH, n=17 | DMPH, n=5 |
| Psychiatrist | 0.29 | 0.27 |
| Psychologist | 0.22 | 0.50 |
| Clinical social worker or marriage and family therapist | 1.24 | 0.60 |
| Peer provider/navigator | 0.34 | 0.17 |
| Other behavioral health staff | 0.28 | 0.16 |

*Source: UCLA analysis of the interim survey, data received Jan to May 2019.*
*Notes: N=21 hospitals participating in Project 1.1 (San Mateo did not provide this information). FTE: Full time equivalent. Other behavioral health staff included unlicensed social workers, nurse case managers, and substance abuse counselors.*

During interviews, hospitals noted that behavioral health providers split their time between primary care sites or that there was variability in staffing models between clinics within the same hospital. For example, only 1 primary care clinic within the hospital might have a psychiatrist, with others relying on other types of behavioral health staff. A few hospitals discussed difficulties with hiring behavioral health staff, particularly in areas in which there are shortages of qualified behavioral health providers:

> *"Earlier on, [provider buy-in] was a challenge, but now it's actually better. Now we're coming to an opposite end of this issue where the problem is now we don't have enough behavioral health staff to really work with our clinics." (San Joaquin)*

## Activities to Promote Integration of Behavioral Health and Primary Care Providers

Full integration requires close collaboration, consultation, and joint care planning for patients. Hospitals were asked to report how frequently providers participated in integrated care delivery. In the interim survey, 9 (41%) hospitals reported holding daily pre-visit planning and huddles and 4 (18%) reported doing so weekly (Exhibit 71). Nine hospitals reported weekly case conferences between primary care and behavioral health providers, 7 reported monthly informal (e.g., lunch) and formal meetings, and 11 reported monthly quality improvement and implementation processes. A couple of hospitals reported that none of these communication strategies were used.

**Exhibit 71: Frequency of Integrated Care Delivery between Primary Care and Behavioral Health Providers under PRIME**
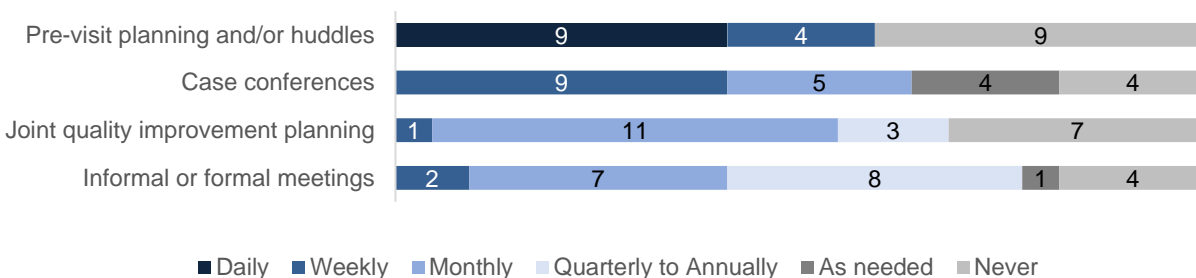


| | Daily | Weekly | Monthly | Quarterly to Annually | As needed | Never |
|---|---|---|---|---|---|---|
| Pre-visit planning and/or huddles | 9 | 4 | | | | 9 |
| Case conferences | | 9 | 5 | | 4 | 4 |
| Joint quality improvement planning | | 1 | 11 | 3 | | 7 |
| Informal or formal meetings | | 2 | 7 | 8 | 1 | 4 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1. Responses were not mutually exclusive; 10 hospitals noted use of more than 1 model. Responses not stratified by hospital type due to low denominator for DMPHs.*

In interviews, a hospital discussed the structuring of the clinic space to facilitate integration between primary care and behavioral health providers:

> *"Our homeless program [primary care and behavioral health providers] actually all sit together in one room. There's no distinction. It's a multidisciplinary seating area where they can note, and then they have their exam room." (Contra Costa)*

Integrated Care Delivery

*Behavioral Health Screening*

In the interim survey, hospitals reported on behavioral health screening within primary care settings before and during PRIME.

Few hospitals systematically screened patients for depression (4), substance abuse (3), or anxiety disorders (1) prior to PRIME (Exhibit 72). Seven hospitals reported systematic screening patients for tobacco use prior to PRIME (33%). Systematic screening greatly expanded during PRIME for depression (16) and tobacco (14) during PRIME but less frequently for other conditions.

**Exhibit 72: Systematic Screening for Behavioral Health Conditions in Primary Care Settings under PRIME**
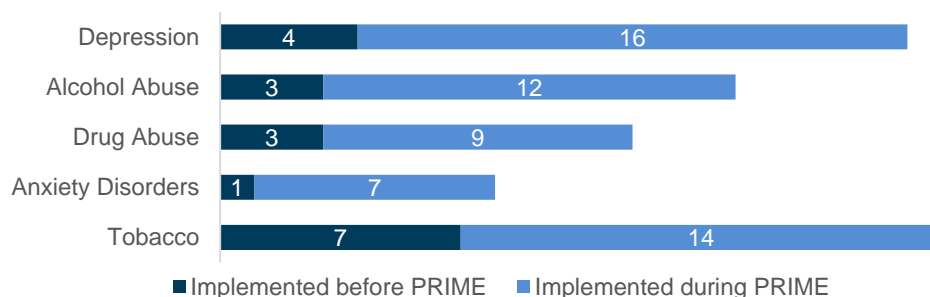


| Condition | Implemented before PRIME | Implemented during PRIME |
|---|---|---|
| Depression | 4 | 16 |
| Alcohol Abuse | 3 | 12 |
| Drug Abuse | 3 | 9 |
| Anxiety Disorders | 1 | 7 |
| Tobacco | 7 | 14 |

*Source: UCLA analysis of the interim survey, data received Jan to May 2019.*
*Notes: N=22 hospitals participating in Project 1.1. Values represent the number of hospitals reporting systematic screening of each respective condition. Responses not stratified by hospital type due to low denominator for DMPHs.*

All participating hospitals reported that medical assistants were the primary staff members responsible for screening (Exhibit 73). However, 15 hospitals also involved primary care providers in behavioral health screening (68%).

**Exhibit 73: Primary Staff Member Responsible for Behavioral Health Screening in Primary Care Settings under PRIME**
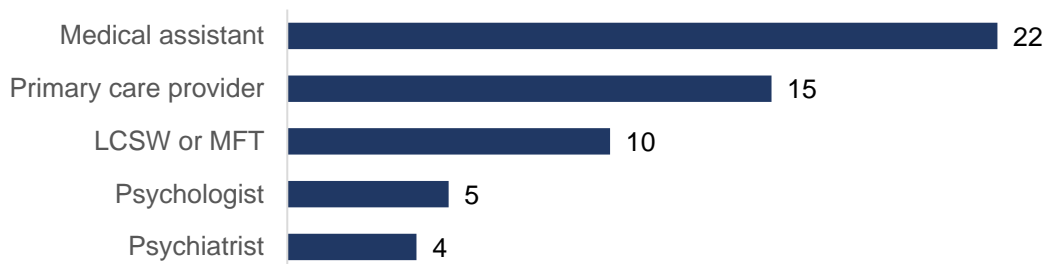


| Staff Member | Count |
|---|---|
| Medical assistant | 22 |
| Primary care provider | 15 |
| LCSW or MFT | 10 |
| Psychologist | 5 |
| Psychiatrist | 4 |

*Source: UCLA analysis of the interim survey, data received Jan to May 2019.*
*Notes: N=22 hospitals participating in Project 1.1. Responses not stratified by hospital type due to low denominator for DMPHs. LCSW: licensed clinical social worker; MFT: marriage and family therapist.*

In interviews, hospitals discussed the instrumental role of PRIME in motivating implementation of standardized screening protocols for depression and substance abuse.

*"Screening before was, I think, ad hoc and provider-driven. Now, it's universal and driven by the registration staff…I think PRIME helped motivate us to fill vacant*

*positions and increase the number of positions where we felt like there was a gap, and created a lot of momentum." (Alameda)*

The majority of hospitals noted that they used the PHQ-2 (18 of 22 hospitals) and PHQ-9 (21) to screen for depression in primary care settings. To screen for alcohol abuse, hospitals most commonly reported using the AUDIT (13) or AUDIT-C (7). Drug abuse was most commonly screened for using the DAST (14) or DAST-10 (6). Fifteen hospitals reported using the GAD-7 to screen for anxiety (68%) (Data not shown).

In addition to screening patients in the primary care setting, 15 DPHs (88%) reported screening patients in the emergency department (ED) but 2 DPHs (12%) were not planning to do so. Among DMPHs, 2 hospitals reported ED screening before PRIME, 1 hospital reported implementing it as part of PRIME, and 2 were planning to or were in the process of implementing it (Data not shown).

### Behavioral Health Referral Process
Hospitals reported using a range of referral methods to behavioral health providers (Exhibit 74). In primary care settings, 20 hospitals (91%) reported using warm handoffs by calling a behavioral health provider to visit patients during a visit; 15 also facilitated making appointments, and 11 referred patients without additional assistance. Within the ED, 6 hospitals used a 24-7 care navigators or community liaisons to link patients to behavioral health providers and 12 called those providers during the visit.

**Exhibit 74: Referral Processes for Patients with Behavioral Health Issues in Primary Care and Emergency Settings under PRIME**
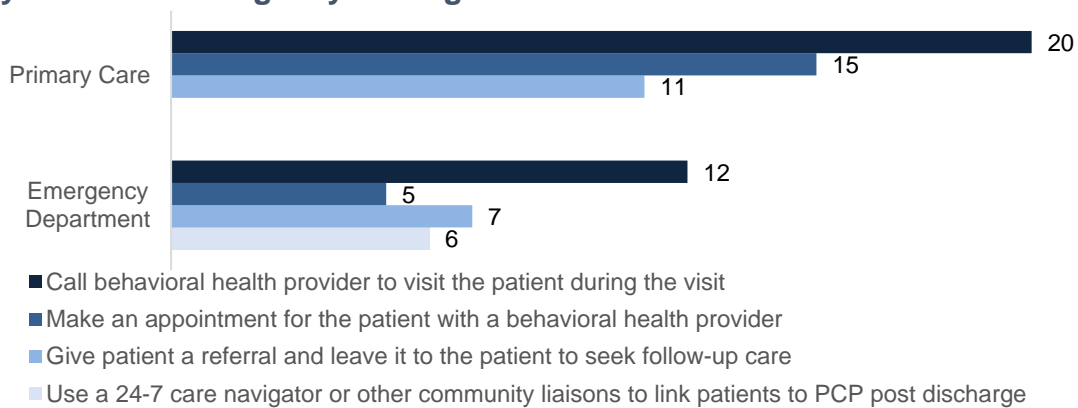


Primary Care: 20, 15, 11
Emergency Department: 12, 5, 7, 6

■ Call behavioral health provider to visit the patient during the visit
■ Make an appointment for the patient with a behavioral health provider
■ Give patient a referral and leave it to the patient to seek follow-up care
■ Use a 24-7 care navigator or other community liaisons to link patients to PCP post discharge

*Notes: N=22 hospitals participating in Project 1.1. Responses were not mutually exclusive; hospitals could report using multiple methods of referral. Responses not stratified by hospital type due to low denominator for DMPHs.*

During interviews, many hospitals noted that they were still in the process of refining referral processes. Hospitals often discussed the referral process as dependent on patient acuity and inconsistencies in the availability of behavioral health providers within each clinical setting. For example, a hospital described their process for addressing milder issues through co-located behavioral health providers, while referring patients with more severe needs to specialized behavioral health providers outside of the system:

> *"We have brought on a team of social workers…they address the needs and provide brief interventions when beneficiaries are flagged, but at the same time, they can provide the follow up care as well…They do social work and therapy as well, but what we're really trying to do is integrate them into our primary care setting where they're available as a resource to our providers so that we can address those needs as they become evident. Then we work closely with our county department through the specialty mental health to transition those referrals, make sure that those who really have the specialty mental health needs are getting the care where they need it."*
> *(Kern Medical)*

Another hospital discussed how having consistent colocation of a behavioral health providers in each primary care clinic facilitated improvement in referring patients with behavioral health conditions.

> *"I think with addition of the [Behavioral Health Integration and Complex Care Initiative (BHICCI)] team, it hasn't been [an] entirely smooth transition but we do now have a therapist in each clinic and that's given a lot more leeway for the providers to kind of seek out advice and if the patient is actually appropriate for the services of that BHICCI team, they can be referred there for therapy."* (Riverside)

### *Training, Monitoring, and Feedback for Primary Care Providers*
In the interim survey, hospitals reported on the extent to which they provided training, monitoring, and feedback to primary care providers to (1) screen for behavioral health conditions, (2) refer to behavioral health providers, (3) use warm handoff, and (4) conduct motivational interviewing.

Most hospitals reported training providers on these activities but the frequency was variable. For example, training on screening was conducted annually in 7 hospitals, only

once (3 hospitals) or as needed (1 hospital), and not done at 11 hospitals (Exhibit 75). In contrast, training for referrals, warm hand offs, and motivational interviewing was more prevalent. Monitoring to assess adherence to these care delivery processes was often more frequent than providing provider feedback as a strategy to promote such care delivery.

**Exhibit 75: Frequency of Training, Monitoring, and Feedback to Primary Care Providers for Behavioral Health Processes Under PRIME**
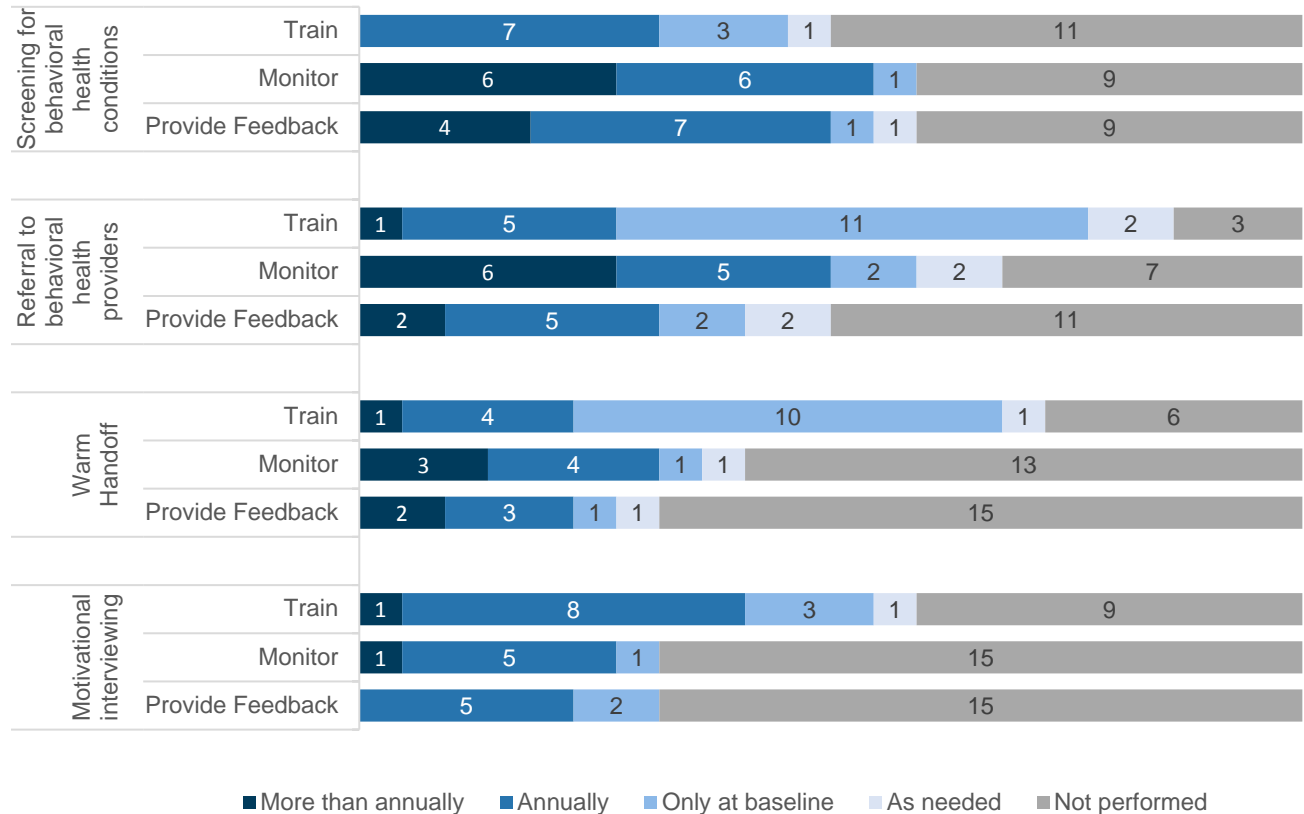


Legend: ■ More than annually  ■ Annually  ■ Only at baseline  ■ As needed  ■ Not performed

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1. Responses not stratified by hospital type due to low denominator for DMPHs.*

In interviews, hospitals described their strategies for training staff on protocols for behavioral health screening, which included employing champions or clinical experts in leading trainings, implementing standardized training processes for all staff, and providing specialized training to certain staff. However, a hospital highlighted the difficulties of training and monitoring providers to implement updated screening and referral workflows within their system:

*"We do have time[d] meetings where our teams can meet for an hour a month, and those are already filled with a slew of issues that they need to address operationally for the clinic…and so you're fighting for that desperate one hour of time or brown bag lunches when people are busy…You can do the initial minimum [training] to launch, but then you need the follow-up to not only monitor but to have that consulting who are your champions to help really motivate continuous effort to change the culture and change the practice style." (Santa Clara)*

### Joint Individual Treatment Plans

In the interim survey, hospitals were asked to assess the extent to which behavioral health and primary care providers developed joint individual treatment plans for patients with behavioral health issues. Overall, 14 of 22 hospitals noted that joint individual treatment plans (ITP) were developed for patients with behavioral health issues. However, only 6 hospitals reported these plans were usually or always used (Exhibit 76).

**Exhibit 76: Frequency of Joint Individual Treatment Plan (ITP) Development between Primary Care and Behavioral Health Providers for Patients with Behavioral Health Issues under PRIME, by Hospital Type**
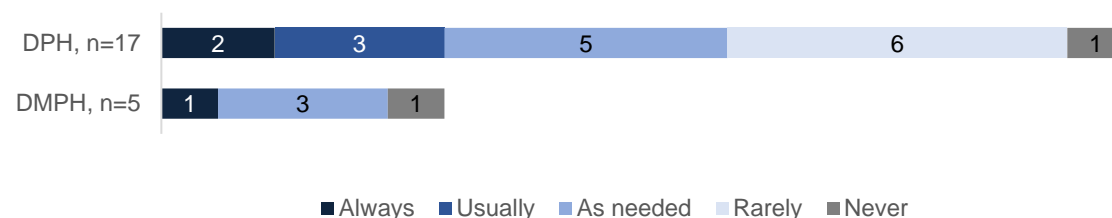


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.1.*

Among the 14 hospitals using a joint ITP, 13 reported that these plans contained non-medical interventions as needed. A hospital reported that the ITP always included non-medical interventions. The most common non-medical intervention included in ITPs was healthy lifestyle coaching (used by 12 hospitals), although a few hospitals also included peer-led classes (4) and gym memberships (2). A couple of hospitals did not include any non-medical interventions within the ITP. The ITP was most commonly housed in the medical EHR (7) or a joint medical and behavioral health EHR (5), although 1 hospital noted that the ITP was maintained in a paper behavioral health chart. Half of hospitals that used ITPs reported sharing it with the patient, either through both electronic and paper forms (5) or through paper only (2) (Data not shown).

*Medication-Assisted Treatment*

In the interim survey, hospitals reported the use of medication-assisted treatment (MAT) as a substance abuse treatment strategy. Nine of 22 hospitals reported providing MAT. Eight DPHs reported that at least 1 of their primary care providers had been certified for MAT under PRIME; no DMPHs reported any MAT certification during PRIME. Among the 8 DPHs in which any primary care providers had been certified for MAT, each hospital on average had certified 20 providers (Data not shown).

A hospital discussed how their prioritization of MAT shifted during the course of PRIME implementation:

> *"We hired a board-certified addictionologist…and he is now operating a MAT clinic in one of our primary care locations, and he's taking referrals from across all of the different primary care locations. But we are now doing buprenorphine induction and maintenance for individuals with opioid addiction. And he's also doing work with individuals who are suffering from alcoholism or even using other substances like cocaine…We hadn't planned it prior to PRIME. But as we've got deeper into the PRIME efforts, we realized it was an area of great need, and our primary care doctors wanted it, our patients needed it, and so that's part of our offerings now." (UC Davis)*

## Participation in Learning Collaboratives

Hospitals received support for PRIME implementation from organizations engaged by DHCS, including Harbage Consulting and Safety Net Institute (SNI) (Learning Collaboratives). In addition, the California Association of Public Hospitals (CAPH) and District Hospital Leadership Forum (DHLF) provided support to their member hospitals. Hospitals were asked to report on participation in other external learning collaboratives related to implementation of this project. In the interim survey, 5 hospitals noted participating in external learning collaboratives and these included California Smokers Helpline Learning Collaborative, America's Essential Hospitals Population Health Learning Network, Institute for Health Improvement Team Collaborative, and Institute for High Quality Care. A hospital discussed the benefits of participating in the Institute for Health Improvement Behavioral Health Care Collaborative:

> *"We were lucky that this project got to continue with IHI for the first 2 years of PRIME, so they were a focus area, and that brought in some additional expertise. We had a person that was an amazing expert on collaborative care…so she helped us design workflows that were successful and had a lot of evidence of success based on their portfolio of other projects that they had in their collaborative. So we felt confident that whatever recommendation they made, it was backed by hundreds of systems that were testing it or doing similar work." (Contra Costa)*

## Level of Effort Spent on Behavioral Health Integration

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10), effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10.0). DPH hospitals reported spending a medium level (6.9) of overall effort in implementing Project 1.1 and DMPH hospitals reported spending a high level (8.0) of overall effort to implement (Exhibit 403). Among DPHs, ratings of effort were high for engaging internal stakeholders (7.2), staff training (7.6), resources (8.1), and effort to implement (8.2). On average, DMPHs reported requiring high effort for engaging internal stakeholders (7.6), resources (8.0), and effort to implement (8.0).

In interviews, hospitals discussed difficulties related to having sufficient resources to offer treatment to patients screening positive for behavioral health conditions, engaging providers in implementing expanded workflows for screening and referral, building the infrastructure to integrate new processes into the EMR, addressing changes in project metrics, and coordinating care with external behavioral health providers. To explain the high level of effort reported, a hospital said:

> *"Based off of our baseline performances in other measures, and how much of a gap there is to meet our targets…Project 1.1, in certain areas, were big gaps for us. So we needed to spend a lot of time and resources focused on that project, which is why it's rated highly. It is a complicated project, but it also was one of our priority programs this past fiscal year, which is why we've rated it highly."* (UCSF)

## Challenges and Solutions to Integration

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 1.1 (Challenges: Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (12 of 22) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the majority of hospitals (8) was variation in documentation within system by providers and staff. The top solution identified by the majority of hospitals (8) was EHR/IT standardization or expansion across the system. The second solution identified by the majority of hospitals (6) was standardizing processes for documentation.

In interviews, a hospital noted the importance of an enhanced information technology infrastructure in improving their ability to manage the behavioral health needs of their patient population:

> *"What we did notice with behavioral health, with the help of the IT department being able to stratify and understand a lot of our readmissions and those kind of things...and our complex care really were based on a lot of these challenges…I think*

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*that that's really where IT really helped, is we built that data warehouse, we're actually able to run some more certification reports, and get more data." (Natividad)*

## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 1.1 (Challenges Exhibit 406:  Solutions Exhibit 407).

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The top challenge cited by the hospitals (10) was processes not being established system-wide. The second challenge cited by the majority of hospitals (7) was inadequate follow-up processes to document patient outcomes. The top solution identified by the hospitals (8) was standardizing processes across systems. The second solution identified by the majority of hospitals (6) was establishing meetings across teams.

In interviews, a few hospitals also discussed the difficulties created by changes in the SBIRT measure specifications:

*"… How do you improve on something that changed after the fact? And so the effort to implement is increased because you did things that didn't mean anything, or the effort due to unanticipated changes in the metrics. Again, you can't improve something that's a moving target, and that's a moving target after the fact." (UCLA)*

A hospital noted how the wide applicability of the project's metrics encouraged prioritization of the project's activities within the system:

*"Some of the metrics just have a greater impact on the health of our overall … population that we take care of…when we look at the population health perspectives, sort … metrics and the projects around diabetes control, and blood pressure control. Those have elements … of access to care … good clinical decisions, and us supporting patients when they're not in our setting…So some of these metrics are really cross-cutting in the population …as opposed to some of the other PRIME metrics that are much more process … orientated in some of smaller populations." (Contra Costa)*

## Hospital-Reported Metric Performance

Performance of the hospitals in Project 1.1 was measured by the following 7 metrics (Exhibit 77), although 2 were deactivated following DY 12 and 1 was added for DY 13. Among these, all were standard metrics, except for 1 innovative metric. Out of these metrics, 6 were designed to show progress by increasing rates and 1 was shown by decreasing rates. Metrics were categorized as outcome metrics (2) or process metrics (4) or mixed (1).

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**Exhibit 77: PRIME Project 1.1 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **Alcohol and Drug Misuse (SBIRT)** | 1.1.1.a | Oregon CCO | N/A | Increase | Process |
| **Care Coordinator Assignment (deactivated after DY 12)** | 1.1.2* | Variation Univ of Wash./ Coordinated Care Initiative | N/A | Increase | Process |
| **Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%)** | 1.1.3.d | NCQA | 0059 | Decrease | Outcome |
| **Depression Remission at 12 Months CMS159v4 (deactivated after DY 12)** | 1.1.4 | MN Community Measurement | 0710 | Increase | Outcome |
| **Screening for Clinical Depression and Follow-Up** | 1.1.5.f | CMS | 0418 | Increase | Process |
| **Tobacco Assessment and Counseling** | 1.1.6.t | AMA-PCPI | 0028 | Increase | Process |
| **Depression Remission or Response for Adolescents and Adults: Follow-Up PHQ-9; Depression Remission; Depression Response(added for DY 13)** | 1.1.7 | NCQA | N/A | Increase | Mixed |

*Source: PRIME Metrics Specs, DY 13YE*

*Notes: NQF: National Quality Forum, CCO: coordinated care organizations, SBIRT: screening, brief intervention, and referral to treatment, NCQA: National Committee for Quality Assurance, CMS: Centers for Medicare and Medicaid Services, AMA-PCPI: American Medical Association Physician Consortium for Performance Improvement. * Denotes innovative metric.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the

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denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.

Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. DMPHs did not report data in DY 11 for this project.

### Metric 1.1.1.a – Alcohol and Drug Misuse (SBIRT)

Metric 1.1.1.a measured the screening, intervention, and referral to treatment service rate for patients with a history of alcohol and drug misuse (PRIME Metric Specs, DY 13YE). Hospitals were intended to provide accurate diagnosis and comprehensive treatment procedures to support patients with a history of alcohol and drug misuse. Achievement was measured by an increasing rate.

Among DPHs, the alcohol and drug misuse screening and intervention rate remained stable between DY 11 and DY 12 at 3%, then increased to 5% in DY 13 (Exhibit 78). Both DPH UC and DPH County hospitals showed a similar pattern of change. The DMPHs began implementation in DY 12, and alcohol and drug misuse screening and intervention rates increased from DY 12 (7%) to DY 13 (12%). Both DMPH Non-CAHs and DMPH CAHs increased between DY 12 and DY 13. In DY 13, the individual achievement rates for Metric 1.1.1.a ranged from 0.02% to 57% for DPHs and 0.04% to 51% for DMPHs (data not shown).

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**Exhibit 78: PRIME Self-Reported Alcohol and Drug Misuse Rates for Metric 1.1.1.a**
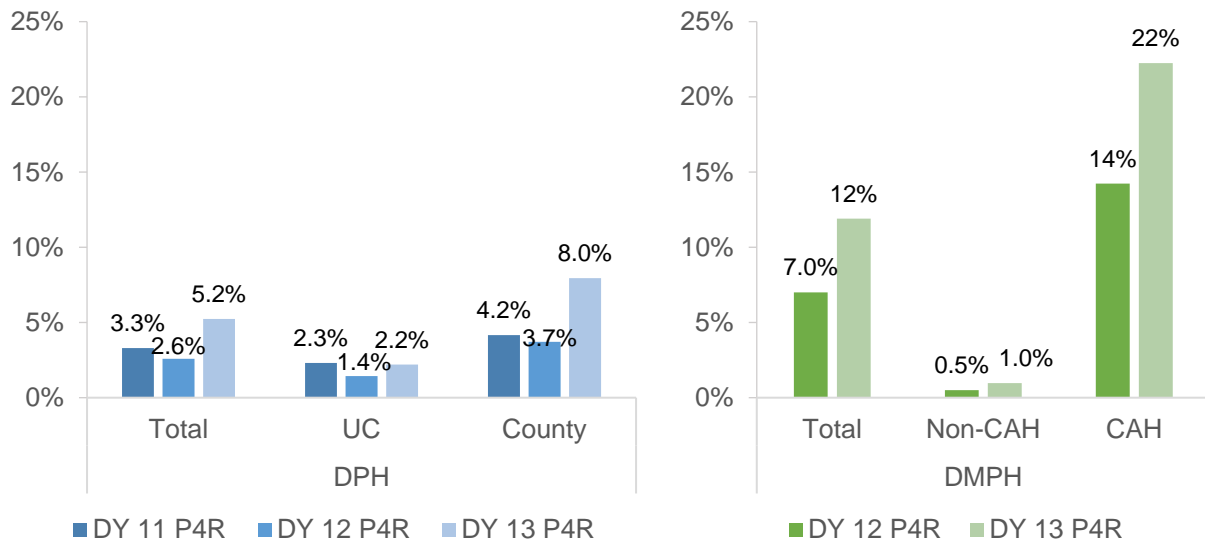


DPH chart (DY 11 P4R, DY 12 P4R, DY 13 P4R):
- Total: 3.3%, 2.6%, 5.2%
- UC: 2.3%, 1.4%, 2.2%
- County: 4.2%, 3.7%, 8.0%

DMPH chart (DY 12 P4R, DY 13 P4R):
- Total: 7.0%, 12%
- Non-CAH: 0.5%, 1.0%
- CAH: 14%, 22%

*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital,*
*UC: University of California, CAH: critical access hospital, DY: demonstration year,*
*P4R: pay-for-reporting, P4P: pay-for-performance.*

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## Metric 1.1.2 – Care Coordinator Assignment

Metric 1.1.2 measured the number of diabetes patients with an assigned care coordinator (PRIME Metric Specs, DY 12YE). Hospitals were intended to provide comprehensive care by assigning a specific care manager who takes full responsibility of the patient's care coordination. Achievement was measured by an increasing rate.

Although DPH County rates decreased between DY 11 (40%) and DY 12 (37%), this drop was negated by the increase of the DPH UC rate between DY 11 (20%) and DY 12 (32%) (Exhibit 79). Therefore, the total DPH rate remained stable between DY 11 and DY 12 around 35%. DMPHs did not start implementation until DY 12 and reported a total rate of 4.6%.

**Exhibit 79: PRIME Self-Reported Care Coordinator Assignment\* Rates for Metric 1.1.2**
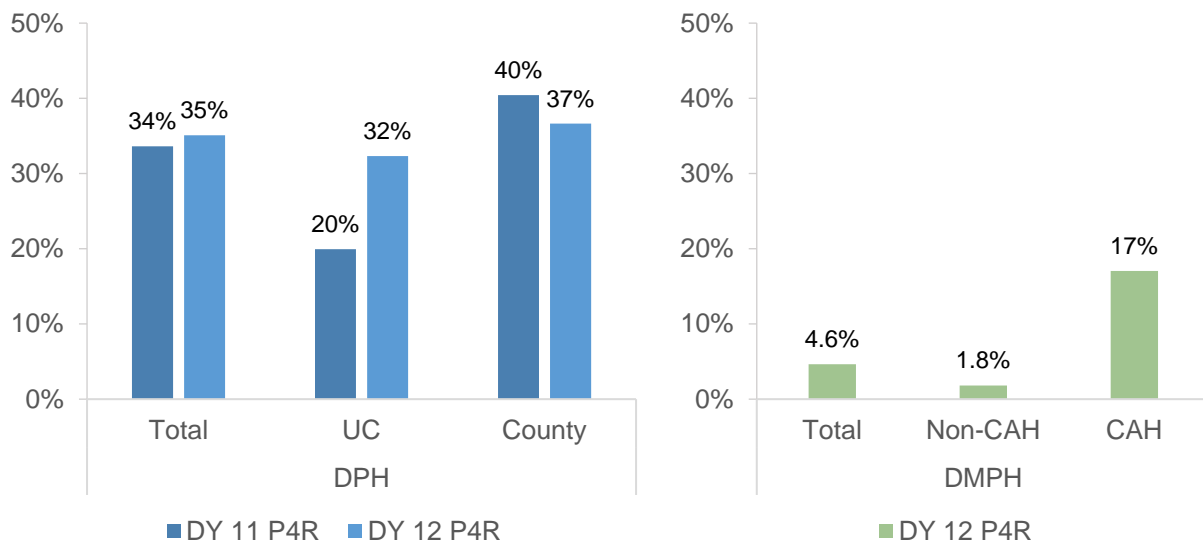


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. \* Denotes innovative metric.*

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## Metric 1.1.3.d. –Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%)

Metric 1.1.3.d measured the rate of poor, missing, or incomplete HbA1c levels among diabetic patients (NQF 0059, PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce the risk of microvascular complications, such as eye, kidney, and nerve diseases by maintaining control of HbA1c blood levels. Achievement was measured by a decreasing rate.

DPHs reported a decline in the weighted average rate of diabetic patients with poor control of HbA1c blood levels from 29% in DY 11 to 25% in DY 13 (Exhibit 80). DPH UC rates remained stable, whereas DPH County rates declined. DMPHs did not report this metric in DY 11 but reported 14% as their rate in DY 12 and 19% in DY 13. DMPH Non-CAH and DMPH CAH reported different patterns of change. In DY 13, the individual achievement rates for Metric 1.1.3.d ranged from 13% to 36% for DPHs and 14% to 35% for DMPHs (data not shown).

**Exhibit 80: PRIME Self-Reported Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%) Rates for Metric 1.1.3.d**
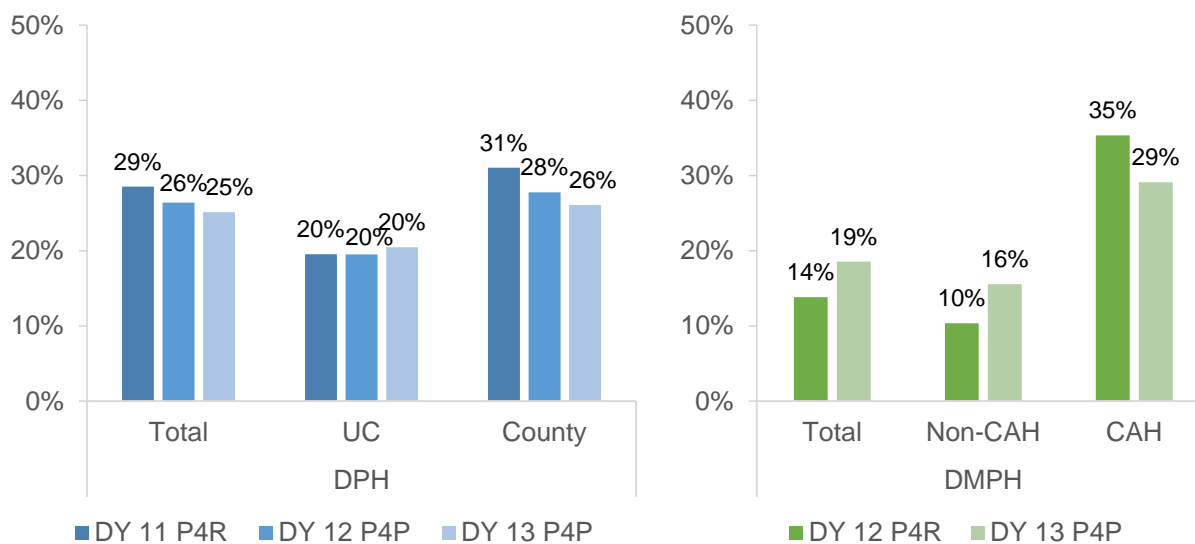
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*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 1.1.4 – Depression Remission at 12 Months

Metric 1.1.4 measured the rate of adult patients with major depression or dysthymia and an initial PHQ-9 score > 9 who demonstrate remission at 12 months (NQF 0710, PRIME Metric Specs, DY 13YE). Hospitals were intended to increased remissions by improving patient care and behavioral health. Achievement was measured by an increasing rate.

DPHs reported similar rates in DY 11 (6.4%) and DY 12 (6.5%) (Exhibit 81). DPH UCs decreased between the 2 reporting years, whereas DPH Counties increased. DMPHs did not report this metric in DY 11 but reported remission rates at 1.1% in DY 12. Metric 1.1.14 was replaced by metric 1.1.7 in DY 13 due to operationalization difficulties.

**Exhibit 81: PRIME Self-Reported Depression Remission at 12 Months Rates for Metric 1.1.4**
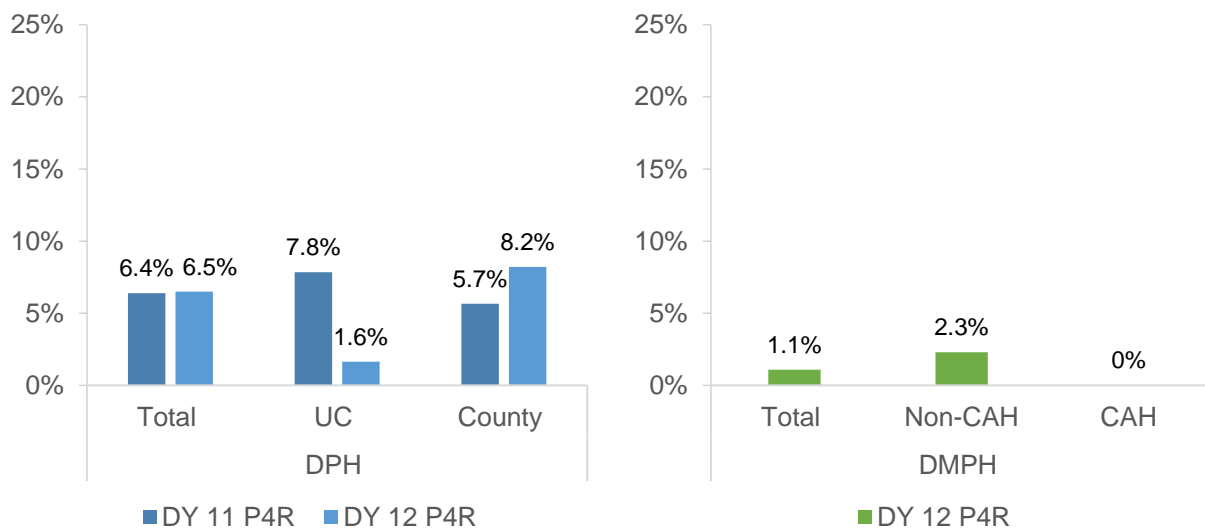


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. The metric was retired after DY 12.*

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## Metric 1.1.5.f –Screening for Clinical Depression and Follow-Up

Metric 1.1.5.f measured the rate of adults received standardized clinical depression screening, and if positive, received a follow-up plan (NQF 0418, PRIME Metric Specs, DY 13YE). Hospitals were intended to combat depression by improving proactive measures and ensuring patients received a thorough diagnosis and follow-up procedures. Achievement was measured by an increasing rate.

The weighted average rates for DPHs increased from 18% in DY 11 to 55% in DY 13 (

Exhibit 82). DPH UCs remained stable between DY 11 and DY 12 at 15%, then increased to 39% in DY 13. The other 3 subcategories, including DPH Counties, DMPH Non-CAH, and DMPH CAH, all showed similar increasing rates. The weighted DMPH rate also increased between DY 12 (35%) and DY 13 (63%). In DY 13, the individual achievement rates for Metric 1.1.5.f ranged from 20% to 91% for DPHs and 15% to 94% for DMPHs (data not shown).

**Exhibit 82: PRIME Self-Reported Screening for Clinical Depression and Follow-Up Rates for Metric 1.1.5.f**



*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance.*

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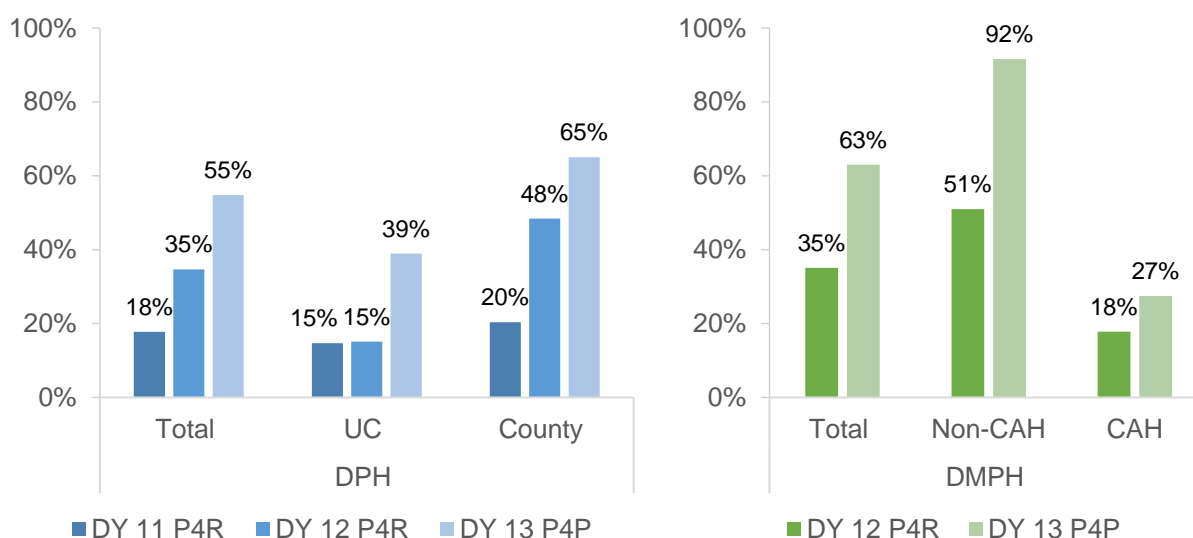
## Metric 1.1.6.t. – Tobacco Assessment and Counseling

Metric 1.1.6.t measured the rate at which patients were screened for tobacco use and received cessation intervention if identified as a tobacco user (PRIME Metric Specs, DY 13YE). Hospitals were intended to lower the risk of heart disease, lung disease, and stroke through diagnosis and other preventative measures to reduce tobacco usage. Achievement was measured by an increasing rate.

The rates of tobacco screening and follow up increased in weighted DPH and DMPH categories, as well as the other individual rates between all active reporting years (Exhibit 83). The weighted DPH rate increased from 82% in DY 11 to 96% in DY 13. As for the DMPHs, they did not begin reporting metric performance data until DY 12; the rate increased from 45% in DY 12 to 84% in DY 13. In DY 13, the individual achievement rates for Metric 1.1.6.t ranged from 89% to 100% for DPHs and 76% to 89% for DMPHs (data not shown).

**Exhibit 83: PRIME Self-Reported Tobacco Assessment and Counseling Rates for Metric 1.1.6.t**



*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 1.1.7 – Depression Remission or Response for Adolescents and Adults (DRR)

Metric 1.1.7 measured the number of patients who were able to receive follow-up PHQ-9, demonstrate depression response, or demonstrate depression remission within 4 to 8 months (PRIME Metric Specs, DY 13YE). Hospitals were intended to improve care for patients with depression by thorough diagnosis and comprehensive treatment. Achievement was measured by an increasing rate, but this metric was new in DY 13 and only 1 year of data was available. The metric replaced 1.1.4 - depression remission or response for adolescents and adults.

DPHs reported 24% for follow-up rate, 7.4% for response rate, and 4.1% for remission rate (Exhibit 84). DMPHs reported 42% for follow-up rate, 5.5% for response rate, and 4.1% for remission rate. All subtypes also followed a similar pattern in which follow-up rates had the highest rate, followed by response rate, and lastly, remission rate. In DY 13, the individual achievement rates for Metric 1.1.7 (Depression Remission or Response for Adolescents and Adults: Depression Remission) ranged from 0.735% to 100% for DPHs and 2% to 100% for DMPHs (data not shown). In DY 13, the individual achievement rates for Metric 1.1.7 (Depression Remission or Response for Adolescents and Adults: Follow-Up) ranged from 4% to 100% for DPHs and 2% and 14% for DMPHs (data not shown). In DY 13, the individual achievement rates for Metric 1.1.7 (Depression Remission or Response for Adolescents and Adults: Depression Response) ranged from 3% to 17% for DPHs and 16% to 48% for DMPHs (data not shown).

**Exhibit 84: PRIME Self-Reported Depression Remission or Response for Adolescent and Adults (DRR) Rates for Metric 1.1.7**
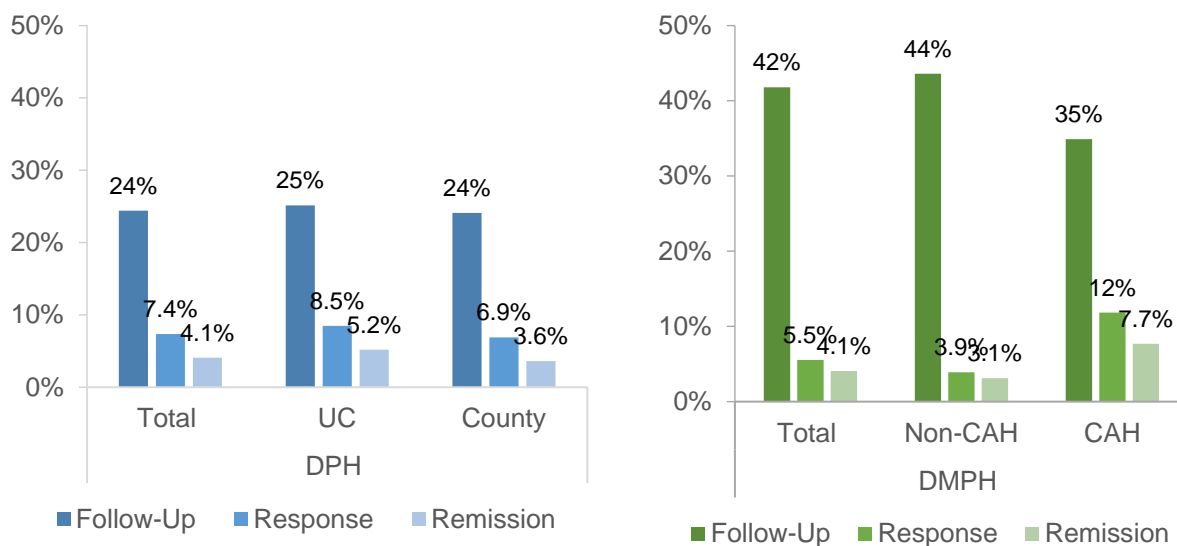
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## Summary of Key Findings

Project 1.1 was designed to promote behavioral health and primary care integration to improve outcomes of care for patients with behavioral health conditions. Seventeen DPH and 5 DMPHs participated in Project 1.1. Multiple hospitals indicated implementing some aspects of this project prior to PRIME but the majority had newly selected or implemented the core components identified in Attachment Q. When asked to report on specific infrastructure established for implementing this project, they reported a single EHR for primary care and behavioral health providers (20); behavioral health patient registries (13) that were most commonly managed by licensed clinical social workers (11); and newly developed explicit protocols for referral of patients to behavioral health providers (10).

When reporting on how this project was implemented, hospitals indicated an increase in leadership support and resources for: screening for depression (18); colocation of behavioral health providers (11); involving primary care and behavioral health providers in planning (21). Hospitals faced challenges in garnering provider support due to competing priorities and concerns for capacity to address behavioral health needs. Hospitals mostly (14) used the Collaborative Care Model and increasingly co-located behavioral health providers in at least some primary care clinics (13) indicating this co-location a work in progress though beneficial. Behavioral health staffing was frequently limited and mostly included clinical social workers and marriage and family therapists and less frequently psychiatrists. Providers used daily pre-visit planning and huddles (9), weekly case conferences (9), monthly joint QI meetings (11), and monthly informal or formal meetings (8) to communicate, but this depended on the level of behavioral health staffing.

Delivery of behavioral health care included systematic screening for depression (16), tobacco (14), and alcohol abuse (12) during PRIME; warm handoffs to (20) and directly facilitating appointments with behavioral health providers (15), although these processes were still being refined; regularly providing jointly-developed individual treatment plans (7); and providing medication-assisted treatment or MAT for patients with substance abuse disorders (9). The overall level of difficulty in implementing this project was high (over 8 out of 10). Data and metric-related challenges to implementation included lack of health information technology or EHR functionality (12), variations in documentation by providers and staff (8), lack of system-wide established

processes (10), and inadequate follow-up in documenting patient outcomes (7). These challenges were addressed by standardizing processes in tracking/documentation (8) adoption of an enterprise-wide EHR (7), standardizing processes across systems (8), and establishing meetings across teams (6).

Performance of hospitals in Project 1.1 was measured by 6 standard and 1 innovative metric (denoted with an *). Metrics were 1.1.1.a-Alcohol and Drug Misuse (SBIRT); 1.1.2*-Care Coordinator Assignment (deactivated after DY 12); 1.1.3.d-Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%); 1.1.4-Depression Remission at 12 Months (deactivated after DY 12); 1.1.5.f-Screening for Clinical Depression and Follow-Up; 1.1.6.t-Tobacco Assessment and Counseling; 1.1.7-Depression Remission or Response for Adolescents and Adults: Follow-Up PHQ-9, Depression Remission, and Depression Response (added for DY 13). Of these, 5 measured care processes (1.1.1.a, 1.1.2, 1.1.5.f, 1.1.6.t, 1.1.7) and 3 (1.1.3.d, 1.1.4, 1.1.7) measured outcomes of care. Hospitals reported improvement in several (DPH: 1.1.1.a, 1.1.2, 1.1.3.d, 1.1.4, 1.1.5.f, 1.1.6.t, 1.1.7; DMPH: 1.1.1.a, 1.1.5.f, 1.1.6.t, 1.1.7), and a decline in 1 (DMPH 1.1.3.d) metric. A couple of metrics were not implemented for long enough to observe trends (DMPH: 1.1.2, 1.1.4).

Overall, hospitals made significant progress in implementing project 1.1 by establishing data infrastructure and protocols for behavioral integration, garnering support for integration and planning to do so using evidence-based models, co-locating behavioral health and primary care providers, and delivering integrated care. Hospitals reported improvements in the majority of metrics. However, they varied in their progress in project implementation and metrics progress.

# Project 1.2 – Ambulatory Care Redesign: Primary Care

## Project Overview

Project 1.2 focuses on promoting system integration and improving efficiency in primary care delivery to ultimately improve access to care. These goals are to be achieved by transforming primary care practice into the patient-centered medical home (PCMH) care delivery model. Hospitals were encouraged to implement the PCMH principles including team-based care, care coordination across settings, population health management using EHR technologies and other approaches, promoting evidence-based care delivery including monitoring of provider performance, and promoting access through open-access scheduling. Specific objectives can be found in Attachment Q. Performance of hospitals in Project 1.2 was measured by the following 14 metrics.

A total of 24 hospitals participated and reported metric performance for Project 1.2 in DY 11; this decreased to 23 in DY 12 and DY 13. Project 1.2 was required for DPHs and all 17 implemented it (Exhibit 85). Among the DMPHs, 7 chose to participate in DY 11, of which 4 were DMPH Non-CAH (El Centro, Kaweah Delta, Oak Valley, and Tulare) and 3 were DMPH CAH (John C. Fremont, Modoc, and Southern Inyo). Interim survey data is available for 22 hospitals; Tulare stopped PRIME participation and Southern Inyo did not participate in the survey.

**Exhibit 85: PRIME Project 1.2 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| Total Participating Hospitals | 24 | 23 | 23 |
| Total DPH | 17 | 17 | 17 |
| DPH UC | 5 | 5 | 5 |
| DPH County | 12 | 12 | 12 |
| Total DMPH | 7 | 6 | 6 |
| DMPH Non-CAH | 4 | 3 | 3 |
| DMPH CAH | 3 | 3 | 3 |

*Notes: The number of participating hospitals indicates those that implemented the project for the full DY. Among the DMPH Non-CAHs, Tulare dropped in DY 12 on October 29, 2017. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital. Tulare stopped participation in PRIME prior to interim evaluation, but did complete the survey and interview; Southern Inyo did not participate in the interim survey or interviews or select a disparity target.*

In the interim survey, 22 of the hospitals reported whether and when they implemented the suggested core components of this project as an indication of their overall approach to redesigning primary care (Exhibit 86). The most common activities before PRIME were providing evidence-based preventive and chronic disease management (13) and hiring and training of frontline workforce responsible for coordination (12, Exhibit 86). During PRIME, the majority of participating hospitals reported implementing all of the core components.

### Exhibit 86: PRIME Project 1.2 Core Components

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Gap analysis of practice sites within the DPH/DMPH system. | 7 | 15 |
| Primary Care practices will demonstrate advancement of their PCMH transformation through the use of a nationally recognized PCMH methodology. | 9 | 17 |
| Hiring and training of frontline workforce (e.g., medical assistants, community health workers, promotoras, health navigators or other non-licensed members of the care team) to be responsible for coordination of non-clinical services and elements of the care plan. | 12 | 18 |
| Implement technology-enabled data systems to support pre-visit planning, point of care delivery, population/panel management activities, care coordination, patient engagement, and operational and strategic decisions including a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. a. Implementation of Electronic Health Record (EHR) technology that meets meaningful use standards (MU). | 11 | 17 |
| Ongoing identification of all patients for population management (including assigned managed care lives): a. Manage panel size, assignments, and continuity to internal targets; b. Develop interventions for targeted patients by condition, risk, and self-management status. c. Perform preventive care services | 9 | 20 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| including mental health and substance misuse screenings and brief interventions (e.g., PHQ-9, SBIRT). | | |
| Enable prompt access to care by: a. Implementing open or advanced access scheduling b. Creating alternatives to face-to-face provider/patient visits c. Assigning frontline workers to assist with care navigation and non-clinical elements of the care plan. | 11 | 15 |
| Coordinate care across settings a. Identification of care coordinators at each primary care site who are responsible for coordinating care within the PCMH as well as with other facilities (e.g., other care coordinators or PCMH/DPH/DMPH high risk care managers) i. Establish onsite Care/Case managers to work with high risk patients and their care teams, or develop processes for local care coordinators to work with a central complex care management program for these patients b. Implement processes for timely bi-directional communication and referral to specialty care, (including mental health and substance use disorder services), acute care, social services and community based services. | 9 | 21 |
| Demonstrate evidence-based preventive and chronic disease management. | 13 | 20 |
| Improve staff engagement by: a. Implementing a model for team-based care in which staff performs to the best of their abilities and credentials. b. Providing ongoing staff training on the team-based care model to ensure effective and efficient provision of services (e.g., group visits, medication reconciliation, motivational interviewing, cognitive behavioral therapy and Medication- Assistance Treatment (MAT)). | 9 | 18 |
| Engage patients using care plans, and self-management education, and through involvement in the design and implementation of this project. | 10 | 15 |
| Improve the accuracy and completeness of race, ethnicity, and language (REAL), and sexual orientation and gender identity (SO/GI) data, and use that data to identify and reduce disparities in 1 or more Primary Care Redesign project metrics by: a. Adding granular REAL and SO/GI data to demographic data collection processes and training front-line/registration staff to gather complete and accurate REAL/SO/GI data b. Developing capacity to track and report REAL/SO/GI data, and data field completeness c. Implementing and/or refining processes for ongoing validation of REAL/SO/GI data d. Developing capacity to stratify performance metrics by REAL/SO/GI data and use stratified performance data to identify disparities for targeted | 5 | 20 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| interventions e. Developing capacity to plan and implement disparity reduction interventions with input from patients and community stakeholders f. Developing dashboards to share stratified performance measures with front-line staff, providers, and senior leadership. | | |
| To address quality and safety of patient care, implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | 8 | 15 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=22 hospitals participating in Project 1.2 completed the survey (Southern Inyo and Tulare did not). Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey hospitals may have implemented or dropped activities under a core component.*

## Infrastructure for Primary Care Transformation

### Health Information Technology

As discussed in the Introduction (
Electronic Health Record (EHR) Infrastructure), many hospitals adopted new and improved existing systems for capturing and monitoring data on patient processes and outcomes during PRIME.

In interviews, hospitals discussed the role of improvements in health information technology in improving their ability to document patient outcomes, perform population health management, and improve patient-provider and inter-provider communication. Examples of health information technology to transform primary care practice included the integration of screening tools in the electronic health record and use of automated outreach phone calls to registry patients:

> *"One of the biggest changes is implementing our survey assessment tool…our PHQ-9, all electronically and get immediate feedback … before when these were done on paper, it really just creates that pile of paper that gets scanned into our medical record. It's not discrete data. It wasn't anything we could easily refer back to. It wasn't something that we could track and trend, whereas now, we have that ability to really be able to compare these responses over time, manage the perception of care. It*

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*allows us to capture our REAL and SO/GI data in a non-intrusive manner and get the most accurate results that we can from that." (Kern Medical)*

## Support for Care Coordination in Primary Care

In addition to implementing and expanding health information technology tools to facilitate care coordination within primary care settings, hospitals also reported the type of support and training offered to primary care providers to facilitate care coordination. In particular, support services emphasized in the implementation of Project 1.3 (e.g., decision support tools, e-consultation systems, joint care conference) were implemented by a majority of hospitals to support primary care providers in expanding their role in specialty care management and establishing linkages to specialty services (Project 1.3,
Infrastructure). In addition, many hospitals provided training to primary care providers to build their capacity to manage specialty conditions (e.g., endocrinology, substance abuse) or care for high acuity patients (Project 1.3, Training Primary Care Providers in Specialty Care and Caring for High Acuity Patients). Systems to facilitate communication between primary care and specialty care providers were often implemented through the EHR (Exhibit 125).

## Project Implementation

### Patient-Centered Medical Home (PCMH) Recognition/Certification

The goal of Project 1.2 was to drive the transformation of primary care practices towards the patient-centered medical home (PCMH) model of care. Of the 22 hospitals participating in Project 1.2, 7 DPHs and 2 DMPHs reported PCMH recognition/certification. Of these hospitals, 4 reported certification of on-campus clinics (average 4.3 clinics per hospital) and 5 reported certification of off-campus clinics (average 7.0 clinics per hospital). Hospitals reported the latest year they had achieved PCMH certification, which ranged from 2014 to 2018. Hospitals most commonly reported PCMH accreditation by the National Committee for Quality Assurance (NCQA; 9 hospitals); 1 DPH reported accreditation by URAC.

In interviews, the approach to PCMH certification ranged from having achieved and maintained PCMH for years, letting their certification lapse, being in the process of achieving certification, or choosing to emphasize implementing specific PCMH principles rather than obtaining certification. There was consensus that achieving PCMH certification was highly resource-intensive but that implementation of core PCMH concepts would be instrumental in improving the quality of primary care, whether or not formal certification was achieved. A hospital emphasized the importance of PRIME in driving forward PCMH certification within the system:

*"[We] wanted to be successful in achieving PCMH status for many years beforehand, and there had been efforts to [do] it, but it is very time consuming certainly to transform care and it takes a lot of effort. The resources that we were able to bring on with the PRIME project helped us with that." (Kaweah Delta)*

## Gap Analysis to Assess Primary Care Practice

In the interim survey, hospitals reported whether they performed a gap analysis in preparation for implementing Project 1.2 (Exhibit 87). Eight of 22 hospitals reported performing a system-wide gap analysis. Of the 4 DPHs that did not conduct a gap analysis at all, 3 reported that they already had adequate information on gaps in primary care and 1 reported that they would complete a gap analysis in DY 14. A DMPH reported using gap analysis in their outpatient clinics, while 4 reported doing so in their off-campus clinics.

**Exhibit 87: Gap Analysis in Preparation for Implementing Project 1.2 under PRIME**
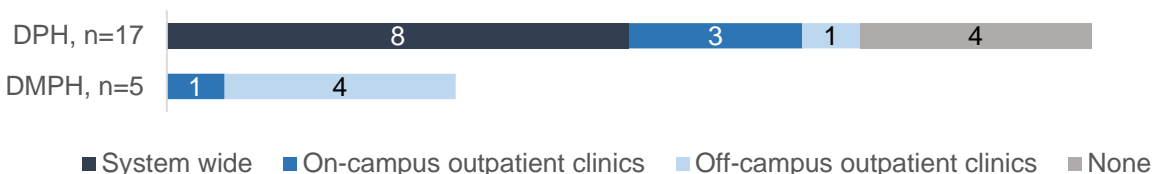


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.2 completed the survey. "Other" was reported by 3 hospitals, which is described above in text. Answers were not mutually exclusive.*

In interviews, a hospital discussed the importance of consolidating and standardizing data sources in order to conduct the gap analysis in primary care:

*"Our health plan has certain ways of looking at it, HEDIS has certain ways of looking at it, internally our departments had certain ways of looking at it, so standardizing our reports and looking at our data was a month long process that helped us analyze and understand gaps. There's also gaps of geography across clinics, between departments...really getting all the data cleaned up and...under one reporting system and software helped us to be able to move forward." (Contra Costa)*

Another hospital reported regular tracking of progress before PRIME, which reduced the need for performing a formal gap analysis for Project 1.2:

*"I think we've got a wonderful, organized network with very diligent practice managers who meet on a very regular basis to make sure that we're all on the same page, quite*

*frankly. And so I think we were well aware of what we were doing before PRIME started." (UC Davis)*

## Team-Based Care

An important PCMH principle and a core component of Project 1.2 is to deliver team-based care, which requires forming a multidisciplinary team who practices collaboratively. In the interim survey, 10 of 17 DPHs and 2 of 5 DMPHs reported following a specific model for delivery of team-based care. Specific models included the National Committee for Quality Assurance PCMH model (4 hospitals), the Agency for Healthcare Research and Quality's TeamSTEPPS for Primary Care Model (2), the UCSF Centers for Excellence in Primary Care Building Blocks of High-Performing Primary Care (2), and the Safety Net Medical Home Initiative (1).

The majority of DPHs and DMPHs reported that care models utilized within the hospitals met essential components of team-based care (Exhibit 88). However, a few DPHs reported that they lacked communication and interaction between team members, QI support for team workflows, training on goals/objectives, scheduled time for daily huddles, and adequate team staff time. Among DMPHs, 2 reported that they lacked training on care team goals and objectives and scheduled time for daily huddles. A DMPH reported that there was adequate clinical and administrative staffing for care teams.

**Exhibit 88: Modes of Team-Based Engagement for Provider Care Teams under PRIME**

Overall, during interviews, hospitals embraced the concept of team-based care as integral to improving primary care quality and patient-centered care. For example, a hospital noted:

> *"That really is about transforming the way we provide care so that we're really looking at our patients as a team, and then as a team, helping that patient being part as a team member to improve their health and really manage their healthcare, and from the outcomes perspective that they have better care and better health outcomes."* *(Kaweah Delta)*

Hospitals noted that many aspects of implementing team-based care required careful consideration of team staffing models and designation of roles, particularly to ensure that important roles in treatment and coordination were met, appropriate training was offered, and to encourage team members to work at the top of their licenses:

> *"As we move forward into this next year really thinking about how that team structure focuses on meeting the needs of the client…Then, how do we use the clerical staff differently? Then, what's the role of the pharmacists and the RNs, and those express care providers?...How do you develop these care teams and how do you decide who's on it and what's the right staffing ratio for this or the clinic, and what are their roles, and how do you get people change in the culture, and allow people to practice their full scope of their license? That's what I would think of as the hardest task."* *(San Mateo)*

## Care Coordination

In the interim survey, hospitals reported whether they used care coordinators and case managers to coordinate care. The former may focus more on health care coordination and the latter may focus more on social service coordination. Twenty of 22 hospitals reported using care coordinators and 17 used case managers (Data not shown). Sixteen hospitals noted that care coordinators were always located in primary care clinics, and 2 reported fewer days per week (Exhibit 89). Half of hospitals (11) reported that case managers were always located in primary care clinics and 2 reported fewer days per week.

**Exhibit 89: Frequency of Staffing of Care Coordinators and Case Managers at Primary Care Sites under PRIME**
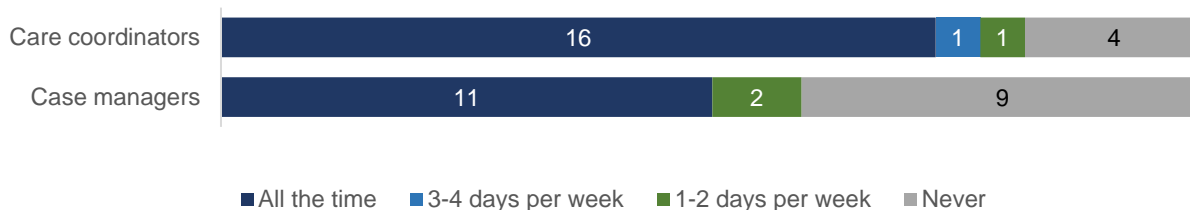
| | | | |
|---|---|---|---|
| Care coordinators | 16 | 1 | 1 | 4 |
| Case managers | 11 | 2 | 9 | |

■ All the time  ■ 3-4 days per week  ■ 1-2 days per week  ■ Never

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.2 completed the survey.*

Eight of 22 hospitals reported that care coordinators were located in on-campus clinics only, and others reported locating them in off-campus clinics only (5) or both (4; Exhibit 90). Seven hospitals reported staffing case managers in both on- and off-campus clinics; fewer reported having care coordinators (1) or case managers (3) in a central location. Among the 2 hospitals that noted having case managers at other locations, case managers were available to accompany patients to clinic visits, conducted home visits, or provided telephone support.

**Exhibit 90: Location of Case Managers and Care Coordinators**
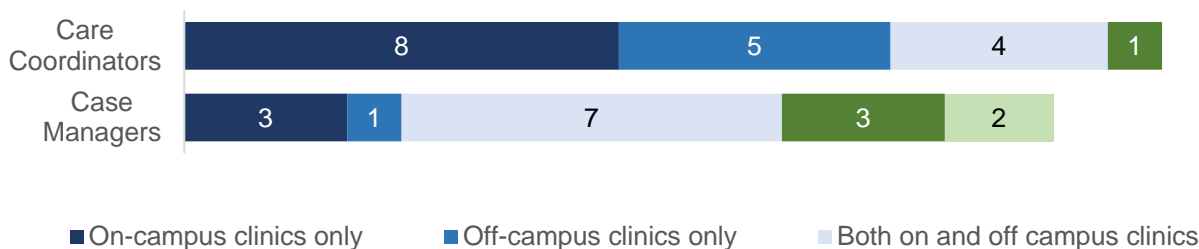
| | | | | |
|---|---|---|---|---|
| Care Coordinators | 8 | 5 | 4 | 1 |
| Case Managers | 3 | 1 | 7 | 3 | 2 |

■ On-campus clinics only  ■ Off-campus clinics only  ■ Both on and off campus clinics

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.2 completed the survey. Responses were not mutually exclusive; hospitals could choose multiple responses for the location of staff.*

In interviews, a hospital discussed the benefits of having care coordinators both centrally and embedded in care teams, where they might perform additional functions:

*"We centralize the care coordination along with our discharge follow-up so that we're really providing for that transition of care, post discharge from the hospital and that flows into all of the other care management. Now at our PCMHs…they have very dedicated care managers who provide a little more hands on care management and case management, really following up on those care plans." (Kern Medical)*

Hospitals reported in the interim survey how often they trained and monitored care coordinators and case managers in their processes and protocols (Exhibit 91). For case coordinators, the majority of hospitals reported that they regularly (at least annually) provided training (15 of 22) and monitoring (17). Although less common, the majority of hospitals also reported regular training (13) and monitoring (13) of case managers.

**Exhibit 91: Frequency of Training and Monitoring of Care Coordinators and Case Managers**
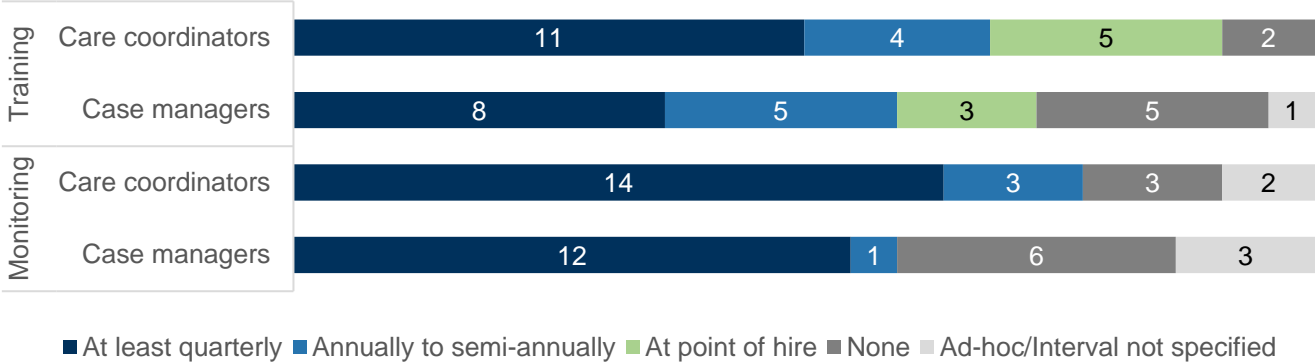
| | | At least quarterly | Annually to semi-annually | At point of hire | None | Ad-hoc/Interval not specified |
|---|---|---|---|---|---|---|
| Training | Care coordinators | 11 | 4 | 5 | 2 | |
| Training | Case managers | 8 | 5 | 3 | 5 | 1 |
| Monitoring | Care coordinators | 14 | 3 | | 3 | 2 |
| Monitoring | Case managers | 12 | 1 | | 6 | 3 |

■ At least quarterly ■ Annually to semi-annually ■ At point of hire ■ None ■ Ad-hoc/Interval not specified

*Source: Interim PRIME survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.2 completed the survey.*

In addition to coordinating care, 13 of 17 DPHs and 4 of 5 DMPHs reported hiring or training front line staff to coordinate non-clinical services, such as obtaining health insurance coverage, coordinating transportation, and providing patient education (Data not shown). Hospitals reported hiring or reassigning medical assistants (11), health navigators (8), community health workers (3), or other staff (7) to perform these tasks (Exhibit 92). The latter included licensed vocational nurses, panel management coordinators, pre-visit planners, and health education specialists.

**Exhibit 92: Staff Hired and Trained for Coordination of Non-Clinical Services among Participating Hospitals**
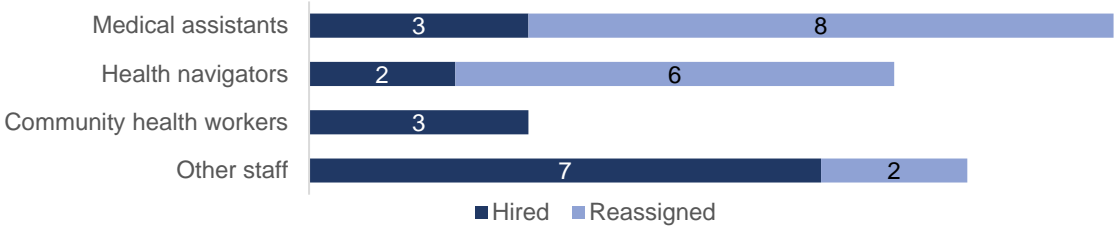


*Source: Interim PRIME survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.2 completed the survey. Responses were not mutually exclusive; hospitals could choose multiple responses for the type of staff hired or assigned. Other staff included licensed vocational nurses, panel management coordinators, pre-visit planners, and health education specialists.*

During interviews, a few hospitals acknowledged that addressing social determinants of health was an important component of improving population health:

> *"And so when we look at the population health perspectives, sort of the metrics and the projects around diabetes control, and blood pressure control—those have elements to them both of access to care, and providers with good clinical decisions, and us supporting patients when they're not in our setting, in terms of their social needs and they're in the community at home—getting transportation to appointments and food security, and patient engagements here and to therapy." (Contra Costa)*

Among hospitals that noted hiring or assigning medical assistants to deliver care coordination services, 6 reported hiring or training at least 10 medical assistants (Exhibit 93). Among those that used health navigators and community health workers, new hiring or training was limited to 5 or fewer such staff.

**Exhibit 93: Number of Staff Hired or Trained for Coordination of Non-Clinical Services under PRIME**
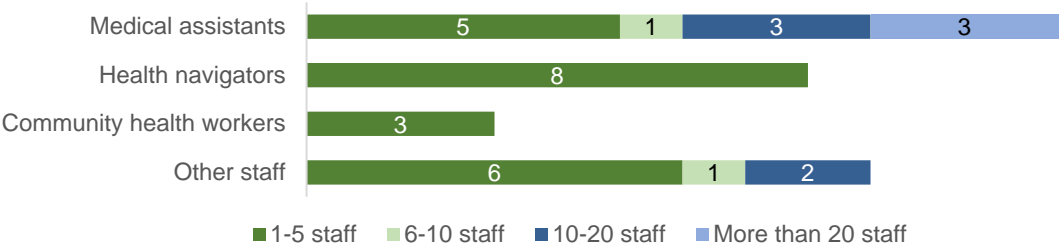


Source: *Interim PRIME survey, data received April to May 2018.*
*Notes: N=22 hospitals participating in Project 1.2 completed the survey. Other staff included licensed vocational nurses, panel management coordinators, pre-visit planners, and health education specialists.*

## Population Health Management

Population health management is an important PCMH principle and was a central focus of Project 1.2. Population health management requires risk assessment to identify the level of care needed per patient, teaching patients self-management skills, and providing them with an individualized treatment plan to guide both self-management and professional care delivery.

In the interim survey, hospitals most often reported risk-stratification of patients based on diagnosis of diabetes (19 of 22), depression (16), and congestive heart failure (13; Exhibit 94). A quarter reported stratification of patients by substance use (5). Other risk factors or conditions on which hospitals stratified patients for population health management included hypertension, high utilization of acute care, complex care, and coronary artery disease.

**Exhibit 94: Risk-Stratification of Patients for Population Health Management**
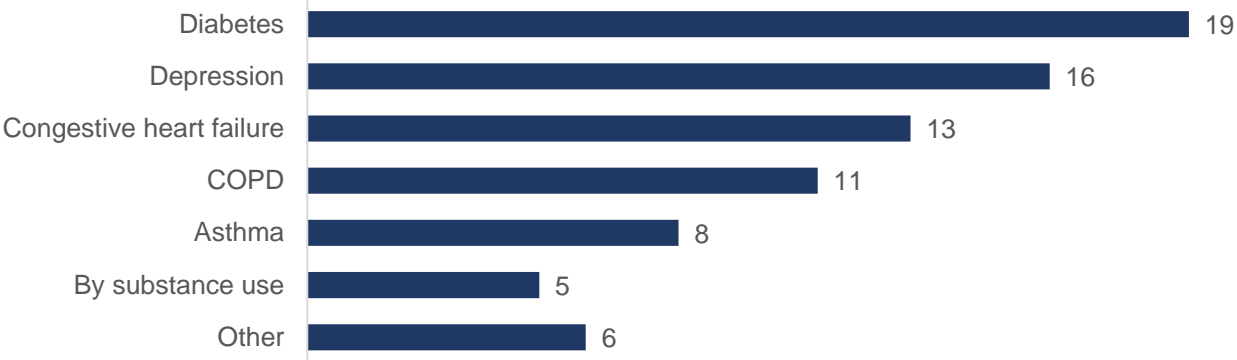
In the interim survey, hospitals reported on the method of delivery of disease management (Exhibit 95). Fifteen DPHs incorporated these activities into the care delivered by the medical team and 9 delivered them through a centralized group within the organization; 4 DMPHs reported that these services were delivered by the medical team and 1 had a centralized method of delivery.

**Exhibit 95: Method of Delivery of Disease Management Services**



DPH, n=17 — 15 / 9 / 1
DMPH, n=5 — 4 / 1 / 1

- ■ Incorporated in the activities of the medical team and delivered by team members
- ■ Delivered by a centralized group within the organization
- ■ Delivered by a contracted external organization

Telephone calls were a common approach to delivering disease management; 15 of 17 DPHs and all 5 DMPHs reported its use (Exhibit 96). Overall, 15 hospitals (13 DPHs, 2 DMPHs) reported holding group visits. Among DPHs, 7 reported conducting home visits and 3 reported peer educator visits. Few to no DMPHs reported use of a nurse advice line, home visits, or peer educator visits. Other approaches to delivery of disease management services included e-communication strategies (e.g., patient portal, texting).

**Exhibit 96: Approaches of Delivery of Disease Management Services**

DPH, n=17

| Approach | Value |
|---|---|
| Telephone calls | 15 |
| Group visits | 13 |
| Mailing informational materials | 10 |
| Nurse advice line | 8 |
| Home visits | 7 |
| Peer educator visits | 3 |
| Other | 2 |

DMPH, n=5

| Approach | Value |
|---|---|
| Telephone calls | 5 |
| Group visits | 2 |
| Mailing informational materials | 4 |
| Nurse advice line | 1 |
| Home visits | 0 |
| Peer educator visits | 0 |
| Other | 1 |
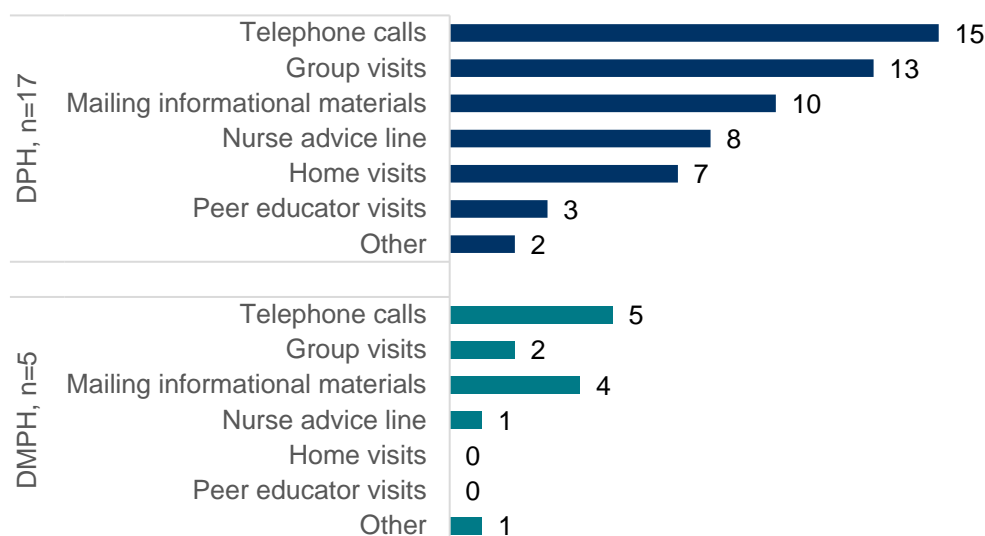
*Source: Interim PRIME survey, data received April to May 2018.*
*Note. N=22 hospitals participating in Project 1.2 completed the survey. Other approaches to delivery of disease management services included e-communication (e.g., patient portal, texting).*

A hospital offered an example of how group visits were implemented, for patients with difficulty controlling their diabetes:

> *"We started a diabetes group visit…its targeting patients who seem to have trouble controlling their hemoglobin A1C and when they come to the diabetes clinic they have the health education, a conversation with a pharmacist, a doctor and a dietician. So all of that is put together in one group visit. And that's, again, very young and it's very early …but it's all part of the PDSA process that we're doing with our clinics." (San Joaquin)*

Individual treatment plans (ITPs) are an important tool in helping patients manage their conditions. ITPs are prepared with involvement and feedback from multiple members of the care team and incorporate guidance on and patients' goals in managing physical health, behavioral health, and social needs. In the interim survey, hospitals reported how often ITPs were used and whether they included patient-driven goals. In addition, hospitals reported whether ITPs were reviewed with patients, and if so, how they were shared.

Eleven of 22 hospitals reported that they usually or always used individual treatment plans, 7 included patient-driven goals in ITPs sometimes, and 2 reviewed ITPs with patients rarely (Exhibit 97).

**Exhibit 97: Individual Treatment Plan (ITP) Use, Inclusion of Patient-Driven Goals, and Review with Patients**
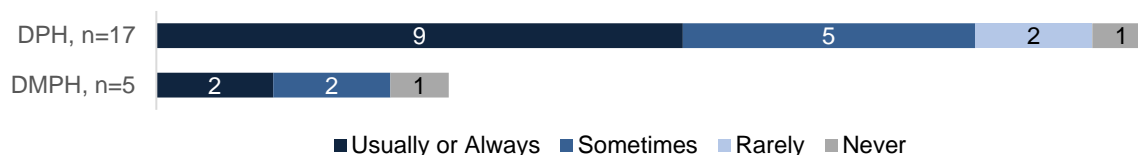


Source: Interim PRIME survey, data received April to May 2018.
Notes: N=22 hospitals participating in Project 1.2 completed the survey.

Five DPHs shared the ITP both electronically and by paper; another 6 did so by paper only, or did not share the ITP at all (Exhibit 98).

**Exhibit 98: Methods of Sharing of Individualized Treatment Plans with Patients**
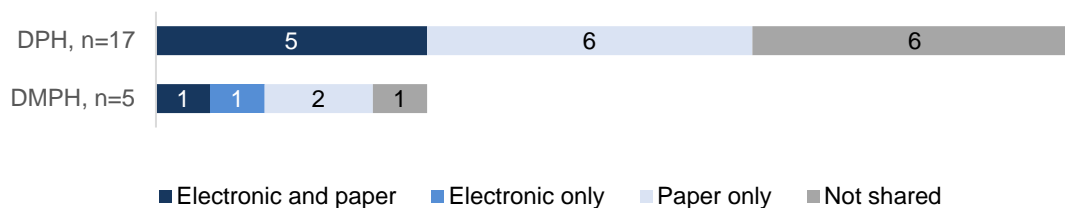


Source: Interim PRIME survey, data received April to May 2018.
Notes: N=22 hospitals participating in Project 1.2 completed the survey.

In interviews, some hospitals incorporated the use and dissemination of the ITP into their standard work, while others noted inconsistencies based on patient need or clinic-specific processes:

*"We have a goal…that patients receive these plans, and our version of success would be that they're getting them consistently with low variability. The reality is some clinics are doing it better than others, some providers better than others, some medical home teams, and we haven't gotten that piece over the hump…there's still a fair bit of variability across our very large delivery network." (LA County)*

### Addressing Health Disparities

As discussed in REAL/SO/GI Implementation, a central focus of PRIME was to improve documentation of and stratification by patient demographics, particularly Race, Ethnicity and Language (REAL) and Sexual Orientation and Gender Identity (SOGI). In DY 12 of PRIME, hospitals participating in Project 1.2 were required to stratify 9 primary care

project metrics by REAL and/or SO/GI information to identify significant disparities. Hospitals selected a combination of metric and demographic population for their disparity reduction interventions in metric 1.2.10 from DY 13 to DY 15 (CAPH).

Five primary care metrics and health conditions were selected by hospitals, and the most frequent type of disparity identified was by race/ethnicity, although many hospitals identified intersectional characteristics, such as gender and ethnicity (Exhibit 99). Ten hospitals selected disparities for African Americans for diabetes, hypertension, colorectal cancer screening, and tobacco use metrics (detailed in Exhibit 113). Eight hospitals selected Latinos for the same metrics, followed by 4 focusing on a specific gender or patients speaking specific languages for ischemic vascular disease, diabetes, and hypertension. Six focused on age-specific subgroups (Exhibit 99). A couple of hospitals (Natividad, Kaweah Delta) selected their English-Speaking population for targeted disparity reduction. In hospital reports (DY12), Natividad reported that English-Speaking patients meeting eligibility guidelines were less likely to receive recommended colorectal cancer screening (5% difference) than the overall patient population. Similarly, Kaweah Delta found that hypertension control was lower for English-Speaking Non-Hispanic whites (5% difference) compared to the Spanish-Speaking population.

**Exhibit 99: Specific Metrics and Demographic Criterial Selected for Disparity Reduction Interventions for Project 1.2 under PRIME**

| Metric | |
|---|---|
| 1.2.5.b Controlling Blood Pressure (Hypertension) | 9 |
| 1.2.4.d Comprehensive Diabetes Care: HbA1c… | 6 |
| 1.2.3.c Colorectal Cancer Screening (Colorectal… | 5 |
| 1.2.7.i Ischemic Vascular Disease: Use of… | 1 |
| 1.2.14.t Tobacco Assessment and Counseling… | 1 |

| Criteria for Targeted Disparity Reduction | |
|---|---|
| Race/ethnicity | 18 |
| Gender | 4 |
| Language | 4 |
| Age* | 6 |
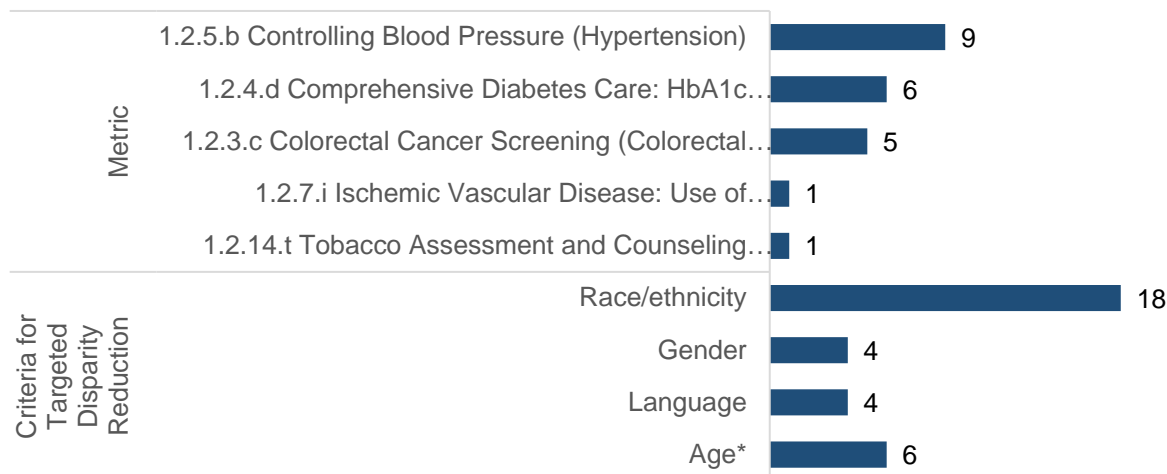
*Source: UCLA analysis of the self-reported data for metrics and interim survey data, data received April to May 2018.*

*Notes: N=22 hospitals participating in Project 1.2 that provided this data Southern Inyo hadn't identified a disparity due to EHR issues. *More hospitals (3) selected adults, but did not indicate a specific age range. Many hospitals identified intersectional characteristics, such as gender and ethnicity (Hispanic/Latino Men)*

In interviews, a hospital described the difficulties of addressing their targeted health disparity, which was still a work-in-progress:

*"The health disparity reduction plan for our diabetic Latino population, working closely with all of our diabetic care managers and our primary care team, is a heavy lesson that is ongoing. What we seem to be finding is many of our newest enrollees have poorly controlled diabetes enough that you feel like it's a Sisyphean task…we got to help engage them and get them to [a] managed population…just a whole lot of complexity goes into—how do you better achieve this?" (Santa Clara)*

## Participation in Learning Collaboratives

Eight DPHs and 4 DMPHs reported participating in learning collaboratives other than those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF relating to activities for Project 1.2 (Data not shown). Learning collaboratives included: Kaiser Preventing Heart Attacks and Strokes, Institute for High Quality Care Quality Improvement Strategies, and a UC-Wide Primary Care Collaborative.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10), effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10.0). DPH hospitals reported spending a medium level (6.8) of overall effort in implementing Project 1.2 and DMPH hospitals reported spending a high level (9.0) of overall effort to implement (Exhibit 403). Among DPHs, ratings of effort were high for engaging internal stakeholders (7.5), staff training (7.9), and effort to implement (8.1). On average, DMPHs reported requiring high effort for engaging internal stakeholders (8.6), resources (7.7), and effort to implement (9.3).

In interviews, hospitals indicated that the high level of effort for staff training often related to having multiple measures including colorectal cancer screening, ischemic vascular disease, and REAL/SOGI data collection. A hospital described its alignment with past and existing work reduced the burden of implementation:

*"We had gotten some headway through our ambulatory care redesign team...the creation of the patient centered medical home, a lot of that background work to set up…Also, some of the actual measures were things that our departments were already working on. Blood pressure, diabetes are real bread-and-butter [of] primary care. So we already had teams and people focused on aspects of that. So it wasn't as heavy of a lift with brand-new workflows and getting together a lot of different people." (Contra Costa)*

## Challenges and Solutions to Primary Care Redesign

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 1.2 (Challenges: Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (11) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the majority of hospitals (8) was variation in documentation within system by providers and staff. For example, in interviews, a hospital discussed the difficulties of implementing EHR changes to incorporate documentation of PRIME-related processes:

*"I think some of the things that we have a challenge with is, at the time we had an upgrade for our electronic health record, and it required a freeze on all changes in the health system for, I think, ten months prior. And then even after that, it was something like seven months after, you couldn't make any changes. And so that really hit us*

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*hard with REAL and SOGI, because we couldn't even just change what was in Epic in terms of the fields that were being collected." (UCLA)*

The top solution to data-related challenges identified by the majority of hospitals (12) was EHR/IT standardization or expansion across the system. The second solution identified by the majority of hospitals (7) was implementation of standardized tools and screening. In discussing their successes, a hospital described how making data available to clinicians and staff promoted buy-in and empowered them to drive improvements in primary care processes:

*"Getting data into the hands of frontline providers was a brand-new thing for us and that really created a culture change around data…Thanks to the great work of our business intelligence team to make the data very provider friendly, very actionable, very accessible, I think that made staff buy in. Historically, reports are very depersonalized. How do they relate to me? It's the broader system, it's the large denominator. But when we can really narrow it down so every PCP can see…this is how I compare to other clinics, this is how I compare to peers across 50 … systems, and this is how I compare to the 90th percentile…It makes it really personal. So staff are more willing to buy in and get involved in some of the best practices around our 1.2 measures." (Contra Costa)*

## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 1.2 (Challenges Exhibit 406:  Solutions Exhibit 407). The top challenge cited by the majority of hospitals (12) was processes not being established system-wide. The second challenged cited by the hospitals (4) was inadequate follow-up processes to document patient outcomes. The top solution identified by the hospitals (10) was enhanced outreach and capacity to follow up with patients. The second solution identified by hospitals (6) was standardizing processes across the system.

Perspectives on metric-related challenges noted in interviews involved the metric surrounding ischemic vascular disease. More specifically, a few hospitals discussed the difficulty of addressing changes in the metric specifications, and the rigidity of the metric to clinical indications for aspirin use. For example, a hospital noted:

*"So clinical practice has more nuances than the metrics allow for. A great example is our IVD one in PRIME that doesn't have a prior hemorrhage exclusion. So we've had to implement clinical practices that—yes you may be on IVD, you may have IVD, but*

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*you should not be on aspirin because you've had a prior bleed. We can't exclude that from the metrics." (UC Irvine)*

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## Hospital-Reported Metric Performance

Performance of hospitals in Project 1.2 was measured by the following 14 metrics (Exhibit 100). The metrics pertaining to REAL and SO/GI were organized so that 4 metrics were not reported in DY 11, 2 of those were reported only in DY 12 (1.2.6 and 1.2.9), 1 began in DY 12 (1.2.13), and another began in DY 13 (1.2.10). There were 11 standard and 2 innovative metrics. The majority of the metrics were designed to show progress by increasing rates over time. UCLA categorized 5 as outcome metrics and 9 as progress metrics. Metrics in Project 1.2 related to REAL: Detailed Ethnicity/Race and SO/GI: Sexual Orientation/ Gender Identity are presented together.

**Exhibit 100: PRIME Project 1.2 Metric Details**

| Metric Title | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **Alcohol and Drug Misuse (SBIRT)** | 1.2.1.a | Oregon CCO | N/A | Increase | Process |
| **CG-CAHPS: Provider Rating** | 1.2.2 | AHRQ | 0005 | Increase | Outcome |
| **Colorectal Cancer Screening** | 1.2.3.c | NCQA | 0034 | Increase | Process |
| **Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%)** | 1.2.4.d | NCQA | 0059 | Decrease | Outcome |
| **Controlling Blood Pressure** | 1.2.5.b | NCQA | 0018 | Increase | Outcome |
| **Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic** | 1.2.7.i@ | NCQA | 0068 | Increase | Process |
| **Prevention Quality Overall Composite (PQI) #90** | 1.2.8 | AHRQ | N/A | Decrease | Outcome |
| **Screening for Clinical Depression and Follow- Up** | 1.2.12.f | CMS | 0418 | Increase | Process |
| **Tobacco Assessment and Counseling** | 1.2.14.t | AMA-PCPI | 0028 | Increase | Process |
| **REAL and SO/GI metrics** | | | | | |
| **Documented REAL and/or SOGI Disparity Reduction Plan (DY 12 only)** | 1.2.6*^ | DHCS | N/A | Increase | Process |
| **Primary Care Redesign Metrics Stratified by REAL Categories and SOGI (DY 12 only)** | 1.2.9*^ | DHCS | N/A | Increase | Process |
| **REAL and/or SO/GI Disparity Reduction (begins in DY 13)** | 1.2.10*# | DHCS | N/A | Increase | Outcome |
| **REAL Data Completeness** | 1.2.11 | CMS | N/A | Increase | Process |

| Metric Title | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **SO/GI Data Completeness (begins in DY 12)** | 1.2.13 | CMS | N/A | Increase | Process |

*Source: PRIME Metrics Specs, DY 13YE*

*Notes: NQF: National Quality Forum, CCO: coordinated care organizations, SBIRT: screening, brief intervention, and referral to treatment, AHRQ: Agency for Healthcare Research and Quality, CAHPS: Consumer Assessment of Healthcare Providers & Systems, DHCS: California Department of Health Care Services, REAL: Detailed Ethnicity/Race, SO/GI: Sexual Orientation/ Gender Identity, NCQA: National Committee for Quality Assurance, CMS: Centers for Medicare and Medicaid Services, AMA-PCPI: American Medical Association Physician Consortium for Performance Improvement. * Denotes innovative metric. ^ Attestation reported for DY 12 only, # reported for DY 13 to DY 15; baseline is DY 12. @ A trend break was issued for this metric in DY12.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. DMPHs did not report data in DY 11 for this project.

### Metric 1.2.1.a – Alcohol and Drug Misuse (SBIRT)

Metric 1.2.1.a measured the number of patients that underwent screening, brief intervention, and referral to treatment (SBIRT) services for alcohol and drug misuse (PRIME Metric Specs, DY 13YE). Hospitals were intended to decrease future risks and complications by improving the detection of alcohol-related disorders and intervention. Achievement was measured by an increasing rate.

DPHs reported alcohol and drug screening, intervention, and referral rates at 3.3% in DY 11, which then decreased to 2.6% in DY 12, and increased to 5.2% in DY 13 (Exhibit 101). DPH UC and DPH Counties also showed a similar decreasing then increasing pattern in their reported rates. DMPHs did not report performance data until DY 12 (0.8%), which then increased to 15% in DY 13. DMPH Non-CAH and DMPH

CAH rates also increased between DY 12 and DY 13. In DY 13, the individual achievement rates for Metric 1.2.1.a ranged from 0.02% to 57% for DPHs and 2% to 56% for DMPHs (data not shown).

**Exhibit 101: PRIME Self-Reported Alcohol and Drug Misuse Service Rates for Metric 1.2.1**
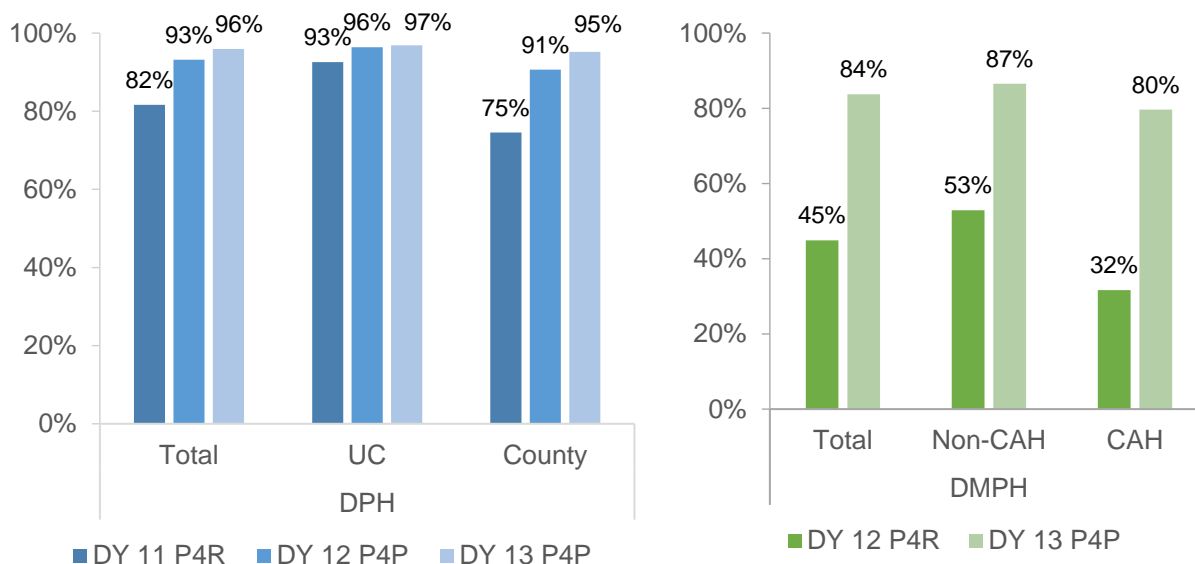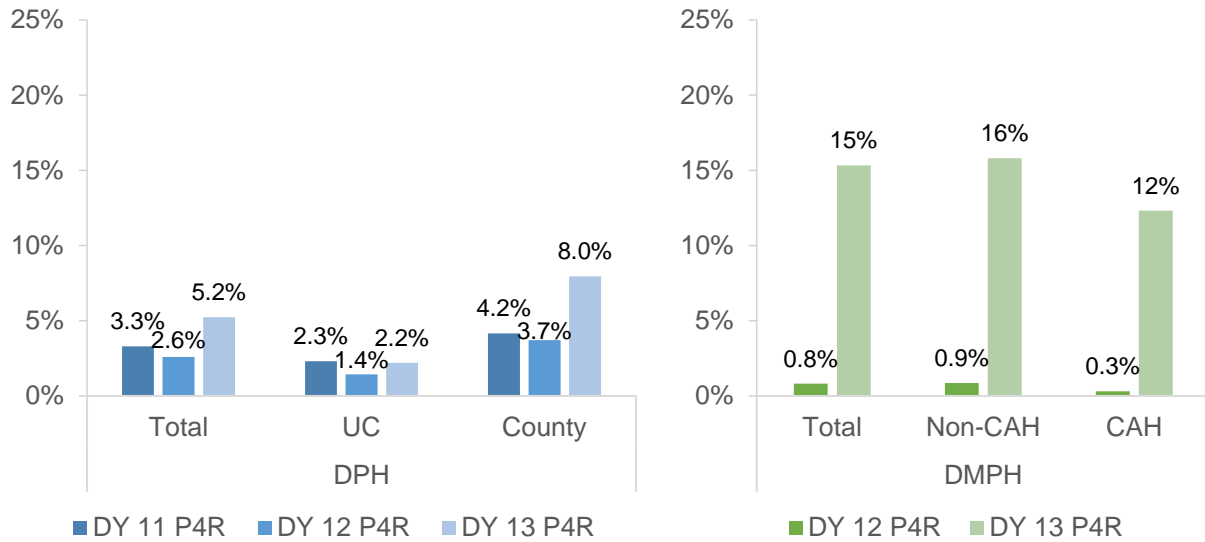


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 1.2.2 – CG-CAHPS: Provider Rating

Metric 1.2.2 measured the number of individuals that rated their provider as a 9 or 10, with 10 indicating "Best Provider Possible" (NQF 0005, PRIME Metric Specs, DY 13YE). Hospitals were intended to assess and surpass patient expectations by ensuring providers were cognizant, accurate, and empathetic. Achievement was measured by an increasing rate.

Among DPHs, the weighted average rate of individuals that highly rated their providers increased from DY 11 (78%) to DY 12 (81%) and remained the same in DY 13 (81%) (Exhibit 102). DPH UC and DPH County rates increased throughout the 3 reporting years. DMPHs did not begin recording and reporting performance data until DY 12 (75%), which then decreased to 67% in DY 13. In DY 13, the individual achievement rates for Metric 1.2.2 ranged from 70% to 89% for DPHs and 0% to 83% for DMPHs (data not shown).

**Exhibit 102: PRIME Self-Reported Provider Rating Rates for Metric 1.2.2**

*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital,*
*UC: University of California, CAH: critical access hospital, DY: demonstration year,*
*P4R: pay-for-reporting, P4P: pay-for-performance.*
*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P)*
*in a given DY and they progressively transitioned from P4R to P4P over the 5*
*demonstration years of PRIME. In DY 11 and DY 12, P4R or* P4P metric status varied
depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P
status of metrics was identical whether a hospital was a DPH or DMPH.

## Metric 1.2.3.c – Colorectal Cancer Screening

Metric 1.2.3.c measured the number of patients that received an appropriate screening for colorectal cancer (NQF 0034, QPP spec, eCQM spec, PRIME Metric Specs, DY 13YE). Hospitals were intended to increase the earlier detection of colon cancer in order to raise survival rates due to the lack of signs and symptoms at early stages. Achievement was measured by an increasing rate.

DPHs reported colorectal cancer screening rates at 59% in DY 11, which increased to 65% in DY 12 and 67% in DY 13 (Exhibit 103). DPH UC and DPH County rates also followed an increasing pattern. DMPHs did not report performance data until DY 12; the weighted average rate was 19% in DY 12, which then increased to 34% in DY 13. In DY 13, the individual achievement rates for Metric 1.2.3.c ranged from 38% to 80% for DPHs and 18% to 91% for DMPHs (data not shown).

**Exhibit 103: PRIME Self-Reported Colorectal Cancer Screening Rates for Metric 1.2.3.c**
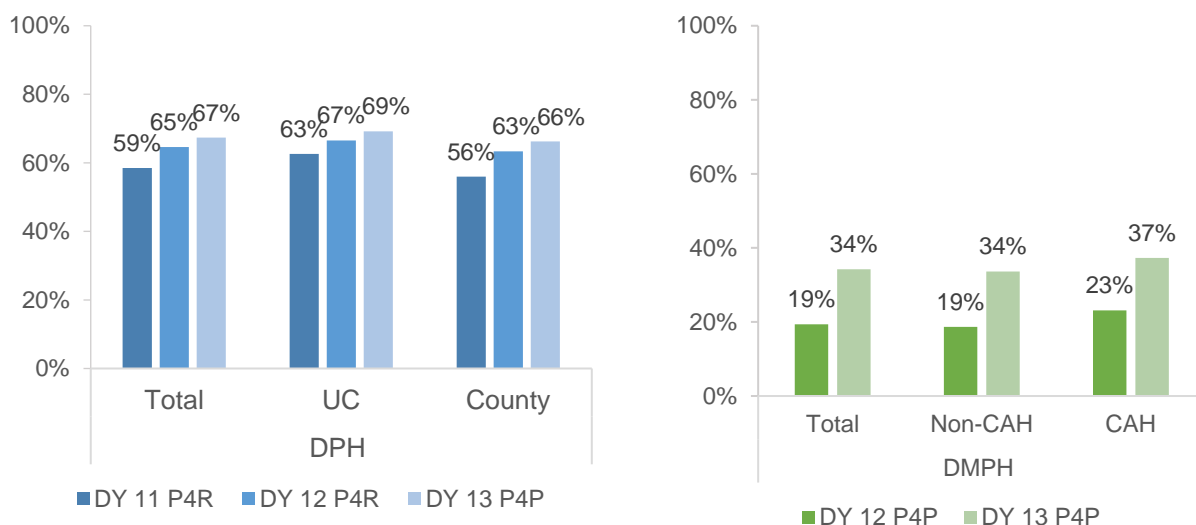


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.2.4.d – Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%)

Metric 1.2.4.d measured the number of individuals with Type 1 diabetes or Type 2 diabetes who had hemoglobin A1c in poor control (NQF 0059, PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce microvascular complications in patients with diabetes through improving hospital management of hemoglobin A1c levels. Achievement was measured by a decreasing rate.

DPHs reported rates of poor HbA1c control as 29% in DY 11, which decreased to 26% in DY 12, then to 25% in DY 13 (Exhibit 104). DPH UC rates remained stable at 20% all 3 reporting years, whereas DPH County rates showed a decreasing trend. DMPHs did not report data in DY 11. The weighted average of the DMPHs reached 38% in DY 12, then decreased in 34% in DY 13. DMPH Non-CAHs and DMPH CAHs showed different movement of rates between demonstration years. In DY 13, the individual achievement rates for Metric 1.2.4.d ranged from 13% to 36% for DPHs and 13% to 66% for DMPHs (data not shown).

**Exhibit 104: PRIME Self-Reported Diabetes Control Rates for Metric 1.2.4.d**

*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.2.5.b – Controlling Blood Pressure

Metric 1.2.5.b measured the number of hypertensive individuals with well controlled blood pressure based on aged-restricted criteria (NQF 0018, PRIME Metric Specs DY 13YE). Hospitals were intended to lessen the risks of high blood pressure, such as heart attacks, strokes, aneurysms, and weakened kidney blood vessels by adequately controlling blood pressure among patients with hypertension. Achievement was measured by an increasing rate.

DPHs reported well controlled blood pressure rates that followed an increasing trend starting at 67% in DY 11 and reaching 74% in DY 13 (Exhibit 105). DPH UC and DPH County rates also showed an increasing pattern. DMPHs did not report performance values until DY 12 (62%), which then increased in DY 13 (64%). DMPH Non-CAH rates increased whereas DMPH CAH rates decreased between DY 12 and DY 13. In DY 13, the individual achievement rates for Metric 1.2.5.b ranged from 68% to 81% for DPHs and 39% to 88% for DMPHs (data not shown).

**Exhibit 105: PRIME Self-Reported Blood Pressure Control Rates for Metric 1.2.5.b**

*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.2.7.i – Ischemic Vascular Disease (IVD): Use of Aspirin or another Antithrombotic

Metric 1.2.7.i measured the number of patients diagnosed with an ischemic vascular disease with an active medication of aspirin or another antiplatelet (NQF 0068, PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce the yearly risk of serious vascular events, such as myocardial infarction or stroke, by tracking the proportion of patients with an active antiplatelet medication. Note that a trend-break notice was issued for this metric (PPL-17-007 DY 12) to clarify that the numerator includes active medications for patients and added details to the time periods for events in the denominator inclusion criteria. Achievement was measured by an increasing rate.

Among DPHs, the average weighted rates increased from 79% in DY 11 to 89% in DY 13 (Exhibit 106). DPH UCs and DPH Counties also showed an increasing trend over time. DMPHs did not begin reporting performance data until DY 12; DMPH rate decreased between DY 12 (88%) and DY 13 (75%). DMPH Non-CAH and DMPH CAH rates also decreased between DY 12 and DY 13. In DY 13, the individual achievement rates ranged from 76% to 95% for DPHs and 0% to 96% for DMPHs (data not shown).

**Exhibit 106: PRIME Self-Reported Aspirin or another Antithrombotic Use Rates for Metric 1.2.7.i**
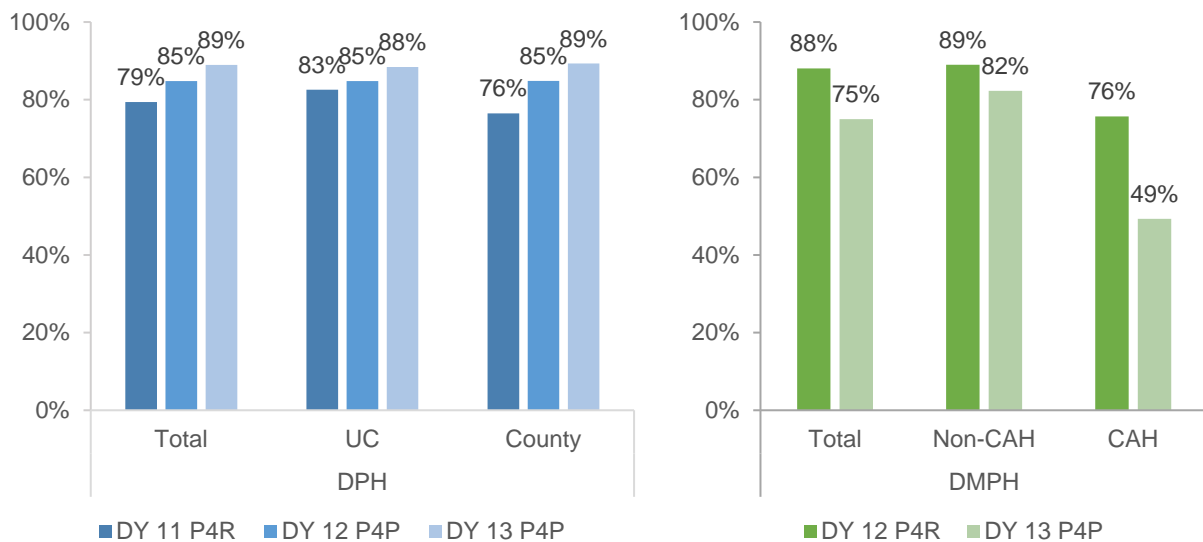
*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. A trend-break notice was issued for this metric (PPL-17-007 DY 12) to clarify that the numerator includes active medications for patients and added details to the time periods for events in the denominator inclusion criteria. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.2.8 – AHRQ Prevention Quality Indicators (PQI #90)

Metric 1.2.8 was measured the number of discharges that meet the inclusion and exclusion rules for the numerator in any of the following PQIs: #1, 3, 5, 7, 8, 10-12, 14-16 (PRIME Metric Specs, DY 13YE). The PQI metric also applies to 2.3.3 and 2.5.3. Hospitals were intended to utilize standardized, evidence-based measures of health care quality can in order to highlight potential quality improvement areas. Achievement was measured by a decreasing rate.

**Exhibit 107: PRIME Prevention Quality Indicators (PQI)**

| Prevention Quality Indicators | Description |
|---|---|
| #1 | Diabetes Short-Term Complications Admission Rate |
| #3 | Diabetes Long-Term Complications Admission Rate |
| #5 | Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate |
| #7 | Hypertension Admission Rate |
| #8 | Heart Failure Admission Rate |
| #10 | Dehydration Admission Rate |
| #11 | Community-Acquired Pneumonia Admission Rate |
| #12 | Urinary Tract Infection Admission Rate |
| #14 | Uncontrolled Diabetes Admission Rate |
| #15 | Asthma in Younger Adults Admission Rate |
| #16 | Lower-Extremity Amputation among Patients with Diabetes Rate |

*Source: PRIME Metrics Specs, DY 13YE.*

DPH rates did not follow a consistent trend; they reported 1.6% in DY 11, 2.3% in DY 12, and then 0.9% in DY 13 (Exhibit 108). DPH UC and DPH County rates did not follow a pattern. DMPHs did not report in DY 11. DMPH rates in DY 12 and DY 13 stayed consistent at around 3%. DMPH Non-CAH rates stayed consistent, whereas DMPH CAH rates decreased between DY 12 and DY 13. In DY 13, the individual achievement rates ranged from 0.41% to 2% for DPHs and 2% to 6% for DMPHs (data not shown).

**Exhibit 108: PRIME Self-Reported Prevention Quality Overall Composite Rates for Metric 1.2.8**
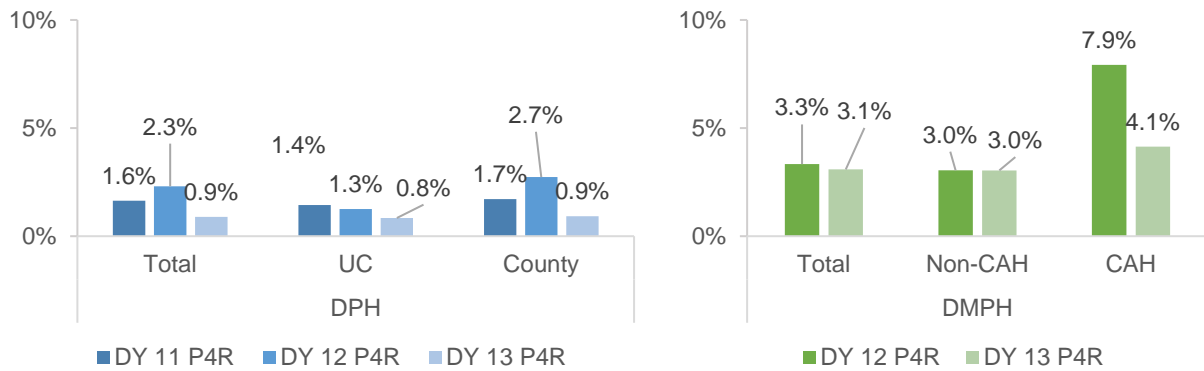


Source: UCLA analysis of the self-reported data, data received July 2019.
Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.

## Metric 1.2.12.f –Screening for Clinical Depression and Follow-Up

Metric 1.2.12.f measured the number of patients screened for clinical depression and if applicable, was provided a follow-up plan (NQF 0418, Core set spec, eCQM spec, PRIME Metric Specs, DY 13YE). Hospitals were intended to identify and treat depression in its early stages in order to reduce risks of the negative outcomes associated with depression. Achievement was measured by an increasing rate.

Among DPHs, rates of depression screening and follow-up increased from 18% in DY 11 to 36% in DY 12 to 55% in DY 13 (Exhibit 109). DPH UC rates remained stable between DY 11 and DY 12 at 15%, then increased to 39% in DY 13. DPH County rates increased over time. DMPHs did not begin reporting performance data until DY 12 (18%), which then increased in DY 13 (53%). Both DMPH Non-CAH and DMPH CAH increased between DY 12 and DY 13. In DY 13, the individual achievement rates for Metric 1.2.12.f ranged from 20% to 91% for DPHs and 3% to 69% for DMPHs (data not shown).

**Exhibit 109: PRIME Self-Reported Depression Screening and Follow-Up Rates for Metric 1.2.12.f**
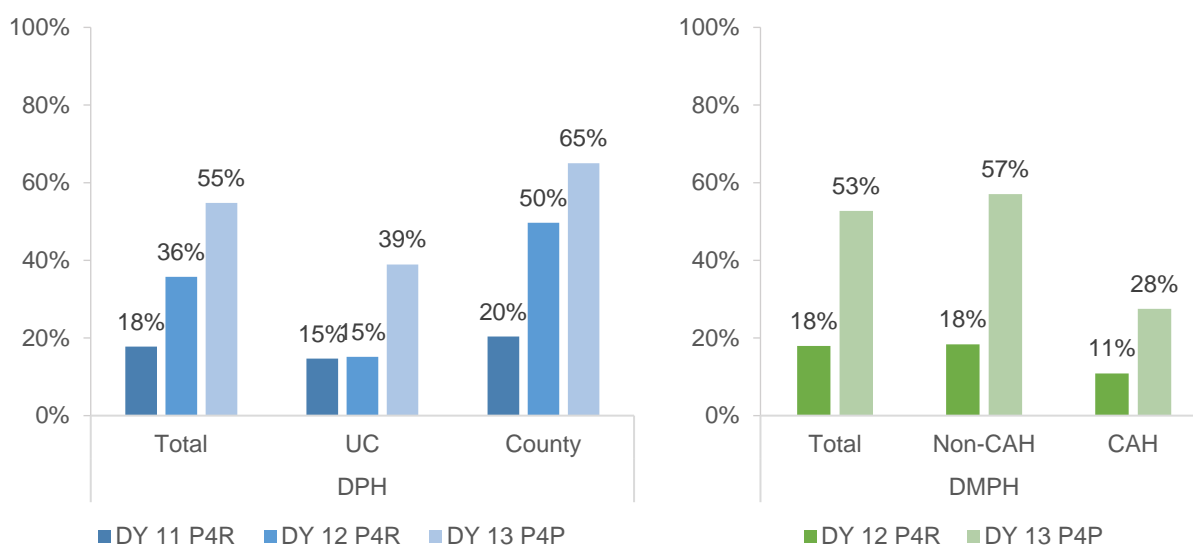


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 1.2.14.t – Tobacco Assessment and Counseling

Metric 1.2.14.t measured the number of patients received tobacco screening and if identified as a tobacco user, received tobacco cessation intervention (PRIME Metric Specs, DY 13YE). Hospitals were intended to promote screening and intervention for adult tobacco users in order to lower risks of heart disease, lung disease, and stroke. Achievement was measured by an increasing rate.

Among the DPHs, the weighted achievement rate started as 82% in DY 11, which increased to 93% in DY 12 and steadily rose again to 96% in DY 13 (Exhibit 110). Both DPH UC and DPH County rates increased from DY 11 to DY 13. DMPHs began implementation of the metric in DY 12 with a weighted average of 52%. In DY 13, the individual achievement increased to 81% (Exhibit 110). DMPH Non-CAH and DMPH CAH rates also increased between DY 12 and DY 13. In DY 13, the individual achievement rates for Metric 1.2.14.t ranged from 89% to 100% for DPHs and 57% to 97% for DMPHs (data not shown).

**Exhibit 110: PRIME Self-Reported Tobacco Assessment and Counseling Rates for Metric 1.2.14.t**

*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance.*
*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.2.6 – Documented REAL and/or SO/GI Disparity Reduction Plan

Metric 1.2.6 measured the number of hospitals that attested to completing a REAL and/or SO/GI disparity reduction plan targeting 1 or more disparities (PRIME Metric Specs, DY 13YE). Metric 1.2.6 was only in effect for DY 12, so no change in rate was assessed. Hospitals were intended to reduce primary care health disparities that exist on the lines of race, ethnicity, language, (REAL) and sexual orientation or gender identity (SO/GI) to provide equal opportunity and fair treatment to all. For Metric 1.2.6, the achievement rate was not a weighted average because the underlying data was reported as "yes" or "no" for reporting whether they had documented disparity plan, however submission of the disparity reduction plan is not required to obtain an achievement value of 1.

Hospitals were required to report the following 5 elements for DY 12 (PRIME Metric Specs, 12 YE):
1. Who is the disparity population(s)?
2. How was the disparity population(s) identified?
3. What is the rationale for targeting this disparity population(s)?
4. What is the proposed intervention(s)?
5. How will the intervention be tailored to address the specific needs of the disparity population(s)?

This analysis indicates how many hospitals had a documented a disparity reduction plan. All DPHs documented a disparity reduction plan (17 of 17, Exhibit 111). Half of DMPHs had a plan (3 of 6), with DMPH Non-CAH at 67% (2 of 3) and DMPH CAH reaching 33% (1 of 3).

**Exhibit 111: PRIME Self-Reported Disparity Plan* Rates for Metric 1.2.6; Reported in DY 12**
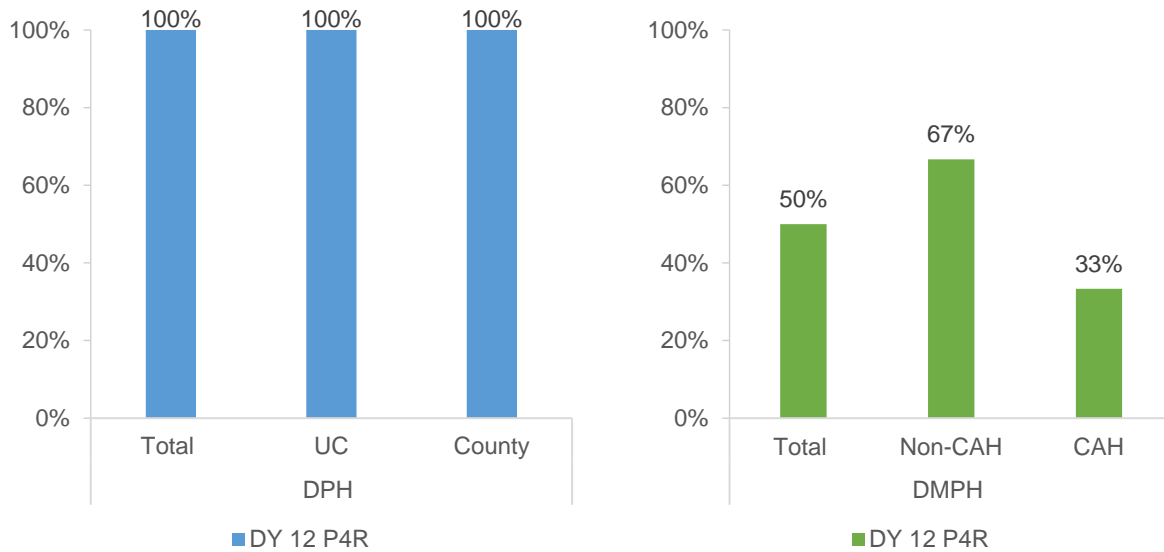


*Source: UCLA analysis of the self-reported data, data received July 2019. *This is an innovative metric.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. Metric 1.2.6 was only in effect for DY 12.*

## Metric 1.2.9 – Primary Care Redesign Metrics Stratified by REAL categories and SO/GI

Metric 1.2.9 measured the number of metrics stratified by the following sub-populations of the PRIME Eligible Population: Ethnicity Group (Detailed Ethnicity); Race Category; Detailed Race; Preferred Language; Sexual Orientation; Gender Identity (PRIME Metric Specs, DY 13YE; Exhibit 113). This metric was only implemented in DY 12, so no trend was assessed.

Hospitals were intended to identify significant disparities in health, health outcomes, or health care delivery amongst sub-populations of the PRIME Eligible Population and determine target disparities for future intervention. For Metric 1.2.9, the achievement rate was not a weighted average because the underlying data was reported as "yes" or "no" to the metric. Even when hospitals indicated that they did not have a plan, they achieved 1 for reporting (P4R metric). Among the DPHs, percentage stratification was 100%. DMPH Non-CAH had a 25% stratification (1 of the 4 Non-CAH DMPHs stratified the metrics) and CAH had a 0% stratification (Exhibit 112), for an average of 14% among all DMPHs (1 of 7).

**Exhibit 112: PRIME Self-Reported Sub-Population Stratification\* Rates for Metric 1.2.9; Reported in DY 12**
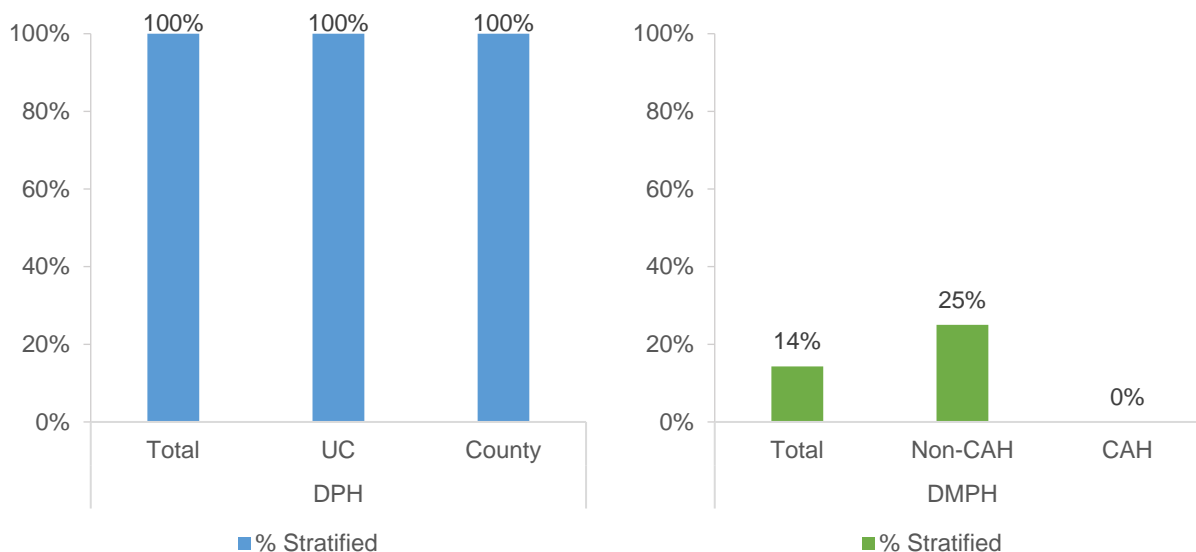


*Source: UCLA analysis of the self-reported data, data received July 2019. \*This is an innovative metric.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. Metric 1.2.6 was only in effect for DY 12 and it was P4R for all hospitals.*

**Exhibit 113: Targeted Disparities Using REAL/SOGI Data for Metric 1.2.9 and 1.2.10; Reported in DY 12**

| Hospital | Type | Targeted Patient Population | Targeted Metric |
|---|---|---|---|
| Alameda Health System | DPH | African Americans | Diabetes |
| Arrowhead Regional Medical Center | DPH | Latino Men | Colorectal cancer |
| Contra Costa Regional Medical Center | DPH | African Americans | Hypertension |
| Kern Medical Center | DPH | Spanish-language | Ischemic Vascular Disease |
| Los Angeles County Health System | DPH | African Americans | Colorectal cancer |
| Natividad Medical Center | DPH | English-language | Colorectal cancer |
| Riverside University Health System | DPH | Spanish-language Latinos (ages 18-39) | Diabetes |
| San Francisco General Hospital | DPH | African Americans (ages 18-85) | Hypertension |
| San Joaquin General Hospital | DPH | African Americans | Hypertension |
| San Mateo Medical Center | DPH | African Americans | Hypertension |
| Santa Clara Valley Medical Center | DPH | Latinos (ages 19-60) | Diabetes |
| UC Davis Medical Center | DPH | African Americans | Diabetes |
| UC Irvine Medical Center | DPH | Latinos | Colorectal cancer |
| UC Los Angeles Medical Center | DPH | African Americans | Hypertension |
| UC San Diego Medical Center | DPH | African Americans | Tobacco Use |
| UC San Francisco Medical Center | DPH | African Americans (ages 18-85) | Hypertension |
| Ventura County Medical Center | DPH | Latinos (ages 18-64) | Hypertension |
| El Centro Regional Medical Center, El Centro | DMPH | Latino Men (ages 50-75) | Colorectal cancer |
| John C. Fremont Healthcare District, Mariposa | DMPH | Women | Diabetes |
| Kaweah Delta Health Care District, Visalia | DMPH | English-language | Hypertension |
| Modoc Medical Center, Alturas | DMPH | Latinos | Hypertension |
| Oak Valley Hospital District, Oakdale | DMPH | Latina Women | Diabetes |

*Source: Hospital reports for DY12 and survey data; data received May 2019.*

*Notes: N=22 hospitals participating in Project 1.2 that provided this data. Southern Inyo did not complete the survey and hadn't identified a disparity due to EHR issues.*

## Metric 1.2.10 – REAL and/or SO/GI Disparity Reduction

Metric 1.2.10 measured the number of PRIME Primary Care Redesign project metrics targeted for disparity reduction in the PRIME hospital's DY 12 REAL and/or SO/GI Disparity Reduction Plan (PRIME Metric Specs, DY 13YE). Hospitals were intended to decrease disparities in health, health outcomes, or health care delivery amongst sub-populations of the PRIME Eligible Population. Metric 1.2.10 came into effect for DY 13 and was applicable for the remainder of PRIME. In this demonstration year, DPHs had an achievement rate of 59%, while DMPHs had an achievement rate of 31% (Exhibit 114). In DY 13, the individual achievement rates for Metric 1.2.10 ranged from 27% to 97% for DPHs and 17% to 63% for DMPHs (data not shown).

**Exhibit 114: PRIME Self-Reported Disparity Reduction\* Rates for Metric 1.2.10**
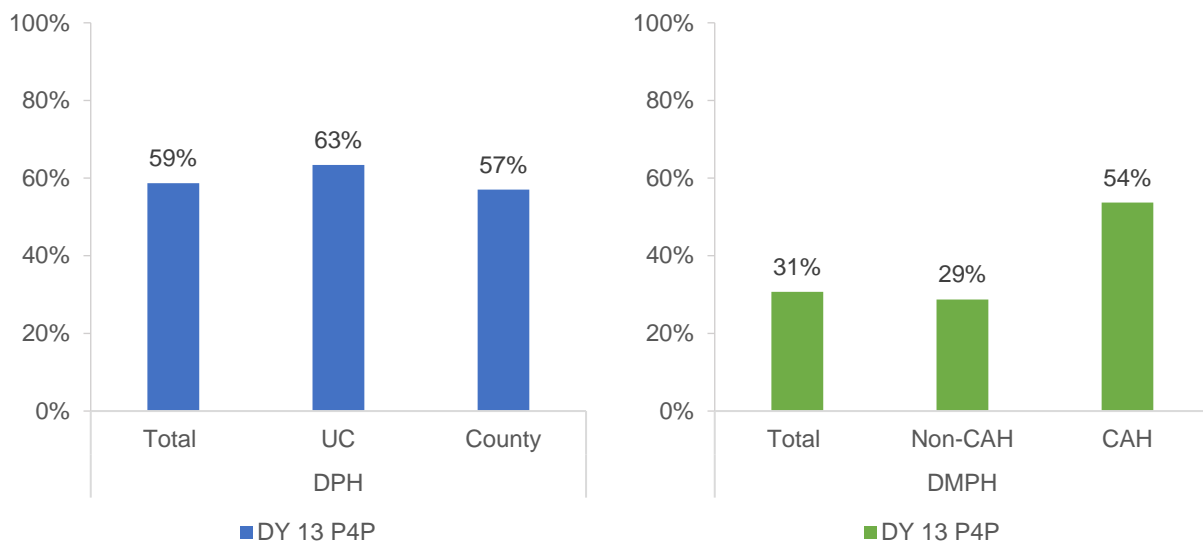


*Source: UCLA analysis of the self-reported data, data received July 2019. \* Denotes innovative metric.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. Metric 1.2.10 came into effect for DY 13.*

## Metric 1.2.11 – REAL Data Completeness

Metric 1.2.11 measured the number of patients who have complete race, ethnicity, and preferred language data available on file ([PRIME Metric Specs, DY 13YE](#)). Hospitals were intended to improve and maintain data completeness to support cohesive patient care and reduce health disparities by race, ethnicity, and language. Achievement was measured by an increasing rate.

DPHs reported rates of patient REAL data completeness at 36% in DY 11; the weighted average rate then increased to 58% in DY 12, and then to 78% in DY 13 (Exhibit 115). DPH UC rates did not follow a pattern, whereas DPH County rate increased over time. DMPH did not begin reporting performance data until DY 12 (22%) and increased in DY 13 (83%). Both DMPH Non-CAH and DMPH CAH rates increased between DY 12 and DY 13. In DY 13, the individual achievement rates for Metric 1.2.11 ranged from 22% to 100% for DPHs and 45% to 99% for DMPHs (data not shown).

**Exhibit 115: PRIME Self-Reported Race, Ethnicity, and Preferred Language (REAL) Data Completeness Rates for Metric 1.2.11**
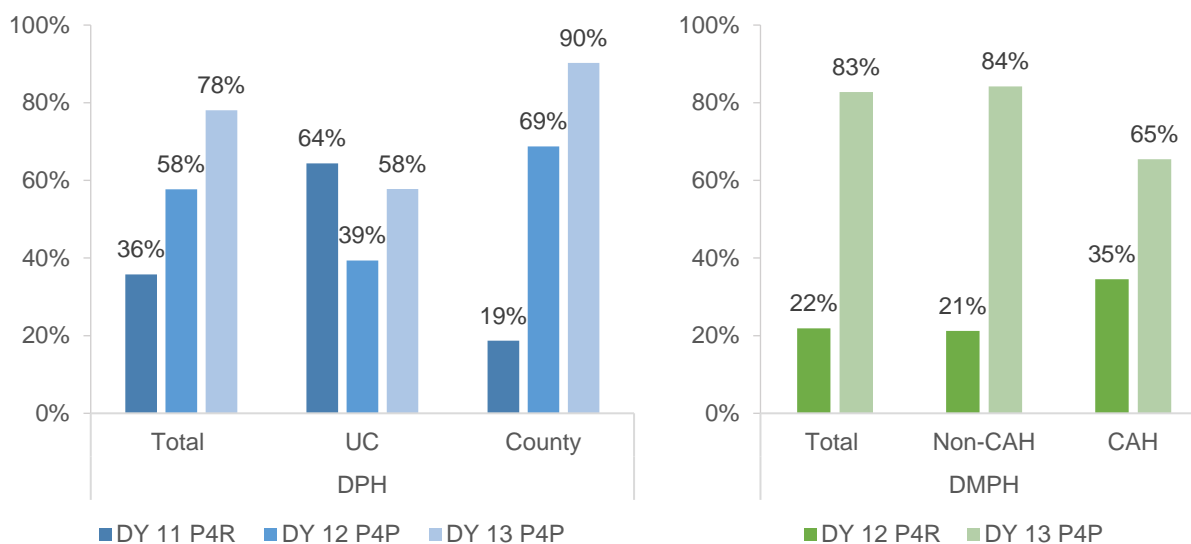


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.2.13 – SO/GI Data Completeness

Metric 1.2.13 measured the number of patients with both sexual orientation and gender identity available on file (PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce primary care health disparities that exist on the lines of sexual orientation or gender identity. This metric was implemented starting in DY 12. Achievement was measured by an increasing rate.

The average weighted rate among participating DPHs in DY 12 started at 8.9% and increased in DY 13 to 44% (Exhibit 116). Both DPH UC and DPH County rates increased between DY 12 and DY 13. DMPHs also increased between DY 12 and DY 13; the average weighted rate started at 22% then increased to 58%. DMPH Non-CAH and DMPH CAH rates also showed the same increasing movement over time. In DY 13, the individual achievement rates for Metric 1.2.13 ranged from 0.4% to 100% for DPHs and 35% to 100% for DMPHs (data not shown).

**Exhibit 116: PRIME Self-Reported Sexual Orientation and Gender Identity (SO/GI) Data Completeness Rates for Metric 1.2.13**
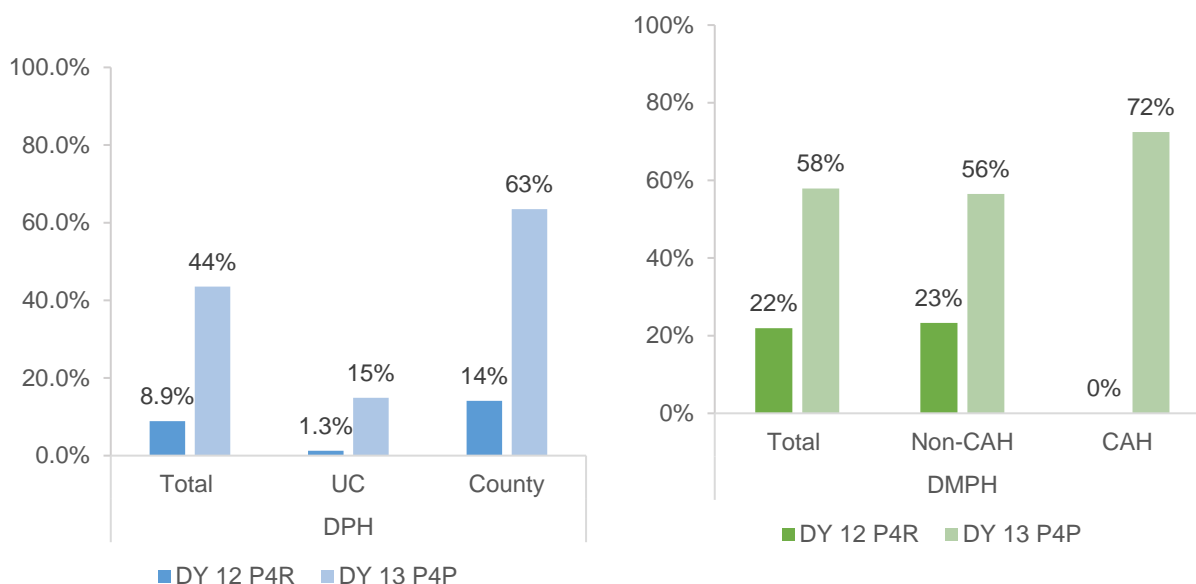


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. This metric started in DY 12.*

## Summary of Key Findings

Project 1.2 focused on promoting system integration, enhancing care coordination, and improving efficiency in primary care. A total of 24 hospitals participated in Project 1.2, including all 17 DPHs, as it was a required project. Seven DMPHs selected it and 2 subsequently dropped it, resulting in 23 participating hospitals in DY 12 and DY 13, and 22 hospitals participated in the survey.

Multiple hospitals implemented aspects of this project before PRIME, but the majority newly selected or implemented the core components. Specific infrastructure established for this project included developing EHR capacity to track test results and document demographic data. Hospitals also trained and supported primary care providers, activities that were synergistic with Project 1.3.

When reporting on how this project was implemented, 9 hospitals obtained a patient-centered medical home (PCMH) recognition/certification. All hospitals planned or conducted a gap analysis to assess primary care practices and 8 DPHs conducted a system-wide analysis. Twelve hospitals followed a specific model for delivering team-based care. The majority of DPHs and DMPHs reported that care models utilized within the hospitals met essential components of team-based care, particularly communication and interaction (18) and QI support for improving workflows (18), and scheduled time for regular team meetings (18).

Hospitals frequently engaged care coordinators to coordinate health care (20) and most were always located in primary care clinics (16). Seventeen hospitals used case managers to coordinate social services, and most hospitals always had these staff in the primary care clinic (11). Furthermore, 17 hospitals hired or trained front line staff to coordinate non-clinical services, such as obtaining health insurance coverage, coordinating transportation, and providing patient education.

Population health management requires a risk assessment to identify the level of care needed per patient, teach patients self-management skills, and provide them with an individualized treatment plan (ITP) to guide both self-management and professional care delivery. Hospitals most often conducted risk-stratification of patients based on a diagnosis of diabetes (19), depression (16), and congestive heart failure (13). Disease management was incorporated into the activities of the medical team by all but 1 hospital. Disease management services were delivered via multiple methods: 20 hospitals used telephone calls for this purpose, 15 held group visits, and 14 mailed informational materials.

The overall level of difficulty in implementing this project varied by hospital type, DPHs reported a medium level (6.8 of 10), whereas DMPH hospitals reported spending a high

level of effort (9). The most effort was spent implementing the projects (DPH 8.1, DMPH 9.3).

Data and metric-related challenges to implementation included IT infrastructure lacking data query ability, tracking, or reporting functions (11) and processes not being established system-wide (12). The top solutions were EHR/IT standardization or expansion across the system (12) and enhanced outreach and capacity to follow up with patients (10).

Performance of hospitals in Project 1.2 was measured by 14 metrics, although not all applied to each year. Metrics were 1.2.1.a -Alcohol and Drug Misuse (SBIRT); 1.2.2-CG-CAHPS; 1.2.3.c-Colorectal Cancer Screening; 1.2.4.d-Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%); 1.2.5.b-Controlling Blood Pressure; 1.2.7.i-Ischemic Vascular Disease: Use of Aspirin or Another Antithrombotic (this measure had a trend-break in DY 12); 1.2.8-Prevention Quality Overall Composite #90; 1.2.12.f-Screening for Clinical Depression and Follow- Up; and 1.2.14.t-Tobacco Assessment and Counseling. The race, ethnicity and preferred language (REAL) and Sexual Orientation and Gender Identity (SO/GI) metrics were 1.2.6*-Documented REAL and/or SOGI Disparity Reduction Plan (DY 12 only); 1.2.9*-Primary Care Redesign Metrics Stratified by REAL Categories and SOGI (DY 12 only); 1.2.10*-REAL and/or SO/GI Disparity Reduction (begins in DY 13); 1.2.11-REAL Data Completeness; and 1.2.13-SO/GI Data Completeness (began in DY 12). There were 11 standard and 3 innovative metrics (denoted with an *). Of these, 9 measured care processes and 5 measured outcomes of care. Both DPHs and DMPHs showed progress over time in 7 metrics (1.2.3.c, 1.2.4.d, 1.2.5.b, 1.2.11, 1.2.12.f, 1.2.13, 1.2.14.t). DPHs also showed progress for 2 metrics (1.2.2 and 1.2.7.i) and had mixed results for 2 metrics (1.2.1.a and 1.2.8). DMPHs showed progress for 1 metric (1.2.1.a) and did not have an improvement for 2 (1.2.2 and 1.2.7.i). DMPHs remained the same for 1 metric (1.2.8). Several (3) metrics (1.2.6, 1.2.9, 1.2.10) did not have a trend, as the metrics were only in effect for 1 demonstration year. Of note, many of these metrics were stratified by demographics and hospitals selected specific populations for disparities reductions.

Overall, hospitals made significant progress in implementing Project 1.2 by establishing data infrastructure and protocols to implement the patient-centered medical home (PCMH) model of care, including delivering team-based care, disease management, care coordination, population health management, and addressing health disparities. Hospitals reported improvements in the majority of metrics. However, they varied in their progress in project implementation and metrics progress.

# Project 1.3 – Ambulatory Care Redesign: Specialty Care

## Project Overview

Project 1.3 was designed to integrated specialty and primary care and thus improve timely access to high quality and effective specialty care by transformation of specialty care practice, including mental health and substance abuse treatment. This goal was to be achieved by establishing needed infrastructure such as specialty care support tools for primary care providers (PCPs) and implementing processes that promote delivery of integrated care including team-based care, technology-assisted expanded access to specialty care, and improved management of patients. Specific objectives can be found in Attachment Q.

Project 1.3 was required for all 17 DPHs. A couple of DMPHs participated in this project, including Kaweah Delta and Lompoc Valley, neither of which were critical access hospitals. In total, 19 hospitals participated and reported metric performance data (Exhibit 117).

**Exhibit 117: PRIME Project 1.3 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 19 | 19 | 19 |
| **Total DPH** | 17 | 17 | 17 |
| **DPH UC** | 5 | 5 | 5 |
| **DPH County** | 12 | 12 | 12 |
| **Total DMPH** | 2 | 2 | 2 |
| **DMPH Non-CAH** | 2 | 2 | 2 |
| **DMPH CAH** | 0 | 0 | 0 |

*Source: Data provided by DHCS.*
*Notes: The number of participating hospitals indicates those that implemented the project for the full DY. At the start of PRIME, DMPHs had the option to report Infrastructure Building Milestones, rather than reporting these metrics. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the suggested core components of this project as an indication of their overall approach to managing specialty care redesign (Exhibit 118). In the interim survey, before PRIME 12 hospitals reported having clinical teams engage in team- and evidence-based care and 11 reported development of a specialty care program that is broadly applied to the entire population of service and implementing a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. During PRIME, all or nearly all participating hospitals reported implementing all of the core components except for demonstrating engagement of patients in the design and implementation of the project and improving medication adherence.

**Exhibit 118: PRIME Project 1.3 Core Components**

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Develop a specialty care program that is broadly applied to the entire population of service. | 11 | 13 |
| Conduct a gap analysis to assess need for specialty care including mental health and SUD services (analysis to include factors impacting ability to access specialty care), and the current and ideal state capacity to meet that need. Benchmark to other CA Public Health Care systems. a. For ideal state analysis, include potential impact of increased primary care capacity to manage higher acuity conditions either independently, or in collaboration with, specialty care, so as to reduce the need for in-person specialty care encounters. (e.g., insulin titration, IBS management, joint injections, cognitive behavioral therapy (CBT) or Medication Assisted Treatment (MAT)). | 5 | 9 |
| Engage primary care providers and local public health departments in development and implementation of specialty care model a. Implement processes for primary care: specialty care co-management of patient care b. Establish processes to enable timely follow up for specialty expertise requests c. Develop closed loop processes to ensure all requests are addressed and if in person visits are performed, that the outcome is communicated back to the PCP. | 9 | 13 |
| Clinical teams engage in team- and evidence-based care. | 12 | 12 |
| Increase staff engagement by: a. Implementing a model for team-based care in which staff performs to the best of their abilities and credentials. b. Providing ongoing staff training on care model. | 7 | 13 |
| Develop and implement standardized workflows for diversified care delivery strategies (e.g. shared medical visits, ancillary led services, population management, telemedicine services) to expand access and improve cost efficiency. | 8 | 15 |
| Adopt and follow treatment protocols mutually agreed upon across the delivery system. | 9 | 13 |
| Implement technology-enabled data systems to support pre-visit planning, point of care delivery, population management activities and care coordination/transitions of care. Timely, relevant and actionable data is used to support patient engagement, PCP collaboration, and drive clinical, operational and strategic decisions including continuous QI activities. a. Implement EHR technology that meets meaningful use standards (MU). | 8 | 13 |
| Patients have care plans and are engaged in their care. Patients with chronic disease (including MH/SUD conditions) managed by specialty care have documented patient-driven, self-management goals reviewed at each visit. | 3 | 7 |
| Improve medication adherence. | 7 | 6 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Implement population management strategies for patients in need of preventive services, with chronic conditions, or with recurring long term surveillance needs. | 4 | 14 |
| Implement or expand use of telehealth based on DPH/DMPH capacity to address patient and PCP barriers to accessing specialty expertise. Implement a telehealth platform with communication modalities that connect between specialty care and primary care (e.g., eConsult/eReferral). | 9 | 13 |
| Demonstrate engagement of patients in the design and implementation of the project. | 4 | 4 |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | 11 | 14 |
| Test use of novel performance metrics for redesigned specialty care models | 3 | 7 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=19 hospitals participating in Project 1.3. Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey hospitals may have implemented or dropped activities under a core component.*

## Infrastructure

### Specialty Care Support Services for Primary Care Providers

A goal of Project 1.3 was to promote the use of tools and services that support primary care providers in the treatment and management of patients with high acuity to reduce the need for specialty referrals. In the interim survey, 17 of 19 hospitals reported that they offered these services (Data not shown). Among the 2 hospitals that reported not offering such support, 1 reported resistance from PCPs to accepting additional responsibilities and the other hospital reported that they were in the process of implementing e-consultations.

Among those offering support, services included decision support tools (12), real-time specialist consultations (8), and the provision of extra clinical support or care teams involving multiple specialties (8; Exhibit 119). Six offered other services such as asynchronous electronic consultations, dissemination of expected practice guidelines, and standard processes for physical therapy orders.

**Exhibit 119: Specialty Care Support Services Offered to Primary Care Providers for Treatment of High Acuity Patients Under PRIME**

| Service | Count |
|---|---|
| Decision support tools | 12 |
| Real time electronic/phone specialist consultations | 8 |
| Additional clinical support/multi-specialty care teams | 8 |
| Joint case conferencing with specialists | 7 |
| Other services | 6 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: Of the 19 hospitals participating in Project 1.3, 17 offered any of these services. Other services included asynchronous electronic consultations, dissemination of expected practice guidelines, and standard process for physical therapy orders.*

## Training Primary Care Providers in Specialty Care and Caring for High Acuity Patients

In the interim survey, 11 of 19 DPHs reported training PCPs to expand their specialty roles and the remaining 8 hospitals did not (Data not shown). Among the former, 6 reported providing training in endocrinology or substance use (Exhibit 120). Fewer hospitals reported training PCPs to expand their role in orthopedics (4), mental health (3), or gastroenterology (2).

**Exhibit 120: Types of Training Provided to Primary Care Providers to Expand Specialty Care Access Under PRIME**
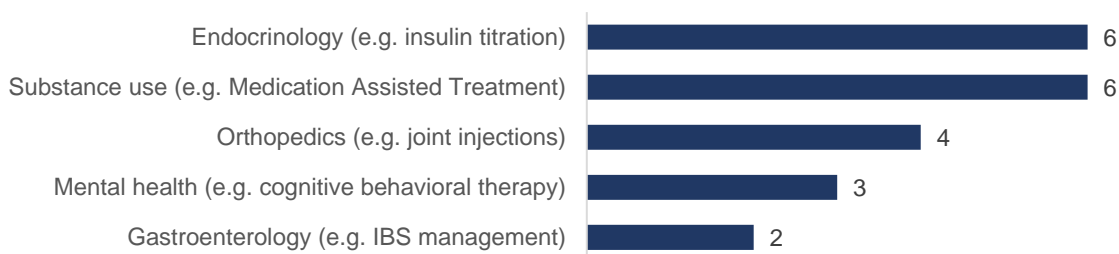
| Training type | Count |
|---|---|
| Endocrinology (e.g. insulin titration) | 6 |
| Substance use (e.g. Medication Assisted Treatment) | 6 |
| Orthopedics (e.g. joint injections) | 4 |
| Mental health (e.g. cognitive behavioral therapy) | 3 |
| Gastroenterology (e.g. IBS management) | 2 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=11 hospitals participating in Project 1.3 noting use of any training for primary care providers in specialty care. Responses are not mutually exclusive; hospitals could report training for multiple specialties.*

In interviews, several hospitals discussed their strategies for training and supporting primary care providers and the challenges they faced in doing so. For example, 2 hospitals noted:

*"So the psychiatrists that are on-site also have a portion of their time spent kind of as faculty training the primary care residents and providers on some standard protocols. For example, medication management, and how to diagnose certain conditions, and when to escalate or refer to specialty psychiatry…And we've also built some technical tools to help that process, so we have some decision support around how to choose which medication, and when to titrate up and when to switch if you see certain symptoms. So that kind of training has also been embedded within some of our technical tools that we built this year." (UC San Francisco)*

*"I think it's just the sheer number of clinic locations we have in a health system that serves, that has one million unique patient visits each year…ensuring that we're using the right mix of digital tools for training, which sometimes don't engage people as well as we'd like them to, to in-person trainings can take time to coordinate that while not grinding to a halt our clinical services …the challenge for us, is the geographic distribution, the sheer number of clinics, the sheer number of employees that need training." (UC Davis)*

### Specialty Treatment Protocols

In the interim survey, hospitals reported up to 5 specialty treatment protocols and whether these protocols were implemented before or during PRIME. Fourteen hospitals (74%) reported developing or adopting at least 1 specialty treatment protocol; hospitals reported developing 12 treatment protocols before PRIME and 35 during PRIME in the aggregate. The most common treatment protocols covered a wide range of specialties, including cardiology (7 hospitals), gastroenterology (7), endocrinology (6), substance abuse (5), mental health (4), and pain management (4). Examples of specialty treatment protocols included delivery of brief treatment of mental health conditions by primary care teams, influenza vaccination within specialty care settings, and tobacco screening and referral in specialty settings.

## Project Implementation

### Specialty Care Assessment

Hospitals reported in the interim survey whether they performed a gap analysis to assess the extent of the need for specialty care in their organization while implementing Project 1.3, and if not, their reasons for not doing so. 4 DPHs reported that they performed a gap analysis; both participating DMPHs did so. Of the 6 hospitals who performed a gap analysis, all reported examining the need for medical specialty care; fewer hospitals examined the need for services for mental health, substance abuse, and dental care (Exhibit 121). Among the 13 DPHs who did not conduct a gap analysis for the project under PRIME, the majority (8) reported that they already had adequate

information on gaps in specialty care and 2 hospitals reported that they recently completed or regularly complete such analyses (Data not shown).

**Exhibit 121: Services Examined in Gap Analyses among Hospitals Noting Any Gap Analysis for Project 1.3 Under PRIME**



| Service | Count |
|---|---|
| Medical specialties | 6 |
| Mental health | 4 |
| Substance use | 4 |
| Dental care | 2 |
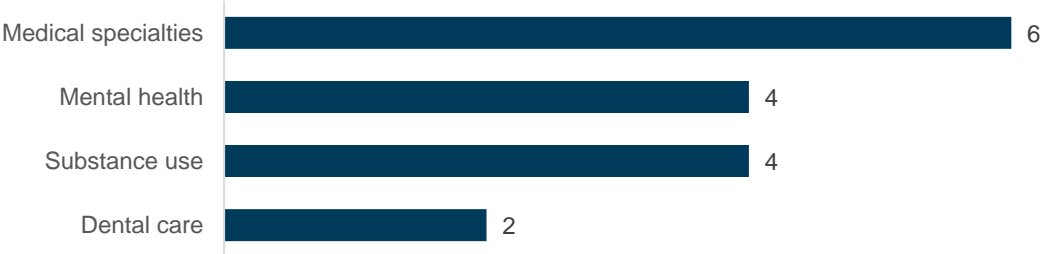
*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=6 hospitals participating in Project 1.3 who reported conducting gap analyses for the project.*

## Team-based Models for Specialty Care

In the interim survey, hospitals reported employing specific team-based models (7 DPHs, 1 DMPH; Data not shown). Specific models included: the Patient-Centered Medical Home, pod/podlet-based model, unit-based teams, the Medical Neighborhood, and GEMCare Health Plan's Comprehensive Care Clinic model.

The majority of hospitals used multiple strategies to promote team-based care including having facilitated communication and interaction within the specialty care team (14 of 19), scheduled times for daily huddles (13), or regular team meetings (13; Exhibit 122). Hospitals also reported providing quality improvement (QI) support to improve team workflows, training on goals and objectives, coaching on role delegation, and sufficient clinical and administrative staff time to support care teams.

**Exhibit 122: Modes of Specialty Care Team-Based Engagement Under PRIME**

| Mode | Value |
|------|-------|
| Communication and interaction | 14 |
| Scheduled time for daily huddles | 13 |
| Scheduled time for regular team meetings | 13 |
| Provide QI support for improving workflow for teams | 11 |
| Provide training on goals and objectives | 10 |
| Coaching teams on role delegation | 10 |
| Assure adequate clinical & administrative staffing for teams | 10 |
| No modes of team-based care engagement | 2 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=19 hospitals participating in Project 1.3.*

Eight of 19 hospitals reported that medical specialists regularly participated in primary care teams, while 7 reported regular participation by mental health providers; regular participation by substance use providers was less commonly reported (3; Exhibit 123). The majority of hospitals reported participation of these specialists in primary care teams on an as-needed basis.

**Exhibit 123: Specialist Participation in Primary Care Teams Under PRIME**

| | Regularly | Only when needed | Never |
|------|-----------|------------------|-------|
| Medical specialists | 8 | 10 | 1 |
| Mental health providers | 7 | 11 | 1 |
| Substance use providers | 3 | 11 | 5 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=19 hospitals participating in Project 1.3.*

Hospitals reported that specialists collaborated with the primary care teams most frequently by email and phone (Exhibit 124). Among hospitals that reported collaboration, 8 reported that specialists communicated frequently by email and 7 reported frequent communication by phone. Joining case conferences with primary care teams was most often reported to occur sometimes or less frequently.

**Exhibit 124: Modes of Participation by Specialists in Primary Care Teams Under PRIME**
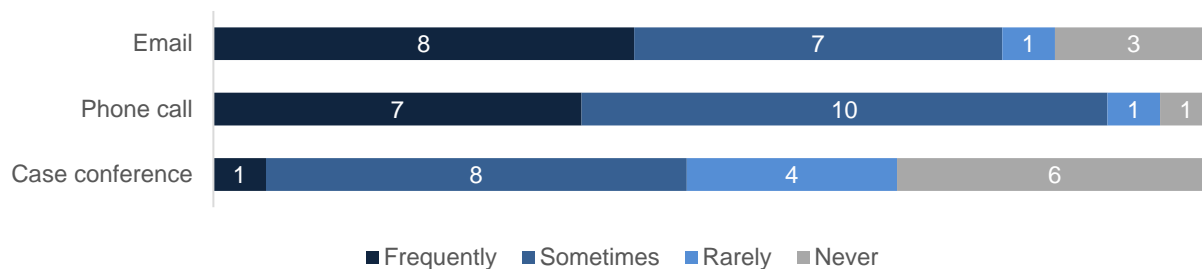
| Mode | Frequently | Sometimes | Rarely | Never |
|---|---|---|---|---|
| Email | 8 | 7 | 1 | 3 |
| Phone call | 7 | 10 | 1 | 1 |
| Case conference | 1 | 8 | 4 | 6 |

■ Frequently  ■ Sometimes  ■ Rarely  ■ Never

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=19 hospitals participating in Project 1.3.*

All participating hospitals reported that primary care providers always (6 of 19) or usually (13) receive feedback from specialists on the outcomes of specialty visits (Data not shown). Feedback by specialists was most often received via the electronic medical record (17; Exhibit 125).

**Exhibit 125: Modes of Feedback from Specialists to Primary Care Providers Under PRIME**
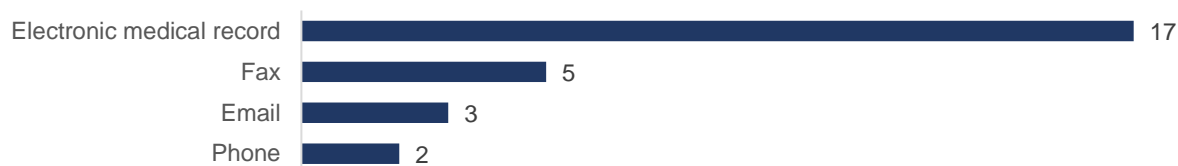
| Mode | Value |
|---|---|
| Electronic medical record | 17 |
| Fax | 5 |
| Email | 3 |
| Phone | 2 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=19 hospitals participating in Project 1.3.*

In interviews, a hospital discussed their efforts to implement team-based specialty care models:

*"What comes to mind is our surgery department—we have a malignant surgery group that kind of coordinates with the navigators, nurses, and physicians to do team-based care. We are in the process of developing new service lines where we will have integrated specialties coming together into one clinic. For example, cardiovascular and podiatry and vascular surgery…those are still in works but haven't gone live because one of the things we face here is space constraints. … [we are constructing] a 200,000 square foot on an MOD (medical office building), which is opening in 2020. It will give us more opportunities to do these types of team-based care." (Riverside)*

## Strategies for Expanding Access to Specialty Care

In the interim survey, 13 of 19 hospitals reported using population management to expand access to specialty care, 7 reported use of telephone visits, and 6 reporting using e-consults (Exhibit 126).

**Exhibit 126: Strategies for Expanding Access to Specialty Care Under PRIME**
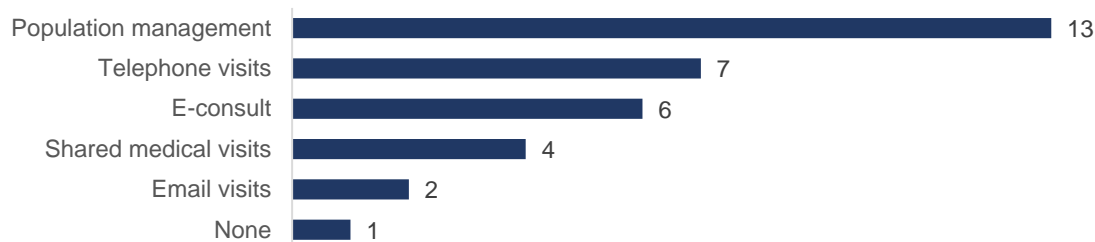
| Strategy | Count |
|---|---|
| Population management | 13 |
| Telephone visits | 7 |
| E-consult | 6 |
| Shared medical visits | 4 |
| Email visits | 2 |
| None | 1 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=19 hospitals participating in Project 1.3.*

In interviews, several hospitals discussed the significant amount of work and coordination required to implement e-referrals, which was often still a work in progress. For example, a hospital noted:

*"It was a group effort from our referral center, to the local referral centers in the clinics, to IT…... We're still in the process of implementing an e-consult e-referral system. We had to redo the internal system …It's still not fully operational in all the clinics. And we had to make some of the specialty clinics electronic that they were not. They had a hybrid process so still work in progress. Hopefully, by the end of the year, we'll be fully electronic and we'll have the consult e-referral system fully in place." (Arrowhead)*

Another hospital discussed their intention to create a "seamless experience" for patients by facilitating communication between providers:

*"… we're just trying to create a seamless experience for our patients…to make sure that through the electronic tools we use, that there's a good information exchange, working together to make sure access is efficient so the patients aren't waiting to see a specialist for a long period of time…liberally using the tools within Epic, like staff messages to exchange information even when the patient is not in the office, follow-up questions, et cetera once the consultation has been completed." (UC Davis)*

Hospitals reported in their interim survey on their use of telehealth services to expand access to a wide range of medical specialties (Telehealth Capacity). Among the 17

DPHs, 15 reported use of telehealth services, most commonly for Psychiatry and Radiology.

In interviews, hospitals discussed the limited role of telehealth in patient care, many of whom were still working on building out their capacity to offer telehealth services. Telehealth was discussed not only as a tool for linking patients to providers, but as a method for facilitating more direct communication between providers across specialties:

> *"Certainly [telehealth] is part of, as you referred to it, kind of a referral pathway. But it's really much much more than that. And this is really where the tele-health piece comes in. It's a communication tool. It allows for iterative dialog and conversation between 2 practitioners who both have a vested interest in the outcome of the patient and it allows them over time to collaborate in care." (Los Angeles)*

## Strategies for Improving Specialty Care Management

In the interim survey, 14 hospitals used various strategies to manage patients with specialty care needs in primary care and 5 did not report doing so. Among the former, 11 hospitals reported using reminders for preventive services (e.g., flu shots, mammograms); 11 reported use of alternative approaches to traditional office visits (e.g., one-on-one phone calls visits, group classes on self-care) to manage care for specialty care patients (Data not shown).

In the interim survey, all 19 hospitals reported that individual treatment plans (ITPs) were used by specialists or shared with specialists when patients go for consultation. Among these hospitals, 12 reported that ITPs were regularly (usually or always) used by medical specialists (Exhibit 127). Twelve used them regularly when patients visited medical specialists for consultation and 13 used them regularly when patients visited mental health or substance use providers for consultation.

**Exhibit 127: Use of Individual Treatment Plans for Patients of Specialty Providers Under PRIME**



| | Always | Usually | Sometimes | Rarely | Never |
|---|---|---|---|---|---|
| Patients managed by medical specialists | 9 | 3 | 2 | 5 | |
| Patients visiting medical specialists for consultation | 8 | 4 | 2 | 5 | |
| Patients visiting mental health providers for consultation | 8 | 5 | 3 | 2 | 1 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=19 hospitals participating in Project 1.3.*

Among the 14 hospitals that reported use of the ITP by medical specialists at least sometimes, most reported that specialists always (3) or usually (8) reviewed treatment goals with patients (Exhibit 128). Seven hospitals reported that ITPs developed by specialists regularly contained patient-driven self-management goals.

**Exhibit 128: Frequency of Individual Treatment Plan (ITP) Use and Content by Specialists Under PRIME**
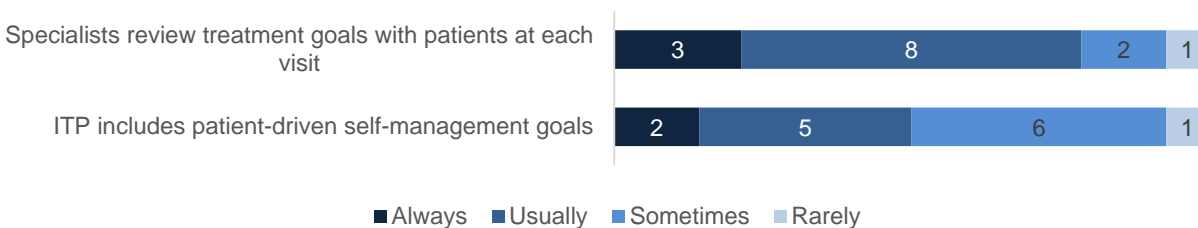


| | Always | Usually | Sometimes | Rarely |
|---|---|---|---|---|
| Specialists review treatment goals with patients at each visit | 3 | 8 | 2 | 1 |
| ITP includes patient-driven self-management goals | 2 | 5 | 6 | 1 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=19 hospitals participating in Project 1.3. ITP: individual treatment plan.*

In interviews, hospitals further explained how case management improved their ability to manage care for patients with complex care needs:

*"We have ambulatory case management folks, these are nurses, pharmacists, social workers, who are working with our highest utilizers or folks with the highest needs, help connect them with community resources to help address some of the social determinants of health that they are struggling with in their day-to-day life. They're also trying to help navigate patients from office to office and make sure they are keeping their appointments with specialists. Our pharmacists are wonderful in identifying when patients are having difficulty affording their medications and working with different programs to get them affordable medications." (UC Davis)*

## Improving Medication Adherence

Fifteen hospitals reported that specialists used tools and strategies to improve medication adherence and 4 did not. Among the former, 12 called patients to offer reminders or refreshers on medication instructions and 11 provided tools, such as schedules or pillboxes (Exhibit 129).

**Exhibit 129: Strategies Used by Specialists to Improve Medication Adherence Under PRIME**
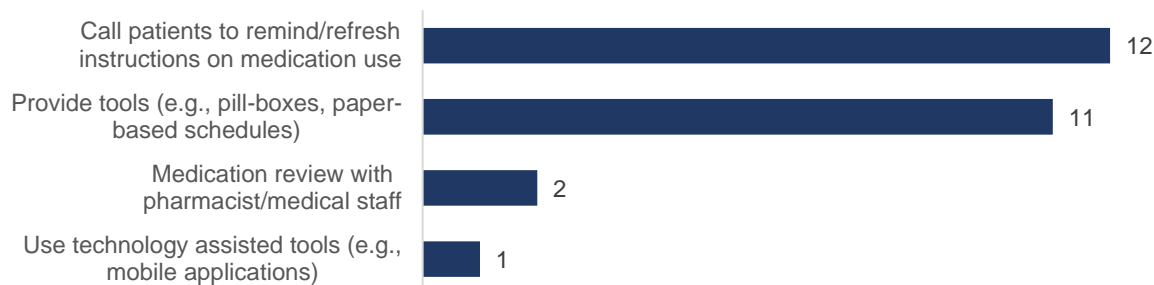


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=15 hospitals participating in Project 1.3 who noted use of any strategies to improve medication adherence.*

In interviews, hospitals discussed various strategies for improving medication adherence, including use of the medication list on the after-visit summary, expanding the role of specialists in medication management, engaging patients in medication management using the patient portal, including pharmacists in primary care teams, and utilizing care management staff to counsel patients on medication use following discharge from the hospital. A couple of hospitals expanded on their process:

> *"On top of that, assisting with medication reconciliation in the specialties is something that we would like to assist primary care with. However, as you know, regarding specialties, not everybody is well versed, say, like in diabetes management. So someone like, say, a surgeon necessarily doesn't feel comfortable per se adjusting those meds they'd rather refer back to PCP. So that's why we talk about implementing protocols in the specialists to start doing some of those checks when there's an ability to do it. Make sure that patients don't fall through the gap." (Contra Costa)*

> *"We're embedding pharmacists in the primacy care clinics. And the pharmacists are now with chronic opioid patients, they are developing taper plans and transition to buprenorphine if necessary, or just tapering to cessation. They're also working with*

*patients on multiple medications to try to sort through drug-drug interactions and, again, cost issues…And the pharmacist works electronically with the primary care provider to make medication change suggestions if necessary." (UC Davis)*

## Participation in Learning Collaboratives

Multiple hospitals (5 DPHs, 1 DMPH) reported participating in learning collaboratives outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF relating to activities for Project 1.3. Specific learning collaboratives included the Hospital Improvement Innovation Network, California Smoker's Helpline Learning Collaborative, Blue Shield Foundation e-Consult Collaborative, and America's Essential Hospitals Population Health Learning Network.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10), effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10.0). Hospitals reported spending an overall high level of effort in implementing Project 1.3 (DPH 7.0; DMPH 8.0; (

Exhibit 403). Among DPHs, ratings of effort were high for resource intensity (7.2), and implementation requirements (7.3). On average, DMPHs reported requiring high effort for unanticipated changes in metrics (10.0), revision or modification of the project (7.0), resource intensity (7.0), and implementation requirements (8.0).

In interviews, hospitals discussed the overlap in some metrics targeted by other projects and how previous work on specialty care redesign reduced the level of effort needed for Project 1.3:

> "I think that we have a combination of [metrics] that are already part of standard work so…that makes it easy…Influenza—it's like every quality measure. Once you get influenza we already have robust processes for that." (UC San Diego)

> "We do have a specialty access team that is working on referral turnaround across the organization, and also closing the loop with encounters for specialty... It happens to align with PRIME, but hasn't necessarily been driven by PRIME." (UC San Francisco)

## Challenges and Solutions to Specialty Care Redesign

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 1.3 (Challenges: Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (10) was IT infrastructure lacking data query ability, tracking, or reporting functions. The second challenge cited the majority of hospitals (5) was variation in documentation within the system by providers and staff. The top solution identified by the majority of hospitals (9) was EHR/IT standardization or expansion across the system. The second most successful solutions identified by the majority of hospitals (5) was standardizing processes for documentation, implementing standardized tools and screening (5), and process development from management and QI (5).

### Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 1.3 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by the hospitals (8) was processes not being established system-wide. The second challenged cited by the hospitals (4) was siloed departments and difficulty collaborating. The top solution identified by the hospitals (7) was standardizing processes across systems. The second solution identified by the hospitals (3) was establishing meetings across teams.

In interviews, a few hospitals described the complexity of implementing the project due to variation in the range of metrics and need for coordinating services across all ambulatory settings:

*"Well, this project is kind of a hodgepodge, right? There is referral management…one measure is about whether or not this note from a visit got back to a provider and one measure is abouht vaccination rates in specialty clinics, and another measure is about readmission." (Alameda)*

*"…The measures in this project, the denominators are humongous. So they're really looking at referrals and encounters across the entire ambulatory system. And for that reason, making change, the level of effort to influence a particular measure is really difficult because they're spread out across hundreds and hundreds of providers and clinics…the leadership and decision and governance is really spread across many, many areas." (UC San Francisco)*

## Hospital-Reported Metric Performance

Performance of hospitals in Project 1.3 was measured by 7 metrics (Exhibit 130). Among these metrics, 4 were standard metrics and 3 were innovative metrics. The majority of the metrics for Project 1.3 were designed to show progress by increasing rates over time. UCLA categorized 4 as process metrics and 3 as outcome metrics.

**Exhibit 130: PRIME Project 1.3 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **Closing the Referral Loop: Receipt of Specialist Report (CMS504)** | 1.3.1 | CMS | N/A | Increase | Process |
| **DHCS All-Cause Readmissions – Statewide Collaborative QIP Measure** | 1.3.2 | DHCS | N/A | Decrease | Outcome |
| **Influenza Immunization** | 1.3.3 | NCQA | 0041 | Increase | Process |
| **Post Procedure ED Visits** | 1.3.4* | SFHN | N/A | Decrease | Outcome |
| **Request for Specialty Care Expertise Turnaround Time** | 1.3.5* | LACDHS, SFHN | N/A | Increase | Process |
| **Specialty Care Touches: Specialty Expertise Requests Managed via Non-Face to Face Specialty Encounters** | 1.3.6* | LACDHS, UCD | N/A | Increase | Process |
| **Tobacco Assessment and Counseling** | 1.3.7 | AMA-PCPI | 0028 | Increase | Process |

*Source: PRIME Metrics Specs, DY 13YE*

*Notes: NQF: National Quality Forum, CCO: coordinated care organizations, SBIRT: screening, brief intervention, and referral to treatment, NCQA: National Committee for Quality Assurance, CMS: Centers for Medicare and Medicaid Services, AMA-PCPI: American Medical Association Physician Consortium for Performance Improvement. \* Denotes innovative metric.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric.

Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability.

## Metric 1.3.1 – Closing the Referral Loop

Metric 1.3.1 measured the proportion of all patients regardless of age, for which the provider both gave a referral and received a report back from the specialty care provider to whom the patient was referred (CMS50v6, PRIME Metric Specs, DY 13YE). Hospitals were intended to close the loop on the receipt of referrals, since physicians did not always receive a report from specialists. Achievement was measured by an increasing rate.

DPHs reported an increase in the weighted average rate of closing the referral loop from 67% in DY 11 to 81% in DY 13 (Exhibit 131). DPH UC hospitals reported an increase from 50% in DY 11 to 81% in DY 12, then an increase in DY 13 (86%). DPH County hospitals reported a decrease from DY 11 (76%) to 64% in DY 12, then an increase to 78% in DY 13. DMPH Non-CAH hospitals reported a decrease from 53% in DY 12 to 52% in DY 13. In DY 13, the individual achievement rates for Metric 1.3.1 ranged from 35% to 100% for DPHs and 40% to 59% for DMPHs (data not shown).

**Exhibit 131: PRIME Self-Reported Rate of Closing the Specialist Referral Loop for Metric 1.3.1**
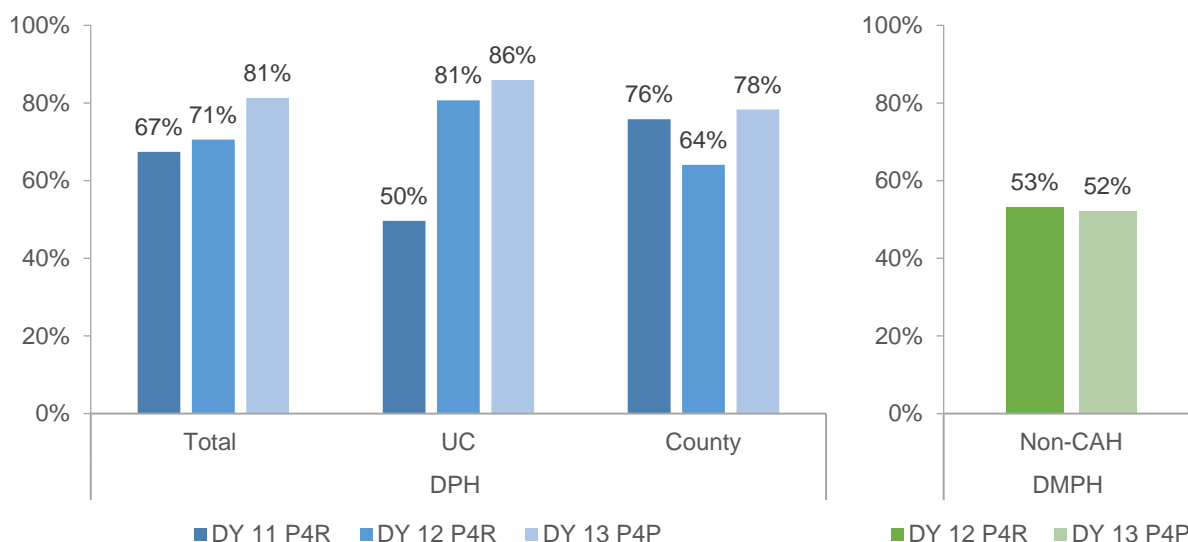


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 1.3.2– DHCS All-Cause Readmissions – Statewide Collaborative QIP measure

Metric 1.3.2 measured the proportion of patients that were readmitted within 30 days of the Index Hospital Stays (IHS) for individuals 21 years of age and older from Project 1.3 Target Population (PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce readmissions after improvements of transitional care for patients. Achievement was measured by a decreasing rate.

For the DPHs, the weighted average rate remained relatively stable with a slight decrease between DY 11 to DY 13; the rate was 14% in DY 11, then dropped to 13% for DY 12 and DY 13 (Exhibit 132). There were fluctuating differences between DPH UC and DPH County hospitals. For the participating DMPHs, the readmissions rate was more than doubled, 6% in DY 12 to 13% in DY 13. In DY 13, the individual achievement rates for Metric 1.3.2 ranged from 7% to 16% for DPHs and 4% to 17% for DMPHs (data not shown).

**Exhibit 132: PRIME Self-Reported All-Cause Readmission Rates for Metric 1.3.2**

*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.3.3 – Influenza Immunization

Metric 1.3.3 measured the proportion of patients who received an influenza immunization or had a previous receipt of an influenza immunization in the Project 1.3 Target Population ages 6 months and older (NQF # 0041, PRIME Metric Specs, DY 13YE). Hospitals were intended to promote influenza vaccinations to reduce contraction rates and risks of disease. Achievement was measured by an increasing rate.

Among the DPHs, the weighted average rate increased from 49% in DY 11 to 55% in DY 12 to 68% in DY 13 (Exhibit 133). DPH UC and County hospitals reported different patterns of change. Influenza immunization rates for DMPHs increased from 16% in DY 12 to 26% in DY 13. In DY 13, the individual achievement rates for Metric 1.3.3 ranged from 51% to 86% for DPHs and 15% to 41% for DMPHs (data not shown).

**Exhibit 133: PRIME Self-Reported Influenza Immunization Rates for Metric 1.3.3**
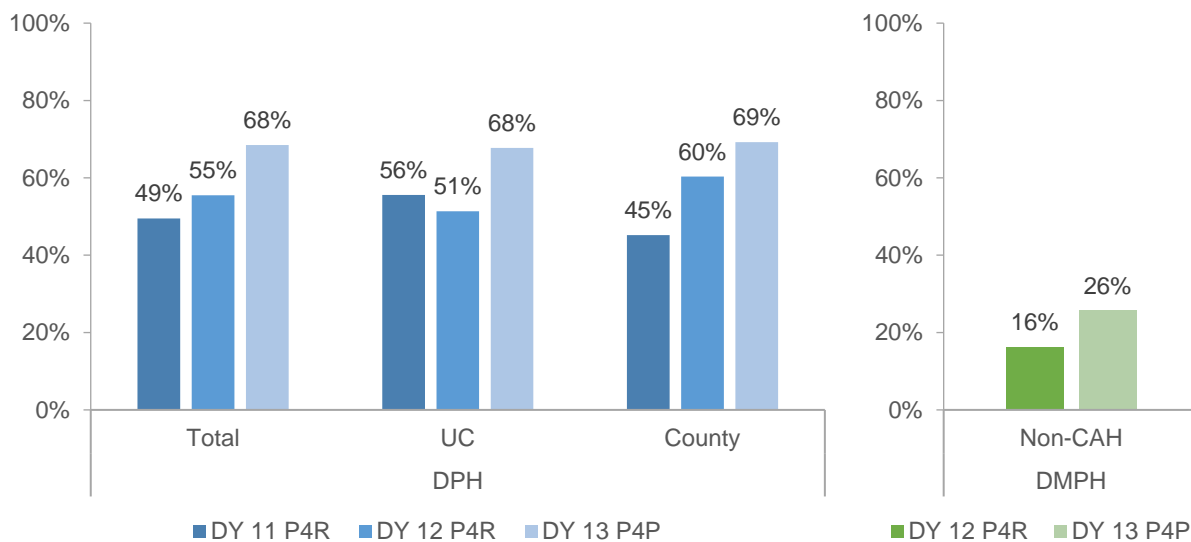


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 1.3.4 – Post Procedure ED visits

Metric 1.3.4 determined the proportion of PRIME hospital emergency department (ED) visits that occurred within 7 calendar days of the denominator outpatient specialty care encounters during surgeries and procedures being completed on the same individuals; all ages were included in this metric (PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce unplanned admissions to emergency rooms for outpatient procedures and surgeries in order to lower the development of adverse events associated with these procedures. Achievement was measured by a decreasing rate.

Among the DPHs, the weighted average rate was 1.9% in DY 11, then increased to 2.0% in DY 12, then dropped to 1.5% in DY 13 (Exhibit 134). Both DPH UC and DPH County hospitals fluctuated in the same pattern. The ED admissions rate among DMPHs increased from 2.9% in DY 12 to 4.6% in DY 13. In DY 13, the individual achievement rates for Metric 1.3.4 ranged from 0.45% to 7% for DPHs and 3% to 5% for DMPHs (data not shown).

**Exhibit 134: PRIME Self-Reported Post Procedure Emergency Department (ED) Visit\* Rates for Metric 1.3.4**



*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. \* Denotes innovative metric.*

## Metric 1.3.5 – Request for Specialty Care Turnaround Rate

Metric 1.3.5 measured the proportion of requests in which an individualized response was returned to the requester within 5 calendar days over the total number of requests sent to the PRIME Hospital specialists (PRIME Metric Specs, DY 13YE). The rationale of this metric was to promote timely responses from the specialists to ultimately provide the well-informed, best care possible to patients. Achievement was measured by an increasing rate.

Among the DPHs, the rate steadily increased from 33% in DY 11 to 60% in DY 13 (Exhibit 135). DPH UCs started at 24% and increased to 63% in DY 13, while DPH County hospitals had an increase from 47% in DY 11 to 58% in DY 12, but the rate stayed stable at 58% in DY 13. DMPHs did not begin implementation until DY 12 with an achievement value of 36%, which increased to 42% in DY 13. In DY 13, the individual achievement rates for Metric 1.3.5 ranged from 0.23% to 95% for DPHs and 25% to 54% for DMPHs (data not shown).

**Exhibit 135: PRIME Self-Reported Specialty Care Request Rates for Metric 1.3.5**
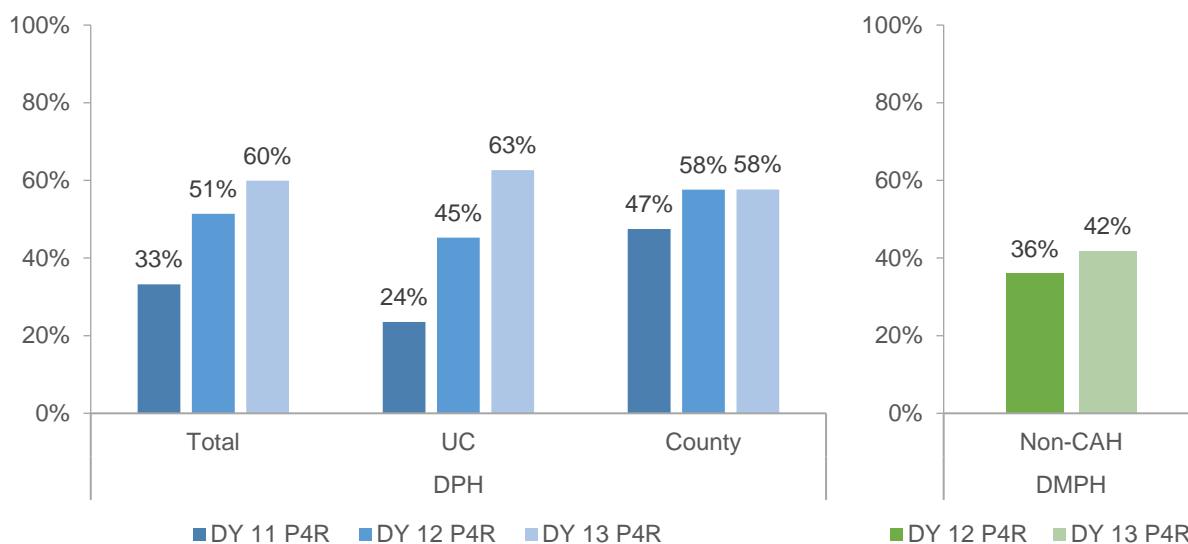


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. * Denotes innovative metric.*

## Metric 1.3.6 – Specialty Care Touches: Specialty Expertise Requests Managed via Non-Face to Face Specialty Encounters

Metric 1.3.6 measured the rate of outpatient specialty care requests that were managed via non-in person face to face encounters (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase the number of specialist requests that could be managed via telephone, email, or video encounters for electronic correspondence without the need for patients to be admitted to a hospital. Achievement was measured by an increasing rate.

DPHs reported fluctuating changes in weighted average rates, with 6.0% in DY 11, 5.3% in DY 12, and 6.8% in DY 13 (Exhibit 136). DPH UCs reported an increase from 0.7% in DY 11 to 1.4% in DY 12 and then a more gradual increase in DY 13 (1.7%). DPH County hospitals reported a decrease from DY 11 (10%) to 8.8% in DY 12 and then back up to 11% in DY 13. DMPH Non-CAH hospitals reported 0% in DY 12 and 8.0% in DY 13. In DY 13, the individual achievement rates for Metric 1.3.6 ranged from 0.01% to 28% for DPHs and 2% to 22% for DMPHs (data not shown).

**Exhibit 136: PRIME Self-Reported Specialty Care Touches: Specialty Expertise Managed via Non-Face to Face Specialty Encounters Rates for Metric 1.3.6**
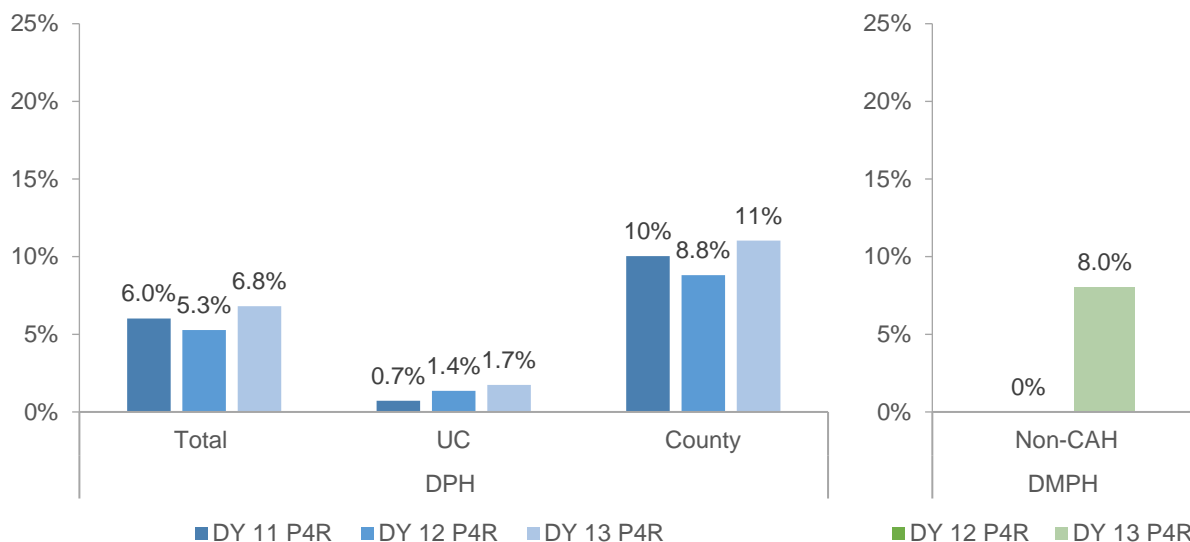


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance. * Denotes innovative metric.*

## Metric 1.3.7 – Tobacco Use: Screening and Cessation Intervention

Metric 1.3.7 measured the proportion of adults (ages 18 and over) who were screened for tobacco use at an in-person specialty care visit and who received cessation counseling intervention if identified as a tobacco user (QPP spec, eCQM spec, PRIME Metric Specs, DY 13YE). Hospitals were intended to improve the quality of services provided for preventive screening for tobacco use. Achievement was measured by an increasing rate.

DPHs reported an increase in the weighted average rate of tobacco use screening and cessation intervention from 83% in DY 11 to 97% in DY 13 (Exhibit 137). Both DPH UC and County hospitals reported increasing trends from DY 11 to DY 13. DMPH Non-CAHs reported an increase from 73% in DY 12 to 86% in DY 13. In DY 13, the individual achievement rates for Metric 1.3.7 ranged from 94% to 99% for DPHs and 85% to 87% for DMPHs (data not shown).

**Exhibit 137: PRIME Self-Reported Tobacco Use: Screening and Cessation Intervention Rates for Metric 1.3.7**

*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital,*
*UC: University of California, CAH: critical access hospital, DY: demonstration year,*
*P4R: pay-for-reporting, P4P: pay-for-performance.*
*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P)*
*in a given DY and they progressively transitioned from P4R to P4P over the 5*
*demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied*
*depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P*
*status of metrics was identical whether a hospital was a DPH or DMPH.*

## Summary of Key Findings

The primary goal of Project 1.3 was to improve timely access to high quality and effective specialty care by transforming all specialty care practice, including mental health and substance abuse treatment, and integrating it with primary care. Project 1.3 was required for all 17 DPHs and 2 DMPHs participated in this project. Multiple hospitals indicated implementing some aspects of this project before PRIME but the majority had newly selected or implemented the core components. Before PRIME, many hospitals had developed a specialty care program that their population could access (11), had clinical teams engaged in evidence-based care (12), and engaged in QI activities such as performance feedback and rapid cycle improvement (11). The most common activity newly selected or continued during PRIME was developing and implementing standardized workflows for diversified care delivery strategies to expand access and improve cost efficiency (15).

When asked to report on specific infrastructure established for implementing this project, 17 hospitals reported that they provided tools and services to primary care providers to support primary care providers in the treatment and management of patients with high acuity and reduce the need for specialty referrals. The most common types were decision support tools (12), real-time specialist consultations (8), and the provision of extra clinical support and establishing care teams with multiple specialties (8). Eleven hospitals (11 DPHs) reported training PCPs to expand their specialty roles, most commonly for endocrinology or substance use (6). Fourteen hospitals reported developing or adopting at least 1 specialty treatment protocol. The most common treatment protocols were for cardiology (7), gastroenterology (7), endocrinology (6), substance abuse (5), mental health (4), and pain management (4). Examples of specialty treatment protocols were for a brief treatment of mental health conditions by primary care teams and influenza vaccination within specialty care settings.

When reporting on how this project was implemented, 6 hospitals conducted a gap analysis to assess the need for medical specialty care. Several hospitals used a specific team-based model (8) and the majority facilitated communication and interaction within the team (14), scheduled daily huddles (13), and regular team meetings (13). Hospitals reported participation of medical (8), mental health (7) and substance use specialists (3) in primary care teams. All participating hospitals reported that primary care providers always (6) or usually (13) received outcomes of the visit from specialists most often through the electronic medical record (17). Hospitals used population management (13), telephone visits (7), and e-consults (6) to expand access; trained PCPs to expand capacity to deliver specialty care (11 DPHs), including endocrinology (6), orthopedics (4), mental health (3), or gastroenterology (2). All participating hospitals reported the use of individual treatment plans (ITPs) by specialists, including regular use of ITPs by

medical (12) and mental health or substance use specialists (13). Hospitals improved medication adherence by calls to offer reminders or refreshers on medication instructions (12) and providing schedules or pillboxes (11). In interviews, hospitals reported other strategies such as patient portal tools, embedding pharmacists in primary care settings, and engaging care management staff in medication counseling.

Hospitals reported an overall high level of difficulty in implementing Project 1.3 (DPH 7; DMPH 8 of 10). The level of effort was highest for resource intensity (DPHs 7.2, DMPHs 7.0), implementation requirements (DPHs 7.3, DMPHs 8), and unanticipated change in metrics (DMPHs 10). The top challenges cited by the majority of hospitals were IT infrastructure lacking data query ability, tracking, or reporting functions (10), and processes not being established system-wide (8). Hospitals addressed these most commonly by standardization across systems, both with their EHR/IT (9) and processes (7).

Project 1.3 metrics were 1.3.1-Closing the Referral Loop: Receipt of Specialist Report; 1.3.2-DHCS All-Cause Readmissions – Statewide Collaborative QIP Measure; 1.3.3-Influenza Immunization; 1.3.4*-Post Procedure ED Visits; 1.3.5*-Request for Specialty Care Expertise Turnaround Time; 1.3.6*-Specialty Care Touches: Specialty Expertise Requests Managed via Non-Face to Face Specialty Encounters; and 1.3.7-Tobacco Assessment and Counseling. Performance of hospitals in Project 1.3 was measured by 7 metrics, with 4 standard and 3 innovative (denoted with an *); 5 measured care processes and 2 measured outcomes. Overall, hospitals showed improved performance from DY 11 to DY 13. Both DPH and DMPHs showed progress over time in 3 process metrics (1.3.3, 1.3.5, 1.3.7). DPHs also showed progress in 2 metrics (1.3.1 and 1.3.2) and had mixed results for 2 metrics (1.3.4 and 1.3.6). DMPHs showed progress for 1 (1.3.6) and no improvement for 3 (1.3.1, 1.3.2, 1.3.4).

Overall, hospitals made significant progress in implementing Project 1.3 by integrating specialists with primary care teams and promoting the capacity of primary care providers to manage patients with higher severity. Some hospitals took a more methodical approach to redesign by conducting gap analyses and using evidence-based practices but most hospitals had made some progress before PRIME and focused on other activities. Despite past efforts, hospitals found this project to be resource-intensive and challenging, particularly due to unanticipated changes in metrics. Hospitals reported improvements in the majority of metrics. However, they varied in their progress in project implementation and metrics progress.

# Project 1.4 - Patient Safety in the Ambulatory Setting

## Project Overview

Project 1.4 was designed to improve quality of care in the outpatient setting by reducing medication errors and delays in delivery of preventive services, particularly for patients with chronic conditions who may be at risk for adverse events related to missed diagnoses, medication side-effects, or other potential problems related to chronic disease management. These goals were to be achieved by examining the existing infrastructure and care delivery processes such as gap analyses, establishing needed infrastructure such as data systems, and improving processes such as insuring abnormal results follow-up for common laboratory tests and for monitoring patients on persistent medications (Attachment Q).

For Project 1.4, 14 hospitals participated in DY 11 and it was not required for DPHs. Five DPHs participated in the project, including Kern Medical, Los Angeles County, Santa Clara Valley, UC Irvine, and UC Los Angeles. Six DMPHs participated in this project, including Oak Valley, Pioneers Memorial, Salinas Valley, Tri-City, Trinity, and San Bernardino. The latter 2 were critical access hospitals. Several (4) hospitals selected the project but dropped it: Alameda (DPH DY 12), Coalinga (DMPH DY 12), Tulare (DMPH DY 12), Tri-City (DMPH DY 13) and Palomar (DMPH DY 13), furthermore Tulare (DY 12) and Coalinga are no longer operational. Five hospitals stopped participation before the survey (administered in April to May 2018) and thus are not included in these analyses. Tri-City stopped participating in Project 1.4 in July 2018 after completing the survey and interview and thus are included in these analyses. Eleven hospitals were participating in this project at the time the survey data was collected. The number of participating hospitals decreased to 13 in DY 12 and 10 in DY 13 (Exhibit 326).

**Exhibit 138: PRIME Project 1.4 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| Total Participating Hospitals | 14 | 13 | 10 |
| Total DPH | 6 | 5 | 5 |
| DPH UC | 2 | 2 | 2 |
| DPH County | 4 | 3 | 3 |
| Total DMPH | 8 | 8 | 5 |
| DMPH Non-CAH | 6 | 6 | 3 |
| DMPH CAH | 2 | 2 | 2 |

*Notes: The number of participating hospitals indicates those that implemented the project for the full DY. Among the DPH County hospitals, Alameda Health System dropped the project in DY 12. Among the DMPH Non-CAHs, Tulare closed in DY12 and Palomar and Tri-City dropped in DY 13. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the suggested core components of this project as an indication of their overall approach to patient safety in the ambulatory setting. In the interim survey participating hospitals reported whether and when they implemented the suggested core components of this project (Exhibit 139). In the survey, 6 hospitals reported implementing technology-enabled data systems to support the improvement and performance feedback system and 4 reported performing a baseline studies to examine the current workflows, developing a standardized workflow, and supporting the standard protocols prior to PRIME. During PRIME, all or nearly all participating hospitals reported implementing all of the core components.

### Exhibit 139: PRIME Project 1.4 Core Components

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Perform a baseline studies to examine the current workflows for abnormal results follow-up and monitoring of individuals on persistent medications. | 4 | 10 |
| Implement a data-driven system for rapid cycle improvement and performance feedback based on the baseline study that effectively addresses all identified gaps in care and which targets clinically significant improvement in care. The improvement and performance feedback system should include patients, front line staff from testing disciplines (such as, but not limited to, radiology and laboratory medicine) and ordering disciplines (such as primary care) and senior leadership. | 3 | 10 |
| Develop a standardized workflow so that:<br>a. Documentation in the medical record that the targeted test results were reviewed by the ordering clinician;<br> i. Use the American College of Radiology's Actionable Findings Workgroup33 for guidance on mammography results notification.<br>b. Evidence that every abnormal result had appropriate and timely follow-up; and c. Documentation that all related treatment and other appropriate services were provided in a timely fashion as well as clinical outcomes documented. | 4 | 9 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| In support of the standard protocols referenced in #2:<br>a. Create and disseminate guidelines for critical abnormal result levels<br>b. Creation of protocol for provider notification, then patient notification<br>c. Script notification to assure patient returns for follow up<br>d. Create follow-up protocols for difficult to reach patients | 4 | 10 |
| Implement technology-enabled data systems to support the improvement and performance feedback system as well as engage patients and support care teams with patient identification, pre-visit planning, point of care delivery, and population/panel management activities. | 6 | 9 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=11 hospitals participating in Project 1.4 responded to the interim survey. Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey hospitals may have implemented or dropped activities under a core component.*

## Infrastructure for Ambulatory Patient Safety

### Baseline Assessment of Patient Safety Processes

Hospitals reported in the interim survey whether they conducted baseline studies of their workflows for responding to abnormal test results or managing care for patients on persistent medications. Of 11 participating hospitals, 2 reported collecting baseline data to examine workflows for patients on persistent medications prior to PRIME and 5 did so during PRIME. To assess abnormal results follow-up, 2 hospitals reported performing baseline assessments before PRIME, and 4 did so during PRIME (Exhibit 140).

**Exhibit 140: Baseline Studies Conducted to Assess Workflows Under PRIME**
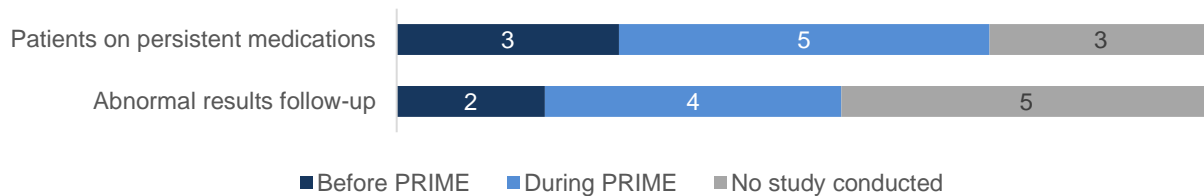
| | Before PRIME | During PRIME | No study conducted |
|---|---|---|---|
| Patients on persistent medications | 3 | 5 | 3 |
| Abnormal results follow-up | 2 | 4 | 5 |

■ Before PRIME  ■ During PRIME  ■ No study conducted

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=11 hospitals participating in Project 1.4 responded to the interim survey.*

In interviews, hospitals discussed their priorities for assessing workflows for abnormal results follow-up and managing patients on persistent medications. Hospitals reported conducting a variety of baseline studies, including studying patient compliance on completing laboratory tests, identifying existing workflows for patients on persistent medications, and gathering qualitative data from clinics to guide potential policy and process changes. For example, a hospital noted:

> *"Definitely our first step here was…performing some baseline studies to examine current workflows for all of these various metrics and we have the results, follow up and monitoring of individuals on persistent meds…that continues to be a challenge based on our ability to track and record that data." (Kern Medical)*

### Gap Analysis to Assess Ambulatory Patient Safety

In the interim survey, hospitals reported whether they performed a gap analysis for assessing follow-up for abnormal test results and patients on persistent mediations. About half of the hospitals examined gaps within target populations, while 4 examined gaps specific to disease conditions (Exhibit 141).

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**Exhibit 141: Gaps Identified in Target Population and Disease Conditions Under PRIME**



*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=11 hospitals participating in Project 1.4 responded to the interim survey.*

## Data Systems

Hospitals adopted and developed systems for capturing and monitoring data on patient outcomes during PRIME, including events related to patient safety. Many hospitals reported implementing new or improving existing systems, including electronic health records, registries, dashboards, alerts, and modes of electronic communication ( Electronic Health Record (EHR) Infrastructure). While significant progress was made during PRIME, developing robust data systems to promote population health management and facilitate follow-up with patients in response to specific triggers was largely still a work-in-progress for many hospitals. In interviews, a few hospitals discussed how the use of multiple data systems or lack of EHR functionality necessitated manual chart review or ad hoc methods for data aggregation and reporting. For example, a hospital noted:

*"…we still rely very heavily on our manual reviews of charts to identify these patients… it's something that we work on very routinely, going through the processes of how we're capturing data, where our weaknesses are, how we can improve that with the resources and systems that we currently have in place…Also, just our ability to report and pull and identify these patients early on so that we can have registries and…understand when they're coming in for their visits, what we've missed in the past, what needs to be addressed." (Kern Medical)*

Other hospitals described their efforts to develop and refine processes for identifying, alerting providers of, and facilitating follow-up with patients of events related to patient safety:

*"Our main barriers were making sure that we could find the data when it would have been done. So for example, being able to find results. That was probably the most*

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*difficult part, was finding results for say 1.4.2 and for our Doctors on Duty because they did not have records, results streaming electronic lab data were not streaming automatically into a searchable structured data element. So we created that process for them and that improved our compliance…" (Salinas)*

*"Then the fifth project is the IVR [interactive voice response] auto call. By having this auto call that goes to the patient automatically, then we don't really need a lot of people to be calling the patient…By doing this, we increase our lab compliance really significantly." (Santa Clara)*

Hospitals further discussed the importance of systems for data exchange among hospitals with linkages to external clinics, providers, laboratories, or pharmacies. In interviews, hospitals discussed their challenges and successes in establishing formal data linkages with external organizations:

*"Again, since we do not own Medi-Cal clinics, we don't have a way to follow those patients long-term and without cooperation…We had met with some of the local community clinics and they had agreed to share data…there were some political issues that had some interplay with that. Also, again, the unwillingness without a lot of forking out a lot of money made it difficult." (Tri-City)*

*"We also started using our health information exchange. So for 1.4.2 specifically,… they weren't getting lab results. But we did find that some of the patients that they had at inpatient visits or if they were seen by another clinic which fed data into our health information exchange, we were able to look it up and see if there was a result and in turn, populate it into our EMR and it would get captured on a report." (Salinas)*

## Follow-Up Protocols

In the interim survey, hospitals reported whether they had a definition of timeliness for follow-up related to abnormal tests results or adverse outcomes related to medications. Regarding abnormal test results, 2 DPHs and all 6 participating DMPHs reported having a definition of timeliness for follow-up (Data not shown). For abnormal test results, the timeframe for notifying patients ranged from immediately to 1 business day; the timeframe for scheduling follow-up visits ranged from immediately to 30 days. Some hospitals noted that these timeframes were dependent on the condition or varied as specified by PRIME requirements. Regarding adverse events related to medications, no DPHs and 3 DMPHs (50%) reported having a definition for timeliness of follow-up of adverse outcomes related to medications. The timeframe to notify patients of adverse outcomes and to schedule follow-up visits ranged from immediately to 1 business day, or were dependent on the condition.

## Project Implementation

### Processes for Improving Ambulatory Patient Safety

Hospitals reported use of a variety of activities for documenting abnormal test results and managing patients on persistent medications in the interim survey (Exhibit 142). For abnormal test results, all or almost all hospitals reported that they documented services following abnormal results (11 hospitals), reviewed the medical record for abnormal results (10), and informed patients of abnormal results in a timely manner (10). For management of patients on persistent medications, all but 1 hospital reported that they documented treatment and other services following adverse outcomes and reviewed the medical record for adverse outcomes of medications. Seven hospitals reported that they regularly provided feedback to providers regarding documentation, monitoring, and conducted follow-up related to abnormal test results and management of persistent medications. With the exception of 1 hospital that did not plan to implement protocols to facilitate patient follow-up, the remaining hospitals had implemented or were planning to implement such protocols during PRIME. Regarding follow-up protocols for difficult-to-reach patients, 4 hospitals had implemented such protocols prior to PRIME while 6 implemented or were planning to implement such protocols during PRIME.

**Exhibit 142: Activities for Documenting and Managing Abnormal Test Results and Patients on Persistent Medications Under PRIME**
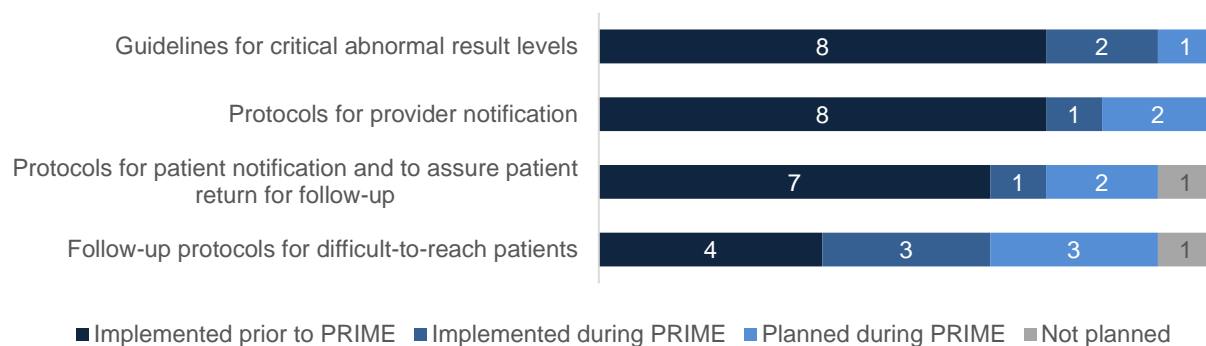


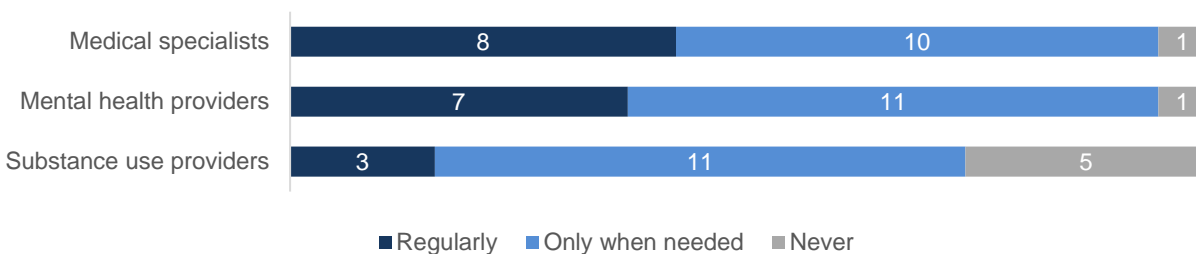*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=11 hospitals participating in Project 1.4 responded to the interim survey.*

In interviews, a hospital described their efforts to refine processes for alerting providers of events relating to prescription medications:

*"Then there's also the refill logic that was deployed in electronic health records. This will notify the providers whether the prescription refill requires additional lab monitoring. If the patient is on the job send, then we also change the intake of the job send to the evening. Because we found that taking the job send in the morning, or*

*within, or more than 12 hours before they go to the lab, is not accurate. So the best time to take it is during nighttime. So when they go to the lab in the morning, then the job send level could be easily withdrawn." (Santa Clara)*

## Participation in Learning Collaboratives

To guide implementation of Project 1.4, no hospitals reported participating in learning collaboratives outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10.0). DPH hospitals reported spending a medium level (5.8) of overall effort in implementing Project 1.4 and DMPH hospitals reported spending a high level (8.0) of overall effort to implement (Exhibit 403).

Among DPHs, ratings of effort were mostly low or medium with ratings of resource intensity (6.0) and implementation requirements (5.6) being the highest. On average, DMPHs reported requiring high effort for conducting personnel reorganization (8.4), staff training (7.4), resource intensity (8.0), and implementation requirements (7.5).

## Challenges and Solutions to Ambulatory Patient Safety

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 1.4 (Challenges: Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (8) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the majority of hospitals (5) was variation in documentation within the system by providers and staff. The top solution identified by hospitals (4) was EHR/IT standardization or expansion across the system. The second solution identified by hospitals (4) was implementing standardized tools and screening.

Hospitals discussed their challenges with data collection and reporting for the project in interviews:

*"Looking at the PRIME metrics specification manual for involvement with the healthcare system … we didn't have enough overlap of enough visits … for those patients to mesh and be the patients we could use… We entered into an agreement*

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*with [an FQHC] that cost us nearly $100,000… We would request specific information utilizing the metric specifications manual. The information we would get back would miss the requirements fairly significantly. We would send it back over with clarification. It would miss not as much, but it would miss again. We were getting information that was not what I would call accurate to the request." (Tri-City)*

## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 1.4 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by the hospitals (3) was processes not being established system-wide. The second most difficult challenge cited by the hospitals (3) was siloed departments and difficulty collaborating, as well as having small denominator or numerator (3). The top solution identified by the hospitals (5) was standardizing processes across systems. The second solution identified by the hospitals (3) was implementing provider and staff training and increased capacity.

In interviews, a hospital discussed their solutions for improving their ability to track metric performance:

*"We created a dashboard that we could then track how our performance was on the metrics. A trial and error if you want to use appropriate lingo, PDSA cycles to see if we were actually accurately recording the data in appropriate places that we could then find so that we could trust the data that we were getting." (Salinas)*

## Hospital-Reported Metric Performance

Performance of hospitals in Project 1.4 was measured by the following 3 metrics (Exhibit 143). A metric was an innovative metric, which was also divided into 3 sub-metrics. All the metrics were intended to show progress by increasing rates over time and UCLA categorized them as process metrics.

### Exhibit 143: PRIME Project 1.4 Metric Details

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **Abnormal Results Follow-Up: Abnormal Potassium Follow-Up** | 1.4.1* | AHS | N/A | Increase | Process |
| **Abnormal Results Follow-Up: Abnormal International** | 1.4.1* | AHS | N/A | Increase | Process |

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| Normalized Ratio (INR) Follow-Up | | | | | |
| Abnormal Results Follow-Up: Abnormal Breast Imaging Reporting and Data System (BIRADS) Follow-Up | 1.4.1* | AHS | N/A | Increase | Process |
| Annual Monitoring for Patients on Persistent Medications | 1.4.2 | NCQA | 2371 | Increase | Process |
| INR Monitoring for Individuals on Warfarin | 1.4.3 | CMS | 0555 | Increase | Process |

*Source: PRIME Metrics Specs, DY13YE*

*Notes: NCQA: National Committee for Quality Assurance, AHS: Alameda Health System, CMS: Centers for Medicare & Medicaid Services. * Denotes innovative metric.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. In general, DMPHs did not report data in DY 11 for this project.

## Metric 1.4.1 – Abnormal Results Follow-Up: Abnormal Potassium Follow-Up

Metric 1.4.1 measured the percentage of ambulatory care serum potassium tests performed on patients 18 years of age and older who received at least 180 treatment days of angiotensin converting enzyme (ACE), angiotensin receptor blockers (ARB), or diuretic therapy, at least 1 potassium monitoring event, and follow-up appropriate to the results (PRIME Metric Specs, DY13YE). Hospitals were intended to increase the amount of appropriate results and timely documentation. Achievement was measured by an increasing rate.

DPHs reported an increase in the weighted average percentage of abnormal potassium test follow-ups from 91% in DY 11 to 93% in DY 12 and 94% in DY 13 (Exhibit 144). UC

hospitals reported a decrease from 93% in DY 11 to 92% in both DY 12 and DY 13. County hospitals reported an increase from 90% in DY 11 to 94% in DY 12 and 95% in DY 13. DMPHs did not report this metric in DY 11, but reported 85% follow-ups in DY 12 and 91% in DY 13. Non-CAH reported an increase from 85% in DY 12 to 90% in DY 13. CAH reported an increase from 86% in DY 12 to 96% in DY 13. In DY 13, the individual achievement rates for Metric 1.4.1 (Abnormal Results Follow-Up: Abnormal Potassium Follow-Up) ranged from 87% to 97% for DPHs and 43% to 72% for DMPHs (data not shown).

**Exhibit 144: PRIME Self-Reported Abnormal Potassium Follow-Up\* Rates for Metric 1.4.1**
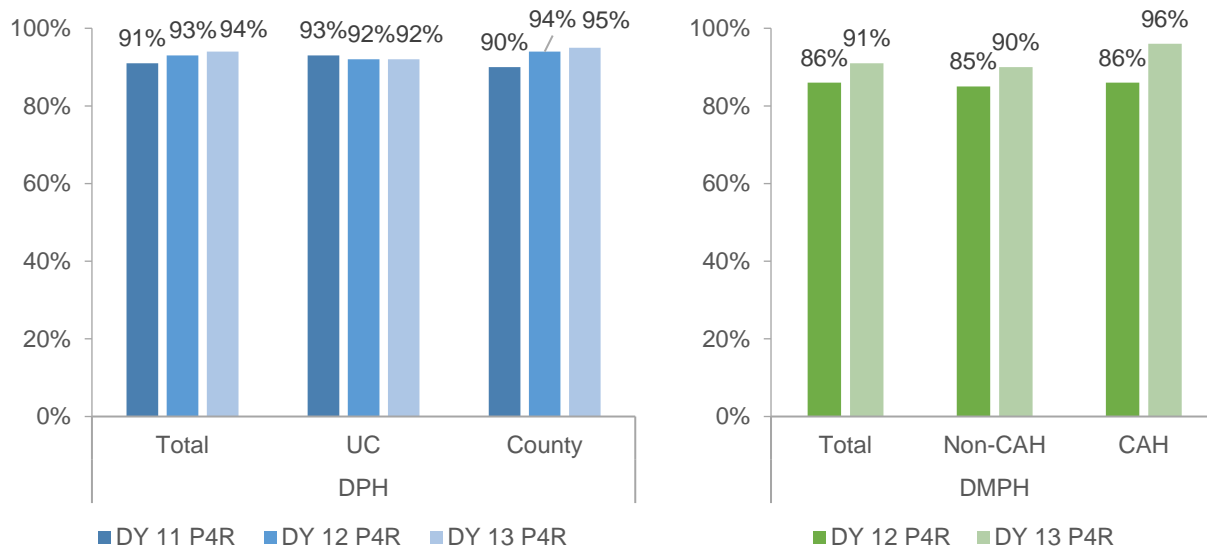


*Source: UCLA analysis of the self-reported data, July 2019.\* This is an innovative metric. Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital.*

## Metric 1.4.1 – Abnormal Results Follow-Up: Abnormal INR Follow-Up

Metric 1.4.1 measured the percentage of ambulatory care International Normalized Ratio Tests (INR) performed on patients 18 years of age and older who received warfarin therapy for at least 56 days, at least 1 INR monitoring test during each 56-day interval with active warfarin therapy, and follow-up appropriate to the results (PRIME Metric Specs, DY13YE). Hospitals were intended to increase the amount of appropriate results and timely documentation. Achievement was measured by an increasing rate.

DPHs reported an increase in the weighted average percentage of abnormal INR follow-ups from 93% in both DY 11 and DY 12 to 94% in DY 13 (Exhibit 145). UC hospitals reported an increase from 91% in DY 11 to 93% in DY 12 and 95% in DY 13. County hospitals reported an increase from 93% in DY 11 to 94% in both DY 12 and DY 13. DMPHs did not report this metric in DY 11, but reported 85% follow-ups in DY 12 and 90% in DY 13. Non-CAH reported an increase from 85% in DY 12 to 90% in DY 13. CAH reported an increase from 82% in DY 12 to 95% in DY 13. In DY 13, the individual achievement rates for Metric 1.4.1 (Abnormal Results Follow-Up: Abnormal INR Follow-Up) ranged from 38% to 97% for DPHs and 89% to 98% for DMPHs (data not shown).

**Exhibit 145: PRIME Self-Reported Abnormal INR Follow-Up\* Rates for Metric 1.4.1**



*Source: UCLA analysis of the self-reported data, July 2019. \*This is an innovative metric. Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital.*

Metric 1.4.1 measured the percentage of ambulatory care Breast Imaging Reporting and Data System (BIRADS) performed on patients of any age with a mammogram and received follow-up appropriate to the resultant BIRADS assessment (PRIME Metric Specs, DY13YE). Achievement was measured by an increasing rate.

DPHs reported an increase in the weighted average rate of abnormal BIRADS follow-ups from 61% in DY 11 to 63% in DY 12, but a decline back to 61% in DY 13 (Exhibit 146). UC hospitals reported a decrease from 78% in DY 11 to 74% in DY 12 and 71% in DY 13 and noted that this may be due to undocumented follow-ups that occur outside of their system. County hospitals reported an increase from 53% in DY 11 to 56% in both DY 12 and DY 13. DMPHs did not report this metric in DY 11, but reported 86% follow-ups in DY 12 and 85% in DY 13. Non-CAH reported a decrease from 89% in DY 12 to 85% in DY 13. CAH reported an increase from 48% in DY 12 to 83% in DY 13. In DY 13, the individual achievement rates for Metric 1.4.1 (Abnormal Results Follow-Up: Abnormal BIRADS Follow-Up) ranged from 65% to 99% for DPHs and 64% to 100% for DMPHs (data not shown).

**Exhibit 146: PRIME Self-Reported BIRADS Follow-Up\* Rates for Metric 1.4.1**
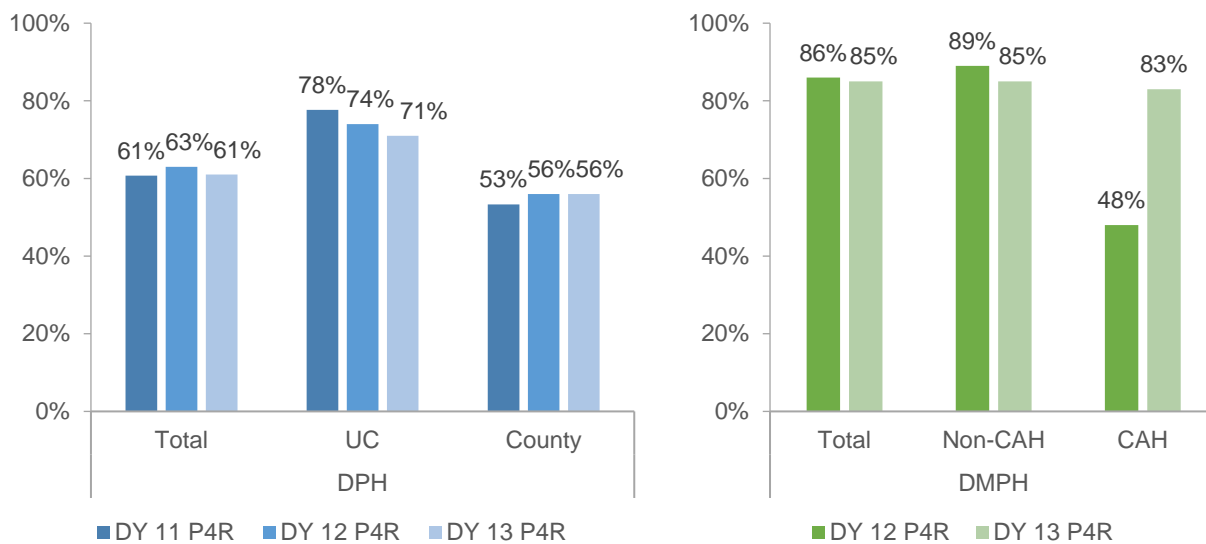


*Source: UCLA analysis of the self-reported data, July 2019. \*This is an innovative metric. Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital.*

## Metric 1.4.2 – Annual Monitoring for Patients on Persistent Medications

Metric 1.4.2 measured the percentage of individuals 18 years of age and older who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent and at least 1 therapeutic monitoring agent in the measurement period (PRIME Metric Specs, DY13YE). Hospitals were intended to improve the annual monitoring for patients on ACE, ARB, digoxin, or diuretics. Achievement was measured by an increasing rate.

DPHs reported an increase in the weighted average percentage of annual monitoring from 84% in DY 11 to 91% in DY 12 and to 92% in DY 13 (Exhibit 147). UC hospitals reported an increase from 88% in DY 11 to 89% in both DY 12 and DY 13. County hospitals reported an increase from 83% in DY 11 to 92% in DY 12 and 93% in DY 13. DMPHs did not report this metric in DY 11, but reported 58% annual monitoring in DY 12 and 84% in DY 13. Non-CAH reported an increase from 56% in DY 12 to 84% in DY 13. CAH reported an increase from 79% in DY 12 to 86% in DY 13. In DY 13, the individual achievement rates for Metric 1.4.2 ranged from 89% to 94% for DPHs and 78% to 92% for DMPHs (data not shown).

**Exhibit 147: PRIME Self-Reported Annual Monitoring for Patients on Persistent Medication Rates for Metric 1.4.2**
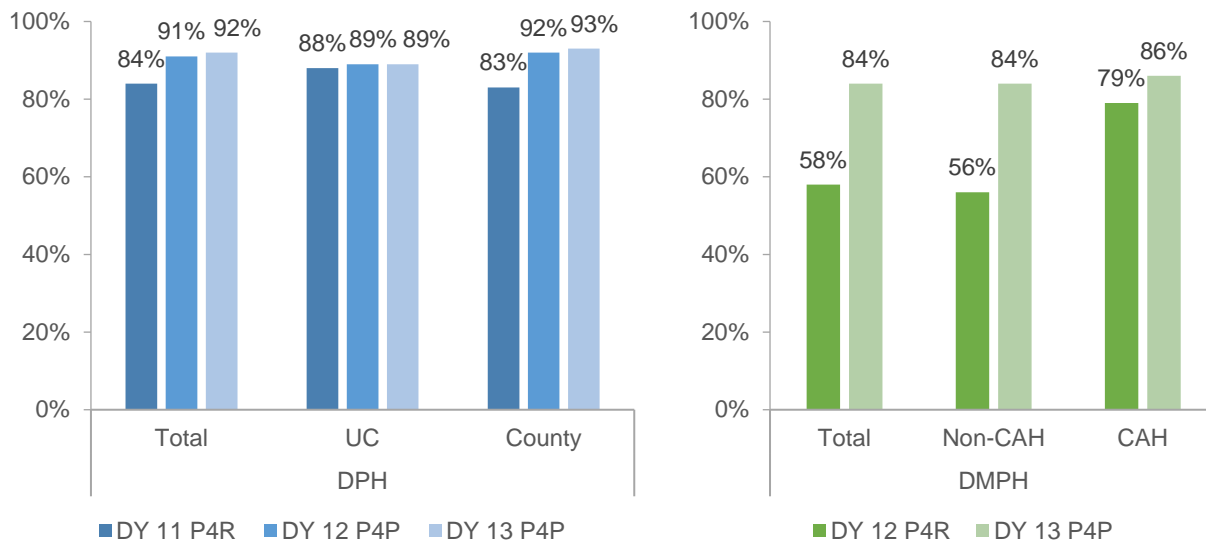
*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital.*

*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.4.3 – INR Monitoring for Individuals on Warfarin

Metric 1.4.3 measured the percentage of individuals 18 years of age and older with at least 56 days of warfarin therapy who receive an International Normalized Ratio (INR) test during each 56-day interval with warfarin (PRIME Metric Specs, DY13YE). Hospitals were intended to improve the monitoring for patients who receive an INR test during each 56-day interval with warfarin. Achievement was measured by an increasing rate.

DPHs reported an increase in the weighted average percentage of annual monitoring from 54% in DY 11 to 68% in DY 12 and to 80% in DY 13 (Exhibit 148). UC hospitals reported an increase from 46% in DY 11 to 50% in DY 12 and 70% in DY 13. County hospitals reported an increase from 62% in DY 11 to 85% in DY 12 and 88% in DY 13. DMPHs did not report this metric in DY 11, but reported 69% annual monitoring in DY 12 and 77% in DY 13. Non-CAH reported an increase from 54% in DY 12 to 76% in DY 13. CAH reported an increase from 80% in DY 12 to 83% in DY 13. In DY 13, the individual achievement rates for Metric 1.4.3 ranged from 63% to 91% for DPHs and 50% to 100% for DMPHs (data not shown).

**Exhibit 148: PRIME Self-Reported INR Monitoring for Individuals on Warfarin Rates for Metric 1.4.3**
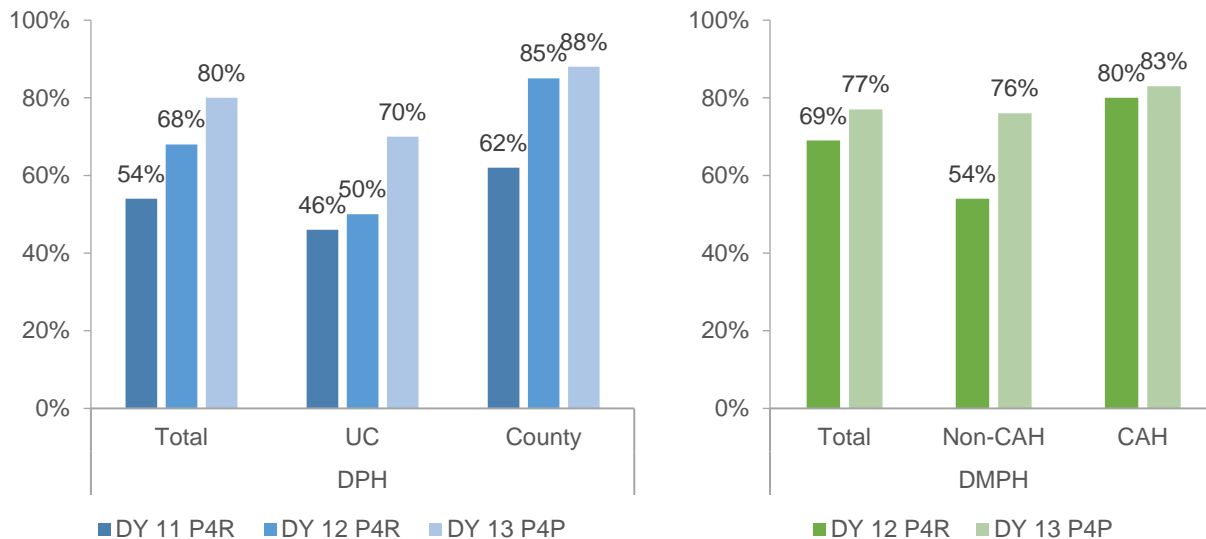


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital.*

## Summary of Key Findings

Project 1.4 focused on promoting patient safety in the ambulatory setting by reducing medication errors and delays in the delivery of preventive services, particularly for patients with chronic conditions. Among the hospitals (14) that originally participated, 1 DPH and 3 DMPHs dropped this project, leaving 5 DPHs and 5 DMPHs. The majority had newly selected or implemented the 5 core components of this project. Hospitals collected baseline studies to assess workflows for patients on persistent medications (7), particularly for abnormal results follow-up. Hospitals examined follow-up gaps within target populations (6), or disease conditions (4), as well as gaps in the management of persistent medications within target populations (5) and disease conditions (4). Hospitals defined timeliness criteria for abnormal test results (8), notifying patients (8), follow-up of medication adverse events (3) and scheduling follow-up visits from immediately to 1 business day.

When reporting on how this project was implemented, all or almost all hospitals reported that they documented services following abnormal results (11), reviewed the medical record for abnormal results (10), and informed patients of abnormal results promptly (10). Nine hospitals reviewed and documented medical record for adverse outcomes among patients on persistent medications.

Seven hospitals reported that they regularly provided feedback to providers regarding documentation, monitoring, and conducted follow-up related to abnormal test results and management of persistent medications. Before PRIME the majority of hospitals had developed guidelines for critical abnormal test result levels (8), protocols for provider notification (8), and protocols for patient notification for follow-up (7). During PRIME this expanded, so that all but 1 hospital, had implemented or were planning to implement such protocols. Regarding follow-up protocols for difficult-to-reach patients, 4 hospitals had implemented such protocols before PRIME while 6 had implemented or were planning to implement such protocols during PRIME.

The overall level of difficulty in implementing this project was higher for DMPHs (8.0; medium for DPH 5.8 of 10) The most common metric and data-related challenges were that IT infrastructure lacked data query ability, tracking, or reporting functions (8), followed by variation in documentation within the system by providers and staff (5). The solutions identified by hospitals were EHR/IT standardization or expansion across the system (4), standardized tools and screening (4) and standardizing processes across systems (5).

Performance of hospitals in Project 1.4 was measured by 3 metrics. The first, 1.4.1, was an innovative metric that included 3 sub-metrics relating to abnormal results follow-ups (abnormal potassium follow-up; abnormal international normalized ratio (INR) Follow-Up;

abnormal breast imaging reporting and data system (BIRADS) follow-up). Hospitals improved in 2 of these, abnormal potassium Follow-Up and abnormal international normalized ratio (INR) Follow-Up. The other 2 were standard metrics and hospitals showed improvement in both over time (1.4.2 annual monitoring for patients on persistent medications and 1.4.3 INR monitoring for individuals on warfarin).

Overall, hospitals made significant progress in Project 1.4 by establishing a baseline assessment of workflows and gap analysis, establishing protocols for follow up regarding abnormal test results and monitoring patients on specific medications, and implementing data systems for capturing and monitoring data on patient outcomes. Hospitals reported improvements in the majority of metrics. However, they varied in their progress in project implementation and metrics progress.

# Project 1.5 – Million Hearts Initiative

## Project Overview

Project 1.5 was designed to support participation in the Million Hearts® initiative, a national initiative aimed at promoting evidence-based practices for the prevention and treatment of cardiovascular disease and empowering patients to make healthy choices. These activities are expected to reduce disparities in receipt of preventive services and reduce variations in performance. These goals were to be achieved by developing needed infrastructure such as registries and protocols for delivery of guideline-concordant care, as well as implementing changes in care delivery processes such as assessment of existing disparities and clinical management of patients. (Attachment Q). Specific objectives can be found in Attachment Q.

Project 1.5 was not required for DPHs. Seven DPHs participated in the project, including Alameda (added in DY12), Natividad, Riverside, San Francisco, UC Davis, UC San Diego, and Ventura. Eight DMPHs participated in this project, including Coalinga, Kaweah Delta, Lompoc Valley, Salinas Valley, Tri-City, Healdsburg, Jerold Phelps (added January 2017), and Tahoe Forest. The latter 3 were critical access hospitals. Coalinga stopped participation in PRIME in June 2018 after completing the survey and interview, and are thus is included in these analyses. Palomar and Mayers stopped participation prior to the survey (October 2017) and Tulare is no longer operational. These 3 hospitals stopped participation before the survey (administered in April to May 2018) and thus are not included in these analyses. There were 15 hospitals participating in this project at the time the survey data was collected. In DY 11, 16 hospitals participated and reported metric performance data. This number increased to 18 in DY 12 with the addition of 1 DPH UC and 1 DMPH CAH, and decreased to 14 in DY 13 with 3 DMPH Non-CAH and 1 DMPH CAH dropping the project (Exhibit 149).

**Exhibit 149: PRIME Project 1.5 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| Total Participating Hospitals | 16 | 18 | 14 |
| Total DPH | 6 | 7 | 7 |
| DPH UC | 2 | 2 | 2 |
| DPH County | 4 | 5 | 5 |
| Total DMPH | 10 | 11 | 7 |
| DMPH Non-CAH | 7 | 7 | 4 |
| DMPH CAH | 3 | 4 | 3 |

*Source: Data provided by DHCS.*

*Notes: The number of participating hospitals indicates those that implemented the project for the full DY. Among the DMPH Non-CAHs, Tulare discontinued the project in DY12, Coalinga discontinued the project in DY13 and Palomar discontinued the project in DY13 on October 2017. Among the CAHs, Mayers dropped the project in DY13 on December 2017, and added project 1.7 instead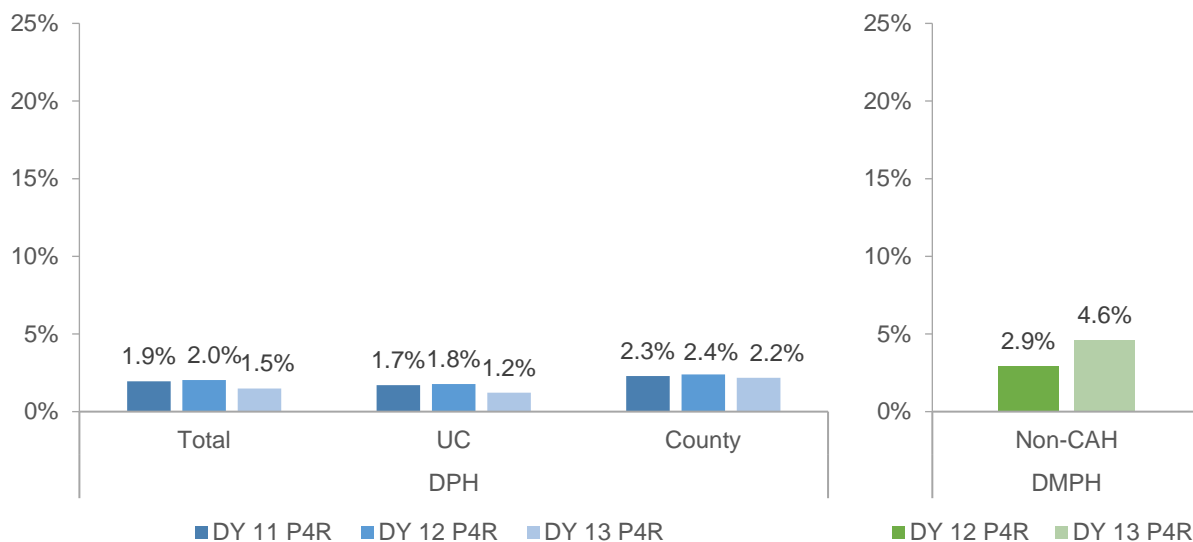. CAH reported no data in DY11 as they were under infrastructure phase. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the suggested core components of this project as an indication of their overall approach to the Million Hearts® initiative (Exhibit 57). In the interim survey, 8 hospitals reported the prior to PRIME, they had begun implementing processes to provide recommended clinical preventive services and 7 began identifying community resources for patients based on need

Exhibit 150). During PRIME, all or nearly all participating hospitals reported implementing all the core components except for encouraging, fostering, empowering, and demonstrating patient engagement in the design and implementation of programs.

### Exhibit 150: PRIME Project 1.5 Core Components

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Collect or use preexisting baseline data on receipt and use of targeted preventive services, including any associated disparities related to race, ethnicity or language need. See figures 1 and 2 for related data among the Medi-Cal population. | 3 | 11 |
| Implement processes to provide recommended clinical preventive services in line with national standards, including but not limited to the US Preventive Services Task Force (USPSTF) A and B Recommendations. | 8 | 14 |
| Improve access to quality care and decrease disparities in the delivery of preventive services. | 5 | 11 |
| Employ local, state and national resources, and methodologies for improving receipt of targeted preventive services, reducing associated disparities, and improving population health. | 4 | 9 |
| Adopt and use certified electronic health record systems, including clinical decision supports and registry functionality to support provision of targeted preventive services. Use panel/population | 5 | 13 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| management approaches (e.g., in-reach, outreach) to reduce gaps in receipt of care. | | |
| Based on patient need, identify community resources for patients to receive or enhance targeted services and create linkages with and connect/refer patients to community preventive resources, including those that address the social determinants of health, as appropriate. | 7 | 13 |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership | 6 | 11 |
| Encourage, foster, empower, and demonstrate patient engagement in the design and implementation of programs. | 4 | 8 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=15 hospitals participating in Project 1.5 responded to the interim survey. Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey hospitals may have implemented or dropped activities under a core component.*

## Infrastructure

### Registries

A goal of Project 1.5 was to promote health information technology to improve the provision of preventive services and management of conditions relating to cardiovascular disease. In the interim survey, hospitals reported whether they used any registries to manage care for patients for the prevention or treatment of cardiovascular disease under PRIME (Exhibit 151). Registries for patients with hypertension or tobacco use were reported by 10 and 9 hospitals, respectively. Registries for managing care for patients with heart disease, stroke, and high cholesterol were less commonly used.

**Exhibit 151: Use of Patient Registries for Prevention or Treatment of Cardiovascular Disease Under PRIME**
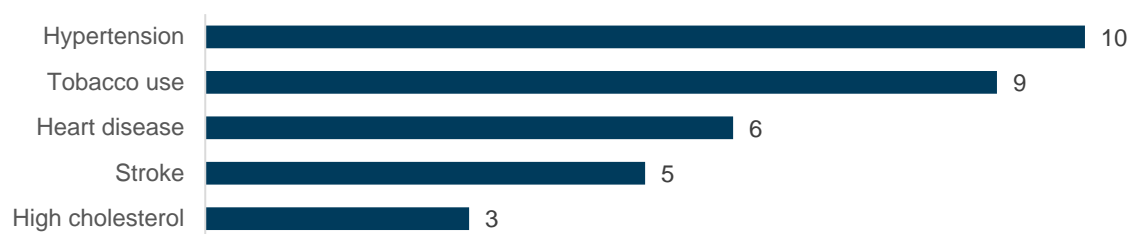
| Condition | Count |
|---|---|
| Hypertension | 10 |
| Tobacco use | 9 |
| Heart disease | 6 |
| Stroke | 5 |
| High cholesterol | 3 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=15 hospitals participating in Project 1.5 responded to the interim survey.*

In the interviews, functionality of patient registries for management of cardiovascular risk and care varied. While some hospitals reported that they lacked any capacity for patient registries, others had built out the functionality to stratify their registries by demographic characteristics to identify patient groups of interest:

> *"We had an EHR [but] our current EMR that doesn't have the ability to, they do not have registry. So we couldn't say okay, show me all of my hypertension patients. You do have the ability to run a report, like a custom report. It was kind of wonky but we did use an EHR." (Salinas)*

> *"The registry is able to do the stratification that we need for demographic data…they're also able to pull the actual PRIME metric reports that include a lot of this data already, such as the REAL data, the SO/GI data, the demographic elements, which clinics they came from, clinics they were assigned to, just really identifiable data elements." (Natividad)*

### Telehealth Capacity

Telehealth has the potential to expand care options for patients with cardiovascular disease or related risk factors. In the interim survey, hospitals reported whether they had

implemented telehealth services for the provision of chronic disease management or cardiology (Exhibit 152). A couple of hospitals reported implementing telehealth for chronic disease management prior to PRIME, 3 reported doing so during PRIME, and 3 were planning to implement it during PRIME. Telehealth for cardiology was implemented prior to PRIME by 2 hospitals; an additional 2 hospitals reported doing so during PRIME.

**Exhibit 152: Telehealth Use for Chronic Disease Management and Cardiology Under PRIME**
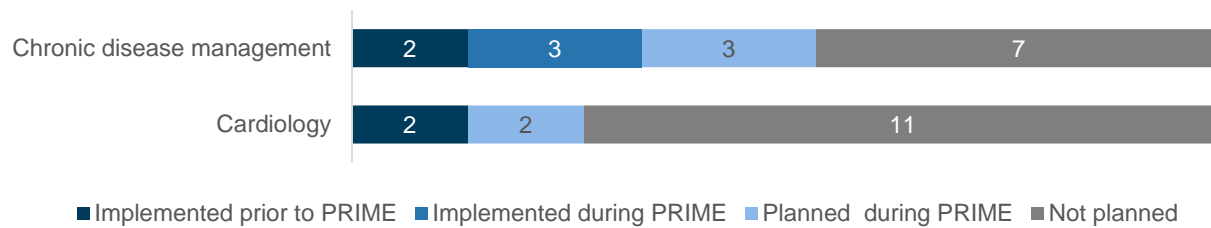
| | Implemented prior to PRIME | Implemented during PRIME | Planned during PRIME | Not planned |
|---|---|---|---|---|
| Chronic disease management | 2 | 3 | 3 | 7 |
| Cardiology | 2 | | 2 | 11 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=15 hospitals participating in Project 1.5 responded to the interim survey.*

In interviews, a hospital described their implementation of alerts in the electronic medical record for patients with elevated blood pressure:

> *"Now, the alert that the specialists get regarding the elevated blood pressure is different than the primary care provider…but everyone gets an alert, that they're seeing a patient and the blood pressure's elevated, whether it's to remind them to refer them back to primary care if they're a specialist, or whether it's for the primary care physician to make sure that they've carried out the correct care, you know, the actions on their part." (Ventura)*

## Protocols

Hospitals reported in the interim survey whether they used resources from outside organizations to guide project implementation or to link patients to additional resources. To improve receipt of preventative services, the majority of hospitals reported referencing USPSTF recommendations (12 of 15), American Heart Association resources (11), and the Centers for Disease Control and Prevention's tobacco cessation resources (10; Data not shown). Other resources included guidance from the Substance Abuse and Mental Health Service Administration (4), the California Smokers' Hotline (3), and the American Medical Association Toolkit (2).

## Project Implementation

### Assessment

In interim survey, hospitals reported whether they collected baseline data or analyzed disparities relating to heart disease under PRIME. Of participating hospitals, 4 DPHs and 7 DMPHs reported collecting baseline data on the receipt and use of targeted preventative services related to the Million Hearts Initiative (Data not shown).

In interviews, several hospitals discussed the synergy of the project with work conducted prior to PRIME, processes being implemented for other PRIME projects, and goals of the organization. Among a few hospitals, suboptimal performance on metrics related to management of cardiovascular risk and care incentivized participation in the Million Hearts program:

> *"Just via synergy, it was an easier project because it was only one novel measure that didn't fit elsewhere. If they're different from 1.2, it's because 1.2 is the lift, and then 1.5 sort of was a piggy-back on 1.2, for the most part." (Alameda)*

> *"We had applied for the federal program [for Million Hearts] and actually been accepted at the same time that PRIME was released, and so we were already in that trajectory. Tulare County ranks I think 53rd out of 58 counties at death due to cardiovascular disease, so million hearts was a very germane topic for us just to our local community and what affects us here." (Kaweah Delta)*

In the interim survey, some hospitals reported identifying disparities in care delivery for patients with heart disease or stroke risk by race/ethnicity or language (Exhibit 153). A hospital reported identifying disparities related to outpatient visits for heart disease by SO/GI status under PRIME. 2 hospitals reported that after analyzing care delivery by race/ethnicity, no disparities were found (Data not shown).

**Exhibit 153: Identification of Disparities in Care Delivery for Patients with Heart Disease or Stroke Risk by Race/Ethnicity, Language, and Sexual Orientation and Gender Identity Under PRIME**
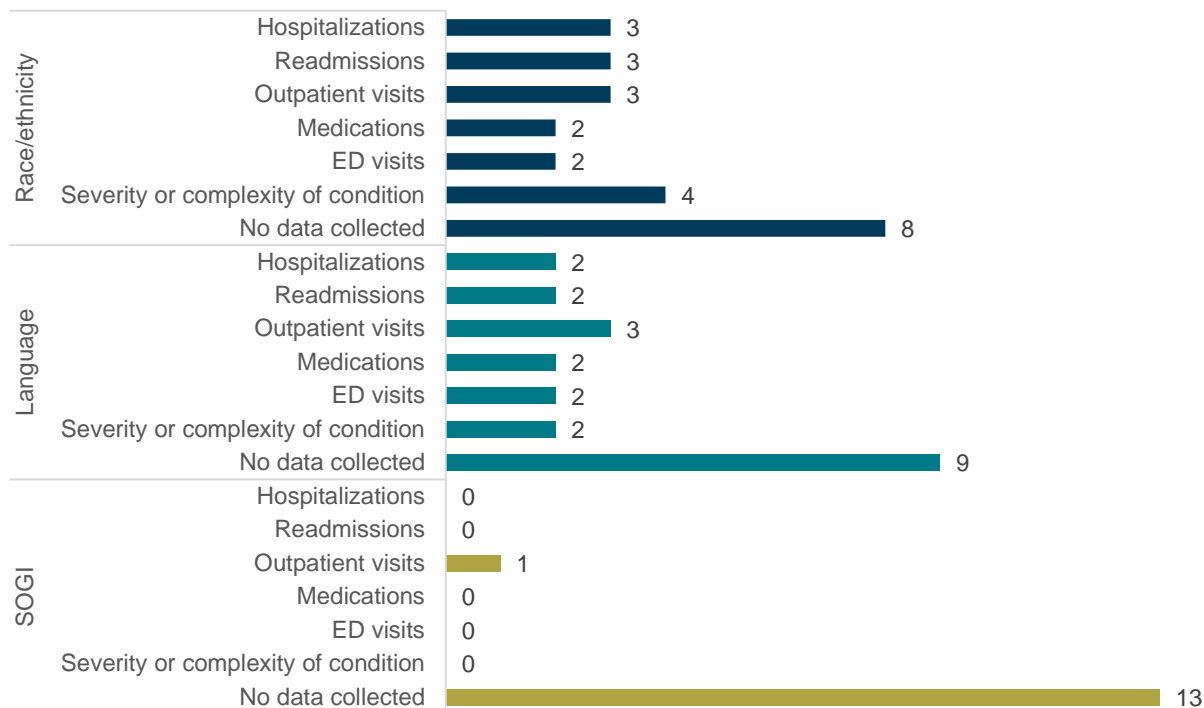


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=15 hospitals participating in Project 1.5 responded to the interim survey. SO/GI: sexual orientation and gender identity.*

In interviews, a hospital described their process for identifying a population and plan in which to address disparities in heart disease or stroke risk:

> *"At the moment, we're still working with the state to finalize our disparity reduction plan…when we tried to look for disparities across the populations we serve, we tried to just use the one that was most significant. And that's African Americans who have hemoglobin A1c greater than 9%. And so we've implemented a strategy where we're going to have a model similar to our Better Blood Pressure model where that's driven by our clinical pharmacists supporting our primary care doctors in small group settings for these patients to help them achieve better diabetes control." (UC Davis)*

## Management of Cardiovascular Disease

In the interim survey, hospitals reported their approaches to blood pressure management (Exhibit 154). All 7 DPHs and 7 DMPHs reported that they measure blood pressure at

each medical visit. Five DPHs and 5 DMPHs reported that patients measure their blood pressure at home and report it to their provider. A few DPHs and DMPHs also reported that they measure blood pressure in the office in between medical visits (3). For example, a DPH reported that they conduct visits with a registered nurse specifically for blood pressure monitoring.

**Exhibit 154: Approaches to Monitoring Blood Pressure of Patients at Risk for Hypertension Under PRIME**
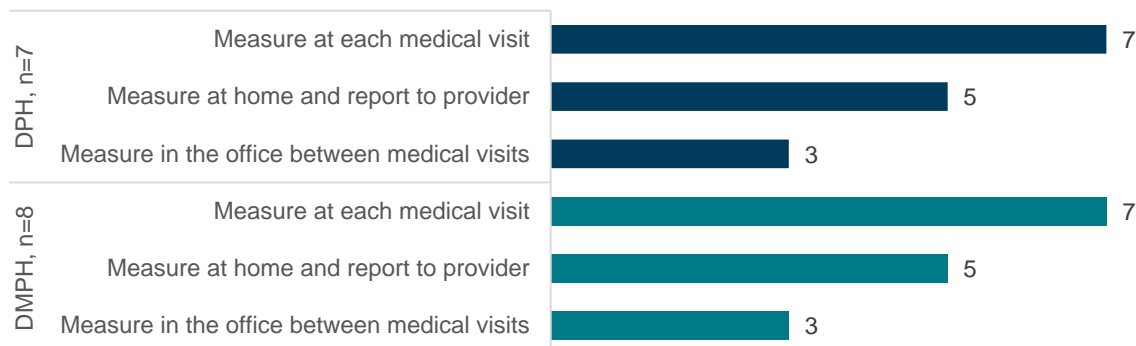


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=15 hospitals participating in Project 1.5 responded to the interim survey. Responses were not mutually exclusive; hospitals could report multiple methods of blood pressure monitoring.*

Hospitals reported in the interim survey their approaches for managing low dose aspirin therapy under PRIME (Exhibit 155). Among the 7 DPHs, the majority reported assessing risk of coronary events (6) or bleeding. The majority of DMPHs hospitals reported assessing risks for coronary events (6 of 8), bleeding (7), and monitoring eligibility for aspirin therapy (5).

**Exhibit 155: Approaches for Assessing Patients' Eligibility for and Management of Low Dose Aspirin Therapy Under PRIME**
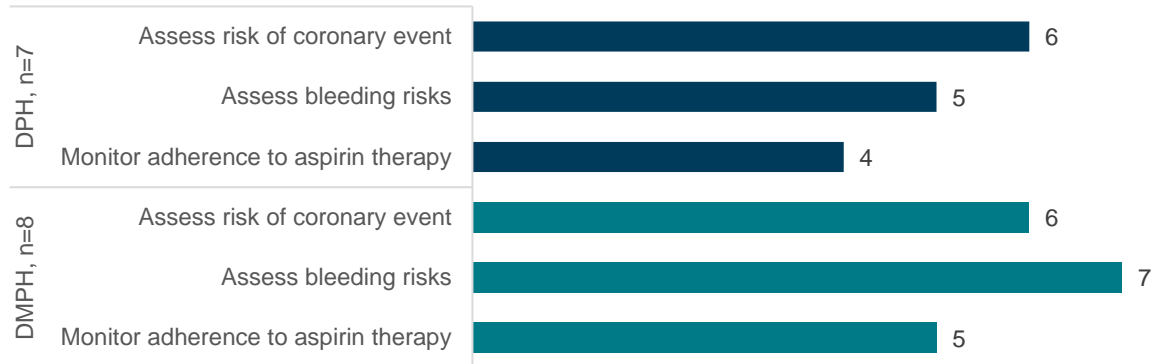


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=15 hospitals participating in Project 1.5 responded to the interim survey.*

Overall, 13 of 15 hospitals reported linking patients to community-based resources (Data not shown). The most common types of referrals were educational or self-management classes, followed by exercise classes or activities (Exhibit 156). Few hospitals reported linking patients to informal support groups or cooking classes.

**Exhibit 156: Linkage of Patients to Community-Based Resources Under PRIME**
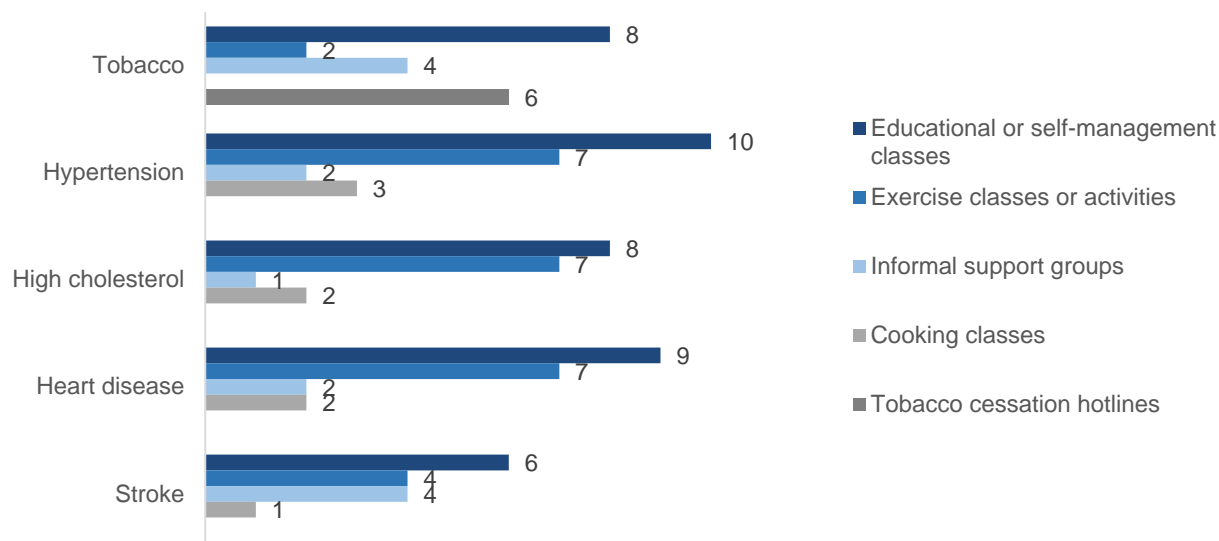


Chart legend:
- Educational or self-management classes
- Exercise classes or activities
- Informal support groups
- Cooking classes
- Tobacco cessation hotlines

Tobacco: 8, 2, 4, (—), 6
Hypertension: 10, 7, 2, 3
High cholesterol: 8, 7, 1, 2
Heart disease: 9, 7, 2, 2
Stroke: 6, 4, 4, 1

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=15 hospitals participating in Project 1.5 responded to the interim survey.*

## Participation in Learning Collaboratives

Four of 15 hospitals reported participating in learning collaboratives outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF. Specific learning collaboratives included: Preventing Heart Attacks and Strokes Everyday (PHASE), Institute for Healthcare Improvement Virtual Expeditions, American College of Cardiology, and Institute for High Quality Care.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10.0). Hospitals reported spending an overall medium level of effort in implementing Project 1.5 (DPH 6.0; DMPH 6.6; (Exhibit 403). Among DPHs, ratings of effort were high for conducting staff training (7.4), resource intensity (7.3), and implementation requirements (7.6). On average, DMPHs reported requiring high effort for conducting staff training (7.1) and implementation requirements (7.1).

## Challenges and Solutions to Implementing the Million Hearts Initiative

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 1.5 (Challenges: Exhibit 404; Solutions Exhibit 405). The top

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challenge cited by the majority of hospitals (10) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the majority of hospitals (8) was variation in documentation within the system by providers and staff. The top solution identified by the majority of hospitals (8) was EHR/IT standardization or expansion across the system. The second solution identified by the hospitals (3) was provider and staff training and increased capacity.

In the interviews, hospitals without robust systems for aggregating and data related to the project discussed the challenges they faced in monitoring and reporting their performance. For example, a hospital discussed the need to use manual chart abstraction to aggregate vital readings from multiple data sources:

*"…to report our numbers, we needed a lot of staff in the clinics to review the charts to identify the last blood pressure reading. Because our patients, even though we do have assigned lives, they can be seen at primary care, they can also be managed by a cardiologist. They could have also had surgery during the measurement period. So their blood pressure could've been in three different databases. Difficult for us to aggregate. So it did require a lot of chart review, chart abstraction." (Salinas)*

## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 1.5 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by the hospitals (5) was processes not being established system-wide. The second challenge cited by the hospitals (4) was siloed departments and difficulty collaborating as well as inadequate availability of services (4). The top solution identified by the hospitals (5) was implementing provider and staff training and increased capacity. The second solution identified by the hospitals (5) was standardizing processes across systems.

In interviews, a hospital discussed their challenges with interpreting the metric related to documenting follow-up for high blood pressure:

*"For high blood pressure screening and follow up, remember where it said you had to have the 140 and then if they have the first reading you had to have them come back?...If it was hypertension then you had to have the follow up document to bring them back within a specific time frame. But then it also said later in a specification if it's not hypertension you don't have to have them come back at all…The metric specification for 1.5.3, the screening, we found to be problematic in trying to understand it. We picked an interpretation and then went with that." (Salinas)*

## Hospital-Reported Metric Performance

Performance of hospitals in Project 1.5 was measured by the following 4 metrics (Exhibit 157). All 4 metrics were intended to show progress by increasing rates over time. UCLA categorized 3 as process metrics and 1 as an outcome metric.

**Exhibit 157: PRIME Project 1.5 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| Controlling Blood Pressure | 1.5.1.b | NCQA | 0018 | Increase | Outcome |
| Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic | 1.5.2.i @ | NCQA | 0068 | Increase | Process |
| PQRS # 317 Preventative Care and Screening: Screening for High Blood Pressure and Follow-Up Documented | 1.5.3 | CMS | N/A | Increase | Process |
| Tobacco Assessment and Counseling | 1.5.4.t | AMA-PCPI | 0028 | Increase | Process |

*Source: PRIME Metrics Specs, DY13YE*
*Notes: NCQA: National Committee for Quality Assurance, CMS: Centers for Medicare & Medicaid Services, AMA-PCPI: American Medical Association – Physician Consortium for Performance Improvement, PQRS: Physician Quality Reporting System. @ A trend-break was issued for this metric in DY 12.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. In general, One DMPH reported data in DY 11. Sixteen hospitals participated in Project 1.5 in DY 11, 6 were DPHs and 10 were DMPHs. In DY 12, 1 DPH UC and 1 DMPH CAH joined, and in DY 13, 3 DMPH Non-CAH and 1 DMPH CAH dropped the project (Exhibit 149). Metrics were designated as pay for reporting (P4R) or pay for performance (P4P) in a given year, and this varied for DPHs and DMPHs.

## Metric 1.5.1.b – Controlling Blood Pressure

Metric 1.5.1.b measured the proportion of individuals whose most recent blood pressure is adequately controlled (Individuals ages 18 to 59 whose BP was <140/90 mm Hg, ages

60 to 85 with a diagnosis of diabetes whose BP was <140/90 mm Hg, ages 60 to 85 without a diagnosis of diabetes whose BP was <150/90 mm Hg) among patients in the Project 1.5 Target Population aged 18 to 85 years of age who had at least 1 outpatient encounter with a diagnosis of hypertension (HTN) during the first 6 months of the measurement period. (PRIME Metric Specs, DY13YE). Hospitals were intended to increase earlier detection of hypertension in order to provide more effective intervention. Achievement was measured by an increasing rate.

Overall, DPHs reported an increase in weighted average rates (Exhibit 158). DPH UCs reported an increase from 70% in DY 11 to 79% in DY 13, DPH County hospitals reported an increase from 69% in DY 11 to 74% in DY 13. One DMPH reported data in DY 11, but the other DMPHs started implementation in DY 12, and overall reported an increase in weighted average rates. DMPH Non-CAH reported an increase from 13% in DY 12 to 60% in DY 13, DMPH CAH reported an increase from 13% in DY 12 to 72% in DY 13. In DY 13, the individual achievement rates for Metric 1.5.1.b ranged from 71% to 81% for DPHs and 58% to 75% for DMPHs (data not shown). Since one DMPH reported in DY 11, their DY 12 rate was P4P, but the other DMPHs were newly reporting and were P4R.

**Exhibit 158: PRIME Self-Reported Blood Pressure Control Rates for Metric 1.5.1.**
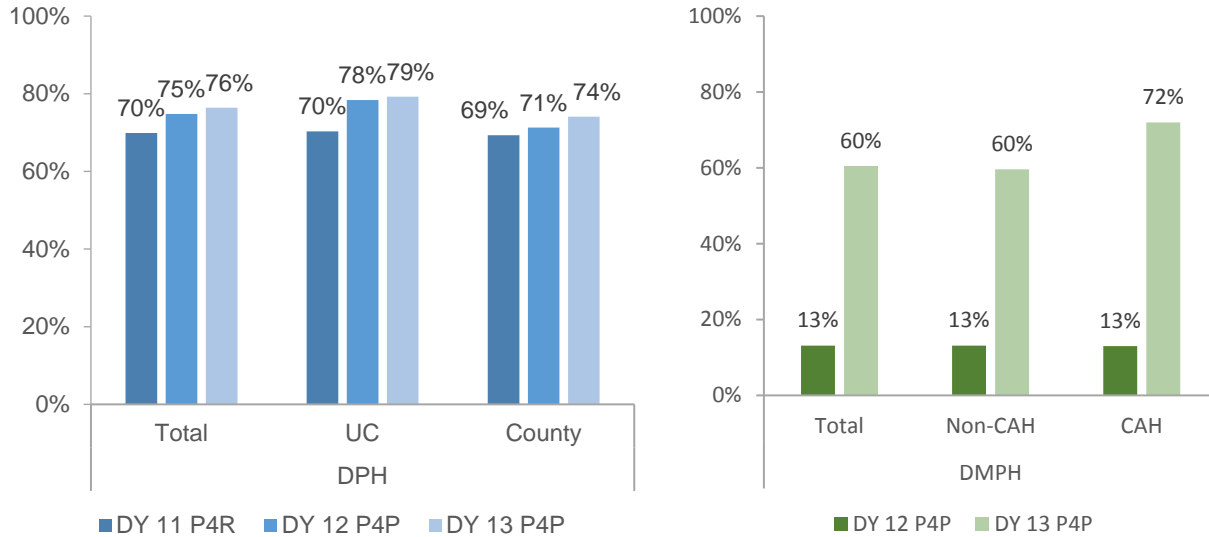


*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital.*

*\* Since one DMPH reported in DY 11, their DY 12 rate was P4P, but the other DMPHs were newly reporting and were P4R. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.5.2.i – Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic

Metric 1.5.2.i measured the number of patients who had an active medication of aspirin or another antiplatelet among patients in the Project 1.5 Target Population aged 18 and over with a visit during the measurement period who had an acute myocardial infarction (AMI), coronary artery bypass grafting (CABG) or percutaneous coronary intervention (PCI) during the 12 months prior to the measurement period or who had a diagnosis of IVD overlapping the measurement period. (PRIME Metric Specs, DY13YE). Hospitals were intended to lower the yearly risk of serious vascular events (MI, stroke, death) in patients who are at high risk through antiplatelet therapy. Note that a trend-break notice was issued for this metric (PPL-17-007 DY 12) to clarify that the numerator includes active medications for patients and added details to the time periods for events in the denominator inclusion criteria. Achievement was measured by an increasing rate.

Overall, DPHs reported an increase in weighted average rates (Exhibit 159). DPH UCs reported an increase from 87% in DY 11 to 93% in DY 13, DPH County hospitals reported an increase from 76% in DY 11 to 91% in DY 13. The DMPHs started implementation in DY 12, and overall reported an increase in weighted average rates. DMPH Non-CAH reported an increase from 77% in DY 12 to 81% in DY 13, DMPH CAH reported an increase from 70% in DY 12 to 79% in DY 13. In DY 13, the individual achievement rates for Metric 1.5.2.i ranged from 87% to 95% for DPHs and 53% to 100% for DMPHs (data not shown).

**Exhibit 159: PRIME Self-Reported Aspirin or another Antithrombotic Use Rates for Metric 1.5.2.i**
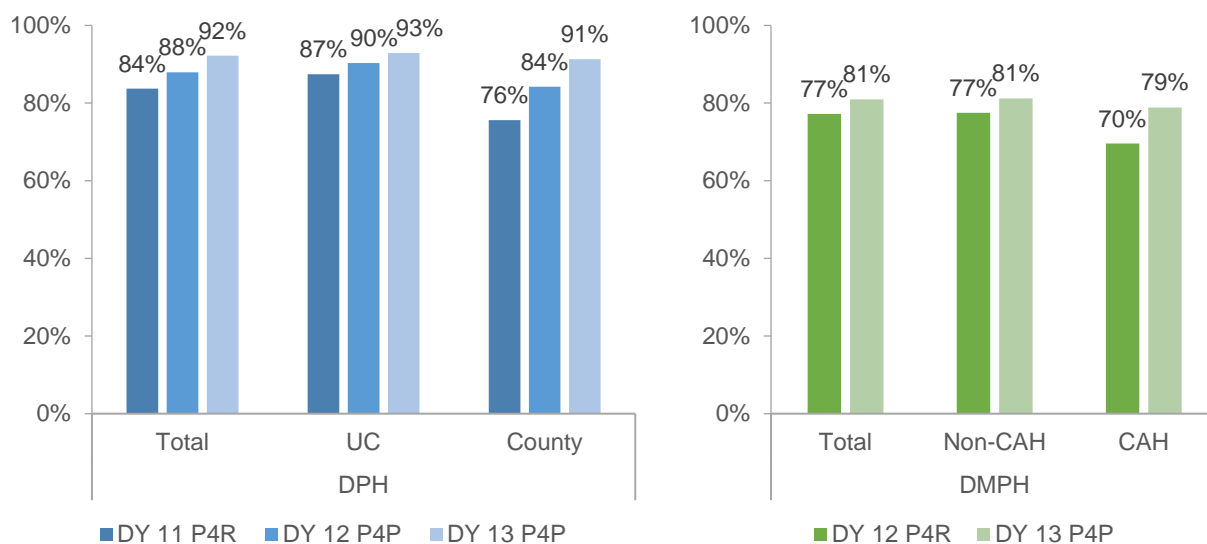


*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital.*

*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.5.3 –Preventative Care and Screening: Screening for High Blood Pressure and Follow-Up Documented

Metric 1.5.3 measured the proportion of patients who were screened for high blood pressure *and* had a recommended follow-up plan if the blood pressure is pre-hypertensive or hypertensive among the Project 1.5 Target Population aged 18 and over (PQRS # 317, PRIME Metric Specs, DY13YE). Hospitals were intended to increase follow-up protocols after blood pressure measurement to prevent the progression of hypertension and the development of heart disease. Achievement was measured by an increasing rate.

Overall, DPHs reported an increase in weighted average rates (Exhibit 160). DPH UCs reported an increase from 51% in DY 11 to 82% in DY 13, DPH County hospitals reported an increase from 31% in DY 11 to 73% in DY 13. The DMPHs started implementation in DY 12, and overall reported an increase in weighted average rates. DMPH Non-CAH reported an increase from 41% in DY 12 to 67% in DY 13, DMPH CAH reported an increase from 4% in DY 12 to 40% in DY 13. In DY 13, the individual achievement rates for Metric 1.5.3 ranged from 48% to 90% for DPHs and 21% to 94% for DMPHs (data not shown).

**Exhibit 160: PRIME Self-Reported High Blood Pressure Screening and Follow-Up Documentation Rates for Metric 1.5.3**
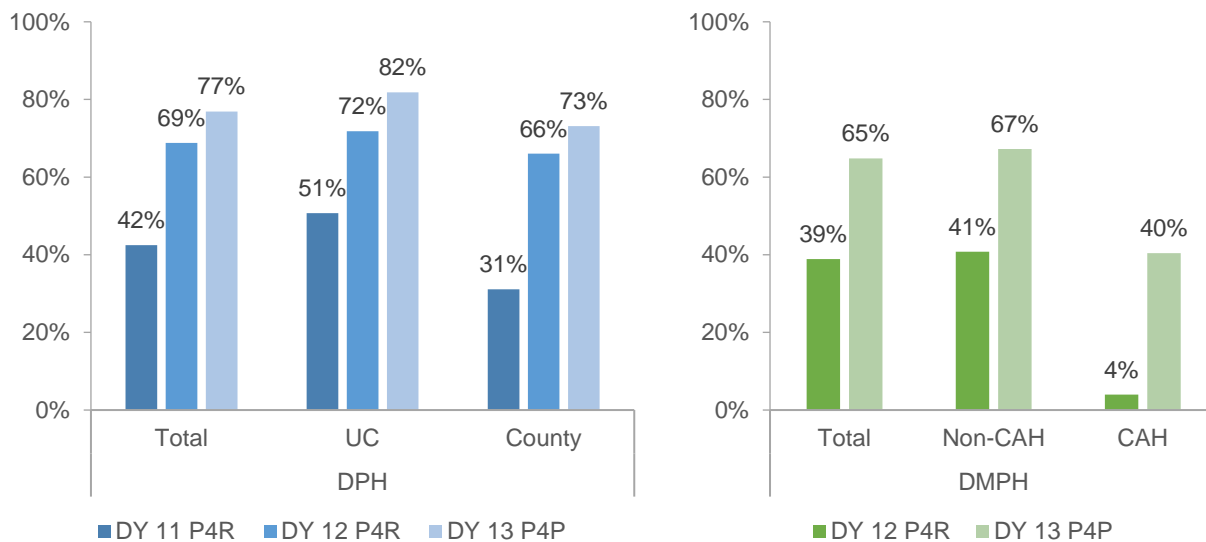


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital.*

## Metric 1.5.4.t – Tobacco Assessment and Counseling

Metric 1.5.4.t measured the proportion of patients in the Project 1.5 Target Population aged 18 and over seen for at least 2 visits or at least 1 preventive visit who were also screened for tobacco use at least once during the 2-year measurement period AND received tobacco cessation counseling intervention. ([PRIME Metric Specs, DY13YE](#)). Hospitals were intended to promote adult tobacco screening and tobacco cessation interventions for those who use tobacco products, as there is good evidence that tobacco screening and brief cessation intervention (including counseling and/or pharmacotherapy) is successful in helping tobacco users quit. Achievement was measured by an increasing rate.

Overall, DPHs reported an increase in tobacco assessment and counseling rates (Exhibit 161). DPH UCs reported an increase from 91% in DY 11 to 98% in DY 13, DPH County hospitals reported an increase from 70% in DY 11 to 97% in DY 13. The DMPHs started implementation in DY 12, and overall reported an increase in weighted average rates. DMPH Non-CAH reported an increase from 80% in DY 12 to 91% in DY 13, while DMPH CAH reported a decrease from 63% in DY 12 to 55% in DY 13. In DY 13, the individual achievement rates for Metric 1.5.4.t ranged from 95% to 99% for DPHs and 23% to 96% for DMPHs (data not shown).

**Exhibit 161: PRIME Self-Reported Tobacco Assessment and Counseling Rates for Metric 1.5.4.t**
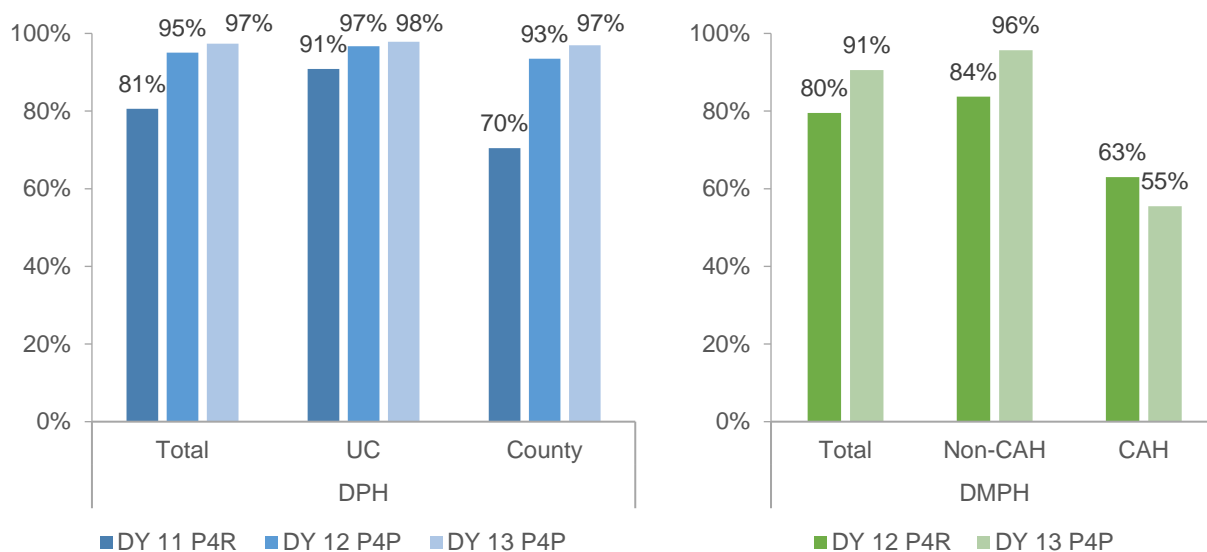


*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital.*

*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Summary of Key Findings

Project 1.5 involved implementing the Million Hearts® initiative, a national program aimed at promoting evidence-based practices for the prevention and treatment of cardiovascular disease and empowering patients to make healthy choices. Fifteen hospitals were participating in this project at the time the survey data was collected. In DY 11, 16 hospitals were participating, this increased to 18 in DY 12, and decreased to 14 in DY 13.

Fewer than half of the hospitals indicated implementing aspects of this project prior to PRIME, so most hospitals had newly selected or implemented the 8 core components identified in Attachment Q. When asked to report on specific infrastructure established for implementing this project, most hospitals reported utilizing registries for patients with hypertension (10) or tobacco use (9). About half of hospitals utilized telehealth for chronic disease management (2 before PRIME, 6 planned or implemented during PRIME); fewer hospitals utilized it for cardiology (2 before PRIME; 2 implemented during PRIME). To improve receipt of preventative services, the majority of hospitals reported referencing outside resources, most commonly USPSTF recommendations (12), American Heart Association resources (11), and the Centers for Disease Control and Prevention's tobacco cessation resources (10).

When reporting on how this project was implemented, most hospitals prepared for the project by assessing baseline data on the receipt and use of targeted preventative services related to the Million Hearts Initiative (11). Fewer than half of hospitals identified disparities in care delivery for patients with heart disease or stroke risk by race/ethnicity or language under PRIME; a hospital reported identifying disparities related to outpatient visits for heart disease by SO/GI status. Hospitals performed the processes of care delivery consistently; the majority of hospitals reported that they measure blood pressure at each medical visit (14) and 10 reported that patients measure their blood pressure at home and report it to their provider. To manage low dose aspirin therapy under PRIME, the majority of hospitals reported assessing the risk of coronary events (12), assessing bleeding risk (12), and monitoring adherence to aspirin therapy (9). Thirteen hospitals reported linking patients to community-based resources. The most common types of referrals were educational or self-management classes, followed by exercise classes or activities. Few hospitals reported linking patients to informal support groups or cooking classes.

Hospitals reported spending an overall medium level of difficulty in implementing Project 1.5 (DPH 6.0; DMPH 6.6 of 10). Ratings of effort were high for conducting staff training (7.4 DPH, 7.1 DMPH), resource intensity (7.3 DPH), and implementation requirements (7.6 DPH, 7.1 DMPH). The top data-related challenge cited by the majority of hospitals

was that IT infrastructure lacked data query ability, tracking, or reporting functions (10); followed by variation in documentation within the system by providers and staff (8). The top solutions to data-related challenges identified by the majority of hospitals were EHR/IT standardization or expansion across the system (8), followed by provider and staff training and increased capacity (3). The top metric-related challenges were that processes were not established system-wide (5), followed by siloed departments and difficulty collaborating (4) as well as inadequate availability of services (4). The top solution to metric-related challenges identified by the hospitals was implementing provider and staff training and increased capacity (5), followed by standardizing processes across systems (5).

The metrics for 1.5 were 1.5.1.b -Controlling Blood Pressure; 1.5.2.i -Ischemic Vascular Disease (IVD; this measure had a trend-break in DY 12): Use of Aspirin or Another Antithrombotic; 1.5.3 -PQRS # 317 Preventative Care and Screening: Screening for High Blood Pressure and Follow-Up; Documented; and 1.5.4.t -Tobacco Assessment and Counseling. Performance of hospitals in Project 1.5 was measured by 4 standard metrics. Overall hospitals showed improved performance from DY 11 to DY 13. Both DPH and DMPHs showed progress over time in all 4 metrics (1.5.1.b, 1.5.2.i, 1.5.3 and 1.5.4.t).

Overall, hospitals made significant progress in implementing project 1.5 by establishing data infrastructure and registries for identifying and tracking patients at higher risk for heart disease due to hypertension and tobacco use, utilizing telehealth for chronic disease management, routinely tracking blood pressure, and referring patients to community-based resources. Hospitals reported improvements in all the metrics. However, they varied in their progress in project implementation.

# Project 1.6 – Cancer Screening and Follow-up

## Project Overview

Project 1.6 was designed to improve early diagnosis and timely treatment of cancer by promoting evidence-based and coordinated processes for prevention, screening, and follow-up. These goals were to be achieved by developing needed infrastructure such as development of health information technology and data, a multidisciplinary taskforce, and protocols for guideline concordant care delivery; as well as following processes such as addressing disparities and linking patients to community-based services (Attachment Q).

Project 1.6 was not required for DPHs and 6 selected this project, including 5 county hospitals (Alameda, Contra Costa, Los Angeles, San Joaquin, and San Mateo) and 1 UC (UC San Francisco). Nine DMPHs participated in this project, including 5 Non-CAHs (Antelope Valley, Pioneers Memorial, Salinas Valley, Tri-City, and Tulare) and 4 CAHs (Healdsburg, Mendocino Coast, Southern Inyo, and Trinity). In DY 11 there were 15 hospitals participating in Project 1.6, but this number decreased to 11 in DY 12 with 1 DPH (Alameda) and 2 DMPHs (Tri-City and Antelope Valley) dropping the project (Exhibit 162). Tulare stopped participation in PRIME prior to interim evaluation and Southern Inyo did not participate in the interim survey or interview, so interim survey data includes 10 hospitals.

**Exhibit 162: PRIME Project 1.6 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 15 | 11 | 11 |
| **Total DPH** | 6 | 5 | 5 |
| **DPH UC** | 1 | 1 | 1 |
| **DPH County** | 5 | 4 | 4 |
| **Total DMPH** | 9 | 6 | 6 |
| **DMPH Non-CAH** | 5 | 2 | 2 |
| **DMPH CAH** | 4 | 4 | 4 |

*Source: Data provided by DHCS.*
*Notes: The number of participating hospitals indicates those that implemented the project for the full DY. Among the DMPH Non-CAHs, Antelope Valley discontinued the project in DY12 on March 2017 and Tri-City discontinued the project in DY12 on September 2016. Tulare discontinued the project in DY12. Among the DPH County Hospitals, Alameda discontinued the project in DY12. DMPH (CAH and Non-CAH) reported no data in DY11 as they were under infrastructure phase. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Ten hospitals reported in the interim survey whether and when they implemented the suggested core components of this project as an indication of their approach to improve cancer screening and follow-up (Exhibit 163). The most common element in place prior to PRIME were electronic health record systems, including clinical decision supports and registry functionality to support provision of targeted preventive service and 5 implemented processes to provide recommended clinical preventive services (6, Exhibit 163). All hospitals expanded their adoption of the core components during PRIME; hospitals implemented most components, except for demonstrating patient engagement in the design and implementation of programs.

## Exhibit 163: PRIME Project 1.6 Core Components

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Develop a multi-disciplinary cross-participating PRIME hospital task force to identify principle- based expected practices for screening and follow-up for the targeted services including, but not limited to: a. Standard approach to screening and follow-up within each DPH/DMPH b. Screening: i. Enterprise-wide standard approach to screening (e.g., ages, frequency, diagnostic tool) c. Follow-Up for abnormal screening exams: i. Clinical risk-stratified screening process (e.g., family history, red flags) ii. Timeliness (specific time benchmark for time from abnormal screening exam to diagnostic exam) | 4 | 10 |
| Demonstrate patient engagement in the design and implementation of programs | 3 | 6 |
| Collect or use preexisting baseline data on receipt and use of targeted preventive services, including any associated disparities related to race, ethnicity or language need. | 2 | 8 |
| Implement processes to provide recommended clinical preventive services in line with national standards, including but not limited to USPSTF A and B Recommendations. | 5 | 10 |
| Improve access to quality care and decrease disparities in the delivery of preventive services. | 3 | 8 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Employ local, state and national resources, and methodologies for improving receipt of targeted preventive services, reducing associated disparities, and improving population health. | 3 | 7 |
| Adopt and use certified electronic health record systems, including clinical decision supports and registry functionality to support provision of targeted preventive services. Use panel/population management approaches (e.g., in-reach, outreach) to reduce gaps in receipt of care. | 6 | 9 |
| Based on patient need, identify community resources for patients to receive or enhance targeted services and create linkages with and connect/refer patients to community preventive resources, including those that address the social determinants of health, as appropriate | 4 | 8 |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership | 3 | 10 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=10 hospitals participating in Project 1.6 completed the survey. Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey, hospitals may have implemented or dropped activities under a core component.*

## Infrastructure

### Use of Health Information Technology

In the interim survey, hospitals reported whether they had implemented health information technology to improve care for patients with cancer, including electronic registries and telehealth. Among participating hospitals, half (5) reported having registries for patients with breast, cervical, and colorectal cancer (Data not shown). A hospital had implemented telehealth for oncology prior to PRIME and 1 did so during PRIME. The remaining 8 hospitals reported having no plans to implement telehealth oncology.

In interviews, several hospitals discussed their efforts to implement new health information technology tools, including dashboards and registries, in order to adopt a population health approach to monitoring rates of cancer screening and follow-up:

> *"We have invested with Cerner's population health tool…HealtheIntent is basically going to help us build the robust automation that's required to kind of get away with the manual chart visit process that's in place, and we'll be able to, when it's all rolled out and done, at the point of care, through the help of dashboards, be able to show the gaps in care for the physician, who will then be able to propose the interventions as needed, versus having to depend on people to do that for him or for her. And this*

*could established through the help of registries and a whole lot of complexities that's involved." (San Joaquin)*

## Availability of Data for Risk Assessment

In the interim survey, hospitals reported whether they collected baseline data to identify use of targeted preventive services related to cancer screening and follow-up under PRIME. Of the 10 participating hospitals, 4 reported collecting baseline data on cancer screening and follow-up specifically for PRIME (Data not shown). Among other hospitals, 4 reported that baseline data already existed before PRIME; 2 hospitals reported collecting no baseline data on cancer screening and follow-up.

In assessing patients at risk for breast cancer, 6 hospitals reported that data was available before PRIME; 3 reported collecting it during PRIME (Exhibit 164). For assessment of risk for cervical and colorectal cancers, half (5) reported that data was available before PRIME; among remaining hospitals, 4 reported collecting such data under PRIME.

**Exhibit 164: Availability of Data for Assessing Patients at Risk for Cancer**
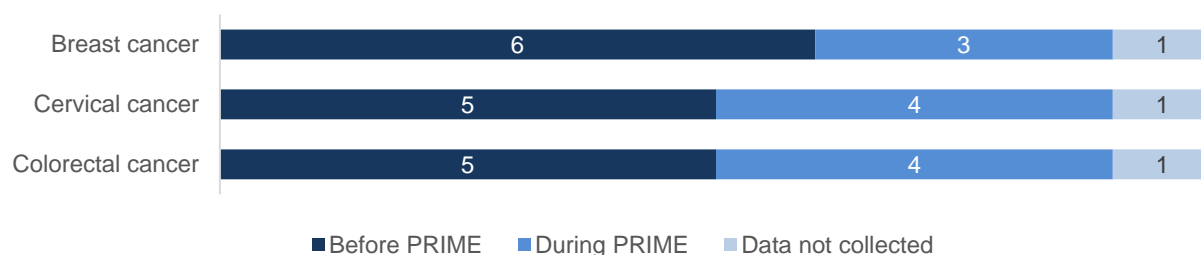


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=10 hospitals participating in Project 1.6 completed the survey.*

## Multidisciplinary Task Force Staffing

Hospitals reported in the interim survey the types of staff that participated in a multidisciplinary task force to identify principle-based expected practices for cancer screening and follow-up. The majority of participating hospitals involved primary care providers (10) and medical support staff (8) in the task force; 1 hospital involved social workers (Data not shown). No hospitals reported involving occupational therapists, behavioral health specialists, pharmacists, neurologists, pain management providers, or home health workers in the task force. As a result of participation in the task force, all 10 hospitals reported that they developed standardized screening processes for breast, cervical, and colorectal cancer; 8 hospitals developed standardized processes for cancer screening follow-up as a result of the task force.

## Protocols for Cancer Screening and Follow-Up

In the interim survey, hospitals reported whether they utilized outside resources to improve receipt of preventative services and to link patients to community-based services. To improve receipt of preventative services, the majority of hospitals reported referencing USPSTF recommendations (7 of 10). Other resources included those from the American Cancer Society (3), National Cancer Institute (1), American College of Obstetricians and Gynecologist (1), and National Committee for Quality Assurance (1; Data not shown).

In the interim survey, hospitals were asked to report the elements that constituted their enterprise-wide standard approaches to screening, as a result of participation in the task force. The majority of hospitals reported using guidelines based on age, frequency of screening, and diagnostic tools to determine system-wide approaches to cancer screening. In creating standard approaches to screening for breast cancer, 9 reported using age-based guidelines, while 8 reported incorporating frequency of screening and diagnostic tools. For cervical and colorectal cancer screening, 8 hospitals reported including age, frequency of screening, and diagnostic tools in the development of standard approaches to screening (Data not shown). Approaches to determining eligibility criteria for screening included following the USPSTF guidelines and PRIME metric specifications.

A hospital described their approaches to increase outreach to patients and improve rates of cancer screenings and follow-up:

> *"The majority of the effort and the improvement that we've done so far has been very much focused on in reach. That is much easier to control because we're taking patients that are already touching our clinics and making sure they get the care. We really focused on impact and screening at the time of a clinic visit, so that there was really no wasted visit. In terms of outreach, I would say our biggest system wide effort has to be collaboration with our health plan…to send out a birthday letter, that goes out around the time of their birthday month, what preventive health medicine, tests, screening, vaccinations are due. With that also, we implemented sending out a FIT kit, to improve our colon cancer screening rate." (Contra Costa)*

## Project Implementation

### Identification of Disparities and Linking Patients to Community-Based Resources

Hospitals reported in the interim survey whether they identified disparities in patterns of health care utilization (such as outpatient visits, and hospitalizations) and severity of conditions for patient at risk of cancer by race/ethnicity, and language, (REAL) and

sexual orientation and gender identity (SO/GI). Of participating hospitals, a minority reported identifying disparities in care delivery among populations at higher risk for cancer (Exhibit 165). Hospitals most commonly reported examining disparities in outpatient visits based on race/ethnicity (4) and language (4), and disparities in severity or complexity of conditions based on race/ethnicity (4).

**Exhibit 165: Identification of Disparities in Care Utilization and Severity of Conditions for Patients at High Risk of Cancer by Race/Ethnicity, Language, and SO/GI**
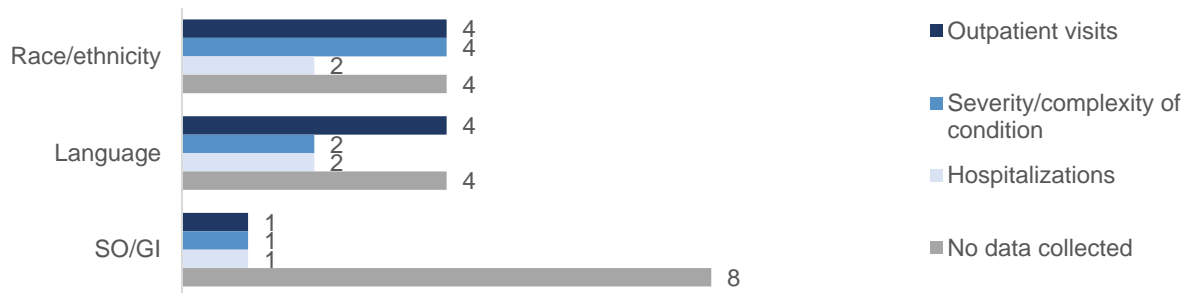


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=10 hospitals participating in Project 1.6 completed the survey. SO/GI, sexual orientation and gender identity.*

In interviews, several hospitals discussed the difficulty of addressing disparities due to the variations in care sources accessed by patients. For example, a hospital described how patients with limited interaction with the hospital may be counted as primary care patients under PRIME:

*"For SVMC PRIME are, as part of our PCMH certification, we did address those type of issues related to race, ethnicity barriers to care. But programmatically as a system this is not part of, this does not preexist part of the PRIME component…Because the definition of what constitutes a PRIME patient is different than say our assigned lives, we had to include patients that may see our podiatrist twice for diabetic foot care and they're getting their diabetic care completely somewhere else. Or people that come just for their well woman exam…and see a gynecologist and getting all their other primary care outside of our system. So we did not in those clinics have any sort of programmatic system to address barriers to care specifically." (Salinas)*

Eight hospitals reported linking patients with cancer to community-based resources, most commonly to informal support groups and educational classes (Exhibit 166). A hospital reported referring patients with breast cancer to exercise classes or activities.

**Exhibit 166: Linkage of Patients with Cancer to Community-Based Resources**
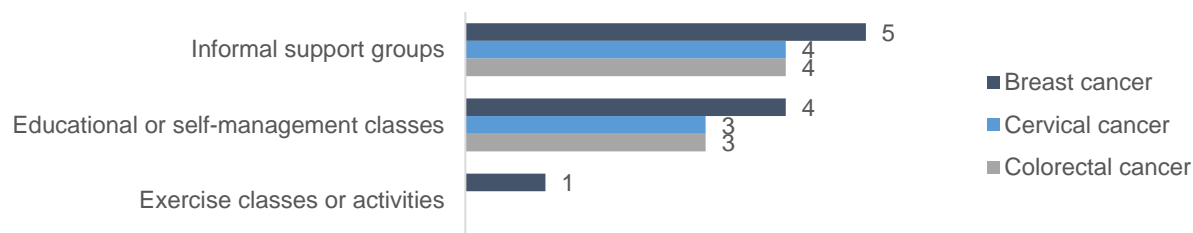


Informal support groups: Breast cancer 5, Cervical cancer 4, Colorectal cancer 4
Educational or self-management classes: Breast cancer 4, Cervical cancer 3, Colorectal cancer 3
Exercise classes or activities: Breast cancer 1

Legend:
- Breast cancer
- Cervical cancer
- Colorectal cancer

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=10 hospitals participating in Project 1.6 completed the survey.*

## Participation in Learning Collaboratives

A few participating hospitals reported participating in learning collaboratives outside of those hosted by Harbage Consulting on behalf of DHCS, SNI/CAPH, or DHLF to inform project implementation (3). Specific learning collaboratives included: UC-wide Primary Care Collaborative, Institute for Healthcare Improvement, and the Partnership Health Plan quality trainings.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10.0). Hospitals reported spending an overall medium level of effort in implementing Project 1.6 (DPH 6.0; DMPH 6.8 (Exhibit 403). Among DPHs, ratings of effort were mostly medium with the highest being to address implementation requirements (6.6). On average, DMPHs reported requiring high effort for effort due to unanticipated change in metrics (7.2), resource intensity (7.2), and implementation requirements (7.2).
In interviews, a hospital discussed their relative ease of project implementation:

> *"Perhaps because there were fewer clinics that we had to—nobody's getting their paps and cancer screening at the cardiology clinic so it was one fewer clinic to have to address…It's part of our primary care. This is sort of well-established protocols. There was very little discussion or any concerns about adopting specific protocols for this area." (Salinas)*

Among other hospitals, effort was needed to establish standardized protocols, implement new health information technology tools, and reorganize and train staff to implement new processes:

*"…in order to improve even further than what we had done in DSRIP, we had some staff reorganization that we had to do to make sure we were offering the same services across all of our clinics. And with that, really trying to standardize the work required coordination around training and establishing a new sort of bi-weekly meeting structure, where the different staff from different sites could learn from each other and start to have the same standards for a number of patients reached per week, and how we document everything in the medical record….teaching everyone how to use an entirely new technology and dashboard tool." (UC San Francisco)*

## Challenges and Solutions to Implementing Cancer Screening and Follow-Up

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 1.6 (Challenges Exhibit 404; Solutions Exhibit 405). The top challenge cited by the hospitals (4) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the hospitals (4) was requiring manual tracking or chart review. The top solution identified by the hospitals (4) was standardizing processes for documentation. The second solution identified by the hospitals (3) was implementing standardized tools and screening and provider and staff training and increased capacity (3).

In interviews, some hospitals noted the challenge of consolidating data from outside hospitals in order to provide accurate and timely information for patient prevention and follow-up services:

*"Some hospitals have found that the health plan provides services that the hospital also provides. Sometimes people will be getting like the same kind of information from 2 different hospitals and then it's hard to figure out who is communicating with whom…There was at one point, the health plan sent out a Pap letter telling women they needed a Pap Smear, but unfortunately they were using data that was inaccurate… Overall, that taught us about how important collaboration is in making sure that we have consistent messages to our patients." (Contra Costa)*

### Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 1.6 (Challenges Exhibit 406: ; Solutions Exhibit 407). The 2 top challenges cited by the hospitals were that processes were not established system-wide (3) and inadequate availability of services (3). The second highest challenge cited by the hospitals was inadequate follow-up processes to document patient outcomes (3). The top solution identified by the majority of hospitals (6) was enhancing outreach

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and capacity to follow up with patients. The second level solutions identified by the hospitals were implementing provider and staff training and increased capacity (3) and standardizing processes across systems (3).

In interviews, hospitals discussed their processes for standardizing cancer screening processes. For example, a hospital noted:

> *"With colorectal cancer screening, [in] DY11 our baseline report was 6.75 percent of our patients being screened… So we decided that can't be the case for our patients so we did a lot of effort throughout QI for that. We put together a team from the FQHCs, from the med center to really tackle that issue. Our champion was actually an LVN… she along with other LVNs and MAs put together beautiful workflows, screenshots, how to order within EPIC and that led to huge improvements at their site and then we then spread that throughout the other FQHCs and local med center. So from that process of standardization of ordering…we went from 6.75 in DY11 to 49.01 in DY12, so it was a huge improvement." (Riverside)*

Another hospital discussed the difficulty of maintaining progress in cancer screening rates initially started during DSRIP:

> *"We had done a lot of work predating in DSRIP around breast cancer screening. It did set us up for this already having high performance in that one area and it has been something of a challenge to maintain that high level of performance through this, especially as we've expanded screening to other areas, but I think we have figured out ways to overcome that challenge."(San Mateo)*

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## Hospital-Reported Metric Performance

Performance of hospitals in Project 1.6 was measured by the following 5 metrics (Exhibit 321: ). All 5 metrics were intended to show progress by increasing rates over time. UCLA categorized all 5 as process metrics.

**Exhibit 167: PRIME Project 1.6 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **BIRADS to Biopsy** | 1.6.1* | LACDHS, SFHN | N/A | Increase | Process |
| **Breast Cancer Screening** | 1.6.2 | NCQA | 2372 | Increase | Process |
| **Cervical Cancer Screening** | 1.6.3 | NCQA | 0032 | Increase | Process |
| **Colorectal Cancer Screening** | 1.6.4.c | NCQA | 0034 | Increase | Process |
| **Receipt of Appropriate Follow-Up for Abnormal CRC Screening** | 1.6.5* | SFHN | N/A | Increase | Process |

*Source: PRIME Metrics Specs, DY13YE*

*Notes: LACDHS: Los Angeles County Department of Health Services, SFHN: San Francisco Health Network, NCQA: National Committee for Quality Assurance, BIRADS: Breast Imaging-Reporting and Data System. * Denotes innovative metric.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as pay for reporting (P4R) or pay for performance (P4P) in a given year, and this varied for DPHs and DMPHs. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. DMPHs did not report data in DY 11, for this project.

## Metric 1.6.1 – BIRADS to Biopsy

Metric 1.6.1 measured the proportion of individuals for whom a breast biopsy was performed or outsourced within 14 business days in the Project 1.6 Target Population who received either a screening or diagnostic mammogram by the PRIME Hospital during the measurement period that was assessed as BIRADs 4 or 5. (PRIME Metric Specs, DY13YE). Hospitals were intended to encourage timely follow up procedures for individuals that tested as suspicious or highly suggestive for malignancies in order to diagnose and treat patients as early as possible. Achievement was measured by an increasing rate.

Overall, DPHs reported mixed trends in weighted average rates (Exhibit 168). DPH UCs reported an increase from 41% in DY 11 to 60% in DY 12, but decreased to 52% in DY13, DPH County hospitals reported an increase from 45% in DY 11 to 48% in DY 12, but decreased to 46% in DY 13. The DMPHs started implementation in DY 12, and overall reported a decrease in weighted average rates. DMPH Non-CAH reported an steady rates at 86% for DY 12 and DY 13, DMPH CAH reported a decrease from 67% in DY 12 to 56% in DY 13. In DY 13, the individual achievement rates for Metric 1.6.1 ranged from 42% to 91% for DPHs and 20% to 100% for DMPHs (data not shown).

**Exhibit 168: PRIME Self-Reported BIRADS to Biopsy\* Rates for Metric 1.6.1**
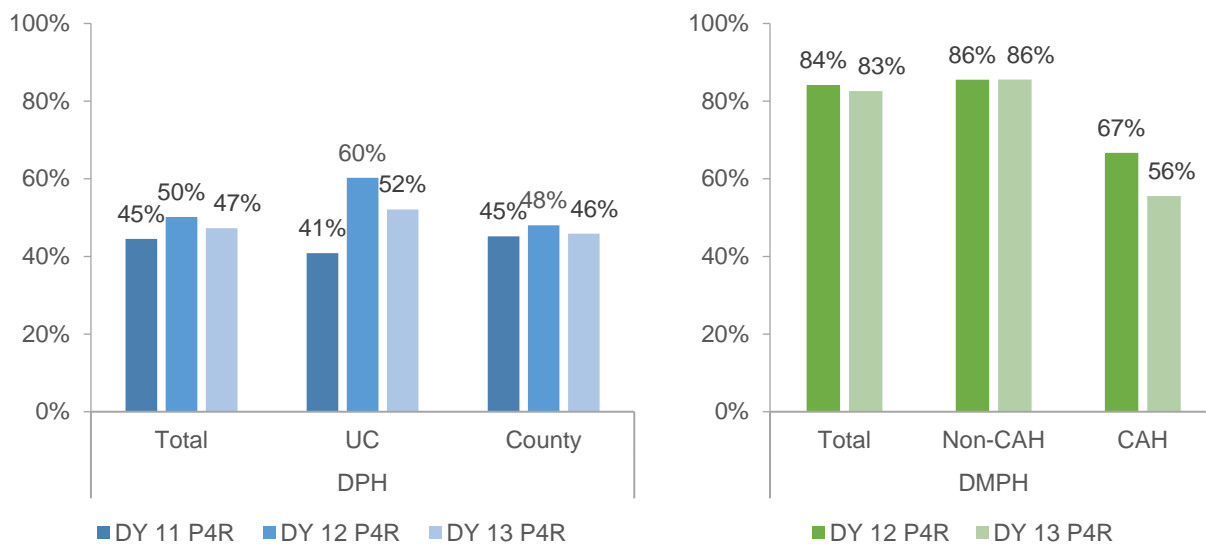


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance.*
*\* Denotes innovative metric.*

## Metric 1.6.2 – Breast Cancer Screening

Metric 1.6.2 measured the proportion of women who had a mammogram to screen for breast cancer in the Project 1.6 Target Population ages 50 to 74. (PRIME Metric Specs, DY13YE). Hospitals were intended to diagnose and treat breast cancer early, especially as it ranks as the second leading cause of cancer-related mortality in women. Achievement was measured by an increasing rate.

Overall, DPHs reported an increase in breast cancer screening rates (Exhibit 169). DPH UCs reported constant rates at 81% from DY 11 to DY 12, and a decrease to 79% in DY 13, DPH County hospitals reported an increase from 63% in DY 11 to 72% in DY 13. The DMPHs started implementation in DY 12, and overall reported an increase in weighted average rates. DMPH Non-CAH reported an increase from 45% in DY 12 to 62% in DY 13, DMPH CAH reported an increase from 30% in DY 12 to 41% in DY 13. In DY 13, the individual achievement rates for Metric 1.6.2 ranged from 51% to 79% for DPHs and 25% to 68% for DMPHs (data not shown).

**Exhibit 169: PRIME Self-Reported Breast Cancer Screening Rates for Metric 1.6.2**

*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance.*

*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.6.3 – Cervical Cancer Screening

Metric 1.6.3 measured the proportion of women who were screened for cervical cancer either through cervical cytology or human papillomavirus co-testing in the Project 1.6 Target Population ages 21 to 64. (NQF 2372, HEDIS, eQCM, PRIME Metric Specs, DY13YE). Hospitals were intended to diagnose and treat women with cervical cancer early; if pre-cancerous lesions are detected early, the likelihood of survival is nearly 100 percent. Achievement was measured by an increasing rate.

Overall, DPHs reported an increase in cervical cancer screening rates (Exhibit 170). DPH UCs reported an increase from 73% in DY 11 to 76% in DY 13, DPH County hospitals reported an increase from 38% in DY 11 to 55% in DY 13. The DMPHs started implementation in DY 12, and overall reported an increase in weighted average rates. DMPH Non-CAH reported an increase from 23% in DY 12 to 56% in DY 13, DMPH CAH reported an increase from 17% in DY 12 to 27% in DY 13. In DY 13, the individual achievement rates for Metric 1.6.3 ranged from 36% to 76% for DPHs and 21% to 67% for DMPHs (data not shown).

**Exhibit 170: PRIME Self-Reported Cervical Cancer Screening Rates for Metric 1.6.3**

*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance.*

*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.6.4.c –Colorectal Cancer Screening

Metric 1.6.4.c measured the number of individuals in the with 1 or more screenings for colorectal cancer among patients in Project 1.6 Target Population aged 50-75 years of age with a visit during the measurement period (NQF 0034, QPP spec, eCQM spec, PRIME Metric Specs, DY13YE). Hospitals were intended to increase screening for colorectal cancer in order to catch the disease in its earliest stages and increase 5-year survival rate. Achievement was measured by an increasing rate.

Overall, DPHs reported an increase in colorectal cancer screening rates (Exhibit 171). DPH UCs reported constant rates of 76-77% for all 3 years, DPH County hospitals reported an increase from 60% in DY 11 to 70% in DY 13. The DMPHs started implementation in DY 12, and overall reported an increase in weighted average rates. DMPH Non-CAH reported an increase from 20% in DY 12 to 40% in DY 13, DMPH CAH reported an increase from 26% in DY 12 to 38% in DY 13. In DY 13, the individual achievement rates for Metric 1.6.4.c ranged from 38% to 77% for DPHs and 20% to 91% for DMPHs (data not shown).

**Exhibit 171: PRIME Self-Reported Colorectal Cancer Screening Rates for Metric 1.6.4.c**
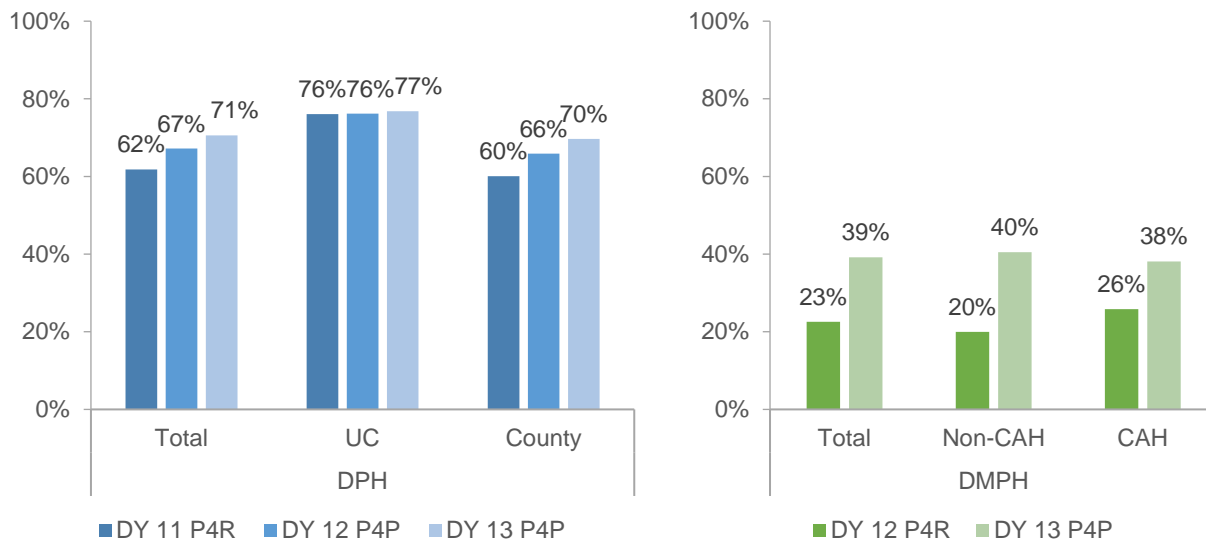
*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.6.5 – Receipt of Appropriate Follow-Up for Abnormal CRC Screening

Metric 1.6.5 measured the number of patients receiving a colonoscopy within 6 months of the date of the positive stool test among patients in the Project 1.6 Target Population aged 51-75 years of age with a positive FIT/FOBT during the first 6 months of the measurement period. (PRIME Metric Specs, DY13YE). Critical to a FIT screening strategy is colonoscopy completion after an abnormal screening test. Organized approaches between primary care practice, gastroenterology, and patients are needed to improve care coordination. Achievement was measured by an increasing rate.

Overall, DPHs reported a decrease in weighted average rates (Exhibit 172). DPH UCs reported an decrease from 49% in DY 11 to 36% in DY 12, and increased to 40% in DY 13, DPH County hospitals reported a decrease from 38% in DY 11 to 19% in DY 12, and remained constant in DY 13. The DMPHs started implementation in DY 12, and overall reported an increase in weighted average rates. DMPH Non-CAH reported an increase from 13% in DY 12 to 67% in DY 13, DMPH CAH reported an increase from 3% in DY 12 to 15% in DY 13. In DY 13, the individual achievement rates for Metric 1.6.5 ranged from 7% to 56% for DPHs and 0% to 67% for DMPHs (data not shown).

**Exhibit 172: PRIME Self-Reported Abnormal Colorectal Cancer Screening Follow-Up\* Rates for Metric 1.6.5**
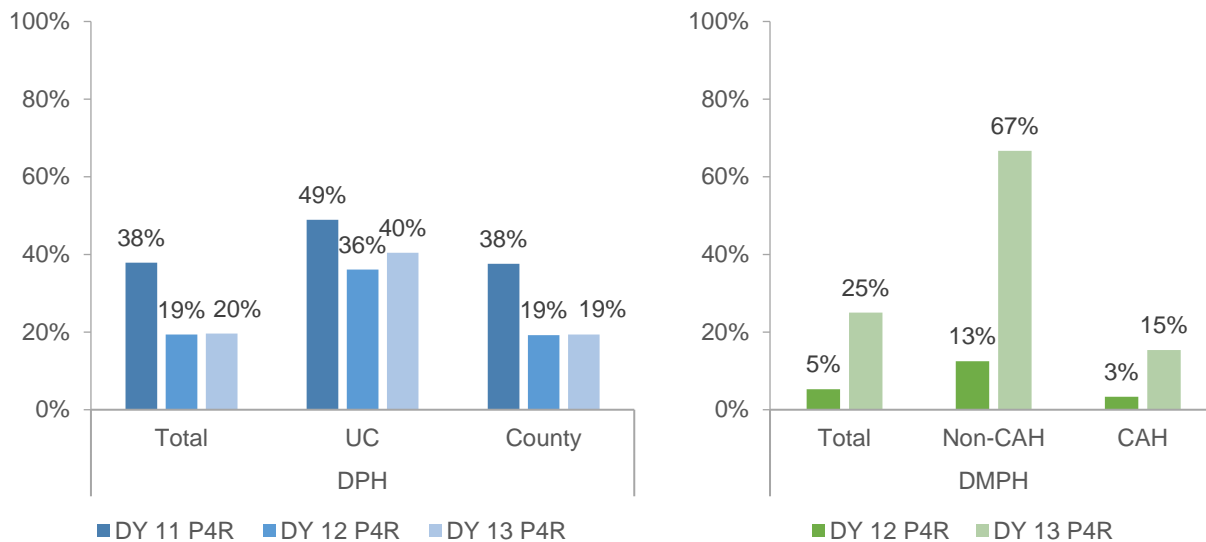


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. \* Denotes innovative metric.*

## Summary of Key Findings

Project 1.6 was designed to improve early diagnosis and timely treatment of cancer by promoting evidence-based and coordinated processes for prevention, screening, and follow-up. In DY 11 15 hospitals were participating in Project 1.6, but this number decreased to 11, as 3 hospitals dropped the project and 1 closed; 10 hospitals completed the interim survey. Most core components were not implemented before PRIME; during PRIME most of the hospitals implemented the majority of the components. Before PRIME the majority of hospitals were using their EHR systems for clinical decision support, registries, and panel/population management approaches (6). About half of the hospitals had data to assess patients at risk for breast, cervical, and colorectal cancer before PRIME and all but 1 did this during PRIME.

The majority involved primary care providers (10) and medical support staff (8) in a task force to identify principle-based expected practices for cancer screening and follow-up. As a result of participation in the task force, all or nearly all hospitals developed standardized screening and follow-up processes for breast, cervical, and colorectal cancer. To improve receipt of preventative services, the majority referenced USPSTF recommendations (7); 4 other references were used less frequently. Hospitals determined system-wide approaches to cancer screening using guidelines based on age, frequency of screening, and diagnostic tools to. For example, age-based guidelines were incorporated into standards for screening for breast cancer (9) and cervical and colorectal cancer screening (8); frequency of screening and diagnostic tools were used by 8 hospitals for all 3 screening tests.

Hospitals inconsistently collected and used demographic data to identify disparities in care delivery among populations at higher risk for cancer. Several (4) hospitals examine disparities in outpatient visits based on race/ethnicity and language and disparities in severity or complexity of conditions based on race/ethnicity.

Eight hospitals linked patients with cancer to community-based resources, most commonly to informal support groups and educational classes.

The overall level of difficulty in implementing this project was medium (DPH 6.0; DMPH 6.8 of 10). The top metric and data-related challenges were inadequate IT infrastructure (4), requiring manual tracking or chart review (4). The top solutions identified by the hospitals were standardizing processes for documentation (4) and enhancing outreach and capacity to follow up with patients (6).

Metrics for Project 1.6 were 1.6.1*-BIRADS to Biopsy; 1.6.2 -Breast Cancer Screening; 1.6.3 -Cervical Cancer Screening; 1.6.4.c -Colorectal Cancer Screening; and 1.6.5*-

Receipt of Appropriate Follow-Up for Abnormal CRC Screening. The performance was measured by 5 process metrics, including 3 standard and 2 innovative metrics (denoted with an *). Both DPH and DMPHs showed progress over time in 3 metrics (1.6.2, 1.6.3, 1.6.4.c). DPHs had mixed results for 1 metric (1.6.1) and did not show improvement in another metric (1.6.5). DMPHs did not have an improvement for 1 metric (1.6.1) but showed progress for another metric (1.6.5).

Overall, hospitals made significant progress in establishing data infrastructure and protocols, including referencing the U.S. Preventive Services Task Force recommendations and establishing guidelines to improve cancer screening, follow-up, and tracking patients at risk for cancer. Hospitals reported improvements in the majority of metrics. However, they varied in their progress in project implementation, particularly in using demographic data to assess disparities.

# Project 1.7 – Obesity Prevention and Healthier Foods Initiative

## Project Overview

Project 1.7 was designed to reduce obesity by using evidence-based approaches to guide systematic delivery of related services by providers and promoting the availability of healthier foods in public settings such as hospitals. These goals were to be achieved by developing the needed infrastructure such as availability of data and development of protocols for obesity screening, referral, and treatment; as well as following care processes that promote population health such as providing healthier food options at hospital facilities and linking patients to community-based resources (Attachment Q). Specific objectives can be found in Attachment Q.

Project 1.7 was not a required project for DPHs; 2 DPHs (County: Arrowhead and Los Angeles) selected this project (Exhibit 173). Nine DMPHs participated in this project, including 6 that participated for the full duration (El Centro, Lompoc Valley, Palomar, San Gorgonio, Sierra View, and Tri-City); and 3 DMPHs switched during PRIME (Coalinga added the project in DY 12, but then closed after completing the survey and interview; Healdsburg, a CAH, stopped during DY 12; and Mayers Memorial, a CAH, joined the project in DY13 but did not report data in DY 13). Due to these factors, Coalinga, Healdsburg, and Mayers Memorial were not included in the self-reported data analysis. Ten hospitals were participating in this project at the time the interim survey data was collected.

**Exhibit 173: PRIME Project 1.7 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 9 | 8 | 8 |
| **Total DPH** | 2 | 2 | 2 |
| **DPH UC** | 0 | 0 | 0 |
| **DPH County** | 2 | 2 | 2 |
| **Total DMPH** | 7 | 6 | 6 |
| **DMPH Non-CAH** | 7 | 6 | 5 |
| **DMPH CAH** | 0 | 0 | 1 |

*Source: Data provided by DHCS.*

*Notes: The number of participating hospitals indicates those that implemented the project for the full DY. Among the DMPH Non-CAHs, Coalinga Regional Medical Center added the project in 2016, then closed in 2017 and was not included in the self-reported data analysis. Among the DMPH CAHs, Healdsburg dropped the project on 10/20/16. Mayers Memorial Hospital District (CAH) added the project on 12/08/17. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.\* Due to insufficient data, Coalinga (DY12 Non-CAH), Healdsburg (DY 12 CAH), and Mayers Memorial (DY 13 CAH) were excluded from the self-reported data analysis due to insufficient data.*

Participating hospitals reported whether and when they implemented the suggested core components of this project as an indication of their overall approach to obesity prevention and healthier foods initiatives. In the survey, 6 hospitals reported that prior to PRIME they had begun implementing processes to provide recommended clinical preventive services and 5 reported adopting and using certified electronic health record systems, including clinical decision supports and registry functionality to support provision of targeted preventive service (Exhibit 174). During PRIME, all or nearly all participating hospitals reported implementing all the core components except for implementing a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership.

**Exhibit 174: PRIME Project 1.7 Core Components**

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Collect or use preexisting baseline data on receipt and use of targeted preventive services, including any associated disparities related to race, ethnicity or language need. | 2 | 7 |
| Implement processes to provide recommended clinical preventive services in line with national standards, including but not limited to the US Preventive Services Task Force (USPSTF) A and B Recommendations. | 6 | 10 |
| Improve access to quality care and decrease disparities in the delivery of preventive services. | 4 | 10 |
| Employ local, state and national resources, and methodologies for improving receipt of targeted preventive services, reducing associated disparities, and improving population health. | 4 | 9 |
| Adopt and use certified electronic health record systems, including clinical decision supports and registry functionality to support provision of targeted preventive services. Use panel/population management approaches (e.g., in-reach, outreach) to reduce gaps in receipt of care. | 5 | 7 |
| Based on patient need, identify community resources for patients to receive or enhance targeted services and create linkages with and connect/refer patients to community preventive resources, including those that address the social determinants of health, as appropriate. | 4 | 8 |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership | 3 | 6 |
| Encourage, foster, empower, and demonstrate patient engagement in the design and implementation of programs. | 2 | 9 |
| Prepare for and implement the Partnership for a Healthier America's Hospital Healthier Food Initiative | 0 | 10 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=10 hospitals participating in Project 1.7 completed the interim survey. Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey hospitals may have implemented or dropped activities under a core component*

## Infrastructure

### Availability of Data and Obesity Registries

In the interim survey, the majority (8 of 10) hospitals reported having data about high body mass index (BMI) or obesity before PRIME and 2 reported that this data became available during PRIME (data not shown). Furthermore, 3 hospitals also collected additional types of data either before or during PRIME, such as healthy habits, other comorbidities, number of encounters, and HEDIS measures for the health plans. In addition, 3 of the participating hospitals had a registry for adults with obesity, and 2 had a registry for children with obesity.

### Protocols and Multidisciplinary Staffing

In the interim survey, hospitals reported use of preventative service guidelines and resources from CDC (4), U.S. Preventive Services Task Force (2), Weight of the Nation (1), Association of Nutrition and Dietetics (i.e. eatright.org, 2), and American Medical Association (1), and UC Extension (1; data not shown).

## Project Implementation

### Use of Data and Obesity Management

Prior to PRIME, none of the hospitals were actively accessing and using obesity data. Both DPHs had baseline data, but were not using it before PRIME; all the DMPHs collected baseline data specifically for PRIME (data not shown). Five participating hospitals reported identifying disparities in care delivery for patients with high BMI based on language, 4 on race/ethnicity, and 3 based on SO/GI (data not shown). The type of disparities identified most frequently were outpatient visits and readmissions (Exhibit 175).

**Exhibit 175: Disparities Identified for Populations with High BMI and/or BMI Above the Obesity Threshold Under PRIME, by Type**
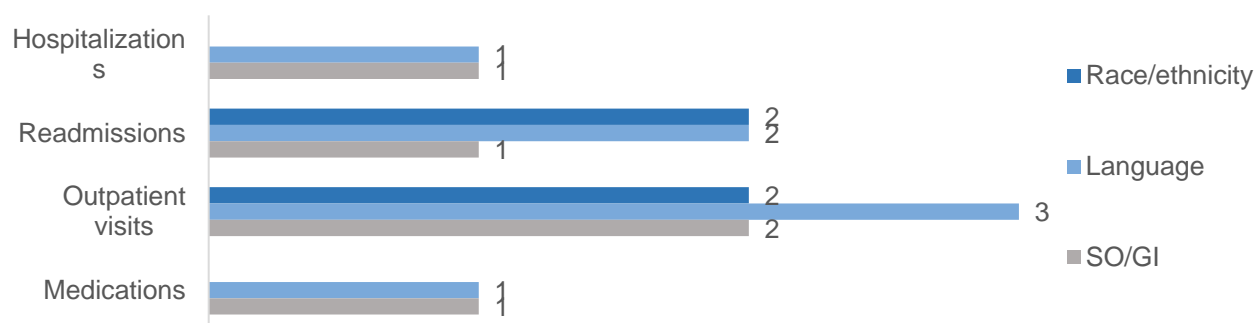
*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Note: N= 10 hospitals participating in Project 1.7 completed the interim survey.*

In the interviews, hospitals explained approaches to obesity management:

*"We also have an outpatient medical nutrition therapy clinic, where our patients who are identified by the dietitians, who are identified with an obese body mass index or a malnourished body mass index. If they're identified as malnourished by the physician who's treating them, the dietitians get a consult... They're providing education… [Nutritionists] would have to promote the physician, especially the primary physician, to submit an order for nutrition therapy and that way Medi-Cal covered it." (Tri-City)*

*"[Metric] 1.7.3, we could never do because we don't have pediatrics. Although, we tried to do that because we went outside to the boys and girls club and started coaching the boys and girls club's families on sound nutrition, sound cooking. So, our nutritionists went out initially to start that up, but then we found out that that wasn't going to count because those people are not from our patient baseline... we have no way of knowing who shows up to those talks as to whether they are patients. It's just extending our services out into the community." (Tri-City)*

In the interim survey, 7 hospitals linked children and 8 hospitals linked adults to community based resources. A hospital that did not provide linkage indicated this was because they had the internal capacity to provide the services and another hospital that linked only adults indicated this was because they did not have a pediatric population. Most participating hospitals reported linking adults (7) and children (6) to educational or self-management classes, followed by exercise classes (6 for adults and 5 for children, respectively; Exhibit 176).

**Exhibit 176: Linkage to Community-Based Resources Provided to Adults and Children Under PRIME, by Type of Service**
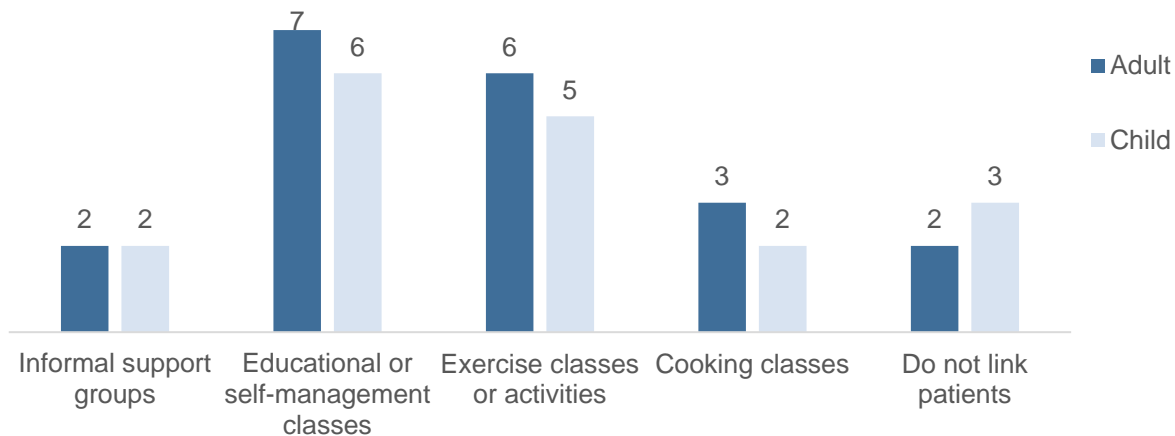
*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Note: N= 10 hospitals participating in Project 1.7 completed the interim survey.*

In the interviews, hospitals pointed out specific examples for identifying patients who needed services and connecting them to those services included using the eConsult system to link patients to YMCA programs and working to implement a Food Insecurity Screening tool for pediatric patients. A hospital reported working with the County Public Health Department for educational and self-assessments classes and working with a managed care plan for cooking classes.

Some hospitals did not have adult primary care or pediatrics clinics, so they needed to develop multidisciplinary teams and linkages with external providers.

*"We don't have a pediatric presence, but … [have] pediatric patients in the emergency room… [So] we brought on … registered dieticians to work with our FQHCs... One of the FQHC's within that project… they were doing screening, but they've had projects that come and go, depending upon grants... [another] had a lot of work that they'd put into that space, in trying to work with their patient population. And so we were looking on how we can adjunct. So we've met with the leadership from the FQHCs… We leverage PRIME as being the umbrella that we can help to try to make gains on both sides." (Palomar)*

## Provision of Healthier Food Options

Hospitals were required to join the PHA's Hospital Healthier Food Initiative, which requires healthy food options for patients, families at hospitals, nutrition standards, labeling and marketing, and food preparation standards. There are 9 criteria in the 1.7.2 PRIME metric:

**Exhibit 177. Summary of Hospital Healthier Food Initiative Criteria**

1. Label all items in the cafeteria with their calorie information
2. Only show healthier options in pictures/advertisements at the cafeteria and on patient menus
3. Only display healthier foods at check out and within 5 feet of cafeteria cash registers
4. Offer at least 1 daily Children's Wellness Meal
5. Offer daily Wellness Meals, starting with 1 and annually add another, for a minimum of 3
6. Offer health-promoting entrees and side dishes in the cafeteria and on patient menus
7. Fruit and vegetable sales are 10% of food dollar purchases
8. Healthier beverage sales are 80% of beverage dollar purchases, tap water is included as a credit
9. Optional: remove fryers and deep-fat fried products from the cafeteria and patient menus

All participating hospitals noted that water promotion, labeling, and healthier options for cafeteria meals were focuses of the initiative and 5 focused on improving vending machine options (data not shown).

In the interim survey, 9 hospitals reported forming a team specifically for the initiative, conducting a policy and environmental assessment, and developing implementation and maintenance plans; 8 (80%) hospitals reported engaging stakeholders and partners, and 7 (70%) evaluated the impact of the initiative's efforts (data not shown).

## Participation in Learning Collaboratives

A hospital participated in a learning collaborative outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, and DHLF—the Imperial County Community Obesity Prevention Alliance.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10.0). DPH hospitals reported spending a medium level (4.0) of overall effort in implementing Project 1.7 and DMPH hospitals reported spending a high level (7.5) of overall effort to implement (Exhibit 403). Among DPHs, ratings of effort were mostly medium with conducting staff training (5.5) being the highest. On average, DMPHs reported requiring high effort for engaging internal stakeholders (7.1), staff training (7.4), resource intensity (7.7), and implementation requirements (7.7).

*"The level of effort on this one was because of the lack of presence in the ambulatory care space and the need to develop those relationships and then get the FQHC's to accept and be willing to have our staff within their facility. The metric manual has changed so much and identifying which population to use. So we've done a whole plan, and design, and build around one thing, and then had to change it again. And then with having to then decide to hire in that position and decide what that position was going to be." (Palomar)*

*"The Healthier America stuff is somewhat difficult to implement. Then also, we've had some difficulty with the doctors referring the patients to get nutritional help. So, we're trying to [have a] more proactive role on the front end, where we actually spend more time with the patients that are critical … we spend more time with the folks [and] give them more information. We give them a pamphlet and encourage them to reach out to their primary to get services for 1.7.1. 1.7.2 is just simply difficult because people love*

*junk food. People want to drink sodas. Moving towards the healthier diet, a lot of people resist." (Tri-City)*

## Challenges and Solutions to Obesity Prevention and Healthier Foods Initiatve

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 1.7 (Challenges: Exhibit 404; Solutions Exhibit 405). The top challenge cited by the hospitals (4) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the hospitals (3) was variation in documentation within system by providers and staff and requiring manual tracking or chart review (3). The top solution identified by the hospitals (4) was EHR/IT standardization or expansion across the system. The second solution identified by the majority of hospitals (3) was process development from management and QI.

### Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 1.7 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by the hospitals (3) was processes not being established system-wide. The second challenge cited by the hospitals (3) was silo-ed departments and difficulty collaborating. The top solution identified by the hospitals (3) was expanding services and availability. The second solution identified by the hospitals (2) was standardizing processes across the system. In the interviews hospitals discussed establishing partnerships to implement the outpatient PRIME metrics:

*"We're not normally in that ambulatory care space, [so] we're having to put staff into that space, in order for us to meet those metrics. That is definitely been one thing that has been a challenge is that, many of the metrics within PRIME have to do with practice outside our organization and how do we help to do influence over that... the EHR that we have is primarily for the hospital portion of our services, and so having to incorporate activities done in an outpatient bases in an ambulatory care space was not something that we had originally built into the system. And so we were having to do… paper documentation or other methods in order to try to be able to capture that data." (Palomar)*

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## Hospital-Reported Metric Performance

Performance of hospitals in Project 1.7 was measured by the following 3 metrics (Exhibit 178) that were intended to show progress by increasing rates over time. UCLA categorized all as process metrics.

**Exhibit 178: PRIME Project 1.7 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **BMI Screening and Follow-Up** | 1.7.1@ | CMS | 0421 | Increase | Process |
| **Partnership for a Healthier America's Hospital Health Food Initiative External Food Service Verification** | 1.7.2 | DHCS | N/A | Increase | Process |
| **Weight Assessment & Counseling for Nutrition and Physical Activity for Children & Adolescents** | 1.7.3 | NCQA | 0024 | Increase | Process |

*Source: PRIME Metrics Specs, DY 13YE*

*Notes: CMS: Centers for Medicare & Medicaid Services, DHCS: California Department of Health Services, NCQA: National Committee for Quality Assurance. @ A trend break was issued for this metric in DY12.*

Metrics were designated as pay for reporting (P4R) or pay for performance (P4P) in a given year, and this varied for DPHs and DMPHs. In general, DMPHs did not report data in DY 11, for this project.

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. This process was repeated for each metric.

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## Metric 1.7.1 – Body Mass Index (BMI) Screening and Follow-Up

Metric 1.7.1 measured the number of patients in the Project 1.7 Target Population aged 18 years and older with a documented BMI and a documented follow-up if BMI was outside the normal parameter ([PRIME Metric Specs, DY 13YE](#)).The normal parameter for patients aged 18 years and older was a BMI between 18.5 and 25 kg/m$^2$. Hospitals were intended to increase earlier detection of chronic disease and other health complications, particularly for patients who are obese or underweight. Note that a trend-break notice was issued for this metric (PPL-17-007 DY 12) to expand the time period for the numerator. Achievement was measured by an increasing rate.

Progress was demonstrated through an increase in rates over time. DPHs reported an increase in the weighted average rate of documentations of BMI screening and follow-ups (if appropriate) from 32% in DY 11 to 60% in DY 12, and 88% in DY 13 (Exhibit 179). DMPHs did not report this metric in DY 11 but reported 28% documentation in DY 12 and 51% in DY 13. In DY 13, the individual achievement rates for Metric 1.7.1 ranged from 88% to 88% for DPHs and 0% to 73% for DMPHs (data not shown).

**Exhibit 179: PRIME Self-Reported BMI Screening and Follow-Up Rates for Metric 1.7.1**
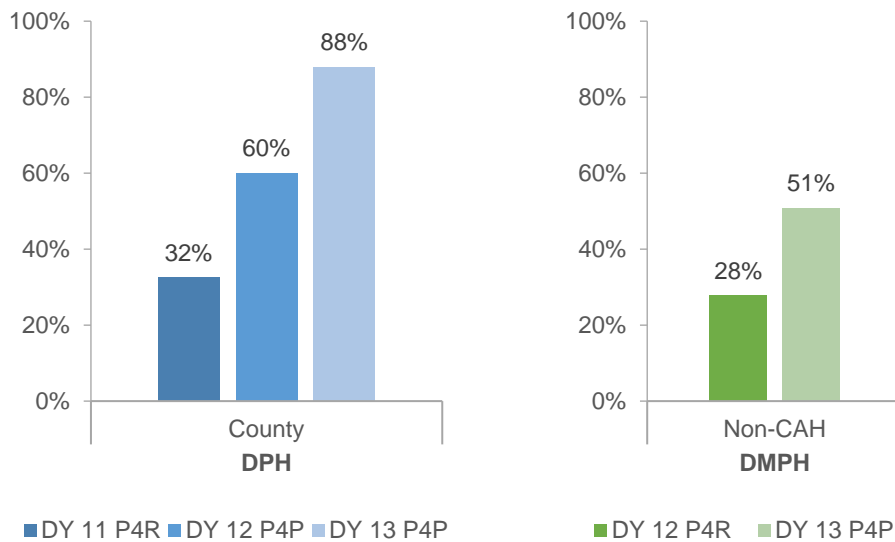
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*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. Only County DPH and Non-CAH DMPH hospitals reported data for this metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 1.7.2 – Partnership for a Healthier America's Hospital Health Food Initiative External Food Service Verification

Hospitals were intended to promote full-service healthier hospital food operations. The numerator for Metric 1.7.2 is the total number of criteria that each hospital met relative to the denominator of 8 total criteria per facility (Exhibit 177). For example, a hospital with 1 facility that implemented 5 of the criteria would be 5/8. Some hospitals had more than 1 facility in their system, so the denominator was calculated as the total number of criteria (8) times the total number of hospitals in that system (PRIME Metric Specs, DY 13YE). For example, Los Angeles reported for 5 facilities, resulting in a denominator of 40 (8 metrics*5 facilities). UCLA created a weighted average of the numerators and denominators. The denominator is the sum of the reporting hospitals (DY 11 includes Los Angeles 40 plus Arrowhead 8 = 48); these hospitals reported a total of 21 criteria, for a weighted average of 44% (21/48). Progress was demonstrated through an increase in rates over time.

DPHs reported an increase in the weighted average rates from 44% in DY 11 to 67% in DY 12, and 85% in DY 13 (Exhibit 180). DMPHs did not report this metric in DY 11. Overall, the DMPHs did report an increase in weighted average rates from 29% to 57% between DY 12 and DY 13.

**Exhibit 180: PRIME Self-Reported Partnership for a Healthier America's Hospital Health Food Initiative Rates for Metric 1.7.2**
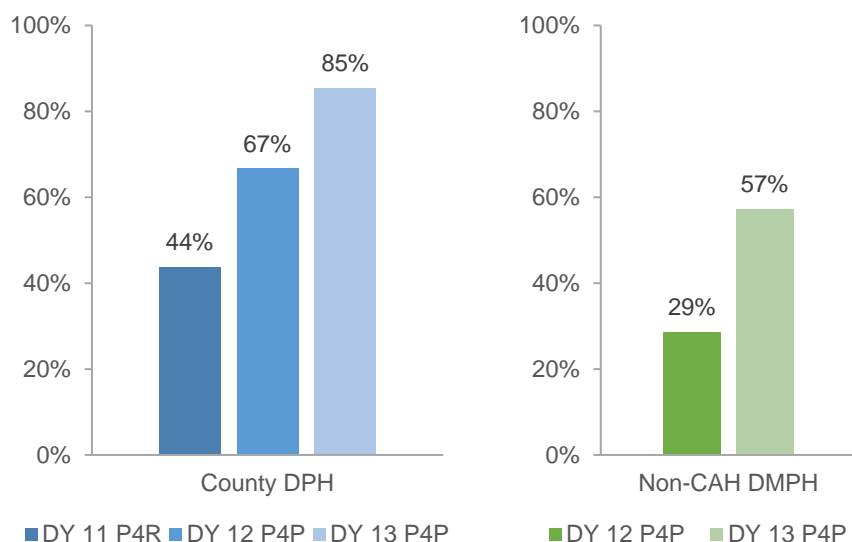


*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. Only County DPHs and Non-CAH DMPHs reported data for this metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 1.7.3– Weight Assessment & Counseling for Nutrition and Physical Activity for Children & Adolescents

Metric 1.7.3 measured the proportion of patients in the Project 1.7 Target Population between the ages of 3 and 17 who had received counseling for nutrition or physical activity or had their height, weight, and BMI recorded during the measurement period (PRIME Metric Specs, DY 13YE). Hospitals were intended to track BMI monitoring and counseling rates among pediatric patients. Achievement was measured by an increasing rate.

Progress is demonstrated through an increase in rates over time. For all 3 sub-metrics, the DPHs reported a decline in the documentation of counseling for nutrition and physical activity and assessments of weight for pediatric patients (Exhibit 181). In DY 12, the number of counseling and weight assessments reported increased and remain at that level in DY 13. The prevalence of weight assessments was highest among the DPHs, followed by counseling for nutrition and counseling for physical activity. The DMPHs reported low documentation of counseling for both nutrition and physical activity in DY 12; documentation increased in DY 13. For weight assessment, the DMPHs were already assessing the weight of most pediatric patients.

**Exhibit 181: PRIME Self-Reported Weight Assessment & Counseling for Nutrition and Physical Activity Rates for Metric 1.7.3**



*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. Only County and Non-CAH hospitals reported data for this metric.*

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## Summary of Key Findings

Project 1.7 was designed to reduce obesity by using evidence-based approaches to guide the systematic delivery of related services by providers and promoting the availability of healthier foods in hospitals. Eleven hospitals (2 DPHs, 9 DMPHs) participated in the project and reported metric performance data; 6 DMPHs were involved for the duration of the project and 3 added or dropped the project between DY 11 to DY 13, and 10 hospitals completed the interim survey. Before PRIME, multiple hospitals implemented some aspects of this project, but the majority newly selected or implemented the core components of this project.

Most hospitals had some data infrastructure, but all expanded their use of this data under PRIME. The majority (8) had data about high body mass index (BMI) or obesity before PRIME and 2 added it during PRIME. However, none of the hospitals were actively accessing and using it. Both DPHs had baseline data, but were not using it before PRIME; all the DMPHs collected baseline data specifically for PRIME. Five hospitals identified disparities in care delivery for patients with high BMI based on language, 4 on race/ethnicity, and 3 on SO/GI. The most frequently identified disparities were outpatient visits and readmissions. Hospitals used 6 types of preventative service guidelines and resources, the most common was the CDC (4). Hospitals linked children (7) and adults (8) to community-based resources; these included education, self-management, and exercise classes.

Hospitals joined the Hospital Healthier Food Initiative, in which hospitals shifted toward healthier food options for patients, families, and providers through nutrition standards, labeling and marketing, and not frying food. Hospitals formed teams to implement the initiative, conducted policy and environmental assessments, and developed implementation and maintenance plans (9); engaged stakeholders and partners (8), and evaluated the impact of the initiative's efforts (7). All hospitals focused on water promotion, labeling, and healthier options for cafeteria meals; and 5 focused on improving vending machine options.

The overall level of difficulty to implement the project was less for DPHs (a medium level, 4.0 of 10) than for DMPHs (a high level, 7.5). Data and metric-related challenges to implementation included IT infrastructure lacking data query ability, tracking, or reporting functions (4); variation in documentation within system by providers (3); staff and requiring manual tracking or chart review (3); silo-ed departments and difficulty collaborating (3); and processes not being established system-wide (3). These challenges were addressed by EHR/IT standardization or expansion across systems (4), process development from management and QI (3), expanding services and availability (3), and standardizing processes across the system (2).

Metrics in 1.7 included 1.7.1-BMI Screening and Follow-Up (this metric had a trend-break in DY 12); 1.7.2-Partnership for a Healthier America's Hospital Health Food Initiative External Food Service Verification; 1.7.3-Weight Assessment & Counseling for Nutrition and Physical Activity for Children & Adolescents. Both types of hospitals improved their performance in the 3 standard process metrics.

Overall, hospitals made significant progress in implementing Project 1.7 by establishing data infrastructure and protocols for tracking obesity/BMI and preventive care services, implementing the Hospital Healthier Food Initiative by restructuring food services to improve access and selection of healthier choices, and implementing processes to provide preventive services with the goal of increasing access to care and addressing disparities. Hospitals improved in all of the metrics, however, these were process metrics and did not track changes in BMI or health outcomes.

# Domain 2- Targeted High-Risk or High-Cost Populations

## Project 2.1 – Improved Perinatal Care

### Project Overview

Project 2.1 was designed to promote quality improvement and use of best practices to deliver safe, efficient, and equitable care and subsequently improve maternal and child health. These goals were to be achieved by participating in statewide and national initiatives focused on improved perinatal and postpartum care, including care coordination to address co-morbidities, decreased unnecessary cesarean section (C-section) rates, reduced morbidity and mortality associated with maternal hemorrhage, and increased breastfeeding rates. Specific objectives can be found in Attachment Q.

For Project 2.1, 20 hospitals participated and reported metric performance data for all 3 demonstration years (Exhibit 182). It was required for DPHs, however 16 DPHs implemented this required project. San Mateo did not participate because they do not provide Obstetrics (OB) delivery services. Four DMPHs participated in this project, including Antelope Valley, El Camino, Tri-City, and Washington.

**Exhibit 182: PRIME Project 2.1 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 20 | 20 | 20 |
| **Total DPH** | 16 | 16 | 16 |
| **DPH UC** | 5 | 5 | 5 |
| **DPH County** | 11 | 11 | 11 |
| **Total DMPH** | 4 | 4 | 4 |
| **DMPH Non-CAH** | 4 | 4 | 4 |
| **DMPH CAH** | 0 | 0 | 0 |

*Source: Data provided by DHCS.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the suggested core components of this project as an indication of their overall approach to improving perinatal care. In the interim survey, 15 hospitals reported that prior to PRIME they had encouraged best practices and facilitated provider education to improve C-section rates and decrease inequities among these rates ( Exhibit 183). Fourteen reported achieving Baby-Friendly hospital designation prior to PRIME. During PRIME, nearly all hospitals reported implementing each of the 4 core components. Although there were not a large

number of core components, obtaining Baby-Friendly hospital designation and implementing the CMQCC bundles were complex tasks with multiple requirements.

**Exhibit 183: PRIME Project 2.1 Core Components**

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Engage in best practice learning collaborative to decrease maternal morbidity and mortality related to obstetrical hemorrhage (CMQCC/PSF/HQI combined effort). | 12 | 19 |
| Achieve Baby-Friendly hospital designation through supporting exclusive breastfeeding prenatally, after delivery, and for 6 months after delivery and using lactation consultants after delivery. | 14 | 16 |
| Encourage best practice and facilitate provider education to improve cesarean section rates, and decrease inequities among cesarean section rates. Participate, as appropriate, in statewide QI initiatives for first-birth low-risk cesarean births. | 15 | 18 |
| Coordinate care for women in the post-partum period with co-morbid conditions including diabetes and hypertension | 7 | 14 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N= 20 hospitals participating in Project 2.1, Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey hospitals may have implemented or dropped activities under a core component, CMQCC: California Maternal Quality Care Collaborative, PSF: Partnership for Smoke-Free Families, HQI: Hospital Quality Institute.*

## Infrastructure and Project Implementation

### Prenatal Care, Postnatal Care, and Care Coordination

Project 2.1 was intended to address a number of problems in maternal care including timeliness of prenatal care, specified by a prenatal visit in the first trimester and a postpartum visit between 3 to 8 weeks. Participating hospitals reported on their performance of these metrics in their reports, described in Hospital-Reported Metric Performance of this report. In addition, Project 2.1 was intended to address specific challenges for women with co-morbid conditions such as diabetes and hypertension who require additional care.

In their reports, a DMPH reported increasing their outpatient capacity and another DMPH strengthened partnerships with community providers to increase prenatal care:

> *"[We] expanded service to the community, and made improvements in systems and processes. WHHS opened a Prenatal Diagnostic Center (PDC) in June 2017. The PDC provides advanced prenatal care, diagnostic testing, and education. As a result, we now have a community-based option to identify, prevent, and plan for pregnancy and newborn complications… The PDC is now in its permanent clinic space, after*

*delays obtaining [California Department of Public Health] inspections. WHHS facilitated a week long LEAN Value Stream Workshop for the OB Department. The workshop included WHHS and community based obstetricians, pediatricians, nursing, lab, and many others. The purpose of the workshop was to observe, learn, and identify solutions towards more efficient flow and seamless care." (Washington)*

*"[We] enabled workflow changes at our community partner (MayView) to better identify our patient population; supporting our community partner by providing scribe support for the perinatal team, offering free prenatal, childbirth and related classes for their patients at the hospital, and regularly meeting with the perinatal team to understand their concerns and offer support. We have further strengthened information sharing between patients that are seen for perinatal primary care at MayView and that deliver at ECH. This way, clinicians can better anticipate delivery and postnatal needs." (El Camino)*

Two hospitals described their approach to care coordination to be grounded in a broader understanding of a variety of risk factors that lead to poor outcomes:

*"We have a women's center here (Sweet Success) for those moms that were identified as high-risk for prenatal diabetes or perinatal diabetes… we asked the dietitians, the nutritionists to work with the maternal child health folks to set up a medical nutrition therapy clinic (and) try to get them into the cardiac wellness as well to make sure that we're touching the 1.5 Healthy Hearts... That was one of those aha moments… this isn't just 1.7 in a vacuum. It isn't just 2.1 in a vacuum. It isn't just 1.5 in a vacuum. We have one patient who could potentially be a denominator for 3 projects. So, that's where that became a collaborative effort." (Tri-City)*

*"(In) the OB clinic they were not being screened for depression. They were hit or miss, some patients were and some patients were not. But this doctor, he just got the license and he said we are required to screen every single patient for depression and for substance abuse. We're going to implement this in the OB clinic and try to teach the MAs and the LVNs when they're rooming the patient to start the screening process." (Riverside)*

In their year-end report another hospital discussed how protocols for their staff and Electronic Health Records (EHR) were created, tested, and implemented to meet the project metrics associated with care coordination:

*"(We have a) policy that all women with a positive pregnancy test have a same day appointment with an OB provider, scheduling priority for OB patients, standardizing documentation and work flow, a postpartum visit invitation, given at time of discharge,*

*which includes a coupon for diapers when presented at the post-partum visit (PPV), discussion of the purpose and value of the PPV initiated during and throughout prenatal care, and offering a combined postpartum and pediatric 7 week visit. RUHS expansion of the Comprehensive Perinatal Services Program (CPSP) services will also support outreach to mothers post-delivery.” (Riverside)*

In the interview, a hospital tested new protocols to follow up with patients postpartum:

*“It has been a struggle getting our population to come back in for their post-partum checks which we thought was surprising, but what we did find was that the patients would bring back in their babies for their follow up appointments. We began placing a nurse practitioner in our peds clinic to provide those follow up appointments while the moms are bringing their babies back in because they were willing to come in... to do the check up for their child, that they weren't coming back in for themselves. That's an ongoing education element as well. We're trying to very early on work with our patients to express the importance of these visits, but at the same time we're doing everything we can to make it as easy as possible for them.” (Kern Medical)*

In the interim survey, hospitals reported on the availability of care coordination infrastructure for postpartum patients. Most hospitals (14 DPH, 1 DMPH) had a standardized protocol for scheduling follow-up visits (Exhibit 184). Six DPHs and 1 DMPH had an identifier in their EHRs, registries, or dashboards that helped them identify women requiring care coordination. Fewer had the capacity to refer patients to community organizations or programs. These challenges could be addressed by care coordination to link postpartum patients to other outpatient and community providers such as specialists, the Women, Infants, and Children (WIC) Program, and public health nurses.

**Exhibit 184: Postpartum Care Coordination for Women with Co-Morbid Conditions During PRIME, by Hospital Type**
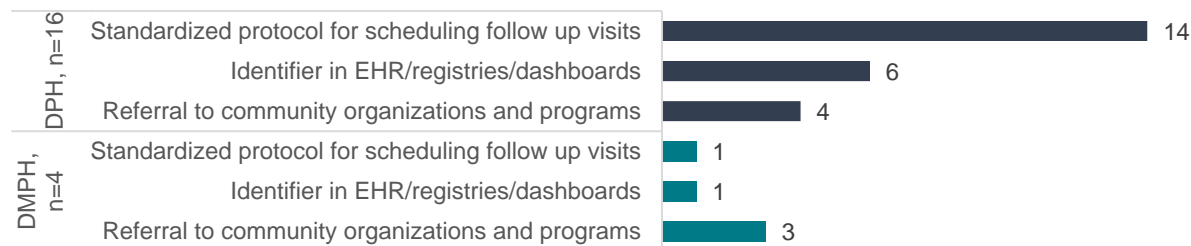


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

In interviews and year-end reports, hospitals discussed development of partnerships and protocols with other agencies to provide outpatient and social services. These activities included working with public health departments and other providers such as WIC:

*"[The public health nurse] coordinates with the hospital [on] who are the high risk moms that were discharged, and then she follows them up." (Santa Clara)*

*"[We refer] patients to public health nurse for home visits: we are currently working to bring that back into, to find a way to integrate … when those visits happened and what sort of information was documented. So right now it's just a referral but we are working to document the public health nurse visits back into Cerner, because there are other discreet data elements that we're looking to track, particularly around breastfeeding and … longitudinal around the different points of education and follow-up." (Ventura)*

*"We added a drop-down menu in our electronic health record to document WIC prenatal class completion for targeted outreach." (Contra Costa)*

*"Our physician who started with us for 2.1, he is actually certified to prescribe this [opioid] medication so he thought there were a lot of high-risk patients in this clinic for opioid abuse and he thought he could probably help in the clinic by starting them there identify these patients so by the time they deliver hopefully they have already been [treated].We don't have a lot of information on this; we started about 3 months ago. We know we get a lot of patients with opioid abuse so this is something we wanted to start working on." (Riverside)*

## Reduction in C-Section Rates

Hospitals participating in Project 2.1 were expected to adhere to the recommendations of the National Partnership for Maternal Safety to reduce C-section rates. Participating hospitals reported on their performance of these metrics in their self-reports, described in Hospital-Reported Metric Performance and Difference-in-Difference Analysis in this report.

Hospitals discussed adding protocols and infrastructure to improve results. In their year-end reports 2 hospitals explained that they had implemented intermittent auscultation for fetal monitoring and set protocols for induction:

*"A laborist model and midwifery are used in the hospital's Obstetric Service, inclusion of intermittent auscultation in the hospital's fetal monitoring policy, adherence to the new ACOG labor curve management guidelines, inductions are limited to 39 weeks gestation unless a medical indication, the availability of doulas and water immersion therapy for laboring patients, and the availability of other devices to support laboring patients, such as labor balls and a birthing stool." (Natividad)*

*"Initiatives include: adopting induction and labor dystocia checklists in our EMR, creating patient education for managing early labor at home, implementing training/procedures for identification and interventions for malposition, and adopting an intermittent fetal monitoring policy for low risk women." (UC San Diego)*

Efforts to reduce C-sections in California have been ongoing and several hospitals were preforming at or near the 90% percentile benchmarks for metric performance as defined by DHCS/SNI and the California Maternal Quality Care Collaborative (CMQCC). These hospitals reported that they were conducting rigorous reviews of their processes to maintain that status. During interviews, a hospital identified physician education as an effort that helped reduce their C-sections rates:

*"We work very closely with them to ensure that one, our providers have the best education and two, that they are making the best decisions in order to provide the best care for our patients." (Kern Medical)*

In their year-end self-reports, hospitals described how they utilized data to identify areas for improvement:

*"It took a couple months of us tracking and showing the data [including] evaluating every single C-section with a group of outside providers. [The director of labor and delivery realized] that there was a problem. Because after we show the proof … he's showing the C-section rates to the providers every week. And now they're internally evaluating a sample size of every C-section done to see if they have to do retraining*

*and we have found out that a lot of the problem was in some of the third year residents. That when they don't feel comfortable to wait, they were performing a C-section. Now, as part of that, they are required to consult with an attending before they do any C-section." (Arrowhead)*

*"The Perinatal Service Director conducts a review of all case fallouts. Over the past 2 years, he has identified only one case where there might have been an opportunity for the provider to manage the patient differently. NMC continues to monitor all C-sections closely along with the rate of unexpected newborn complications as a balancing measure." (Natividad)*

*"During the time period we obtain a new OB medical director, he has been very engaged in collaborating with the doctors to provide unblinded monthly updates on provider specific rates, outliers were identified and interviewed; many times the MD cannot see the tracing and the urgency became greater on arrival. We started having a hospitalist round on questionable tracings to help better communicate to the MD not on premises, both of these changes have helped to reduce this rate." (Antelope Valley)*

## Reduced Morbidity and Mortality Associated with Maternal Hemorrhage

Participating hospitals were expected to adhere to the recommendations of the National Partnership for Maternal Safety Consensus Bundle on Obstetric Hemorrhage and the CMQCC Obstetric Hemorrhage 2.0 Toolkit to reduce postpartum hemorrhage and its sequelae such as massive transfusions and unexpected newborn complications.
In interviews and year-end reports, hospitals discussed amending policies and protocols followed by training staff on project implementation:

*"During the year our OB team also completely overhauled our Obstetric Hemorrhage Protocol to align with our improved processes and CMQCC recommendations." (Washington)*

*"We have amended our maternal hemorrhage policy. The changes include guidance for the use of tranexamic acid and specific uterotonic agents... All labor nursing staff have been trained on the Level 1 Rapid Infuser. We also continue regular maternal hemorrhage drills for nursing staff, family medicine residents, and attending physicians." (Ventura)*

*"[In] our baseline, we had about 11 of the 16 elements implemented [from the OB Hemorrhage safety cart]... Of those that we hadn't implemented before PRIME, the most challenging one was the quantitative measurement of blood loss. And for that*

*one, our OB team had piloted quantitative measurements about 3 or 4 years ago, and it didn't go well. They ended up with numbers that were very surprising and sometimes invalid. And it made that particular element hard to achieve this time with PRIME because there was already sort of a negative experience in the past that we had to overcome. But thankfully, we energized the teams, and we took them on a site visit, and we were able to implement all 16 elements by the end of this past year. Our teams got to actually watch a delivery in the simulation lab, and then they also got to watch a live delivery to see how the interdisciplinary team did [it]... what role each person played in the quantitative blood loss measurement." (UC San Francisco)*

In a report, a hospital discussed assessing high risk patients during prenatal care and conducting patient education at the same time:

*"SJGH/SJCC has begun to more aggressively identify and treat anemic patients and those considered to be high risk for requiring postpartum blood products during the prenatal period. Expectant women attending maternity orientation classes at SJGH are educated on the risk for hemorrhage. Upon admission to labor and delivery, all patients receive an OB Hemorrhage Risk Assessment along with an OB Hemorrhage checklist. Newly delivered mothers are educated on the risk of postpartum hemorrhage through curriculum developed by [Association of Women's Health, Obstetric and Neonatal Nurses] AWHONN and receive a checklist of most common post birth warning signs and instructions on how to respond." (San Joaquin)*

The Obstetric Hemorrhage Patient Safety Bundle protocol also requires there be a team to support families and staff that were involved with a severe hemorrhage. In the survey a hospital indicated they conducted referrals to a social worker for patient and family support following traumatic deliveries with the goal of improving the postpartum experience.

### Improve Exclusive Breastfeeding Rates and Baby Friendly Hospital Initiative

Hospitals participating in Project 2.1 were expected to participate in the Baby Friendly Hospital Initiative, which includes 10 specific steps to support breastfeeding. Hospitals would receive Baby-Friendly certification after successfully implementing the Baby-Friendly protocols and a recertification is required every 5 years. In the interim survey, 8 DPHs and 2 DMPHs reported they had received Baby-Friendly certification before PRIME (Exhibit 185). Three DPHs started implementation before and completed it during PRIME. The remaining 5 DPHs and 2 DMPHs began implementation during PRIME.

**Exhibit 185: Baby-Friendly Hospital Certification Before and During PRIME, by Hospital Type**



*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

To achieve Baby-Friendly certification, the majority of hospitals focused on establishing collaborative teams (15 DPHs, 4 DMPHs; Exhibit 186). Most also identified champions and had an organizational culture that encourages breastfeeding (14 DPHs, 3 DMPHs), and many others reported assessing preferences and characteristics of the patient population and hired new staff.

**Exhibit 186: Strategies for Baby-Friendly Hospital Designation During PRIME, by Hospital Type**
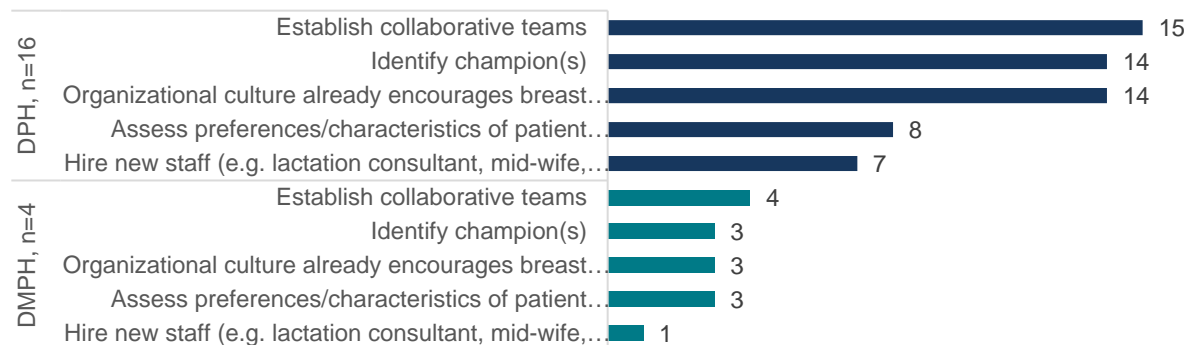


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

A hospital reported on processes used to monitor adherence to exclusive breastfeeding in their interview and year-end report:

*"We have a weekly monitoring tool of all formulas. We're working on having providers and our case providers review that data, provide targeted feedback and coaching to outliers in both our nursing department and clinician department." (Alameda)*

*"Leadership performs daily audits to validate that hand expression teaching has been completed and documented and that mothers comprehend the information. For the CMQCC data we continue to review ALL cases, not a sample. This allows us to fully comprehend trends in fallouts. If any fallouts are eligible for feedback to help educate*

*the nurse, the documentation is printed and shared with them 1:1. A weekly formula order is sent to physician and nursing leaders for review. This has enlightened the Pediatric provider team on formula orders and fallout trends." (Alameda)*

Other hospitals discussed changing procedures and using data to change the culture around formula:

*"Number one [was] locking up the formula in the Pyxis [medication dispensing machine]... This helped create a culture in which formula is actually treated as a medication." (Arrowhead)*

*"Infant formula, pacifiers, bottle nipples, and other infant feeding products are purchased at fair market value and utilized only when medically necessary. Free samples of products are not acceptable for patient distribution. Free infant formula gift packs or any other baby products are not distributed on the maternity unit. Any medical or practical information about care for mother and infants are generic and without advertisement." (Santa Clara)*

In interviews 3 hospitals described their process to establish donor milk programs. A hospital described how they worked to increase breastmilk availability through donor breastmilk programs and technology:

*"The team is working on improving, actually opening up a [donor breast] milk facility in Southern California where there is not one currently, adopting a breast milk feeding app that... mothers and women can use to either donate or obtain breastmilk. And so I think through PRIME or the need to hit a certain target to increase our breastmilk feeding we looked towards other avenues and really used that to expand what was already a dream to do… Our current tissue bank license is being modified to expand donor milk use. Our multidisciplinary group continues work including the breastmilk application Mothers Milk (expected Sept 2018) and San Diego Mothers Milk Bank." (UC San Diego)*

*"We recently started a donor milk program where we provide donor breast milk to those who may want to breastfeed, but aren't capable of breastfeeding." (Kern Medical)*

In their year-end reports, other hospitals emphasized the role of training staff across the system so that a process started during prenatal care is not disrupted at night during the inpatient stay and that there is support during the postpartum period:

*"We have scheduled Lactation Consultants for the night shift some days. We want to gather information about issues that may arise during the nighttime hours... We will be creating an acuity tool for staff and lactation that clearly defines everyone's role and expectations. Nurses are the first contact and need to be empowered to feel comfortable aiding a mother with her lactation concerns." (Alameda)*

*"Standardization of prenatal breastfeeding education program at each clinic caring for pregnant women has been established. Each clinic provides education for pregnant mothers at 25 to 28 weeks gestation. Clinic staff members received specific lactation training and education. Education materials are standardized." (Santa Clara)*

*"Looking at all of our Baby-Friendly initiatives, we do focus on both the outpatient and inpatient side, really trying to standardize our messaging. We work closely with our physicians in order to develop some easy handouts that we can give with information to our patients to help them make the most informed decisions that they can. " (Kern Medical)*

In the interim survey, most hospitals reported few or some challenges in implementing specific elements that were required for Baby-Friendly certification (Exhibit 187). However, 9 hospitals found giving infants no food or drink other than breastmilk to be fraught with many challenges, followed by 4 that reported training all staff to implement the policy to be most challenging. In contrast, elements that were not challenging frequently were allowing the mother and infants to remain together 24-hours a day (5), having a written breastfeeding policy (5), and not giving pacifiers to infants (4).

**Exhibit 187: Challenges Implementing the 10 Required Elements of Baby-Friendly Designation Under PRIME**

| Element | Many challenges | Few/Some challenges | No challenges | Not implementing |
|---|---|---|---|---|
| Foster breastfeeding support groups and refer mothers upon discharge | 1 | 12 | 4 | 3 |
| Encourage breastfeeding on demand | 1 | 15 | 2 | 2 |
| Show mothers how to breastfeed and how to maintain lactation | 2 | 14 | 2 | 2 |
| Inform all pregnant women about the benefits and management of breastfeeding | 2 | 14 | 2 | 2 |
| Help mothers initiate breastfeeding within one hour of birth | 3 | 12 | 3 | 2 |
| Give infants only breast-milk, unless medically indicated | 9 | 7 | 2 | 2 |
| No pacifiers or artificial nipples for breastfeeding infants | 2 | 12 | 4 | 2 |
| Mothers and infants are together 24 hours a day | | 13 | 5 | 2 |
| Train staff in the skills to implement this policy | 4 | 12 | 2 | 2 |
| Written breastfeeding policy routinely communicated to staff | | 13 | 5 | 2 |

■ Many challenges  ■ Few/Some challenges  ■ No challenges  ■ Not implementing

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=20 hospitals participating in Project 2.1.*

## Participation in Learning Collaboratives

Eleven DPHs and 2 DMPHs reported participating in the CMQCC. Additionally, CMQCC's California Maternal Data Center supports QI activities by generating the PRIME perinatal performance metrics. In the interview, a hospital described the process:

> *"CMQCC is where we pull our data from to be able to enter it into PRIME. So that was something that we've seen an increase, because they have access to it, so that's been helping… [staff] have access, they see that, 'Oh, we need to be at 20 percent and we're at 24 percent. What can we do to reduce this? My director … looks at the CMQCC quarterly. And so they'll both discuss ways that they can meet that metric for PRIME." (Antelope Valley)*

Other learning collaboratives outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, and DHLF included Quest for Zero: Excellence in OB (BETA*rm OB). Washington explained that the latter collaborative is facilitated by BETA HealthCare group for District hospitals; this insurance liability risk reduction program was designed

to improve patient safety in OB. Hospitals also had monthly improvement learning sessions with the Institute for Healthcare Improvement, conducted site visits to other PRIME hospitals, and 1 hospital obtained a breastfeeding grant from the Centers for Disease Control and Prevention. The other quality improvement (QI) collaboratives included the Hospital Association Southern California Perinatal Safety Collaborative (with the goal of reducing elective delivery before 39 weeks gestation); the Regional Perinatal Nurse Leadership (with the goal of sharing nursing practice and policies); a Local Breast Feeding Task Force, LA Breastfeeding Consulting: Exclusive Breastfeeding (EBF), First Latch: EBF, and Perinatal Quality Foundation: Fetal Monitoring.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10). DPH hospitals reported spending a medium level (6.0) of overall effort in implementing Project 2.1 and DMPH hospitals reported spending a high level (7.0) of overall effort to implement (Exhibit 403). Among DPHs, ratings of effort were high for conducting staff training (7.9), resource intensity (8.2), and implementation requirements (8.2). On average, DMPHs reported requiring high effort for engaging internal stakeholders (9.3), staff training (8.0), resource intensity (8.5), and implementation requirements (9.0). In interviews, hospitals expanded on why they ranked level of effort in some areas as high:

> *"And then there's the cost of [Baby-Friendly certification]. 20 hours of training for the nurses is a substantial cost, not to mention the actual training modules either being purchased, granted, or developed." (Contra Costa)*

> *"UCSF had not planned to achieve Baby-Friendly Hospital designation before PRIME. We had looked into it, and had done a little gap analysis, or needs assessment around what that would entail, but opted out previously because... training 20 hours for every single birth center nurse was cost-prohibitive. So we had never pursued it in the past. I think it's really that the PRIME financial incentive that made the business, sort of the argument for, at least we can try to break even by achieving Baby-Friendly hospital designation. Because it cost over, probably a million dollars, just for the step two of the Baby-Friendly designation for training." (UC San Francisco)*

Challenges and Solutions to Improved Prenatal Care

Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 2.1 (Challenges Exhibit 404; Solutions Exhibit 405). The top challenge cited by the hospitals (8) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the hospitals (7) was variation in documentation within the system by providers and staff. The top solution identified by the majority of hospitals (5) was EHR/IT standardization or expansion across system. The second solution identified by the majority of hospital (6) was developing and clarifying operational definitions or systems. In year-end reports, some hospitals reported challenges related to patients who lacked data on outpatient care received at external organizations and coding problems:

*"Many of the women who deliver at ARMC are seen for most of their prenatal care visits at outside community providers and ARMC does not always have access to this data. The plan moving forward will be to build these relationships so that we can share vital patient information in regards to the pregnancy." (Arrowhead)*

*"We struggle a little bit with documentation and coding, which is reflected by performance in some of our more maternal morbidity measures that is probably worse than what reflects our true performance. We're working on an initiative with our quality and HIN departments to improve our mechanisms for coding and documentation. Ultimately, when we have accurate data, we're hoping to have a dashboard of sorts for our maternal child health team to use to track their progress." (Alameda)*

*"As an academic medical center, our learners are instructed to perform a meticulous newborn exam... We have instructed our providers to specify if a finding is not clinically significant to assure proper coding. In the past 2 years we have provided NICU and Newborn providers with education regarding appropriate documentation and continue to see improvement. With a rigorous Neonatal Resuscitation team depressed babies are often given a brief period of Continuous Positive Airway Pressure (CPAP) or Positive pressure ventilation according to Neonatal Resuscitation Program guidelines. We have found these may be have been miscoded as CPAP. Through coding and documentation education, only oxygen therapy or CPAP that occurs outside of the Delivery Room is appropriately coded. This has led to less delivery room over-coding. Our NICU and Newborn leaders continue to perform detailed chart reviews to find opportunities for quality improvement. Clinical, quality and coding teams continue to work together. Strategies involve root cause analysis to improve capturing the right codes, documenting the right patient information and communication. Investigating obstetric and perinatal management in a collaborative*

*fashion will be crucial for unexpected newborn complication optimal values to be achieved especially in a high-risk academic perinatal center. Regional or community peer hospitals with a low risk population will not be a valid comparison." (UC San Diego)*

## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 2.1 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by the hospitals (5) was hospitals already performing at a high level, for example in Metric 2.1.5 on cesarean section. The second challenge cited by the hospitals (5) was processes not being established system-wide. The top solution identified by the hospitals (6) was standardizing processes across systems. The second solution identified by the hospitals (6) was establishing meetings across teams. Staff turnover was particularly challenging for 2.1, as Baby Friendly Hospital Designation required all relevant staff to have specific training.

In interviews and year-end reports, hospitals expanded on these challenges:

*"SCVMC was awarded by the State for 2 consecutive years (2016-2017) as included in the "Honor Roll" for having low cesarean section rates based on state and national benchmarks. However, PRIME target was so high based on our previous performance that we are challenged to meet the target." (Santa Clara)*

*"Reducing C-section rates is extremely difficult. NMC is a top-performing hospital within California." (Natividad)*

*"We are proud to have a low rate of maternal hemorrhage at WHHS. For this demonstration year we had a total of 5 deliveries with a hemorrhage related ICD10 code. However, this low rate means that unfortunately we have an insufficient denominator size for this metric." (Washington)*

*"In the Baby Friendly realm ... you have to educate every nurse 20 hours, and every physician 3 hours... One of our larger identified difficulties that has also, would go into our success ... over 96 to 98% of all of our nurses in the perinatal department were trained. And also, of all of our providers that see perinatal patients, a very high number have also been trained. So that's, again, both difficulties and successes." (UC San Francisco)*

Hospitals also discussed how collaboration helped addressing challenges:

*"[Baby Friendly or the American Academy of Pediatrics] both follow the same guidelines with exclusive breastfeeding and drug abuse. In which, if you test positive for absolutely anything, you're not supposed to breastfeed. PRIME does not base it*

*on this... What we came up with, this was a collaborative process with Riverside University Health System, which they're just down the street and we work on some things together... was to create a policy... Because research has shown that, for example, if the mother tests positive for opiates and she's going to a program, at least to have the baby breastfeed for the first few days of birth helps the baby detox because some of the opiates will go through the breast milk. But, it's less than the amount it would be receiving through the umbilical cord. It actually helps the baby wind down and at least for the first couple days they're getting all the benefits from breastfeeding and it's not like that baby starts detoxing, which is a terrible thing to see. That took a long time of convincing, of talking, or changing processes, changing policies. Talking with the American Academy of Pediatrics, talking with the Baby Friendly. That was [why] the implementation was so hard." (Arrowhead)*

In the year-end report and interviews, hospitals explained:

*"Increasing longevity of our system-wide shared EHR accounts for some of the increase with improved data collection and reliability." (Riverside)*

*"The patients are identified when they first come into the clinic so they are referred to the [Maternal Fetal Medicine] MFM who becomes their primary care physician during the pregnancy. He does make a list (in the) EHR which… we can see if this patient has had a C-section if they are high risk and he actually takes over and becomes the physician for the delivery and follows them from when they leave the clinic." (Riverside)*

*"Originally what we had to do was manually quantify and report. Now, one thing that PRIME has managed to do is collaborate with the data warehouse ... What everybody uploads in the CMQCC is parsed out specifically for a PRIME report. So, we can use those numbers once they're cross-checked with our total PRIME population." (Tri-City)*

*"Unfortunately one of our outpatient OB clinics recently closed and it is hard to retain the Medi-Cal patients who become assigned after Medi-Cal enrollment. We will continue to educate the community regarding this resource and the availability of our other clinic which is located 30 minutes away." (Antelope Valley)*

A hospital noted how the wide applicability of the project's metrics encouraged prioritization of the project's activities within the system:

*"Some of the metrics just have a greater impact on the health of our overall … population that we take care of…when we look at the population health perspectives, sort … metrics and the projects around diabetes control, and blood pressure control.*

*Those have elements … of access to care, … good clinical decisions, and us supporting patients when they're not in our setting…So some of these metrics are really cross-cutting in the population …as opposed to some of the other PRIME metrics that are much more process … orientated in some of smaller populations."* *(Contra Costa)*

## Hospital-Reported Metric Performance

Performance of hospitals in Project 2.1 was measured by the following 9 metrics (Exhibit 188). All metrics were standard metrics. Among the metrics, 4 were intended to show progress by increasing rates over time and 5 metrics were intended to show progress by decreasing rates over time. UCLA categorized 5 as outcome metrics and 4 as process metrics.

**Exhibit 188: PRIME Project 2.1 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **Baby Friendly Hospital Designation** | 2.1.1 | Baby-Friendly USA | N/A | Increase | Process |
| **Exclusive Breast Milk Feeding** | 2.1.2 | JNC | 0480 | Increase | Process |
| **Obstetric (OB) Hemorrhage: Massive Transfusion** | 2.1.3 | CMQCC | N/A | Decrease | Outcome |
| **OB Hemorrhage: Total Products Transfused** | 2.1.4 | CMQCC | N/A | Decrease | Outcome |
| **Cesarean Section** | 2.1.5 | JNC | 0471 | Decrease | Outcome |
| **Prenatal Care** | 2.1.6 | NCQA | 1517 | Increase | Process |
| **Postpartum Care** | 2.1.6 | NCQA | 1517 | Increase | Process |
| **Severe Maternal Morbidity (SMM) per 100 Women with Obstetric Hemorrhage** | 2.1.7 | AIM | N/A | Decrease | Outcome |
| **Unexpected Newborn Complications** | 2.1.8 | CMQCC | 0716 | Decrease: Balancing Measure* | Outcome |
| **OB Hemorrhage Safety Bundle** | 2.1.9 | CMQCC | N/A | Increase | Process |

*Source: PRIME Metrics Specs, DY 13YE*
*Notes: NQF: National Quality Forum, JNC: Specifications Manual for Joint Commission National Quality Specifications Manual for Joint Commission National Quality Measures v2017B2, CMQCC: California Maternal Quality Care Collaborative v. March 2016, NCQA: National Committee for Quality Assurance, AIM: Alliance for Innovation on Maternal Health v. 2-7-2017, \*This metric was a balancing measure to other NQF endorsed metrics that examine obstetric care such as cesarean section and episiotomy rates, with the rationale that a low chance of unexpected newborn complications would be valued more than low-medium rates of obstetric procedures.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. Hospitals may not have reported data if they were working on Infrastructure Building Process Measures or had other constraints on data availability. DMPHs did not report data in DY 11 for this project.

## Metric 2.1.1 – Baby Friendly Hospital Designation

Metric 2.1.1 measured the total number of hospitals that met the criteria of the Baby Friendly Hospital Designation ([PRIME Metric Specs, DY 13YE](#)). Hospitals needed to receive Baby Friendly USA Designation by DY 15. In DY 12, hospitals needed to either complete the discovery phase and participate in the Baby-Friendly USA (BFUSA) information webinar or receive Baby Friendly USA Designation. In DY 13, hospitals needed to either complete the development phase or receive Baby Friendly USA Designation. Hospitals were intended to promote infant and mother bonding, breastfeeding and beginnings of life without breastmilk substitutes or breastfeeding barriers.

The intended direction of Metric 2.1.1 was an increase in rates over time. Performance was demonstrated through an increase over time. Among the DPHs, performance improved over time; all of the hospitals met the criteria for the DY 12 and DY 13 phase, compared to the 63% of DPHs who met the criteria set for DY 11 (Exhibit 189). The

DMPHs were in the infrastructure phase in DY 11. DMPH Non-CAHs started implementation in DY 12. Among the DMPHs, the number of hospitals that met the Metric 2.1.1 criteria remained constant at 75% through DY 12 and DY 13.

**Exhibit 189: PRIME Self-Reported Certification Phase Completion for Baby Friendly Hospital Designation Rates for Metric 2.1.1**
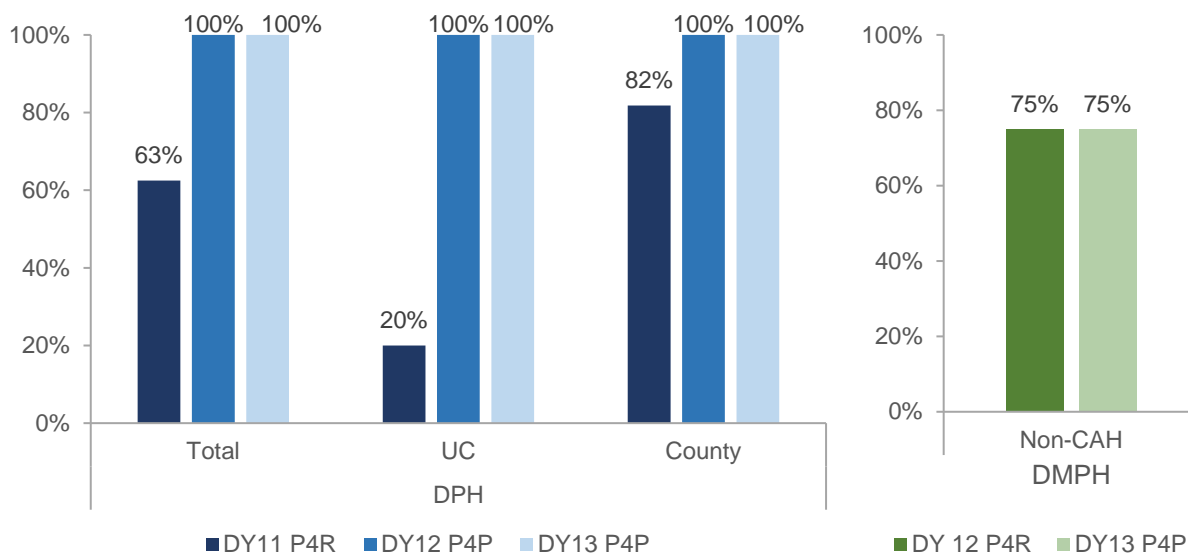


*Source: UCLA analysis of the self-reported data, data received June 2019.*

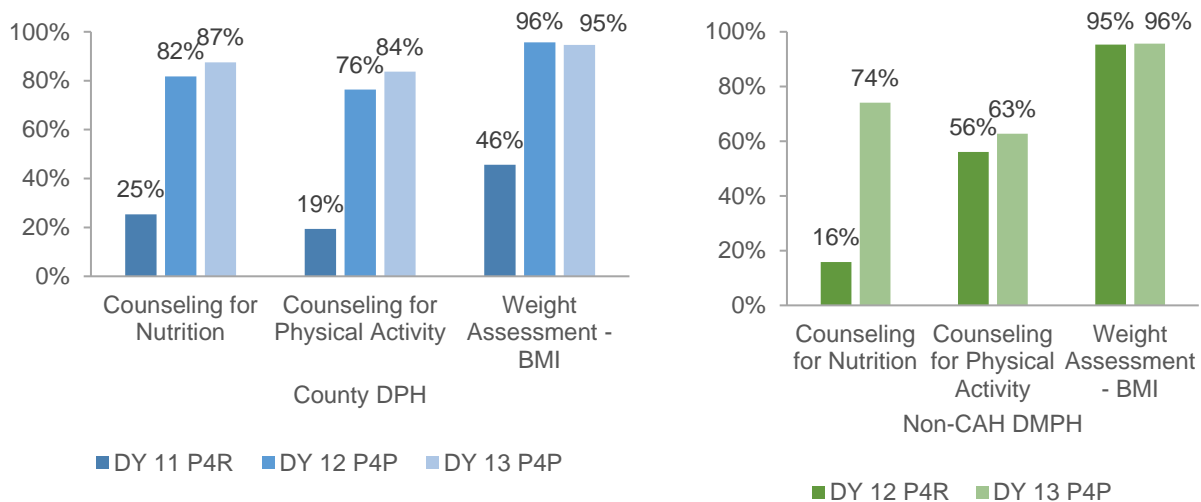*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 2.1.2 – Exclusive Breast Milk Feeding

Metric 2.1.2 measured the number of single term newborns that were discharged alive from the hospital and only fed breast milk since birth (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase the prevalence of exclusive breast feeding for the first 6 months of neonatal life.

The intended direction of Metric 2.1.2 was an increase in rates over time. Among the DPHs, there was an increase in the weighted average rate of newborns that were only fed breast milk during birth over time. Throughout all demonstration years, the proportion of newborns that were fed only breast milk remained constant (71%) among the DPH UCs (Exhibit 190). DPH County hospitals reported an increase from 55% in DY 11, then showed an achievement rate of 62% in DY 12, and then reached 65% in DY 13. DMPHs were in the infrastructure phase in DY 11; they began implementation in DY 12. From the DY 12 to DY 13, the proportion of newborns that were only fed breast milk during birth decreased from 59% to 57%. In DY 13, the individual achievement rates for Metric 2.1.2 ranged from 48% to 77% for DPHs and 40% to 69% for DMPHs (data not shown).

**Exhibit 190: PRIME Self-Reported Exclusive Breast Milk Feeding Rates for Metric 2.1.2**
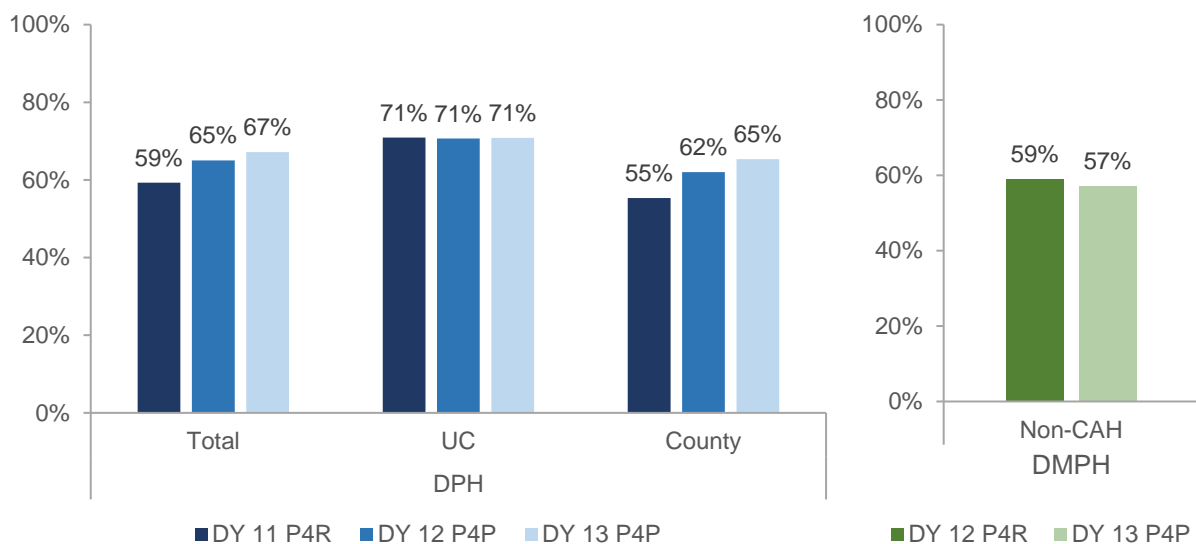
*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 2.1.3 – Obstetric (OB) Hemorrhage: Massive Transfusion

Metric 2.1.3 measured the proportion of maternal cases during which the patient received ≥4 units of Packed Red Blood Cells (PRIME Metric Specs, DY 13YE). Hospitals were intended to promote healthier pregnancies and deliveries and to reduce maternal mortality and morbidity.

The intended direction of Metric 2.1.3 was a decrease in rates over time. Achievement was measured by a decreasing rate over time. Among the DPHs, the number of patients receiving ≥4 units of Packed Red Blood Cells increased from 0.37% to 0.46% in DY 12 (Exhibit 191). In DY 13, the number of patients dropped to 0.29%. DPH UCs reported an overall decline in the average weighted rate from 0.41% to 0.40% throughout all demonstration years. DPH County hospitals reported an overall decline in the weighted average rate from 0.35% to 0.21% throughout all demonstration years. DMPHs were in the infrastructure phase in DY 11 and started implementation in DY 12. Among the DMPHs, the number of patients decreased from 0.18% in DY 12 to 0.16% in DY 13. In DY 13, the individual achievement rates for Metric 2.1.3 ranged from 0% to 0.84% for DPHs and 0% to 0.53% for DMPHs (data not shown).

**Exhibit 191: PRIME Self-Reported Obstetric (OB) Hemorrhage: Massive Transfusion Rates for Metric 2.1.3**
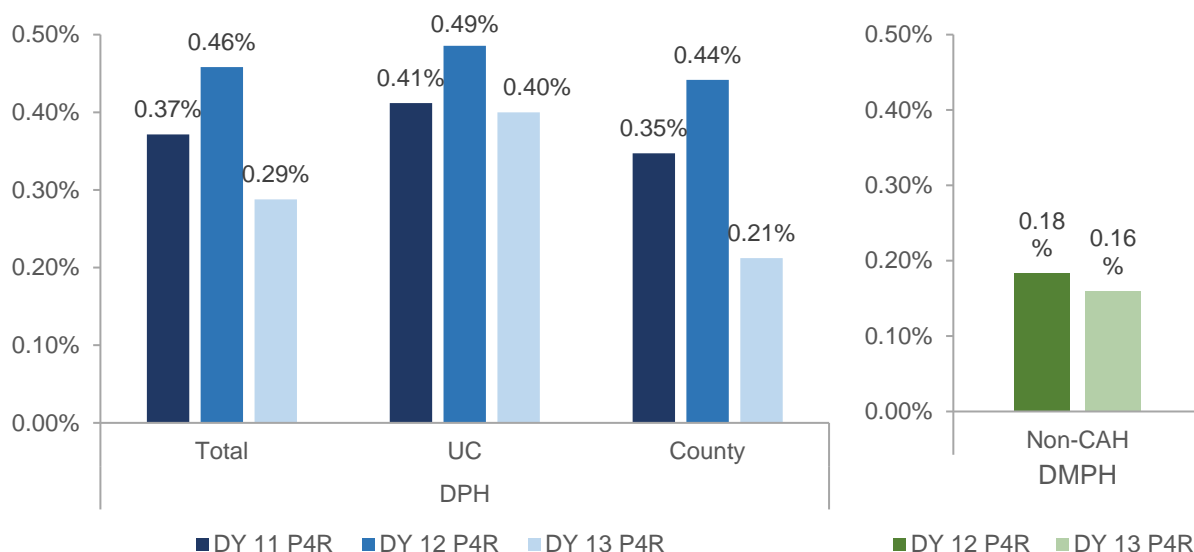


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.1.4 – Obstetric (OB) Hemorrhage: Total Products Transfused

Metric 2.1.4 measured the proportion of maternal cases during which packed Red Blood Cells (PRBC) and Fresh Frozen Plasma (FFP) units transfused ([PRIME Metric Specs, DY 13YE](#)). Hospitals were intended to promote healthier pregnancies and deliveries and to reduce mortality and morbidity.

The achievement of Metric 2.1.4 was measured by a decrease over time. DPHs reported a weighted average rate of 8% in DY 11, an increase to 9% in DY 12, and then a decrease back to 8% in DY 13 (Exhibit 192). DPH UC and County hospitals reported different patterns of change. DPH UC rates remained stable at 10% in DY 11 and DY 12, then increased to 12% in DY 13. DPH County hospitals reported an increase in the weighted average rate from 7% in DY 11 to 8% in DY 12 and a decline to 6% in DY 13. DMPHS did not report this metric in DY 11 but reported constant rates (3%) in DY 12 and DY 13. In DY 13, the individual achievement rates for Metric 2.1.4 ranged from 1% to 16% for DPHs and 3% to 4% for DMPHs (data not shown).

**Exhibit 192: PRIME Self-Reported Obstetric (OB) Hemorrhage: Total Products Transfused Rates for Metric 2.1.4**
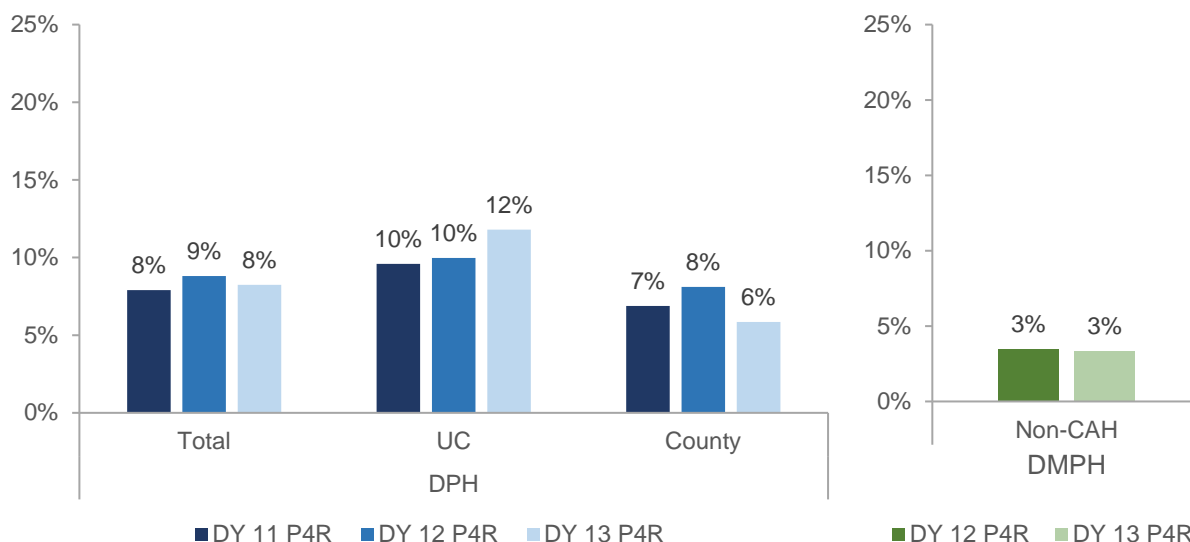


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.1.5 – Cesarean Section

Metric 2.1.5 measured the proportion of nulliparous patients who delivered a live term singleton newborn in vertex presentation that were caesarean births (PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce the prevalence of unnecessary caesarean birth among nulliparous patients.

The intended direction of Metric 2.1.5 was a decrease in rates over time. Performance was demonstrated through a decrease over time. Among the DPHs, the achievement rates steadily decreased from DY 11 to DY 13 (Exhibit 193). DPHs reported a decline in the weighted average rate from 23% in DY 11 to 22% in DY 12 and 21% in DY 13. DMPHs did not report this metric in DY 11 but reported an increase in the weighted average rate from 23% in DY 12 to 25% in DY 13. In DY 13, the individual achievement rates for Metric 2.1.5 ranged from 16% to 29% for DPHs and 17% to 30% for DMPHs (data not shown).

**Exhibit 193: PRIME Self-Reported Cesarean Section Rates for Metric 2.1.5**

*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*
*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 2.1.6 – Prenatal Care

Metric 2.1.6 measured the proportion of live births that had a prenatal visit during the first trimester or within 42 days of enrollment or continuous accountability out of all live births (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase prenatal care visits for pregnant women to improve maternal and infant health.

The achievement of Metric 2.1.6 was measured by an increase in rates over time. DPHs reported an increase in the weighted average rate from 68% in DY 11 to 81% in DY 12 and 90% in DY 13 (Exhibit 194). DMPHs did not report this metric in DY 11 but reported weighted average rates of 20% in DY 12 and 27% in DY 13. In DY 13, the individual achievement rates for Metric 2.1.6 (Prenatal and Postpartum Care: Prenatal Care) ranged from 68% to 100% for DPHs and 0% to 93% for DMPHs (data not shown).

**Exhibit 194: PRIME Self-Reported Prenatal Care Rates for Metric 2.1.6**



*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 2.1.6 – Postpartum Care

Metric 2.1.6 measured the proportion of women who received postpartum visits for a pelvic exam or postpartum care on or between 21 and 56 days after delivery out of all women who gave birth (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase of postpartum care visits for new mothers to improve maternal and infant health.

For Metric 2.1.6, successful performance was measured by an increase in rates over time. DPHs reported an increase in the weighted average rate from 62% in DY 11 to 66% in DY 12 and 73% in DY 13 (Exhibit 195). DMPHs did not report this metric in DY 11 but weighted average rates of 20% in DY 12 and 29% in DY 13. In DY 13, the individual achievement rates for Metric 2.1.6 (Prenatal and Postpartum Care: Postpartum Care) ranged from 0% to 93% for DPHs and 0% to 87% for DMPHs (data not shown).

**Exhibit 195: PRIME Self-Reported Postpartum Care Rates for Metric 2.1.6**



*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 2.1.7 – Severe Maternal Morbidity (SMM) per 100 Women with Obstetric (OB) Hemorrhage

Metric 2.1.7 measured the proportion of women who experienced severe maternal morbidity out of all women with a birth admission (>20 weeks of gestation) and who were discharged with an obstetric hemorrhage diagnosis ([PRIME Metric Specs, DY 13YE](#)). Hospitals were intended to lower the incidence of morbidity (i.e., severe injury, including but not limited to death) among women who experience obstetric hemorrhage.

The intended direction of Metric 2.1.7 was a decrease in rates over time. DPHs reported an overall decline in the weighted average rate from 21% in DY 11 to 25% in DY 12 and 22% in DY 13 (Exhibit 196). DPH UC and County hospitals did not show similar patterns of change. DMPHs did not report this metric in DY 11 but reported 26% OB hemorrhage rates in DY 12 and 32% in DY 13. In DY 13, the individual achievement rates for Metric 2.1.7 ranged from 4% to 53% for DPHs and 29% to 60% for DMPHs (data not shown).

**Exhibit 196: PRIME Self-Reported Severe Maternal Morbidity (SMM) per 100 Women with Obstetric (OB) Hemorrhage Rates for Metric 2.1.7**
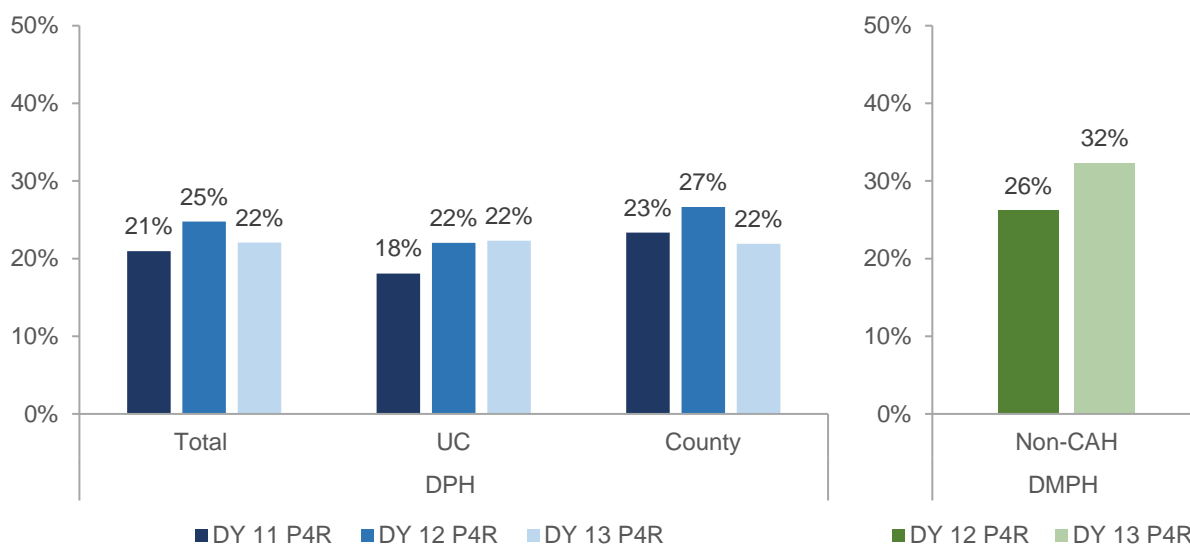


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.1.8 – Unexpected Newborn Complications

Metric 2.1.8 measured the proportion of newborns with severe or moderate complications out of all singleton, live born babies without preexisting conditions, who are normally grown and were not exposed to maternal drug use ([PRIME Metric Specs, DY 13YE](#)). This metric was a balancing measure to that examine obstetric care, such as cesarean section, with the rationale that a low chance of unexpected newborn complications would be valued more than low-medium rates of obstetric proc edures. Hospitals were intended to decrease the prevalence of babies with unexpected newborn complications.

The intended direction of Metric 2.1.8 was a decrease in rates over time. DPHs reported a decline in the weighted average rate from 6.3% in DY 11 to 6.4% in DY 12 and 4.8% in DY 13 (Exhibit 197). DMPHs did not report this metric in DY 11 but reported 5.8% in DY 12 and 3.7% in DY 13. In DY 13, the individual achievement rates for Metric 2.1.8 ranged from 2% to 11% for DPHs and 0% to 8% for DMPHs (data not shown).

**Exhibit 197: PRIME Self-Reported Unexpected Newborn Complications Rates for Metric 2.1.8**
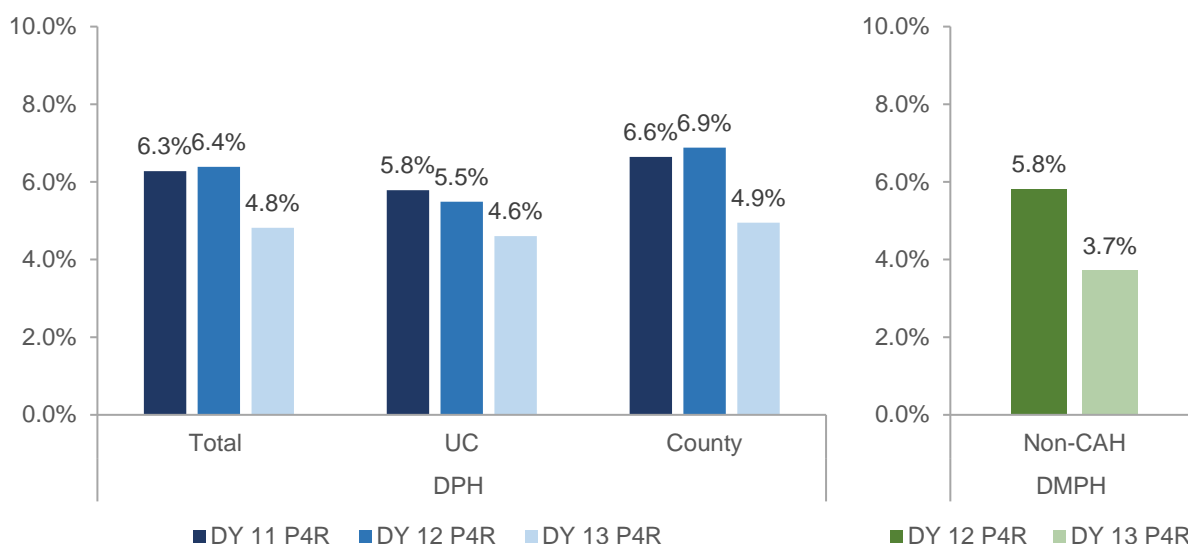


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.1.9 – Obstetric (OB) Hemorrhage Safety Bundle

Metric 2.1.9 measured the number of required CMQCC OB Hemorrhage Safety Bundle components that hospitals adopted to reduce childbirth-related hemorrhages (PRIME Metric Specs, DY 12YE and DY 13YE). With each DY, a hospital must implement an increasing number of the 16 requirements designed to target obstetric hemorrhage. The performance was demonstrated through an increase in the number of requirements that were met over time. For Metric 2.1.9, the achievement rate was not a weighted average. In Exhibit 198, the numerator is the sum of requirements that the hospital completed. For health care systems with multiple labor and delivery facilities, each was counted separately. The denominator is the number of requirements (16) multiplied by the total number of maternity facilities within the PRIME hospital system. For example, if a hospital with 1 maternity facility completed 11 requirements, their performance would be 11/16. If a hospital with 2 maternity facilities completed 11 requirements each, their performance would be 22/32. Both DPHs and DMPHs showed an increase in the proportion of hospitals that implemented the requirements (Exhibit 198).

The intended direction of Metric 2.1.9 was an increase in rates over time. In DY 11, all DPHs qualified for an achievement value of 1 for reporting how many of the requirements they met and DMPHs did not report data. In DY 12, hospitals had to have implemented at least 8 of the requirements to qualify, which all 16 DPHs and all 4 DMPHs did (data not shown). In DY 13 onwards, hospitals had to have implemented all 16 requirements, and perform at least 3 obstetric safety drills each quarter (including at least 1 per quarter about hemorrhage in DY 13), and perform at least 10 post-event debriefs on cases of obstetric hemorrhage per quarter. All of the participating hospitals implemented all 16 requirements in DY 13. For 10 post-event debriefs, 15 of the 16 participating DPHs and all DMPHs met the requirement and for the 3 obstetric safety drills, 14 DPHs and 2 DMPHs met the requirement (Exhibit 199).

**Exhibit 198: PRIME Self-Reported Obstetric (OB) Hemorrhage Safety Bundle Implementation for Metric 2.1.9**

| | | Number of elements met among all facilities | Number of facilities multiplied by total elements (16) | Proportion of elements met |
|---|---|---|---|---|
| **DPH (n=16)** | DY 11 P4R | 203 | 320 | 0.63 |
| | DY 12 P4P | 233 | 320 | 0.73 |
| | DY 13 P4P | 352 | 320 | 1.00 |
| **DMPH (n=4)** | DY 12 P4P | 56 | 80 | 0.70 |
| | DY 13 P4P | 80 | 80 | 1.00 |

**Exhibit 199: PRIME Self-Reported Obstetric (OB) Hemorrhage Safety Bundle Implementation for Metric 2.1.9 (DY 13)**

| Obstetric Requirement | DPH (n=16) | DMPH (n=4) |
|---|---|---|
| 10 Post-event Debriefs Each Quarter (fewer if less than 10 cases) | 15 | 4 |
| 3 OB Safety Drills Each Quarter | 14 | 2 |

*Source: UCLA analysis of the self-reported data, data received July 2019.*

*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital.*

## Summary of Key Findings

Project 2.1 was designed to improve perinatal care by promoting quality improvement and use of best practices to deliver safe, efficient, and equitable care, and subsequently improve maternal and child health. The project was required for DPHs and 20 hospitals (16 DPHs, 4 DMPHs) participated; 1 DPH did not provide these services and thus did not participate. Hospitals completed some of the core components before PRIME; for example, 15 hospitals had educated providers and supported best-practices to reduce C-section rates and 14 achieved Baby-Friendly hospital designation or certified their progress toward the certification. During PRIME, this expanded so that nearly all hospitals implemented all 4 core components.

Hospitals established the needed infrastructure by developing standardized protocol for scheduling follow up visits (15), adding an identifier in EHRs and registries to identify women requiring care coordination (7), and making referral arrangements with community services (7) such as County Public Health Nurses and WIC for prenatal care and education, and developing protocols for promoting visits. To implement, hospitals utilized coordinators who linked patient to community resources before and after delivery. Some hospitals added specialized services for pregnant women who also had other health conditions.

To reduce C-sections, hospitals developed infrastructure such as protocols for use of specific guideline-concordant tests and checklists, physician education, and frequent assessment of data to monitor performance, and amended or overhauled their protocols and trained staff to follow these protocols. The outcomes of these activities were reported in the self-reported metrics. To implement, hospitals referred patients to support services, following traumatic deliveries, and educated high-risk patients about postpartum hemorrhage.

Before PRIME several hospitals had either achieved Baby-Friendly certification or had started the process. The number of Baby Friendly hospitals fluctuated, as hospitals may have let their certification lapse and needed to renew it. Most hospitals developed infrastructure by establishing collaborative teams (19) identifying champions, assessed the preferences and characteristics of the patient population (11) and hired new staff (8) such as midwives to lead a doula program. To implement, hospitals monitored and shared data to encourage progress in reducing C-sections and promoting exclusive breastfeeding. Challenges included giving infants no food or drink other than breastmilk (9) and training all staff (4). To implement Project 2.1, hospitals participated in multiple quality improvement efforts including the California Maternal Quality Care Collaborative (CMQCC), Quest for Zero: Excellence in OB, Hospital Association Southern California Perinatal Safety Collaborative, and the Regional Perinatal Nurse Leadership.

The overall level of difficulty in implementing this project was high for DMPHs (7 of 10) and medium for DPHs (6). Metric- and data-related challenges included lack of health EHR functionality (8) variations in documentation by providers and staff (6), manual tracking or chart review (6), small denominator or numerator (5), and staff turnover (5). Successful solutions included EHR standardization or expansion (5), standardized processes across the system (6), and establishing meetings across teams (6).

Project 2.1 metrics were 2.1.1-Baby Friendly Hospital Designation; 2.1.2-Exclusive Breast Milk Feeding; 2.1.3-Obstetric (OB) Hemorrhage: Massive Transfusion; 2.1.4-OB Hemorrhage: Total Products Transfused; 2.1.5-Cesarean Section; 2.1.6-Prenatal Care; 2.1.6-Postpartum Care; 2.1.7-Severe Maternal Morbidity (SMM) per 100 Women with Obstetric Hemorrhage; 2.1.8-Unexpected Newborn Complications; 2.1.9-OB Hemorrhage Safety Bundle. Performance was measured by 9 standard metrics; 4 metrics measured care processes and 5 measured outcomes. Both DMPHs and DPHs showed progress in 2 metrics (2.1.6 and 2.1.9). DPHs showed progress in 4 metrics (2.1.1 plateaued at 100%, 2.1.2, 2.1.5, and 2.1.9) and mixed results for 4 metrics (2.1.3, 2.1.4, 2.1.7, 2.1.8). DMPHs showed progress in 3 metrics (2.1.3 and 2.1.8), remained constant in 2 metrics (2.1.1, 2.1.4), and did not show improvement for 3 metrics (2.1.2, 2.1.5, and 2.1.7).

Overall, hospitals made significant progress in implementing Project 2.1 by establishing data infrastructure and protocols for perinatal care, garnering support for exclusive breast feeding and Baby Friendly certification, and implementing CMQCC bundles for patient safety. Hospitals reported mixed metric improvements, and this varied by hospital type.

# Project 2.2 – Care Transitions: Integration of Post-Acute Care

## Project Overview

The primary goal of Project 2.2 was to reduce avoidable readmissions by linking patients to health and social services following inpatient discharge. Successful transition to outpatient settings post-discharge is of particular relevance for public hospitals who have a higher than average readmission rate, potentially because they provide care to patients who are high-risk and have chronic conditions, behavioral health conditions, and unstable housing. This goal was achieved by 1) developing the needed infrastructure for successful care transition including using evidence models; 2) identifying high-risk patients; 3) developing standardized workflows and protocols; 4) establishing care transition activities including training staff, teaching patients' self-care, use of multidisciplinary teams, warm handoffs, and monitoring provider performance. Specific objectives can be found in Attachment Q.

Thirty hospitals participated in Project 2.2 and reported metric performance data. All DPHs participated in this project as required by PRIME. In addition, 13 DMPHs participated in this project, including Antelope Valley, Kaweah Delta, Lompoc Valley, Palo Verde, Palomar, Pioneers Memorial, Salinas Valley, San Gorgonio, Sierra View, Sonoma Valley, Sonoma West, Tri-City, and Seneca (a critical access hospital) (Exhibit 200).

**Exhibit 200: PRIME Project 2.2 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 30 | 30 | 30 |
| **Total DPH** | 17 | 17 | 17 |
| **DPH UC** | 5 | 5 | 5 |
| **DPH County** | 12 | 12 | 12 |
| **Total DMPH** | 13 | 13 | 13 |
| **DMPH Non-CAH** | 12 | 12 | 12 |
| **DMPH CAH** | 1 | 1 | 1 |

*Source: Data provided by DHCS.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the suggested 11 core components of this project as an indication of their overall approach to post-acute care transitions. In the interim survey, about half of the hospitals reported that before PRIME they had begun increasing multidisciplinary team engagement (16) and

establishing or expanding on a system to track and report readmission rates, timeliness of discharge summaries, and other transition processes (15; Exhibit 201). During PRIME, between half to all participating hospitals reported implementing all the core components, except for demonstrating engagement of patients in the design and implementation of the project.

**Exhibit 201: PRIME Project 2.2 Core Components**

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Develop a care transitions program or expand a care transitions program to additional settings (e.g., emergency department), or to additional populations, using or adapting at least 1 nationally recognized care transitions program methodology. | 14 | 27 |
| Establish or expand on a system to track and report readmission rates, timeliness of discharge summaries, and other transition processes, and investigate system-specific root causes /risk factors for readmission, using quantitative and qualitative information to identify the key causes of readmissions, including physical, behavioral and social factors | 15 | 26 |
| Develop and implement a process, including utilization of data and information technology, to reliably identify hospitalized patients at high-risk for readmission. | 13 | 26 |
| Develop standardized workflows for inpatient discharge care: a. Optimize hospital discharge planning and medication management for all hospitalized patients. b. Implement structure for obtaining best possible medication history and for assessing medication reconciliation accuracy. c. Develop and use standardized process for transitioning patients to sub-acute and long term care facilities d. Provide tiered multi-disciplinary interventions according to level of risk i. Involve mental health, substance use, pharmacy and palliative care when possible ii. Involve trained, enhanced IHSS workers when possible iii. Develop standardized protocols for referral to and coordination with community behavioral health and social services (e.g., visiting nurses, home care services, housing, food, clothing and social support). Identify and train personnel to function as care navigators for carrying out these functions. | 11 | 25 |
| Inpatient and Outpatient teams will collaboratively develop standardized transition workflows: a. Develop mechanisms to support patients in establishing primary care for those without prior primary care affiliation b. Develop process for warm hand-off from hospital to outpatient provider, including assignment of responsibility for follow-up of labs or studies still pending at the time of discharge. | 10 | 27 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Develop standardized workflows for post-discharge (outpatient) care: a. Deliver timely access to primary and/or specialty care following a hospitalization b. Standardize post-hospital visits and include outpatient medication reconciliation. | 10 | 23 |
| Support patients and family caregivers in becoming more comfortable, competent and confident in self-management skills required after an acute hospitalization by providing: a. Engagement of patients in the care planning process b. Pre-discharge patient and caregiver education and coaching c. Written transition care plan for patient and caregiver d. Timely communication and coordination with receiving practitioner e. Community-based support for the patient and caregiver post hospitalization focusing on self-care requirements and follow-up care with primary and specialty care providers. | 13 | 22 |
| Engage with local health plans to develop transition of care protocols that ensure: coordination of care across physical health, substance use disorder and mental health spectrum will be supported, identification of and follow-up engagement with Primary Care Physician (PCP) is established, covered services including DME will be readily available; and a payment strategy for the transition of care services is in place. | 9 | 20 |
| Demonstrate engagement of patients in the design and implementation of the project. | 8 | 15 |
| Increase multidisciplinary team engagement by: a. Implementing a model for team-based care in which staff performs to the best of their abilities and credentials b. Providing ongoing staff training on care model. | 16 | 23 |
| Implement a system for continual performance feedback and rapid cycle improvement that uses standard process improvement methodology and that includes patients, front line staff and senior leadership. | 14 | 24 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=30 hospitals participating in Project 2.2. Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey hospitals may have implemented or dropped activities under a core component.*

## Infrastructure

### Use of Care Transition Models

Most participating hospitals reported adopting 1 or more existing models of care transition and identifying patients who needed referrals or care coordination. The top 3 models for DPHs were Project Re-Engineered Discharge (RED), Transitional Care

Model (TCM), and Better Outcomes for Older Adults through Safe Transitions (BOOST) Model (Exhibit 202). DMPHs also frequently used the Care Transition Intervention (CTI). Other models reported by hospitals included Multi-Center Medication Reconciliation Quality Improvement Study 2 (MARQUIS2), the Coleman Coaching Model, Agency for Healthcare Research and Quality (AHRQ) Guide to Reducing Medicaid Readmissions, Bridge Model, Guided Care, Geriatric Resources for Assessment and Care of Elders (GRACE), Transforming Clinical Practice Initiative, Screening, Brief Intervention and Referral to Treatment (SBIRT), LACE (Length of Stay, Acuity of Admission, Comorbidities, Emergency department visits) Index, and the Institute for Healthcare Improvement Coordination of Care Model.

**Exhibit 202: Use of Existing Frameworks among Participating DPH and DMPHs Under PRIME, by Hospital Type**
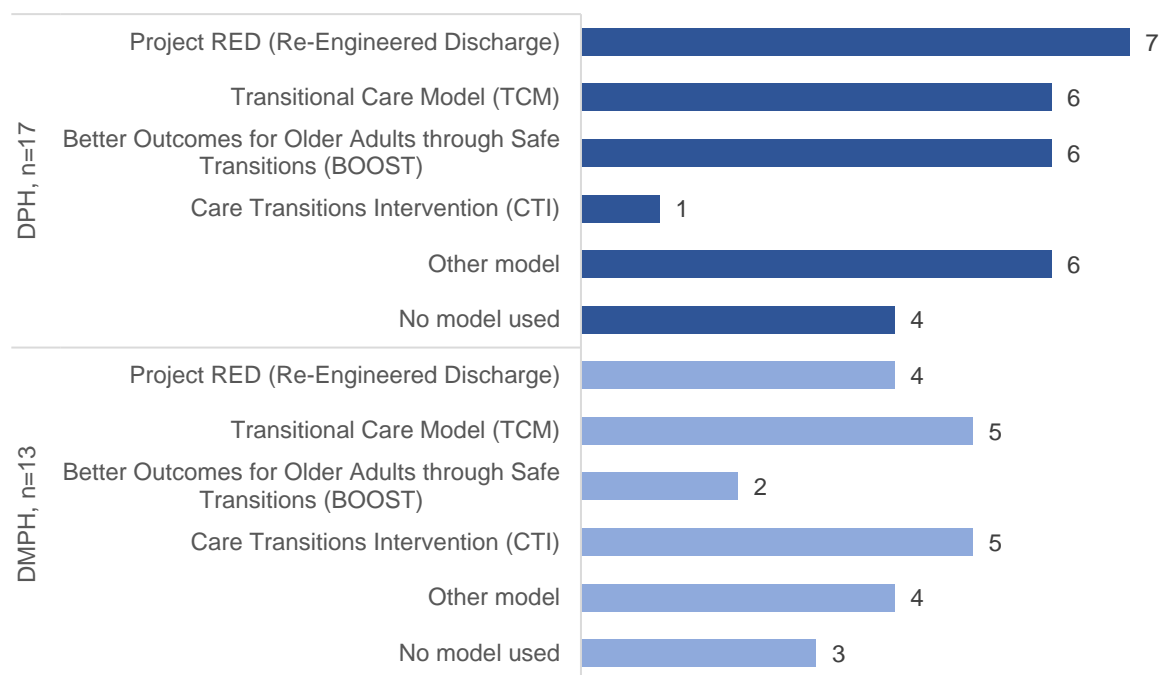


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive, some hospitals noted use of more than 1 model.*

In interviews, hospitals discussed the importance of using data and local stakeholder engagement when developing their programs. A hospital explained the need for such a comprehensive approach to achieve the project's overarching goal of meeting patients' complex needs:

*"We had a really large workgroup of about 20 or so clinicians looking at our ED high utilizers and spending a lot of time looking at the data, doing focus groups, patient interviews, chart reviews to really figure out what are the real causes of [readmissions] for these really complex patient and how do we change our care and design a system that's going to meet their needs." (San Mateo)*

## Use of Assessment Tools to Identify Patients at Risk of Readmission

The use of different tools to assess patients' readmission risk varied among participating hospitals (Exhibit 203). In the interim survey, 10 DPHs and 9 DMPHs reported employing EHR-based risk assessment tools such as Rothman or LACE index. Available clinical risk assessment tools have been used by 5 DPHs and 7 DMPHs. Few DPHs (3) reported not using any tools.

**Exhibit 203: Use of Tool to Assess Risk of Readmissions During PRIME, by Hospital Type**
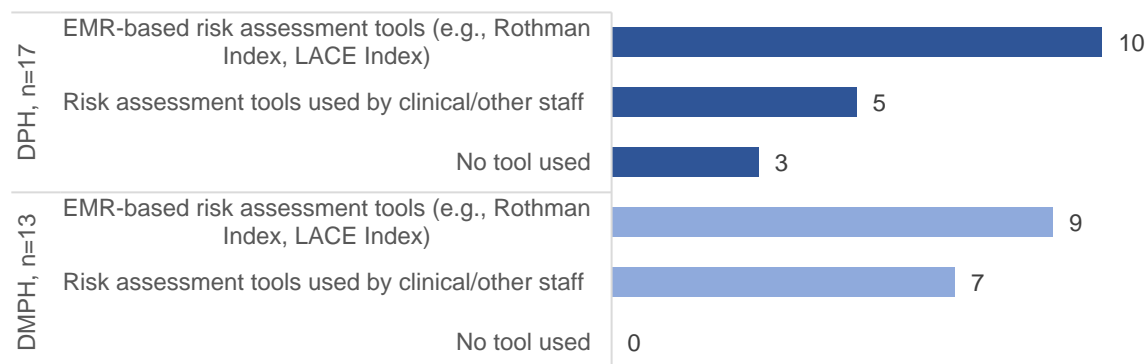


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

Existing tools had challenges, as a hospital noted a lack of comprehensiveness of many standardized assessment tools in the interviews:

*"We've developed readmission risks stratification tool that helps us identify those patients and who are most at risk for the readmission. Understanding that those admission risk assessment tools, they aren't always the most insightful..." (Kern Medical)*

## Care Transition Protocols

All or nearly all DPHs had protocols for medication management, transitions to subacute and long term care, and discharge planning according to the interim survey (Exhibit

204). Protocols for risk-based tiered interventions have been reported by 11 DPHs. All (13) or nearly all (12) participating DMPHs had these protocols.

**Exhibit 204: Care Transition Standardized Protocols Under PRIME, by Hospital Type**
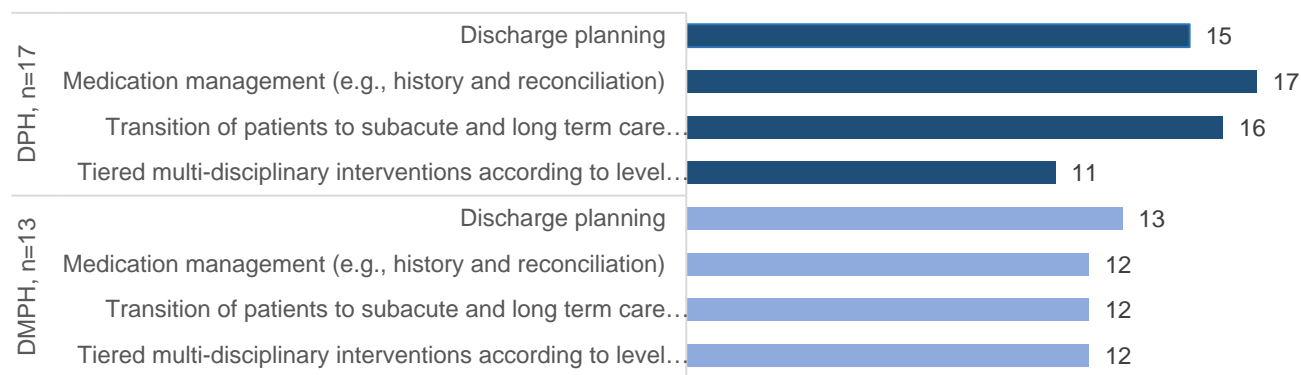


Source: UCLA analysis of the interim survey, data received April to May 2018.
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

During interviews, a hospital highlighted the importance of having these protocols for successful care transition. A hospital that joined Project 2.2 at a later date described establishing a basic care transition protocol at the start:

> *"We're the last hospital being set up in the aftercare. We do have a protocol, but it involves only what we can do to get these patients the information they need to go to their next step." (Tri City)*

Warm handoffs promote follow-up by patients that are referred to outpatient care post discharge. In the interim survey, 4 DPHs and 3 DMPHs had developed warm handoff processes prior to PRIME (Exhibit 205), 6 DPHs and 6 DMPHs developed these processes during PRIME. The minority of hospitals (4 DPHs, 2 DMPHs) had no plans to develop these processes.

**Exhibit 205: Processes for Warm Handoffs to Outpatient Providers, Before and During PRIME and by Hospital Type**

Of the 19 hospitals who reported currently having a process for warm handoffs from the hospital to outpatient providers, 6 DPHs and 8 DMPHs reported that these warm handoffs included assignment of responsibilities for follow-up lab or other pending studies to various team members at discharge (data not shown). This activity was intended to promote accountability within the team.

A particular challenge for care transition was when patients didn't have a usual source of care (Exhibit 206). Several hospitals indicated that explicit workflows for patients without a primary care home were developed prior to PRIME (7 DPHs, 4 DMPHs) or during PRIME (5 DPHs, 6 DMPHs). Only 2 DPHs and 1 DMPH did not plan on developing specific workflows for these patients.

**Exhibit 206: Workflows for Establishing a Primary Care Home for Patients without Usual Source of Care, Before and During PRIME and by Hospital Type**



■ Developed before PRIME   ■ Developed during PRIME   ■ Planned as part of PRIME   ■ Not planned

Interviews revealed that hospitals developed different approaches for establishing a primary care home for patients. For example, 2 of the hospitals created a team specifically tasked to ensure patients' access primary care after discharge but had different solutions:

> *"We have a New Patient Navigator Team at UCSF specifically to establish care at primary care. So we have a 1-800 number that is given to patients at discharge." (UC San Francisco)*

> *"For patients that weren't established within our system, [we are] making sure they reconnect with the new patient connection center, and then getting them an appointment to see a primary care provider." (San Mateo)*

Hospitals were encouraged to engage local health plans to develop care transition protocols that covered the continuum of care, covered services such as durable medical

equipment (DME), and included a payment strategy for care transition services. In the interim survey, 7 DPHs and 4 DMPHs did not have such protocols. Among those that did, 10 DPHs and 8 DMPHs stated their protocols included transition to primary and specialty care providers (Exhibit 207). Other components on availability of DMEs, transition to mental health and substance use care, and payment arrangements were less common.

**Exhibit 207: Elements in Protocol with Health Plan on Care Transitions Under PRIME, by Hospital Type**
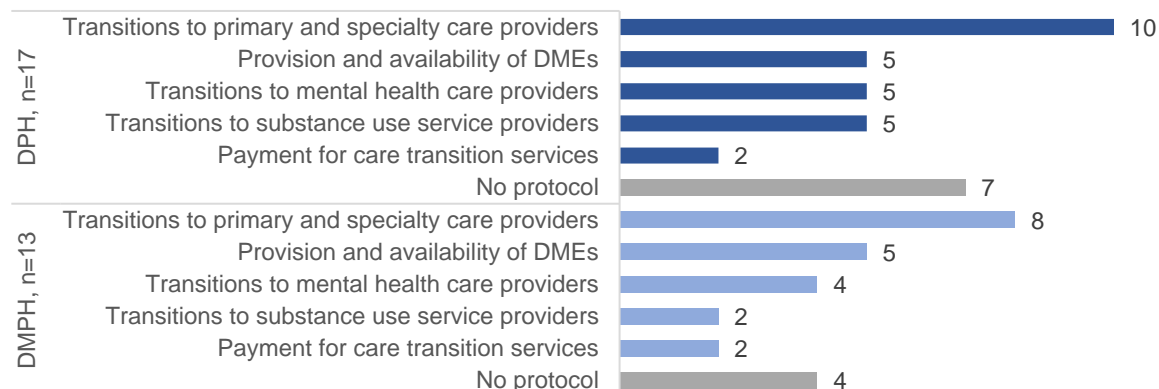


DPH, n=17
- Transitions to primary and specialty care providers: 10
- Provision and availability of DMEs: 5
- Transitions to mental health care providers: 5
- Transitions to substance use service providers: 5
- Payment for care transition services: 2
- No protocol: 7

DMPH, n=13
- Transitions to primary and specialty care providers: 8
- Provision and availability of DMEs: 5
- Transitions to mental health care providers: 4
- Transitions to substance use service providers: 2
- Payment for care transition services: 2
- No protocol: 4

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive, DME: durable medical equipment.*

A hospital explained that this absence of such protocols was due to lack of a local health plan, another emphasized that they had various informal workflows with their local health plans:

> *"We don't have a local health plan that we have attributed lives, so this is not applicable."* (Tri-City)

> *"Informally, we have a lot of coordination between our inpatient case management teams and the health plans."* (UC San Francisco)

In the interim survey, 8 DPHs and 4 DMPHs reported they had established standardized workflows with community agencies to ensure a smooth transition to post-discharge facilities prior to PRIME (Exhibit 208). Another 3 DPHs and 5 DMPHs did so during PRIME.

**Exhibit 208: Referral Protocols for Community Behavioral Health and Social Services, Before and During PRIME and by Hospital Type**



DPH, n=17: 8 | 3 | 4 | 2
DMPH,…: 4 | 5 | 2 | 2

■ Developed before PRIME  ■ Developed during PRIME  ■ Planned as part of PRIME  ■ Not planned
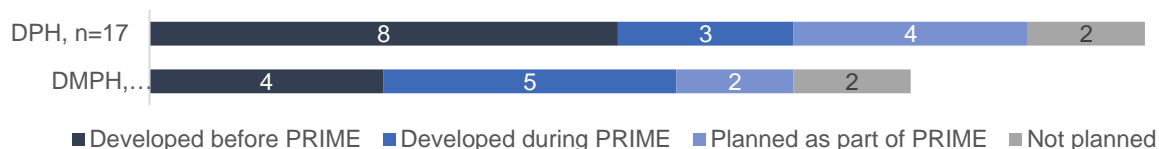
*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

During interviews, a hospital emphasized the lack of oversight control as a challenge when working with external partners:

*"So I think reaching out into the community, finding a willing partner, making sure we stay on the same page in terms of vision and mission and goals when we don't have day-to-day operational control of that entity is always challenging." (UC Davis)*

## Project Implementation

### Staff Training on Care Transition

In the interim survey, 5 DPHs reported training staff to transition patients to post-acute settings, including behavioral health and social services, prior to PRIME, with 5 more doing so during PRIME (Exhibit 209). A similar pattern was observed for DMPHs. Four DPHs and 1 DMPH reported no plans to train staff.

**Exhibit 209: Training Staff on Care Transition to Behavioral Health and Social Services, Before and During PRIME and by Hospital Type**
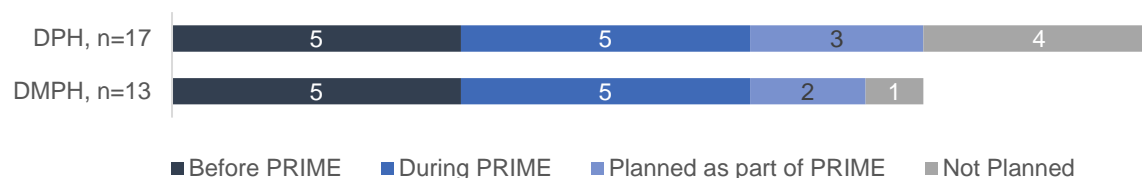


DPH, n=17: Before PRIME 5 | During PRIME 5 | Planned as part of PRIME 3 | Not Planned 4
DMPH, n=13: Before PRIME 5 | During PRIME 5 | Planned as part of PRIME 2 | Not Planned 1

■ Before PRIME   ■ During PRIME   ■ Planned as part of PRIME   ■ Not Planned

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

Hospitals that engaged in care navigator training acknowledged its importance in reducing avoidable acute care utilization. One of the hospitals interviewed emphasized the role of care navigators to reduce avoidable readmission through the emergency department (ED):

*"[Patients] really need something other than what ED can provide or should be providing, that a navigator is always there [in the ED] to assist the patient so that the patient is then supported in making a connection and staying with their primary care provider as opposed to coming to ED." (San Joaquin)*

### Multidisciplinary Team Engagement in Discharge Planning

Hospitals were encouraged to include providers from different disciplines in the discharge planning process to address the needs of complex patients. Among DPHs, 15 and 13 hospitals included pharmacist and palliative care providers, respectively (Exhibit 210). Those providers were also incorporated by 6 DMPHs. Inclusion of behavioral

health providers or In-Home Supportive Services (IHSS) workers was less common. IHSS is a Medi-Cal benefit that pays for care to support activities of daily living at home; enhanced training can include care coordination and assisting the patient with monitoring their health.

**Exhibit 210: Provider Involvement in Discharge Planning Under PRIME, by Hospital Type**
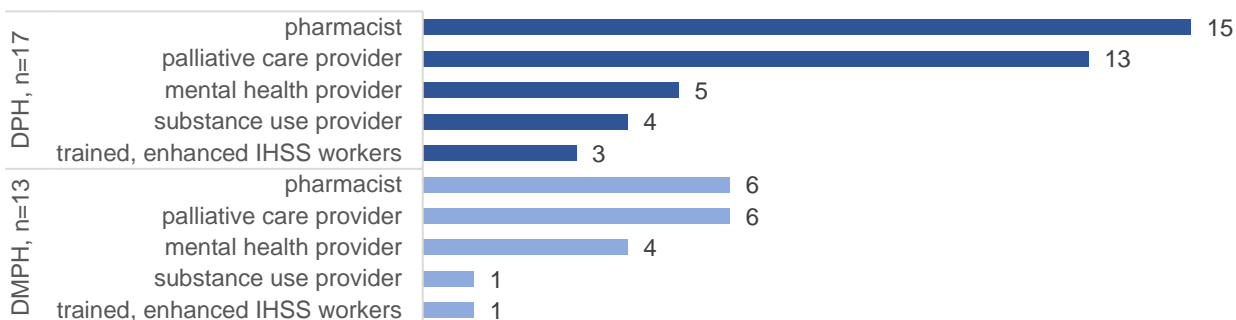


Source: UCLA analysis of the interim survey, data received April to May 2018.
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive; IHSS: In-Home Supportive Services.*

Warm Handoffs

While the majority of hospitals (19; Exhibit 205) reported in the interim survey that they developed processes to conduct warm handoffs, nearly all hospitals reported that they conducted this activity to some extent and 6 DPHs and 7 DMPHs reported that they did it always or most of the time (Exhibit 211).

**Exhibit 211: Frequency of Warm Handoff to Outpatient Providers Under PRIME, by Hospital Type**
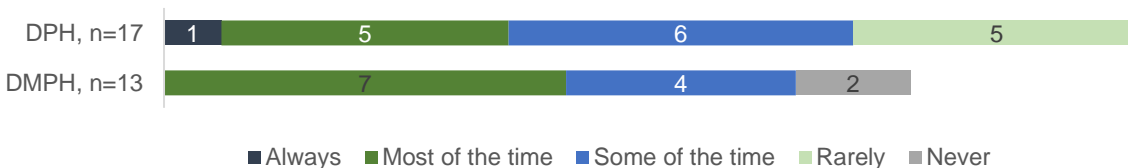


Always  Most of the time  Some of the time  Rarely  Never

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

All hospitals that developed plans for warm handoffs prior to PRIME, conducted them most (4) or some of the time (3; Exhibit 212). Of the hospitals that planned or implemented warm handoffs during PRIME, the majority did them at least some of the time (15), only 2 hospitals reported conducting them less frequently or not at all. Of the

hospitals without plans to establish these protocols, most indicated that they rarely or never (5) did them.

**Exhibit 212: Warm Handoff to Outpatient Providers: Protocols and Frequency Under PRIME**
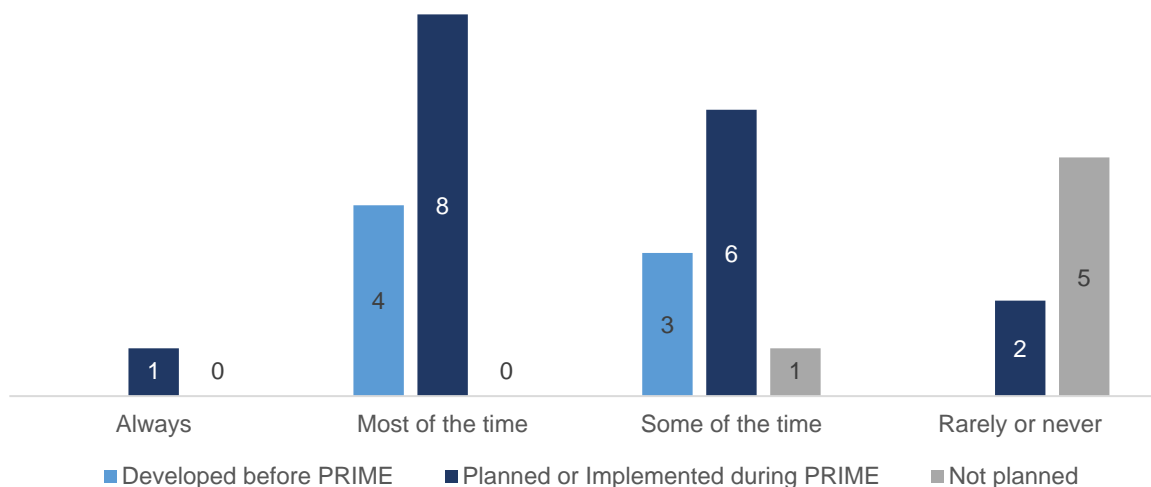


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=30 hospitals participating in Project 2.2.*

In interviews, a DPH addressed the lack of warm handoffs to outside providers by providing patients with information on how to navigate their care after discharge:

> *"If the providers are outside of our system, then we let the patients know that their provider is outside of our system. We still walk them through their discharge instructions so that they're aware, but then we let them know that they need to make their own appointments with the provider outside of the system." (San Joaquin)*

### Patient and Caregiver Support

An important aspect of successful care transition is promoting competency and confidence in self-care among patients and their caregivers. Of the 30 hospitals that implemented Project 2.2, 18 provided written transition plans to patients all the time and another 8 did so most of the time (Exhibit 213). Similarly, the majority of hospitals educated and coached patients before discharge or engaged patients in the care planning process always or most of the time. Timely communication with the receiving practitioner and community-based support for patients were conducted frequently by fewer hospitals.

**Exhibit 213: Type and Frequency of Patients and Family Caregiver Support Under PRIME**
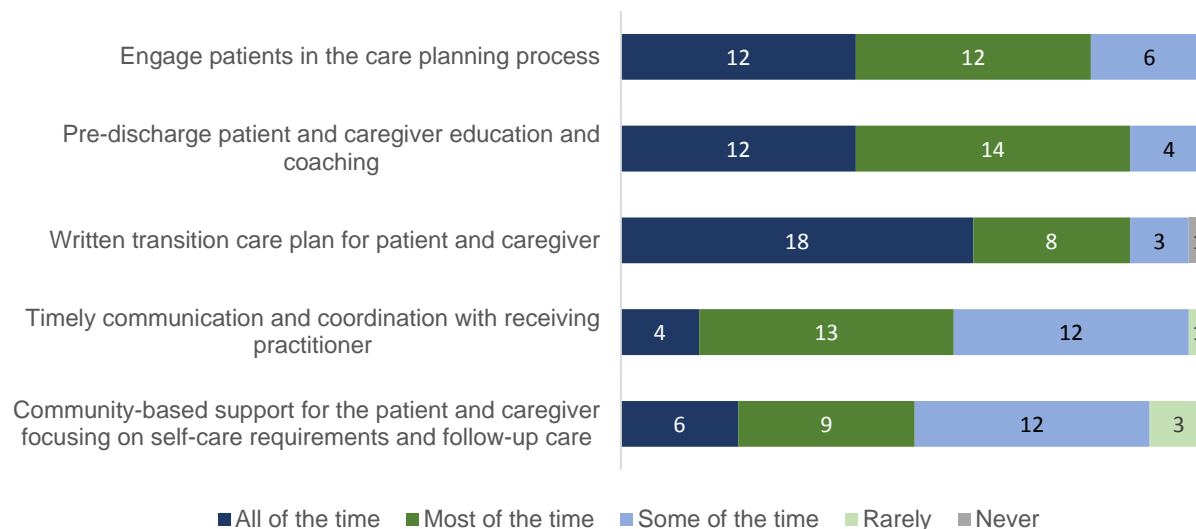


Legend: ■ All of the time ■ Most of the time ■ Some of the time ■ Rarely ■ Never

| | All of the time | Most of the time | Some of the time | Rarely | Never |
|---|---|---|---|---|---|
| Engage patients in the care planning process | 12 | 12 | 6 | | |
| Pre-discharge patient and caregiver education and coaching | 12 | 14 | 4 | | |
| Written transition care plan for patient and caregiver | 18 | 8 | 3 | | 1 |
| Timely communication and coordination with receiving practitioner | 4 | 13 | 12 | 1 | |
| Community-based support for the patient and caregiver focusing on self-care requirements and follow-up care | 6 | 9 | 12 | 3 | |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N= 30 hospitals participating in Project 2.2, Responses were not mutually exclusive.*

During interviews, provision of community-based support seemed to be especially challenging and required resources. One of the hospitals hired an external partner to offer this service:

> *"To help prevent readmission and to smooth the transition, we have engaged a community-based organization, an external one to UCLA. And we pay them, we partner with them to go to our patients' homes." (UC Los Angeles)*

While most hospitals had workflows for helping patients to establish a medical home, 7 DPHs and 4 DMPHs reported always providing this service (Exhibit 214). Others completed this task sometimes (10 DPHs, 8 DMPHs) and 1 DMPH rarely did so.

**Exhibit 214: Patient Support in Establishing Medical Home Under PRIME, by Hospital Type**
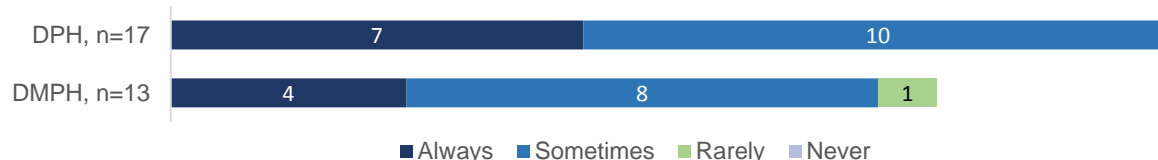


| | Always | Sometimes | Rarely | Never |
|---|---|---|---|---|
| DPH, n=17 | 7 | 10 | | |
| DMPH, n=13 | 4 | 8 | 1 | |

Legend: ■ Always ■ Sometimes ■ Rarely ■ Never

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

In interviews, a hospital discussed the specifics of the PRIME population as an important factor complicating hospitals' efforts in successfully connecting patients to a medical home:

> *"The patients involved are also complex where we deal with a large homeless population as well. It might be very hard to establish a primary care home with them because of all the social requirements and needs … or not being able to reach them after they leave the hospital." (UC San Diego)*

## Monitoring of Care Transition Outcomes

In the interim survey, the majority of hospitals reported monitoring, tracking, and reporting readmission rates (19); tracking and reporting of the timeliness of discharges (10); and investigating root causes or risk factors for readmission (11) on a monthly basis (Exhibit 215). Some hospitals performed these activities more frequently and others did so quarterly or less frequently.

**Exhibit 215: Frequency and Monitoring of Care Transitions Activities Under PRIME**
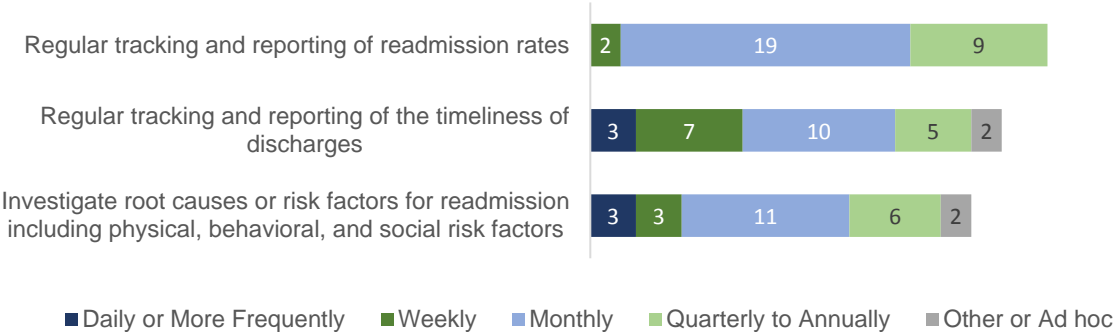


Legend: ■ Daily or More Frequently ■ Weekly ■ Monthly ■ Quarterly to Annually ■ Other or Ad hoc

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=30 hospitals participating in Project 2.2.*

Of the 30 hospitals participating in Project 2.2, 6 hospitals reported using post-hospital visits and outpatient medication reconciliation protocols all of the time, with the majority using them most of the time (Exhibit 216).

**Exhibit 216: Frequency of Use of Protocols for Monitoring Care Transitions Under PRIME**
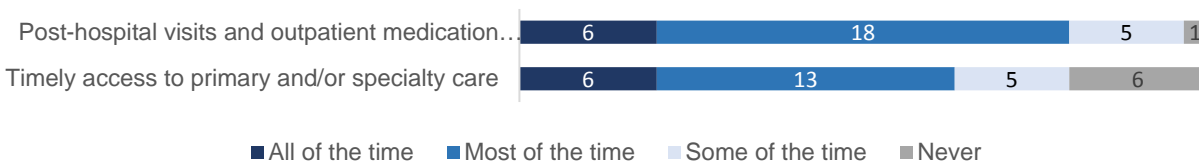


Post-hospital visits and outpatient medication… : 6 | 18 | 5 | 1

Timely access to primary and/or specialty care : 6 | 13 | 5 | 6

■ All of the time  ■ Most of the time  ■ Some of the time  ■ Never

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=30 hospitals participating in Project 2.2, Responses were not mutually exclusive.*

In interviews, a hospital discussed how they enforced adherence to medication reconciliation protocols at discharge:

> *"We've also made the medication reconciliation upon discharge a mandatory activity for the clinicians … we wanted to make sure that they were [doing it]… if you don't do it, you get an alert saying you need to do it." (Ventura)*

## Participation in Learning Collaboratives

In the interim survey, hospitals also reported participation in activities beyond those led by DHCS, Harbage Consulting, SNI/CAPH, or DHLF, including: MARQUIS2, America's Essential Hospitals Population Health Learning Network, Coleman Coaching certification program, Institute for High Quality Care, Care Transitions Contra Costa County Summit, and Discharge Planning Capacity Management Summit.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10). Hospitals reported spending an overall high level of effort in implementing Project 2.2 (DPH 8.2, DMPH 7.0; (Exhibit 403). Among DPHs, ratings of effort were high for engaging internal stakeholders (7.2), resource intensity (8.1), and implementation requirements (7.9). On average, DMPHs reported requiring high effort for engaging internal stakeholders (7.2), and implementation requirements (7.4).

In interviews, participating hospitals emphasized the multifaceted challenges they faced implementing Project 2.2 and engaging with stakeholders:

> *"It was a ground up program again, making sure again, how do we as a patient is discharging knowing they're still at risk, how do get into their home and how do we help serve them and the resources?" (San Mateo)*

*"Just getting buy-in from our providers and our nursing staff has been very difficult. A lot of our providers think that they are communicating the discharge plans to the patient, but then we're finding out with some data that we're collecting, that maybe the patients don't understand their discharge plans. And then bringing those back to the providers and the nurses to push better communication efforts is then, you know, somewhat challenging."* (Contra Costa)

## Challenges and Solutions to Care Transitions: Integration of Post-Acute Care

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 2.2 (Challenges Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (16) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the majority of hospitals (8) was variation in system due to multiple EHRs/IT systems. The top solution identified by the hospitals (13) was standardizing processes for documentation. The second solution identified by the hospitals (5) was process development from management and QI.

In interviews, a DPH also emphasized the importance of combining different approaches in developing solutions to data-related challenges:

*"And for the third QI project, … we've done a major revamp of the transmission, the transition documents, centralizing all of the data points on one document and making sure that all of the contact information for the respective providers, for that patients are included in that file."* (Ventura)

### Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 2.2 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by almost the majority of hospitals (12) was processes not being established system-wide. The second challenge cited by the hospitals (10) was silo-ed departments and difficulty collaborating. The top solution identified by almost the majority of hospitals (10) was standardizing processes across systems. The second solution identified by the hospitals (10) was establishing meetings across teams.

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In interviews, a hospitals discussed their strategy overcoming silo-ed functioning by creating a committee consisting of all key stakeholders responsible for developing system-wide strategies:

> *"Readmissions, if you take that as an example, many of the groups within UCLA are responsible for readmission. So, that has been a little hard to bring everyone together towards that. But since then, I think since the beginning of PRIME, things have changed quite a bit. We have a health system level readmissions committee. And so all the stakeholders are assembled there and working on readmissions." (UC Los Angeles)*

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## Hospital-Reported Metric Performance

Performance of hospitals in Project 2.2 was measured by the following 5 metrics (Exhibit 217). The majority of metrics were intended to show progress by increasing rates over time. UCLA categorized 2 as outcome metrics and 3 as process metrics.

**Exhibit 217: PRIME Project 2.2 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **All-Cause Readmissions** | 2.2.1 | DHCS | N/A | Decrease | Outcome |
| **H-CAHPS-Care Transition Metrics** | 2.2.2 | NQF | 0166 | Increase | Outcome |
| **Medication Reconciliation – 30 Days** | 2.2.3 | NCQA/AMA/PCPI | 0097 | Increase | Process |
| **Reconciled Medication List Received by Discharged Patients** | 2.2.4 | AMA/PCPI | 0646 | Increase | Process |
| **Timely Transmission of Transition Record** | 2.2.5 | AMA/PCPI | 0648 | Increase | Process |

*Source: PRIME Metrics Specs, DY 13YE*

*Notes. NQF: National Quality Forum, DHCS: California Department of Health Services, NCQA: National Committee for Quality Assurance, AMA: American Medical Association, PCPI: Physician Consortium for Performance Improvement.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. DMPHs did not report data in DY 11 for this project.

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## Metric 2.2.1 – All-Cause Readmissions

Metric 2.2.1 measured the 30-day hospital readmission rate (PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce readmissions as a result of improved transition of patients to post hospital care.

Progress was demonstrated through a decrease in rates over time. DPHs reported a decline in the weighted average rate of 30-day all cause readmissions from 14% in DY 11 to 13% in both DY 12 and DY 13 (Exhibit 218). DPH UC and County hospitals reported different patterns of change. DMPHs did not report this metric in DY 11 but reported 12% readmissions in DY 12 and 10% in DY 13. The participating CAH hospital reported an increase from DY 12 (8%) to DY 13 (10%).

**Exhibit 218: PRIME Self-Reported All-Cause Readmission Rates for Metric 2.2.1**



*Source: UCLA analysis of the self-reported data, July 2019. This is an innovative metric. Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*
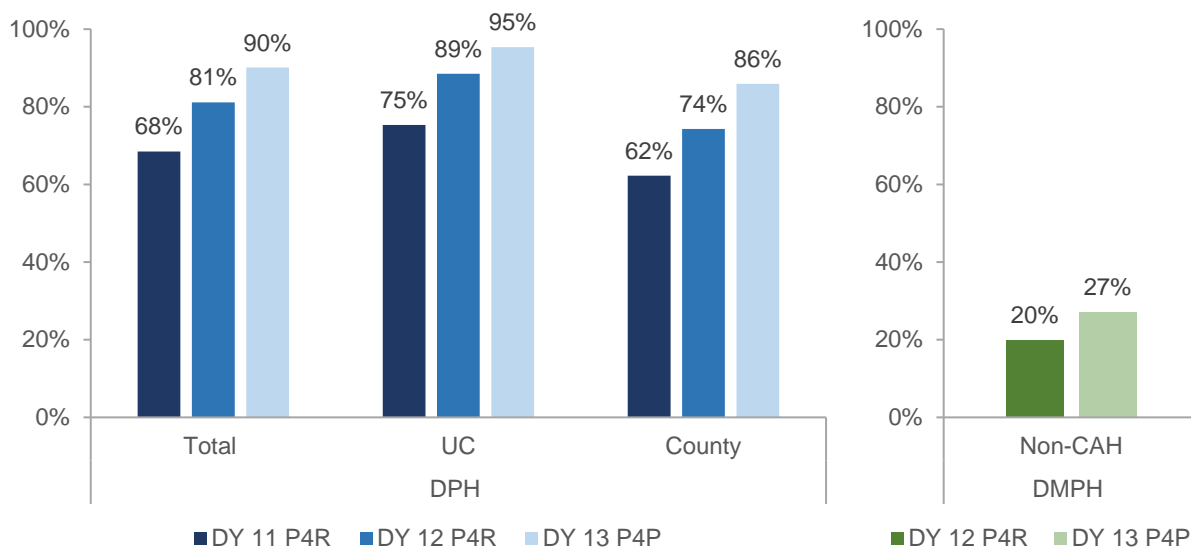*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 2.2.2 – H-CAHPS: Care Transition Metrics

Based on H-CAHPS, Metric 2.2.2 measured patients' assessment of whether hospital staff addressed their health care needs and if patients clearly understood how to manage their health after leaving the hospital (PRIME Metric Specs, DY 13YE). Hospitals were intended to be responsive to patients' need during hospitalization and to improve their understanding of how to manage their care after discharge. Due to data availability, the achievement rates calculated for this metric were the averages of the rates reported and not weighted by hospital denominator.

Progress was demonstrated through an increase in rates over time. Overall, DPHs reported a decrease in average rates in DY 13. DPH UCs reported a decrease starting from 68% in DY 11 to 60% in DY 13, while DPH County hospitals reported stable rates throughout all 3 years. DMPHs reported care transition rates at 45% in DY 12 and 50% in DY 13.

**Exhibit 219: PRIME Self-Reported Care Transition Rates for Metric 2.2.2**
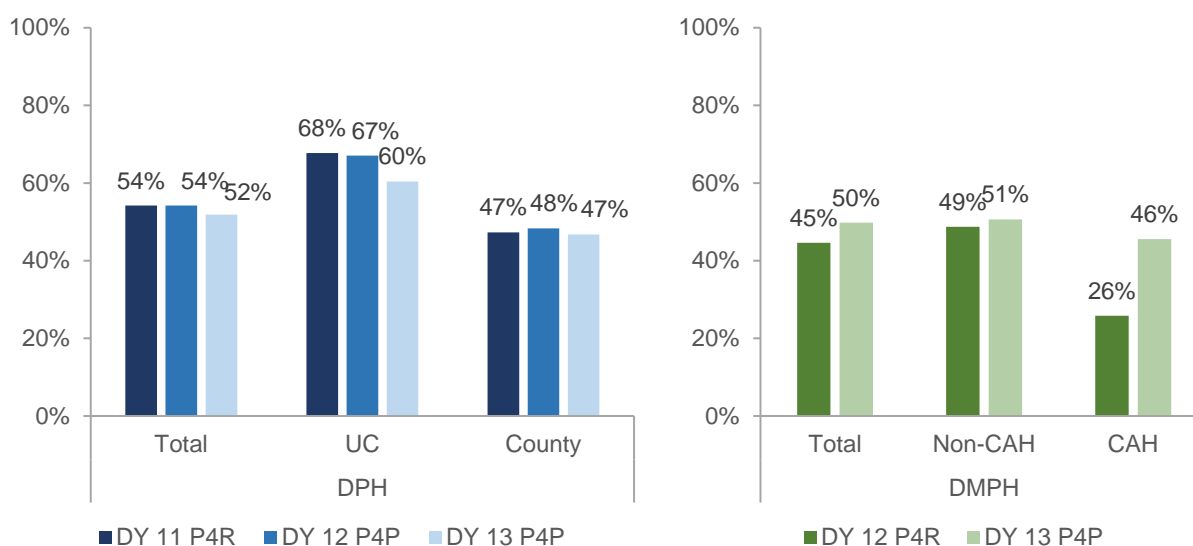


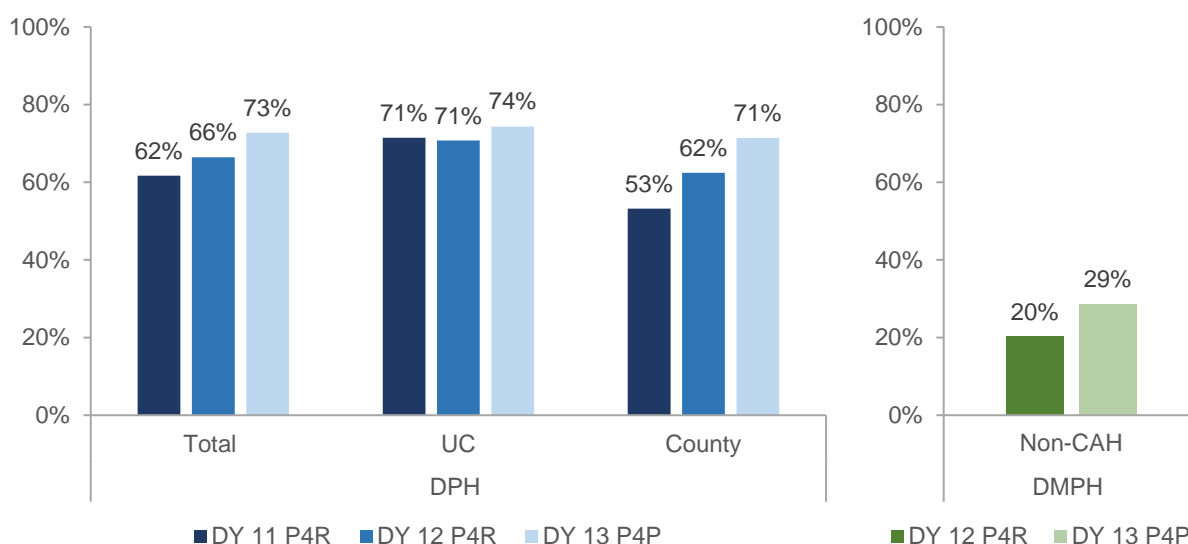*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 2.2.3 – Medication Reconciliation – 30 Days

Metric 2.2.3 measured whether medication reconciliation was conducted on or within 30 days of discharge in the outpatient setting for all patients 18 years of age who were discharged from any PRIME inpatient facility (e.g., hospital, skilled nursing facility, or rehabilitation facility, PRIME Metric Specs, DY 13YE). Hospitals were intended to improve continuity between inpatient and ongoing care, since medications are often changed while a patient is hospitalized.

Progress was demonstrated through an increase in rates over time. Overall, DPHs reported an increase in average rates in DY 13 (Exhibit 220). DPH UCs reported an increase starting from 82% in DY 11 to 90% in DY 13. DPH County hospitals also reported an increase starting from 61% in DY 11 to 74% in DY 13. Overall, DMPHs reported an increase in average rates in DY 13. DMPH Non-CAHs reported an increase starting from 12% in DY 12 to 64% in DY 13. DMPH CAHs reported an increased starting from 66% in DY 12 to 100% in DY 13.

**Exhibit 220: PRIME Self-Reported Medication Reconciliation Rates for Metric 2.2.3**
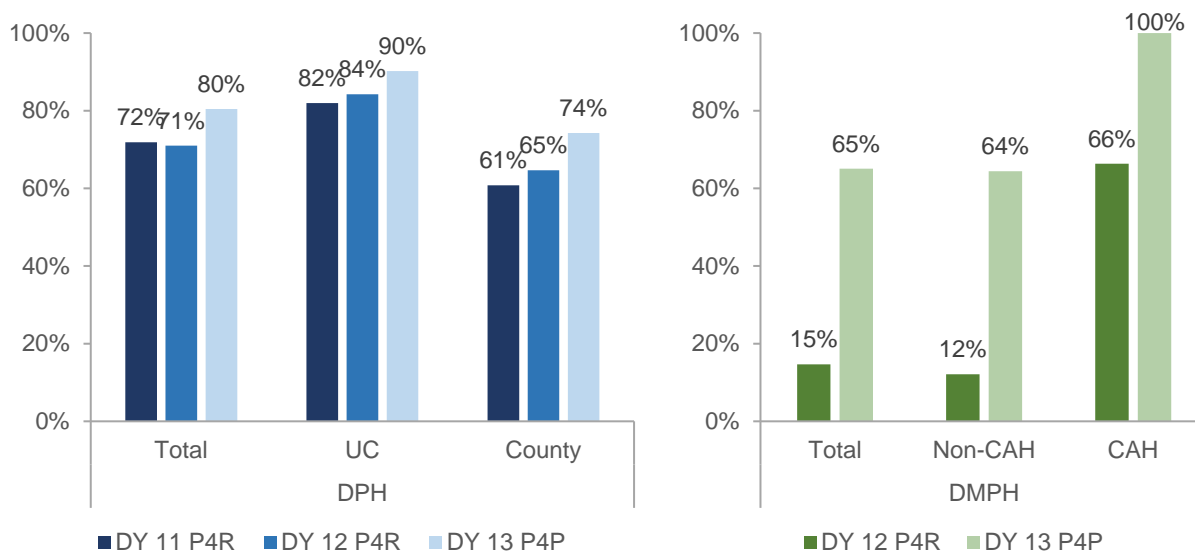


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 2.2.4 – Reconciled Medication List Received by Discharged Patients

Metric 2.2.4 measured to determine the proportion of patients, regardless of age, discharged from inpatient care who received a reconciled medication list at the time of discharge (PRIME Metric Specs, DY 13YE). Hospitals were intended to ensure that prescriptions are explained in a clear and structured manner during times of transition for patients.

Progress was demonstrated through an increase in rates over time. Overall, DPHs reported an increase in average rates in DY 13 (Exhibit 221). DPH UCs reported an increase starting from 72% in DY 11 to 97% in DY 13. DPH County hospitals also reported an increase starting from 42% in DY 11 to 84% in DY 13. Overall, DMPHs reported an increase in average rates in DY 13. DMPH Non-CAHs reported an increase starting from 68% in DY 12 to 89% in DY 13. The participating CAH hospitals reported an increase from DY 12 (20%) to DY 13 (50%).

**Exhibit 221: PRIME Self-Reported Care Reconciled Medication List Rates for Metric 2.2.4**
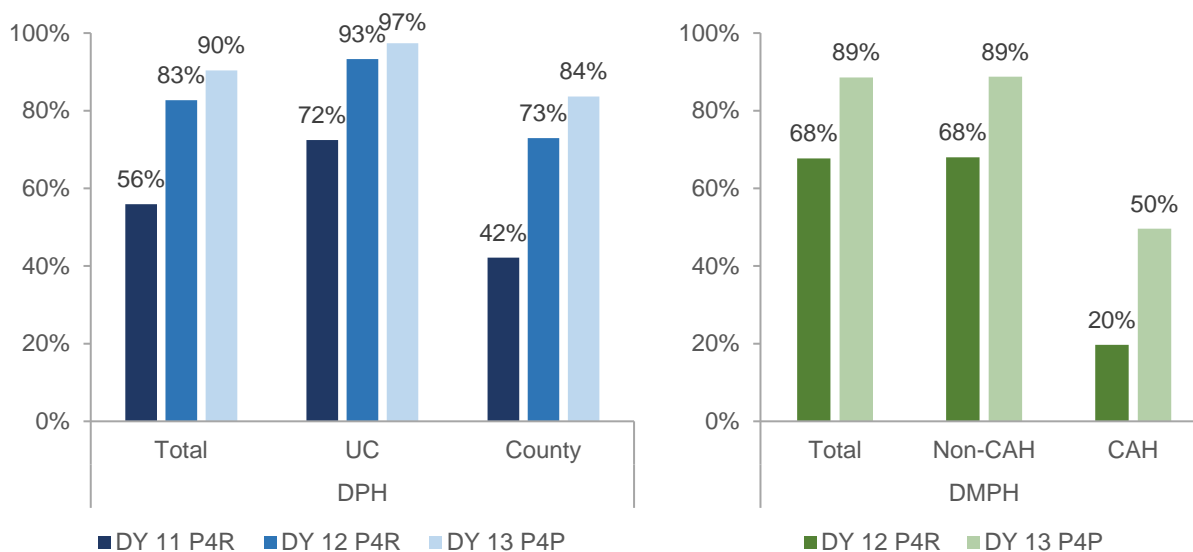


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 2.2.5 – Timely Transmission of Transition Record

Metric 2.2.5 measured the proportion of discharges from inpatient care to home care for which a transition record was transmitted to the facility or primary physician or healthcare professional designated for follow-up within 24 hours of discharge (PRIME Metric Specs, DY 13YE). Hospitals were intended to improve the continuity of care and decrease the risk of re-hospitalization by ensuring patients have a follow-up care plan and clear availability of the patient's discharge information.

Progress was demonstrated through an increase in rates over time. Overall, DPHs reported an increase in average rates in DY 13 (Exhibit 222). DPH UCs reported an increase starting from 93% in DY 11 to 95% in DY 13. DPH County hospitals also reported an increase starting from 21% in DY 11 to 66% in DY 13. Overall, DMPHs reported an increase in average rates in DY 13. DMPH Non-CAHs reported an increase starting from 39% in DY 12 to 47% in DY 13. DMPH CAHs reported an increased starting from 71% in DY 12 to 98% in DY 13.

**Exhibit 222: PRIME Self-Reported Care Timely Transition Record Rates for Metric 2.2.5**

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*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Summary of Key Findings

The primary goal of Project 2.2 was to reduce avoidable readmissions by linking patients to health and social services following inpatient discharge. This project was the most frequently selected, with 30 hospitals implementing it.

Hospitals adapted models and processes to implement risk-assessment for readmission and to establish the steps for implementing care transitions. The majority of hospitals adopted more than 1 care transition model, including the Transitional Care Model, Project Re-Engineered Discharge (RED), Better Outcomes for Older Adults through Safe Transitions (BOOST) Model. DMPHs also frequently used the Care Transition Intervention (CTI). Many hospitals utilized EHR-based risk assessment tools, such as the Rothman or LACE index (19). Nearly all hospitals had protocols for medication management, transitions to subacute and long term care, and discharge planning. Warm handoff processes were established before (7) and during (12) PRIME, and 5 more planned to do this. Similarly, hospitals had workflows to help patients without a usual source of care find a medical home which were developed before (11), during (11) or planned (5) in PRIME. Nineteen hospitals had incorporated care transition elements into their protocols with local health plans. Hospitals incorporated elements to ensure smooth transitions to primary and specialty care providers (18). Hospitals also expanded their protocols and workflows for referring patients to community-based behavioral health and social service agencies; 12 did it before PRIME, 8 added it during PRIME, and 6 more planned to do so.

To implement this project, hospitals expanded their staff training about care transitions; moving from 10 before PRIME, 10 during PRIME, and 5 planning to do it. Discharge planning team most commonly included pharmacists (21) and palliative care providers (19). Some hospitals included mental health (9), substance use (5), and in-home supportive service (4) providers in these teams. The consistency of warm handoffs to transition patients to outpatient care varied across hospitals, with 13 did it most or all of the time, 10 did it some of the time, and 7 rarely or never did this. Hospitals varied in the types and consistency of care transition services for patients and their caregivers; for example, a written transition care plan was always provided by 18 hospitals, but 1 hospital never did it. Most hospitals conducted the following activities at least most of the time: engage patients in the care planning process (24), pre-discharge education (26), conduct timely communication with the receiving practitioner (17), and provide community-based support focusing on self- and follow-up care (15). Most hospitals helped patients establish a medical home if they didn't have one; 11 always and 18 sometimes did this.

All hospitals monitored care transition outcomes but with varying frequency. The majority reported monthly monitoring tracking and reporting of readmission rates (19) and the timeliness of discharges (10), and investigating root causes or risk factors for readmission (11). Ten hospitals monitored the timeliness of discharges more frequently. Six hospitals reported always using post-hospital visits and outpatient medication reconciliation protocols, but the majority reported using these protocols most of the time (18 and 13, respectively).

The overall level of difficulty in implementing this project as high (DPH 8.2; DMPH 7.0 of 10). Data and metric-related challenges to implementation included the lack of health information technology (16), lack of system-wide processes (12), followed by lacking in cooperation due to silo-ed departments (10). Hospitals mostly reported standardization of processes (10) and policies (13); and meetings across teams (10) as the best solutions.

Project 2.2 metrics were 2.2.1-All-Cause Readmissions; 2.2.2-H-CAHPS-Care Transition Metrics; 2.2.3-Medication Reconciliation – 30 Days; 2.2.4-Reconciled Medication List Received by Discharged Patients; 2.2.5-Timely Transmission of Transition Record. Performance was measured by 5 metrics, of which 4 were standard and 1 was innovative; 3 measured processes of care and 2 measured care outcomes. Overall hospitals showed improved performance from DY 11 to DY 13. DPHs showed progress in 2 metrics (2.2.4, 2.2.5) and mixed results in 3 metrics (2.2.1, 2.2.2, and 2.2.3). DMPHs improved in all 5 metrics (2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5).
Project 2.2 was the most commonly selected project and involved adapting models, implementing risk-assessment tools, and changing transition protocols and processes to more consistently link patients with community providers and resources. Hospitals varied in the consistency of these activities, and the majority had mid to high reliability across transition practices.

# Project 2.3 – Complex Care Management for High Risk Medical Populations

## Project Overview

Project 2.3 was designed to improve the health of patients with complex conditions and reduce use of preventable emergency department (ED) visits by better management of complex and high risk patients. These goals were achieved by 1) using guideline concordant frameworks and staffing models; 2) training care teams on managing complex patients; and 3) systematic targeting of these patients. In addition, the project's goals were to be achieved by managing the care of complex patients using established protocols and delivery of needed care. Specific objectives can be found in Attachment Q.

In Project 2.3, 26 hospitals participated and reported metric performance data. All DPHs participated in this project as required by PRIME. Nine DMPHs also participated in this project: Antelope Valley, Hazel Hawkins, Kaweah Delta, Marin, Palo Verde, Palomar, Salinas Valley, Sierra View, and Tri-City (Exhibit 223).

**Exhibit 223: PRIME Project 2.3 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 26 | 26 | 26 |
| **Total DPH** | 17 | 17 | 17 |
| **DPH UC** | 5 | 5 | 5 |
| **DPH County** | 12 | 12 | 12 |
| **Total DMPH** | 9 | 9 | 9 |
| **DMPH Non-CAH** | 9 | 9 | 9 |
| **DMPH CAH** | 0 | 0 | 0 |

*Source: Data provided by DHCS.*
*Notes: At the start of PRIME, DMPHs had the option to report Infrastructure Building Milestones, rather than reporting these metrics. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the suggested core components of this project as an overview of their implementation of providing complex care management for high risk medical populations (Exhibit 224). In the interim survey, 12 hospitals reported developing a complex care management program at 1 site or with 1 defined cohort, or expanding an existing program and 12 also reported

conducting a qualitative assessment of high-risk, high-utilizing patients prior to PRIME. During PRIME, all or nearly all participating hospitals reported implementing all the core components.

**Exhibit 224: PRIME Project 2.3 Core Components**

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Develop a complex care management program at one site or with one defined cohort, or expand an existing program from a pilot site to all sites or to additional high-risk groups and demonstrate engagement of patients in the design and implementation of the project. | 12 | 23 |
| Utilize at least one nationally recognized complex care management program methodology. | 11 | 19 |
| Identify target population(s) and develop program inclusion criteria based on quantitative and qualitative data (e.g., acute care utilization, lack of primary care utilization, number of high-risk medical mental or SUD conditions, polypharmacy, primary care input, functional status, patient activation, social support or other factors). Include patient factors associated with a higher probability of being impacted by complex care management | 12 | 25 |
| Conduct a qualitative assessment of high-risk, high-utilizing patients. | 12 | 20 |
| Establish data analytics systems using clinical (e.g., EHR, registries), utilization and other available data (e.g., financial, health plan, zip codes), to enable identification of high- risk/rising risk patients for targeted complex care management interventions, including ability to stratify impact by race, ethnicity and language. | 8 | 19 |
| Develop a multi-disciplinary care team, to which each participant is assigned, that is tailored to the target population and whose interventions are tiered according to patient level of risk. | 11 | 20 |
| Ensure that the complex care management team has ongoing training, coaching, and monitoring towards effective team functioning and care management skill sets. | 10 | 22 |
| Implement evidence-based practice guidelines to address risk factor reduction (smoking cessation/immunization/substance abuse identification and referral to treatment/depression and other behavioral health screening/etc.) as well as to ensure appropriate management of chronic diseases. a. Use standardized patient assessment and evaluation tools (may be developed locally, or adopted/adapted from nationally recognized sources) b. Use educational materials that are consistent with cultural, linguistic and health literacy needs of the target population. | 11 | 20 |
| Ensure systems and culturally appropriate team members (e.g. community health worker, health navigator or promotoras) are in | 12 | 17 |

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| place to support system navigation and provide patient linkage to appropriate physical health, mental health, SUD and social services. Ensure follow-up and retention in care to those services, which are under DPH/DMPH authority, and promote adherence to medications. | | |
| Implement technology-enabled data systems to support patients and care teams throughout the care management program including patient identification, pre-visit planning, point-of-care delivery, care plan development and population/panel management activities. | 8 | 18 |
| Implement a data-driven system for rapid cycle improvement and performance feedback to address quality and safety of patient care, which includes patients, front line staff and senior leadership. | 10 | 16 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=26 hospitals participating in Project 2.3. Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component. Since the interim survey hospitals may have implemented or dropped activities under a core component.*

## Infrastructure

### Framework and Staffing Models for Complex Care Management

In the interim survey, 7 hospitals (4 DPHs, 3 DMPHs) reported using an existing framework for complex care management (data not shown). Care models included: the Geriatric Resources for Assessment and Care of Elders (GRACE) Team Care Model, Embedded Care Manager Model, Complex Care Management Program, Chronic Care Model, and Camden Coalition Care Management Model.

During interviews, a hospital expanded on their selected framework:

> *"We first were doing complex care through DSRIP … we adopted GRACE mainly for its operational model of using an NP and a social worker and a home-based assessment as a best practice to really address the issues that drive healthcare utilization… [we had a] home-based assessment with an NP and a social worker. They still do full-screening assessments and try and meet the patient in the home. We use the care team model, where they come back and they report out on new patients once a week and get input from the care team. We have a psychiatrist on the team, a pharmacist, a geriatric clinical nurse specialist, a geri-nutrition care physician, and they all weigh in on an interdisciplinary care plan. So the GRACE model gave us that operating structure to expand to other groups." (UC San Francisco)*

In the interim survey, hospitals were asked to identify which complex care staffing models they had adopted for the implementation of this project. Of the 17 DPHs, 10 indicated using an embedded care manager model in which care managers are assigned to dedicated sites. Of the 9 DMPHs, 3 indicated using the embedded care manager model as well. Three DPHs and 2 DMPHs indicated using a centrally located care management model in which care managers are at a central site and 2 DPHs indicated using a hybrid model (Exhibit 225).

**Exhibit 225: Complex Care Management Models Adopted for Implementation During PRIME**
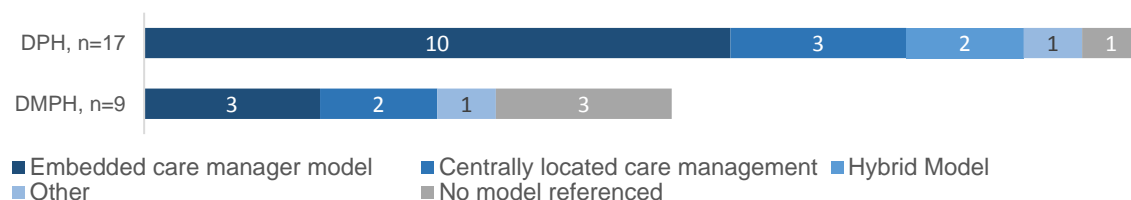


DPH, n=17: Embedded care manager model 10, Centrally located care management 3, Hybrid Model 2, Other 1, No model referenced 1

DMPH, n=9: Embedded care manager model 3, Centrally located care management 2, Other 1, No model referenced 3

Legend: ■ Embedded care manager model ■ Centrally located care management ■ Hybrid Model ■ Other ■ No model referenced

In interviews, a hospital explained how they had chosen to implement their complex care management model:

> *"These are centrally managed, and basically matrixed out to the practices. Most of it is virtual, but sometimes on site… Is if you are a RNC manager, or care manager and they're responsible, let's say, for La Hoya Internal Medicine, where I see patients, they may come on site periodically to my practice, be with a patient, or to provide a better services on site. But, they'll spend most of their time centrally located under the care management team."* (UC San Diego)

### Training Staff and Providers

In the interim survey, all participating hospitals reported training care team members in managing care for complex patients. More than a third of hospitals (10 of 26) trained staff annually, half trained at an interim frequency, and 3 trained once (Exhibit 226). Of the interim frequencies, 3 hospitals had quarterly training, 2 had monthly training, 2 had weekly or daily training, and most also had ad hoc trainings as needed (data not shown).

**Exhibit 226: Frequency of Training Care Team in Managing Care for Complex Patients During PRIME**



| | |
|---|---|
| Annually | 10 |
| Interim Frequency | 13 |
| Once | 3 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=26 hospitals participating in Project 2.3.*

Hospitals reported on the type of individuals included on the multi-disciplinary care teams centered on the needs of complex patients as well as the frequency in the interim survey (Exhibit 227). The majority of hospitals (17 of 26) indicated that clinical support staff (e.g., nurse, licensed vocational nurses, medical assistant) were always involved, and 14 indicated that case managers and case coordinators were also always involved. Mental health professionals (13) and substance use providers (10) were most often reported as being sometimes involved in care teams for complex patients.

**Exhibit 227: Frequency of Complex Care Team Member Involvement During PRIME**
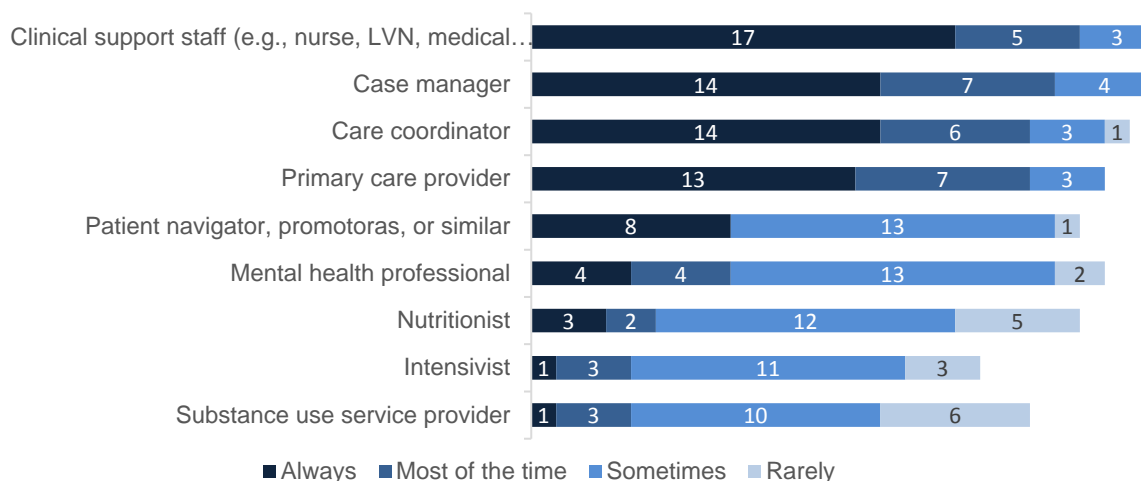


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=26 hospitals participating in Project 2.3.*

A hospital discussed the various staff components that make up their complex care team:

>  "*We have 2 RNs that make up the transitions of care team. We have a social worker so depending on the patient's need, once they get to the clinic they can be handed off. We have high risk care managers, moderate risk care managers, low risk care managers, we have health coaches. I think that we definitely have a multi-disciplinary care team.*" (Salinas Valley)

## Methods and Criteria for Targeting Complex Patients

In the interim survey, participating hospitals were asked to indicate the criteria they used to identify the target population for complex care management. Of the 17 participating DPHs, 16 of them and all 9 DMPHs indicated that the number of high risk medical conditions was used to identify the target population. Frequent emergency department visits or hospitalizations were selected by 12 DPHs and 8 DMPHs (Exhibit 228). The majority of DPHs (11) also reported incorporating mental health conditions in criteria to identify their target populations for complex care management.

**Exhibit 228: Criteria Used for Identifying Target Populations During PRIME**
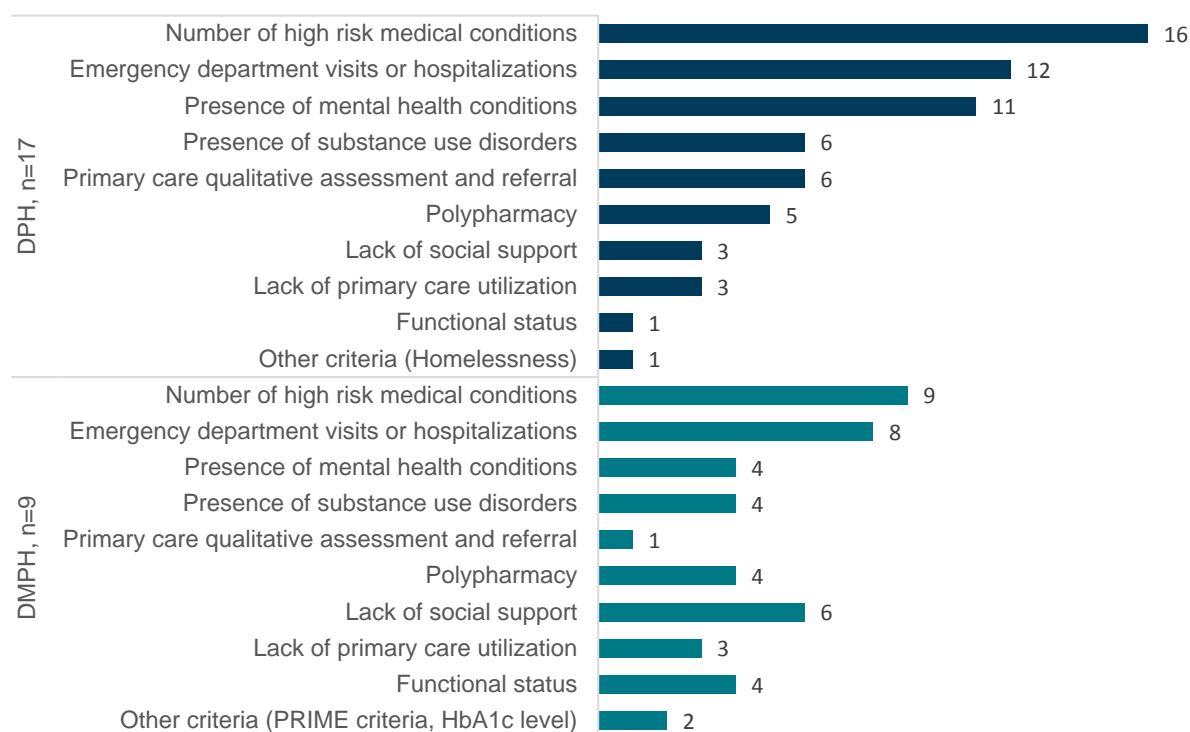


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

In interviews, hospitals described their reasoning behind choosing certain criteria to define their target population for complex care management:

*"So they are using several things to determine the risk, and we were using hospitalization, psychiatric, emergency department, and in-patient. So we were more focusing on utilizers of the hospital system." (Contra Costa)*

*"So at this point, we used utilization as one of the main criteria, with comorbid disease. Trying to follow the complex care, some of the identified codes that are complex care" (UC San Francisco)*

Participating hospitals were also asked in the interim survey to identify data sources and/or analytic methods they used to target complex patients for care management intervention. Of the 17 participating DPHs, 16 of them and 7 of the 9 DMPHs identified using patient encounters within the organization to target complex patients. Of the participating DPHs, 11 of them indicated using disease registries to target complex patients while only 3 of the 9 DMPHs indicated using disease registries (Exhibit 229).

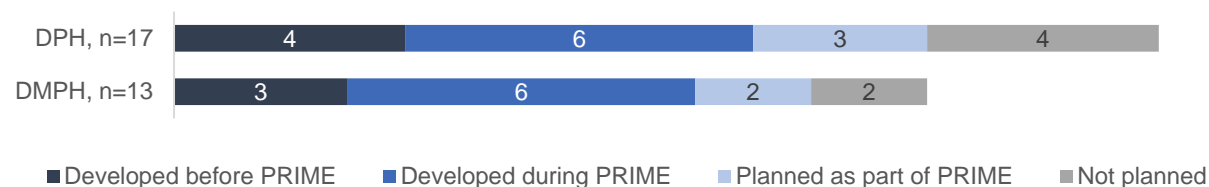**Exhibit 229: Data Sources and Analysis for Targeting Complex Patients Under PRIME**
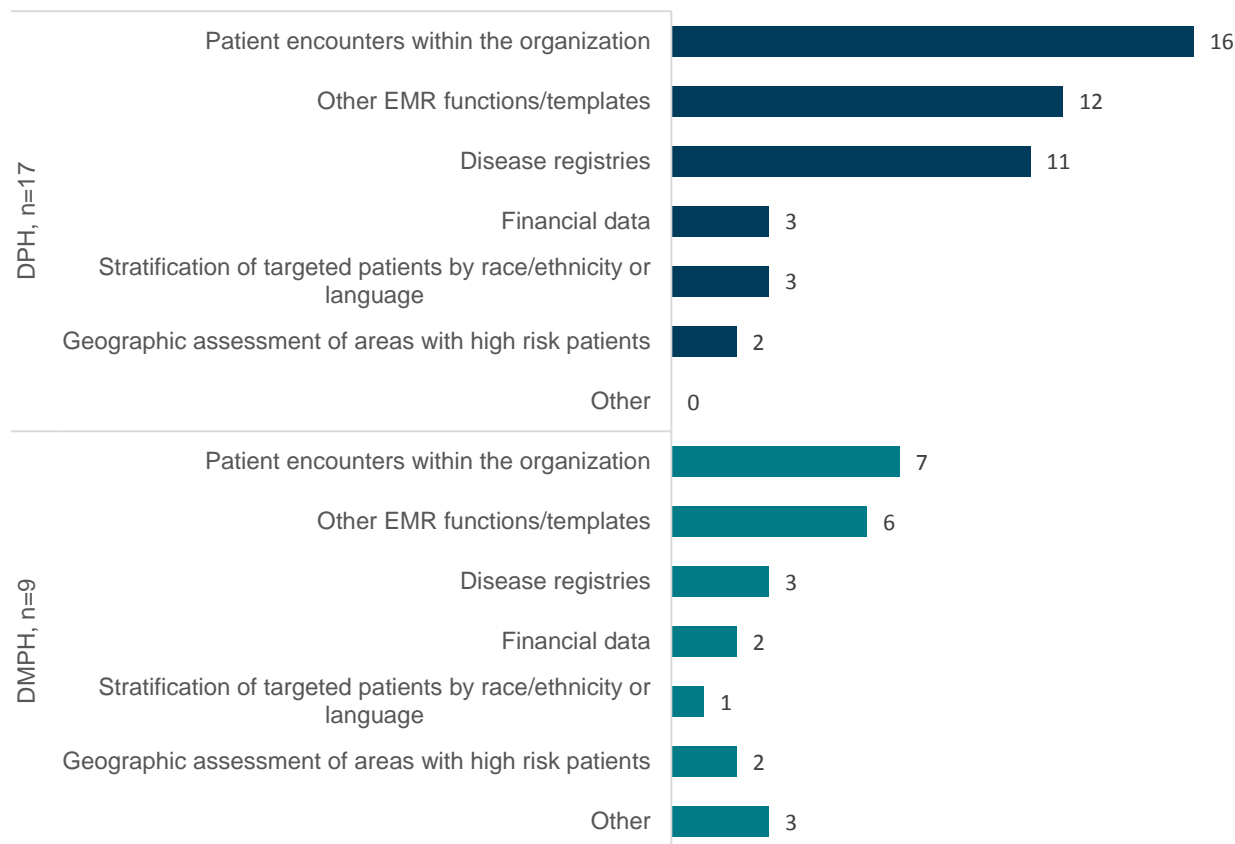


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

## Project Implementation

### Management of Complex Patients

Participating hospitals were asked in the interim survey to indicate what processes they had implemented to manage the care of complex patients (Exhibit 230). The use of standardized patient assessments and evaluations tools was most common amongst DPHs (16 of 17). For DMPHs, the most common process for implementation was the use of educational materials consistent with cultural, linguistic, or health literacy level of patients (8 of 9).

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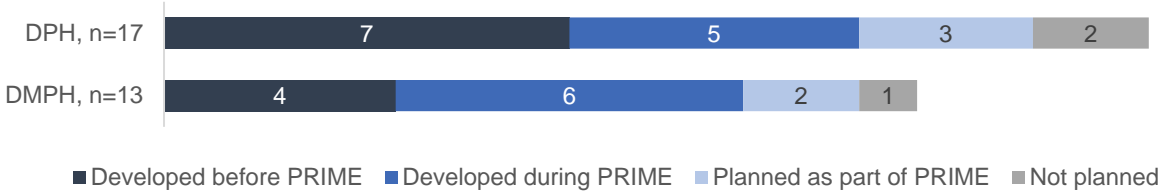**Exhibit 230: Complex Care Management Processes Implemented During PRIME**



*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

During interviews, a hospital discussed the kinds of complex care management processes they implemented for this project:

*"The appropriate management of chronic diseases [included] standardized patient assessment and evaluation tools. That was definitely our LACE and our PHQ2 and PHQ9. And then education materials, we do English, Spanish." (Salinas Valley)*

In the interim survey, most hospitals (15 DPHs, 6 DMPHs) indicated using evidence-based practice guidelines to reduce risk factors as a process to manage the care of complex patients (Exhibit 231). The most common evidence-based practice guideline used was smoking cessation (14 DPHs, 5 DMPHs). Another common guideline used amongst DPHs was mental health screening (13). For DMPHs, guidelines for immunization were also frequently used (5).

**Exhibit 231: Evidence-based Management of Complex Patients during PRIME**
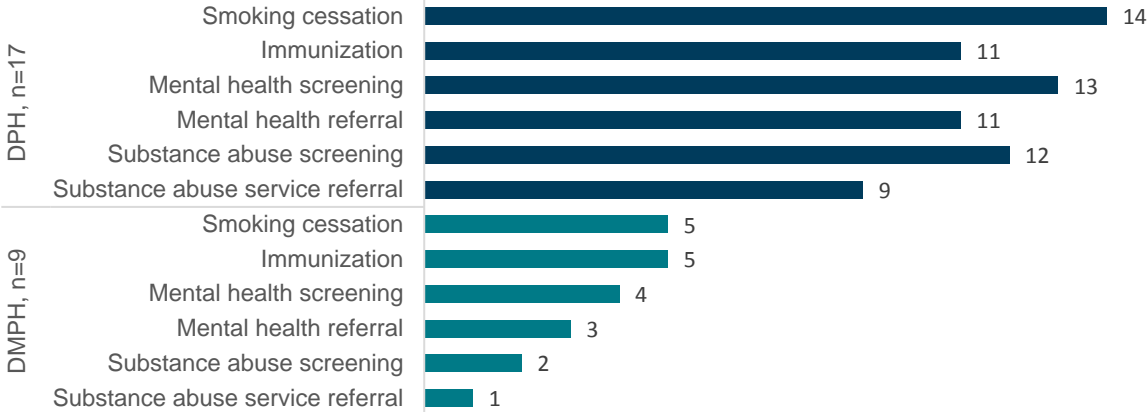


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

Participating hospitals were asked in the interim survey to indicate the activities conducted by patient navigators or promotoras, as well as the frequency (Exhibit 232). The activity that was most commonly reported to be always conducted was helping retain patients in care (9 of 26), followed by promoting adherence to medications (8), and helping patients with translation (7). Providing assistance with transportation, paperwork, and accompanying patients to appointments was less common.

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**Exhibit 232: Frequency of Types of Activities Conducted by Patient Navigators or Promotoras during PRIME**
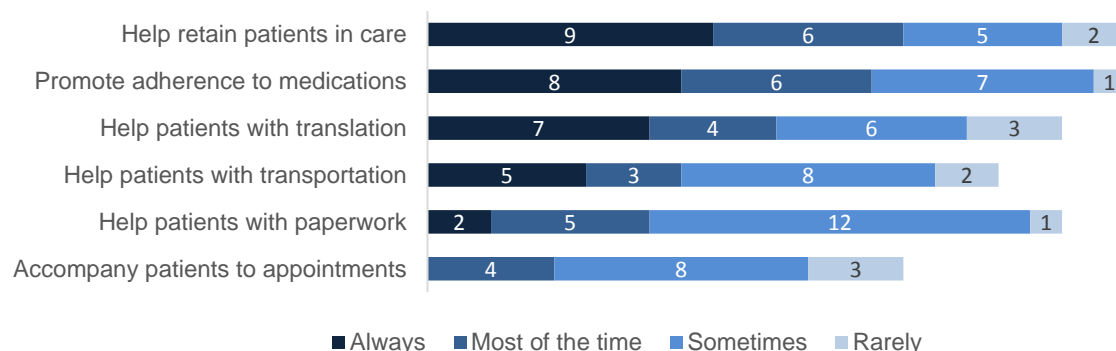


| Activity | Always | Most of the time | Sometimes | Rarely |
|---|---|---|---|---|
| Help retain patients in care | 9 | 6 | 5 | 2 |
| Promote adherence to medications | 8 | 6 | 7 | 1 |
| Help patients with translation | 7 | 4 | 6 | 3 |
| Help patients with transportation | 5 | 3 | 8 | 2 |
| Help patients with paperwork | 2 | 5 | 12 | 1 |
| Accompany patients to appointments | | 4 | 8 | 3 |

■ Always  ■ Most of the time  ■ Sometimes  ■ Rarely

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=26 hospitals participating in Project 2.3.*

## Participation in Learning Collaboratives

In the interim survey, some DPHs (5) and DMPHs (3) reported participating in learning collaboratives outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF for implementation of Project 2.3. Learning collaboratives included: America's Essential Hospitals Population Health Learning Network, MARQUIS2, Whole Person Care activities, Institute for High Quality Care, Institute for Health Improvement Virtual Expeditions, and the Transforming Clinical Practice Initiative.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10). Hospitals reported spending an overall medium level of effort in implementing Project 2.3 (DPH 6.6, DMPH 6.3; (Exhibit 403). Among DPHs, ratings of effort were high for resource intensity (7.5), and implementation requirements (7.5). On average, DMPHs reported requiring mostly medium level effort with engaging internal stakeholders (6.3) being the highest.

## Challenges and Solutions to CCM for High Risk Medical Populations

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 2.3 (Challenges Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (18) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the majority of hospitals (9) was variation in system due to multiple EHRs/IT systems. The top solution identified by the majority of hospitals (13) was EHR/IT standardization or

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expansion across system. The second solution identified by the majority of hospitals (9) was standardizing processes for documentation.

## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 2.3 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by the hospitals (8) was processes not being established system-wide and inadequate availability of services (8). The second challenge cited by the hospitals (9) was silo-ed departments and difficulty collaborating. The top solution identified by the hospitals (7) was standardizing processes across systems. The second solution identified by the hospitals (4) was expanding services and availability as well as implementing provider and staff training and increased capacity (4).

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## Hospital-Reported Metric Performance

Performance of hospitals in Project 2.3 was measured by the following 4 metrics (Exhibit 233). There was 1 innovative metric. Of these metrics, 3 metrics were intended to show progress by increasing rates over time and UCLA categorized these 3 as process metrics. Only 1 metric intended to show progress by decreasing rates over time and UCLA categorized this as an outcome metric.

**Exhibit 233: PRIME Project 2.3 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **Care Coordinator Assignment** | 2.3.1* | Univ. of Washington CCO | N/A | Increase | Process |
| **Medication Reconciliation – 30 Days** | 2.3.2 | NCQA | 0097 | Increase | Process |
| **Prevention Quality Overall Composite #90** | 2.3.3 | AHRQ | N/A | Decrease | Outcome |
| **Timely Transmission of Transition Record** | 2.3.4 | AMA-PCPI | 0648 | Increase | Process |

*Source: PRIME Metrics Specs, DY13YE*

*Notes: Univ.: University, CCO: Coordinated Care Collaborative, NCQA: National Committee for Quality Assurance, AHRQ: Agency for Healthcare Research and Quality, AMA-PCPI: American Medical Association Physician Consortium for Performance Improvement, * Denotes innovative metric.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. Hospitals may not have reported data if they were working on Infrastructure Building milestones or had other constraints on data availability. DMPHs did not report data in DY 11 for this project.

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## Metric 2.3.1 – Care Coordinator Assignment

Metric 2.3.1 measured the percentage of clients with an assigned care coordinator ([PRIME Metric Specs, DY 13YE](#)). Hospitals were intended to increase the amount of appropriate results and timely documentation. This metric was retired after DY 12, so no data were reported for DY 13.

The intended direction of Metric 2.3.1 was an increase in rates over time. DPHs reported an increase in the weighted average percentage of clients with an assigned care coordinator from 35% in DY 11 to 49% in DY 12. (Exhibit 234). DPH UCs reported a decrease from 38% in DY 11 to 37% in DY 12. DPH Counties reported an increase from 33% in DY 11 to 59% in DY 12. DMPH Non-CAHs did not report this metric in DY 11 but reported 26% of clients were assigned a care coordinator in DY 12.

**Exhibit 234: PRIME Self-Reported Care Coordinator Assignment Rates for Metric 2.3.1\***
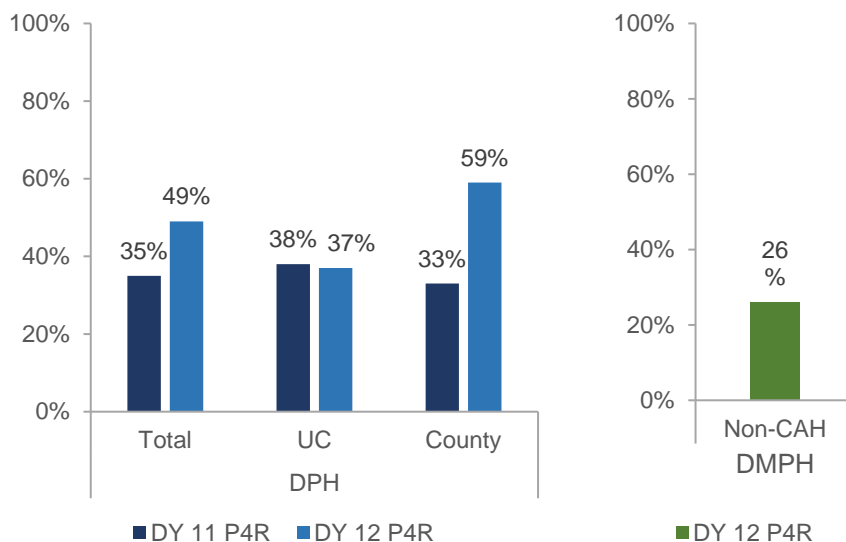


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, this metric was retired after DY 12, so no data were reported for DY 13, \*This is an innovative metric.*

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## Metric 2.3.2 – Medication Reconciliation – 30 Days

Metric 2.3.2 measured the rate of medical reconciliation conducted by a prescribing practitioner, clinical pharmacists or registered nurse on or within 30 days of discharge (PRIME Metric Specs, DY13YE). Hospitals were intended to improve continuity between inpatient and ongoing care, since medications are often changed while a patient is hospitalized.

The intended direction of Metric 2.3.2 was an increase in rates over time. DPHs reported a decrease in the weighted average rate of medical reconciliation from 78% in DY 11 to 72% in DY 12, but an increase to 82% in DY 13 (Exhibit 235). DPH UCs reported an increase from 92% in DY 11 and DY 12 to 94% in DY 13. DPH Counties reported an increase from 59% in DY 11 to 65% in DY 12 and 75% in DY 13. DMPHs Non-CAHs did not report this metric in DY 11 but reported 7% medical reconciliation in DY 12 and 51% in DY 13. In DY 13, the individual achievement rates for Metric 2.3.2 ranged from 49% to 100% for DPHs and 16% to 100% for DMPHs (data not shown).

**Exhibit 235: PRIME Self-Reported Medical Reconciliation Rates for Metric 2.3.2**



*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 2.3.3 – Prevention Quality Overall Composite #90

Metric 2.3.3 measured the rate of discharges from the PRIME hospital, for patients 18 years and older, that meet the inclusion and exclusion rules for the numerator in any of the following Prevention Quality Indicators (PQI), which is also metric 1.2.8 and 2.5.3 (Exhibit 108; PRIME Metric Specs, DY 13YE). Hospitals were intended to decrease the PQIs by ensuring all patients receive deliberate and comprehensive health care in all areas.

The intended direction of Metric 2.3.3 was a decrease in rates over time. DPHs reported a decrease in the weighted average percentage of composite PQI rates from 8% in DY 11 to 4% in both DY 12 and DY 13 (Exhibit 236). DPH UCs reported an increase from 5% in DY 11 to 6% in both DY 12, but a decrease to 4% DY 13. DPH Counties reported a decrease from 9% in DY 11 to 3% in DY 12, but an increase to 4% in DY 13. DMPHs Non-CAHs did not report this metric in DY 11 but reported 22% composite PQI rates in both DY 12 and DY 13. In DY 13, the individual achievement rates for Metric 2.3.3 ranged from 1% to 46% for DPHs and 8% to 74% for DMPHs (data not shown).

**Exhibit 236: PRIME Self-Reported Composite PQI Rates for Metric 2.3.3**



*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

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## Metric 2.3.4 – Timely Transmission of Transition Record

Metric 2.3.4 measured the percentage of discharges for which a transition record was transmitted to the facility or primary physician or other health care professional designated for follow-up care within 24 hours of discharge (PRIME Metric Specs, DY 13YE). Hospitals were intended to improve the continuity of care and decrease the risk of re-hospitalization by ensuring patients have a follow-up care plan and clear availability of the patient's discharge information.

The intended direction of Metric 2.3.4 was an increase in rates over time. DPHs reported an increase in the weighted average percentage discharges from 51% in DY 11 to 52% in DY 12 and to 77% in DY 13 (Exhibit 237). DPH UCs reported an increase from 95% in DY 11 to 96% in both DY 12 and DY 13. DPH Counties reported an increase from 18% in DY 11 to 27% in DY 12 and 68% in DY 13. DMPHs Non-CAHs did not report this metric in DY 11 but reported 3% discharges in DY 12 and 13% in DY 13. In DY 13, the individual achievement rates for Metric 2.3.4 ranged from 29% to 100% for DPHs and 0.87% to 93% for DMPHs (data not shown).

**Exhibit 237: PRIME Self-Reported Timely Transmission of Transition Record Rates for Metric 2.3.4**

## Summary of Key Findings

Project 2.3 was designed to improve the health of patients with complex conditions and reduce use of preventable emergency department visits through improved management of complex and high-risk patients. Seventeen DPHs and 9 DMPHs participated in Project 2.3 and reported metric performance data. Hospitals reported using existing frameworks in PRIME for complex care management with various different care models. Majority of hospitals (13) indicated adopting an embedded care manager model with managers assigned to dedicated sites, other hospitals (5) applied a centrally located care management model, and few used a hybrid model (2). Many hospitals annually (10) or more frequently (13) have provided training for care team members. Multi-disciplinary care teams have been created, consisting of clinical support staff (17), case managers and case coordinators (14), mental health professionals (13) and substance use providers (10). Except for 1 DPH, which relied only on the frequency of emergency department visits and hospitalizations when identifying the target population, all other participating hospitals (26) identified their target population mainly based on the number of high risk medical conditions. Detailing on the data sources and analytic methods used for targeting patients for care management intervention, hospitals indicated relying on patient encounters (23), disease registries (14) or other EHR functions and templates (18).

Most DPHs (16) focused on standardized patient assessments and evaluation, while majority of DMPHs used educational materials consistent with the cultural, linguistic, or health literacy level of patients (8) when managing the care of complex patients. Evidence-based practice guidelines, including commonly guidelines on smoking cessation (19), immunization (16) and mental health screening (13) were applied to reduce risk factors in the project's target population. Services patient navigators or promotoras in many hospitals always provided help retaining patients in care (9), promoting medication adherence (8), or helping patients with translation (7).

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The overall level of difficulty in implementing this project was medium (DPH 6.6, DMPH 6.3). The top metric and data-related challenges were lack in IT infrastructure (18), variation in systems due to multiple EHR/IT systems (9), the lack of processes being established system-wide and inadequate service availability (8). The most successful solutions to these challenges were standardization of EHR/IT systems (13), of documentation processes (9) and other processes across systems (7).

Project 2.3 metrics were 2.3.1-Care Coordinator Assignment; 2.3.2-Medication Reconciliation – 30 Days; 2.3.3-Prevention Quality Overall Composite #90; 2.3.4-Timely Transmission of Transition Record. Performance was measured by 4 metrics, including 3 standard and 1 innovative metric. The innovative metric (2.3.1) was discontinued after DY 12 and not evaluated for the DMPHs, which had only 1 year of data available. Three were process metrics and 1 was an outcome metric. DPHs showed progress in all 4 metrics (2.3.1, 2.3.2, 2.3.3, and 2.3.4). DMPHs improved for 2 of 3 metrics (2.3.2 and 2.3.4) and stable rates for 1 remaining metric (2.3.3).

Overall, hospitals made significant progress in Project 2.3 by establishing multi-disciplinary teams that focused on improved care management through standardized patient assessments, provision of educational materials and use of evidence-based guidelines. Hospitals reported improvements in the majority of metrics with variations in progress in project implementation and metrics.

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# Project 2.4 - Integrated Health Home for Foster Children

## Project Overview

Project 2.4 was designed to implement integrated health homes (Stoltzfus E, 2014) for children in the foster system; provide foster children with a "one-stop-shop" for fully integrated health services including physical and behavioral health, as well as needed substance abuse and social services; and improve the overall quality of care for foster children within the development and implementation of a patient centered medical home. Specific objectives included: improved patient adherence to their treatment regimen; improved communication and documentation of communication and coordination with child welfare services; reduced avoidable acute care utilization (ED, inpatient admissions); and improved patient experience. Specific objectives can be found in Attachment Q.

Project 2.4 was not required for DPHs and 4 County DPHs implemented this project: Ventura, San Mateo, Santa Clara, and Contra Costa (Exhibit 238). Arrowhead stopped participation in May 2017 because they lacked the patient volume to have large enough denominators; this analysis includes data from their self-reports up to this point. No DMPHs selected Project 2.4. Due to the limited number of hospitals participating in these projects and to reduce the survey burden on hospitals, the information on this project is limited to data from hospital annual reports and interviews.

**Exhibit 238: PRIME Project 2.4 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|                              | DY 11 | DY 12 | DY 13 |
|------------------------------|-------|-------|-------|
| **Total Participating Hospitals** | 5     | 4     | 4     |
| **Total DPH**                | 5     | 4     | 4     |
| **DPH UC**                   | 0     | 0     | 0     |
| **DPH County**               | 5     | 4     | 4     |
| **Total DMPH**               | 0     | 0     | 0     |
| **DMPH Non-CAH**             | 0     | 0     | 0     |
| **DMPH CAH**                 | 0     | 0     | 0     |

*Source: Data provided by DHCS.*
*Notes: Among the DPH County hospitals, Arrowhead Regional Medical Center dropped the project in DY 12 on May 4, 2017. At the start of PRIME, DMPHs had the option to report Infrastructure Building Milestones, rather than reporting these metrics. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Hospitals were encouraged to implement suggested core components of the project as an indication of their overall approach to integrate health homes for foster children (Exhibit 239). In other sections hospitals reported on these metrics as part of the interim survey, however this analysis is based on the approved 5-year plans. Four core components were applicable for all participating hospitals (1, 3, 5, 8), 2 components were considered applicable by 4 hospitals (6, 7), and 3 components by 3 hospitals (2, 4, 9).

### Exhibit 239: PRIME Project 2.4 Core Components

| Core Component | Ventura | San Mateo | Santa Clara | Contra Costa | Arrowhead |
|---|---|---|---|---|---|
| **1.** Develop or expand a multi-therapeutic support model whereby PCPs working in Public Healthcare Systems receive support in the ongoing management and treatment of foster children: a. Demonstrate engagement of patients and families in the design and implementation of this project. | Applicable | Applicable | Applicable | Applicable | Applicable |
| **2.** Implement a physical-behavioral health integration program that utilizes a nationally-recognized model (e.g., the Four Quadrant Model for Clinical Integration). | Applicable | Not Applicable | Applicable | Not Applicable | Not Applicable |
| **3.** Multi-therapeutic care team will: a. Identify patient risk factors using a combination of qualitative and quantitative information. Complete a patient needs assessment using a standardized questionnaire; b. Collaborate on evidence-based standards of care including medication management, care coordination and care engagement process; c. Implement multi-disciplinary case conferences/ consults on patients with complex needs; d. Ensure the development of a single Treatment Plan that includes the patient's behavioral health issues, medical issues, substance abuse and social needs: i. Use of individual and group peer support; e. Develop processes for maintaining care coordination and "system continuity" for foster youth who have one or more changes in their foster home; f. Ensure that the Treatment Plan is maintained in a single shared EHR/clinical record that is accessible | Applicable | Applicable | Applicable | Applicable | Applicable |

| Core Component | Ventura | San Mateo | Santa Clara | Contra Costa | Arrowhead |
|---|---|---|---|---|---|
| across the treatment team to ensure coordination of care planning; g. Assess and provide care for all routine pediatric issues with a specific focus on: i. Mental health/toxic stress, ii. Obesity, iii. Chronic disease management, iv. Medication/care plan adherence which are vulnerable when kids transition care givers frequently, v. Substance abuse issues, vi. Developmental assessment, identification and treatment. | | | | | |
| **4.** Implement technology-enabled data systems to support pre-visit planning, point-of-care delivery, population/panel management activities and care coordination. Timely, relevant and actionable data is used to support patient engagement, and drive clinical, operational and strategic decisions including continuous QI activities. | Applicable | Not Applicable | Applicable | Applicable | Not Applicable |
| **5.** Provide linkages to needed services that at a minimum includes child welfare agency, mental health, substance abuse and public health nursing as well as any other social services that are necessary to meet patient needs in the community. | Applicable | Applicable | Applicable | Applicable | Applicable |
| **6.** Develop liaisons/linkage with school systems. | Applicable | Applicable | Applicable | Applicable | Not Applicable |
| **7.** Provide timely access to eligibility and enrollment services as part of the health home services. | Applicable | Not Applicable | Applicable | Applicable | Applicable |
| **8.** Evidence-based practice guidelines will be implemented to address risk factor reduction. (e.g., immunization, smoking cessation, behavioral health screening) as well as to ensure appropriate management of chronic diseases (e.g., Asthma, Diabetes). Assessment of social service needs will be integral to these activities. Educational materials will be utilized that are consistent with cultural and linguistic needs of the population. | Applicable | Applicable | Applicable | Applicable | Applicable |
| **9.** To address quality and safety of patient care, implement a system for continual performance feedback and rapid cycle improvement, which includes patients, front line staff, and senior leadership. | Applicable | Not Applicable | Applicable | Applicable | Not Applicable |

*Source: UCLA analysis of the approved 5-year plans,
https://www.dhcs.ca.gov/provgovpart/Pages/Approved-5-Year-Project-Plans.aspx.
Notes: N=5 hospitals participating in Project 2.4, Hospitals that selected a core
component may have implemented specific aspects rather than all potential activities of
a core component, The 5-year plans were non-binding for the core components.*

## Project Selection

During interviews and in their annual reports, reasons for selection of this project
included having an organizational commitment to improving care for foster children, the
incentive to continue making progress on initiatives started prior to PRIME, and having
strong champions for the project who had an interest of coordinating with other
agencies to improve the entire system of care for children and adolescents in foster
care. Hospitals further explained:

> *"[We] have medical leaders, mostly pediatricians, who are highly involved in the
> medical care of the foster children in our county. So we did have folks who were
> familiar with the needs of the foster care population, and so felt that was something
> that we had already embarked on for different reasons and that we as a county clinic
> and hospital where the primary caregivers, are medical caregivers for the foster care
> population... Most of the kids who are in foster care do see one of our providers."
> (Ventura)*

> *"Everybody would have said that this an important area of work even before PRIME,
> it's pretty clear that this work would not have happened in the absence of PRIME…
> The county workgroup… got put together because we are working on PRIME." (San
> Mateo)*

> *"The work in 2.4, because it's so cross-collaborative, it is a lot of looking at what we're
> looking at for PRIME, but leveraging existing efforts that are going on within the other
> systems, and collaborating on our mutual issues... A lot of the work has been going
> on already, [but] there hasn't been one conversation… What PRIME has helped
> bring, is to convene these work groups together to tackle the metrics… We have
> constant communication, and we have a venue where we can meet at least once a
> month, to talk about our issues, and focusing on core components in order to meet
> the measure, standardizing operating procedures, and understanding each other's
> workflows… Our next big steps are to work on our data sharing agreement so that
> once PRIME is over, it's sustainable that we're sharing information and that we're
> collaborating with one another." (Santa Clara)*

## Infrastructure

### Development of Multi-Therapeutic Care Teams

The PRIME hospitals specifically developed pediatric care teams to provide access to the full range of services that foster care children needed and implemented multi-disciplinary case conferences/consults for patients with complex needs. For example, Santa Clara reported that they hired additional Complex Care nurses, dental providers, care coordinators, and drug rehabilitation staff. In addition, they worked with their Supporting, Protecting, and Respecting Kids (SPARK) clinic to provide the opportunity for foster children to receive medical, behavioral health, and dental services the same day by hiring/reassigning medical staff and developing the needed protocols for care coordination and oversight. Contra Costa reported hiring 3 community health workers (CHWs) to clear pathways for foster parents to make timely appointments using outreach techniques.

### Strategies for Improving Care Coordination for Foster Youth

To meet objectives of the project, hospitals needed to develop processes for maintaining care coordination and continuity for foster youth (Exhibit 240). Strategies for improving care coordination included promoting integrated care between primary, behavioral health, and dental care and strengthening linkages and coordination between the hospital and other agencies and schools.

**Exhibit 240: Strategies for Improving Care Coordination for Foster Youth**

| Strategy | Example(s) |
|---|---|
| **Expand clinic hours or availability to ease scheduling of medical visits** | Contra Costa adjusted their clinic scheduling to open additional medical visits on weekdays and after school dismissals. |
| **Increase coordination with County agencies in identifying foster children in need of services** | Contra Costa increased the frequency at which they obtained lists of children in foster care from the Children & Family Services to twice a week to improve their ability to conduct timely outreach. Ventura's ambulatory care teams collaborated with the Department of Public Health to coordinate care management and treatment for foster children. |
| **Improve internal data systems for tracking care for children in foster care** | Ventura implemented a tracking system for children newly placed in foster care, and were in the process of developing a patient registry for foster children. San Mateo standardized their processes for documenting and reporting development assessment results through the electronic health record. |
| **Expand age limits for pediatric care to promote continuity of care** | Contra Costa changed their pediatric care policies to allow young adults to continue care to age 22, while Santa Clara expanded pediatric care to the age of 21. |
| **Improve systems for data sharing between** | Santa Clara created systems for data sharing for depression screening results between County agencies. Ventura's Ambulatory Care and Department of Public |

| Strategy | Example(s) |
|---|---|
| hospital and County agencies | Health collaborated to implement Foster Health Link, an app that pushes data from their electronic health record to parents and social workers. |
| Implement standardized protocols for initiating and managing care | Santa Clara created protocols for emergency placement and standing orders for referrals for children in out-of-home placement. Ventura implemented systematic screening for behavioral health issues for children in foster care. Prior to ending participation in the project, Arrowhead established protocols for screenings for childhood risk factors. |
| Provide education about care options for foster children | Santa Clara disseminated brochures to providers and caregivers about their SPARK clinic and the availability of medical, dental, and behavioral health services for children in foster care. |
| Increase clinical and care coordination staffing | Santa Clara hired social workers, nurses, care coordinators, and behavioral health providers to increase their pediatric care capacity. Contra Costa and Ventura reported that they hired community health workers to perform outreach, education, coordination, or home visits. |
| Improve the integration between primary care and behavioral health | Ventura integrated behavioral health providers within primary care clinics. Prior to ending participation in the project, Arrowhead assigned a registered nurse care manager to conduct care coordination between primary care and behavioral health. |

*Source: UCLA analysis of hospital self-reports.*
*Notes: SPARK: Supporting, Protecting, and Respecting Kids*

In their self-report, a hospital described their targeted efforts to improve care coordination for children in foster care:

*"[We] improved appointment access by expanding number of appoints from 5 to 20 per week and assigned foster youth to a primary care physician (PCP); added a community health worker to schedule visits for new foster children and for outreach for those who are behind; trained Child Welfare clerks to confirm medical consent when youth come for a visit to remove any access barriers; [worked] with Public Health and Child welfare to define roles for public health nurses who are responsible for monitoring foster children on psychotropic drugs. Sustainability of the gains in the project depend on the vitality of the workforce due to emotion [al] toll of working in the foster care system, so [we] end each team meeting with a positive story about a foster [child]." (Contra Costa)*

## Project Implementation

### Early Identification of Risk Factors and Health Needs

PRIME hospitals were encouraged to identify patient risk factors using a combination of qualitative and quantitative information and complete a patient needs assessment using a standardized questionnaire. However, one of the challenges identified by the hospitals

was that many patients entered foster care without a documented medical history. Thus, the hospitals focused on early engagement with foster families and youth and screening the youth for behavioral health and other needs. For example, San Mateo worked to standardize the use of the Patient Health Questionnaire-2 (PHQ-2) and PHQ-9 in foster children's annual physical exams and worked with providers and staff to ensure that they could collect and report data captured by the screening tools. This focus on early intervention resulted in Contra Costa becoming the metric steward for an innovative metric, Comprehensive Medical Evaluation Following Foster Youth Placement in Foster Care 2.4.8, that required an ambulatory care encounter within 30 days of entry into foster care.

In the self-report, the metric steward described their process to develop the workflow and metric specifications for the innovative metric:

> *"[The] central focus was better alignment of the metrics for this project with its goals and [we] pitched an innovative metric that tracks medical appointments for youth newly in the foster system, within 30 days to replace the well-child metric. [We] worked to improve performance in appointment access and completion and finalized a process measure report on foster care medical appointment slot utilization, with no-shows and appointment conversion, to gain insights and drive improvement work."* (Contra Costa)

In interviews, another hospital described the impact of the project in improving pediatric care on a wider scale:

> *"One other item to share too is because one of the metrics is that depression screening, and so what actually happened is because of this metric, they've chosen to expand this approach to depression screening through all pediatrics. This project informs spreading the work throughout and so the medical director is really excited about now. They're taking the tiny pieces from PRIME which is for foster kids. They're expanding it for other pediatric patients."* (San Mateo)

## Collaboration with Other Agencies

This project required collaboration across agencies in order to identify and provide care for the foster child population. For example, Social/Human Service Agencies (SSA) oversee the children in foster care; County Public Health Nurses may conduct home visits; and County Behavioral Health Agencies may provide care for serious mental illness. The collaborations are designed to (1) identify children in foster care and link them to a health home, (2) have shared data regarding these patients, and (3) collaborate to ensure patients receive the full range of needed services.

For example, Santa Clara reported that their PRIME team met with the Integrated Health Home for Foster Children Work Group, which included members from the SSA, Department of Family and Children, Behavioral Health Services Department, Public Health Department First 5 Public Health Nurse Home Visitation Program, and Santa Clara Valley Medical Center. They collaborated to map and identify care gaps in process flows within and between agencies in relation to PRIME measures.

Contra Costa noted numerous examples of collaboration between the hospital and County agencies, including: the County Department of Child Welfare conducted presentations to the pediatrics department about the foster care system and taught foster parents about trauma-informed care; the Child and Family Services Department gave an in-service training to the Pediatrics Department about the foster care system, including the process of taking children into the system and case work; Public Health Department nurses who provide oversight of foster children on psychotropic medications attended a meeting of the Pediatrics Department for shared learning and collaboration; and Pediatrics providers were trained on accessing notes from Public Health nurses for improved care coordination.

Working with the hospital, Ventura Public Health began targeted outreach to foster youth to connect foster youth to healthcare, including assistance with choosing a medical home and making appointments. Since tobacco use, drug and alcohol use, and depression screenings happened outside the ambulatory clinic setting through the County's Human Services Agency and Public Health foster program, results were sometimes not shared with hospital providers, and thus have been difficult to capture in reporting. To improve data sharing and care coordination, Ventura reported that they were working to gain access to such records.

San Mateo convened a committee comprised of clinical and administrative leaders from San Mateo Medical Center Hospitals and Clinics and San Mateo County's Social Security Administration. The group worked to share information between these organizations, but were delayed while attempting to establish a memorandum of understanding (MOU), which was determined to be necessary to adhere to each hospital's regulatory guidelines. In the interim, they created a system of workflows for communication about each foster child that followed the legal restrictions of each organization. This workflow follows the foster youth through the Child and Family Services system and into the County Medical System. The committee also created a system of data sharing to allow comparison of billing codes, names, and birthdates to track care for foster care children receiving care at San Mateo Medical Center, from Foster Care Public Health Nurses, and from individual pediatric providers in the health care system.

### Participation in Learning Collaboratives

Hospitals received support for PRIME implementation from organizations engaged by DHCS, including Harbage Consulting and Safety Net Institute (SNI). In addition, the California Association of Public Hospitals (CAPH) provided support to their member hospitals. In their self-reports, hospitals reported whether they participated in other external learning collaboratives related to implementation of this project. To offer guidance and gain feedback on the new innovative metric, Contra Costa led conference calls with other PRIME hospitals participating in Project 2.4. In addition, Contra Costa reported that they participated in Whole Person Care monthly meetings and conducted a focus group among young adults aged 16-21 at an independent living skills program to gain input on strategies to improve outreach and care coordination.

## Challenges and Solutions to Improving Care for Foster Children

### Care Coordination Challenges and Solutions

In their self-reports, hospitals noted numerous challenges to coordinating care for children in foster care, including: barriers to communication and data sharing between the hospital and outside agencies; need for targeted outreach to effectively engage the population; difficulty establishing and improving internal and external data systems for capturing care outcomes for foster children; and the unintended provision of the same services to a single foster child by multiple county hospitals.

Hospitals utilized a wide variety of strategies to improve care coordination for children in foster care. For example, Ventura noted that their successes included: implementing standardized processes to evaluate children in foster care for behavioral health issues; establishing a standardized form completed by the child's primary care provider and specialists including information about the child's medical visits, screening results, follow-up care that is shared with foster parents; and improving dissemination of information to foster parents and social workers through an app linked to the electronic health record, Foster Health Link.

In interviews, another hospital described their successes in facilitating communication between the hospital and outside agencies:

*"We really feel like we've improved communication between the different entities. Now, we have an individual embedded in the pediatric clinics that regularly communicates with the public health nurses who initially see the foster children." (San Mateo)*

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## Data-Related Challenges and Solutions

Data-related challenges reported by hospitals in their self-reports included: the need for a high frequency of data updates due to the dynamic nature of foster care; difficulty establishing robust systems for interagency data exchange due to respective regulations; the need to link or reconcile data between different agencies; use of multiple electronic health records within the system; inconsistencies in documentation of screening and care; and the resources needed to establish internal systems for tracking care for foster children.

A hospital described in their self-report their efforts to maintain data integrity for children in foster care:

> "A significant focus of our team was protecting home address integrity of foster children. Because foster children move frequently, our duty is to keep foster children's addresses up-to-date while also safeguarding their information." (Contra Costa)

Solutions to data-related challenges included establishing formal data linkages between the hospital and external agencies, establishing internal systems (e.g., registries) for tracking care for foster children, and increasing in-person collaboration between the hospitals with external agencies involved in coordinating care for children in foster care. For example, San Mateo noted that they created a committee of clinical administrative leaders from the hospital and their Human Services Agency that meets monthly. Successes from the committee meeting included discussion about the creation of a memorandum of understanding that would support information flow and the implementation of a system for data collection (e.g., inclusion of foster care billing codes) to promote data linkages. To address issues in provider documentation of screening follow-up care plans, Ventura reported that they created a task in the electronic health record that required providers to indicate the follow-up plan and changed screening tools to require completion of all fields.

## Metric-Related Challenges and Solutions

Due to low patient populations which inhibited eligibility for reporting on PRIME metrics and other difficulties, Well Child Visits - First 15 Months of Life (2.4.6), was removed after DY 12. An innovative metric, Comprehensive Medical Evaluation Following Foster Youth Placement in Foster Care, was added after DY 13.

In their self-report the metric steward for the innovative metric reported their efforts to improve medical evaluation for children placed in foster care:

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*"We worked to improve our performance with respect to appointment access and completion. We finalized a process measure report on foster care medical appointment slot utilization, with no shows and appointment conversions (to non-foster care children), to gain insights and drive improvement work. Our 3 community health workers (CHWs), recruited in DY12, continued to clear pathways for foster parents to make timely appointments. We worked to identify successful outreach techniques with CHWs to get foster children in for timely care within 30 days of placement. County Children & Family Services increased frequency of sending us the list of children in foster care to twice per week so we could conduct timely outreach on medical appointment scheduling. We continued care collaboration with the 3 public health nurses in our County who share a combined 185 open cases of foster youth prescribed psychotropic medications. We began a manual audit of depression screenings for foster youth to ensure nurses are entering screening results into the patient electronic health record (EHR) for metric capture and appropriate follow up care. Automated upload of foster family and caseworker information to our EHR began this period to facilitate information-sharing and accurate billing practices."* (Contra Costa)

Hospitals reported challenges with the metrics due to a low denominator. To encourage these hospitals to continue their participation in Project 2.4, DHCS issued a policy allowing redistribution of funds for hospitals ineligible to report based on patient counts of less than 30.

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## Hospital-Reported Metric Performance

Performance of hospitals in Project 2.4 was measured by 8 metrics (Exhibit 241). Of these metrics, 1 was an innovative metric. All 8 metrics were intended to show progress by increasing rates over time. UCLA categorized these 8 metrics as process metrics. The target population included 3 criteria: first, individuals with at least 1 encounter with the PRIME Entity Primary Care team during the first half of the measurement period); second, children, 0 to less than 18 years old, in out of home placement under the jurisdiction of the local children's dependency system (as identified by the PRIME entity) at any point during the measurement period; and third, if the child had more than 1 removal in the measurement period, for the purpose of this measure, use the earliest removal date that meets the Project 2.4 Tenure Criteria (PRIME Metric Specs, DY 13YE).

**Exhibit 241: PRIME Project 2.4 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| Adolescent Well-Care Visit | 2.4.1 | NCQA | N/A | Increase | Process |
| Developmental Screening in the First 3 Years of Life | 2.4.2 | NCQA | 1448 | Increase | Process |
| Documentation of Current Medications in the Medical Record (0-18 yo) | 2.4.3 | CMS | Variation on 0419 | Increase | Process |
| Screening for Clinical Depression and Follow-Up | 2.4.4 | CMS | 0418 | Increase | Process |
| Tobacco Assessment and Counseling (13 yo and older) | 2.4.5 | AMA-PCPI | Variation on 0028 | Increase | Process |
| Well Child Visits - First 15 Months of Life | 2.4.6 | NCQA | 1392 | Increase | Process |
| Well Child Visits - Third, Fourth, Fifth, and Sixth Years of Life | 2.4.7 | NCQA | 1516 | Increase | Process |
| Comprehensive Medical Evaluation Following Foster Youth Placement in Foster are | 2.4.8* | CCRMC | N/A | Increase | Process |

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.

## Metric 2.4.1 – Adolescent Well-Care Visits

Metric 2.4.1 measured the percentage of adolescents ages 12 to 18 who had at least 1 comprehensive well-care visit with a primary care physician (PCP) or an obstetric/gynecologic (OB/GYN) practitioner (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase well child visits in order to assess physical, emotional, and social development. Behaviors established during childhood or adolescence, such as eating habits and physical activity, often extend into adulthood and well-care visits provide an opportunity for providers to positively influence health and development. The intended direction of Metric 2.4.1 was an increase in rates over time. DPH Counties reported an increase in the percentage of adolescent well-care visits from 77% in DY 11 to 84% in both DY 12 and DY 13 (Exhibit 242). DMPHs did not report this metric. In DY 13, the individual achievement rates for Metric 2.4.1 ranged from 69% to 99% for DPHs (data not shown).

**Exhibit 242: PRIME Self-Reported Adolescent Well-Care Visit Rates for Metric 2.4.1**
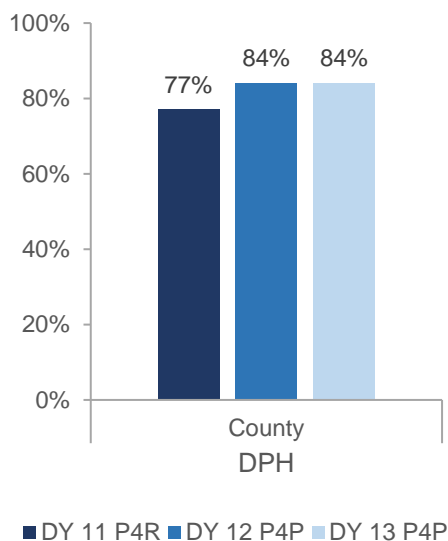


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.4.2 – Developmental Screening in the First 3 Years of Life

Metric 2.4.2 measured the percentage of children screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. Hospitals were intended to increase developmental surveillance as a component of every preventative care visit to identify concerns about a child's development and implement proper management when a child has a positive screening result for a developmental problem.

The intended direction of Metric 2.4.2 was an increase in rates over time. DPH Counties reported an increase in the percentage of developmental screenings from 15% in DY 11 to 16% in DY 12 and 37% in DY 13 (Exhibit 243). DMPHs did not report this metric. In DY 13, the individual achievement rates for Metric 2.4.2 ranged from 9% to 54% for DPHs (data not shown).

**Exhibit 243: PRIME Self-Reported Developmental Screening Rates for Metric 2.4.2**
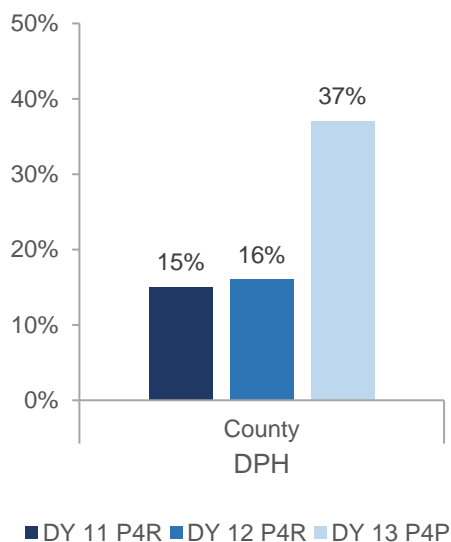


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 2.4.3 – Documentation of Current Medications in the Medical Record (0-18 yo)

Metric 2.4.3 measured the percentage of visits for patients aged 0 to <18 for which the eligible clinician attests to documenting a list of current medications using all immediate resources available on the date of the encounter. Hospitals were intended to increase accurate and complete medication lists in order to ensure patients are taking the correct medication regimen and decrease the likeliness of fatal adverse drug events (ADE) occurring.

The intended direction of Metric 2.4.3 was an increase in rates over time. DPH Counties reported an increase in the percentage of documentation from 69% in DY 11 to 81% in DY 12 and 85% in DY 13 (Exhibit 244). DMPHs did not report this metric. In DY 13, the individual achievement rates for Metric 2.4.3 ranged from 74% to 100% for DPHs (data not shown).

**Exhibit 244: PRIME Self-Reported Documentation of Current Medication Rates for Metric 2.4.3**
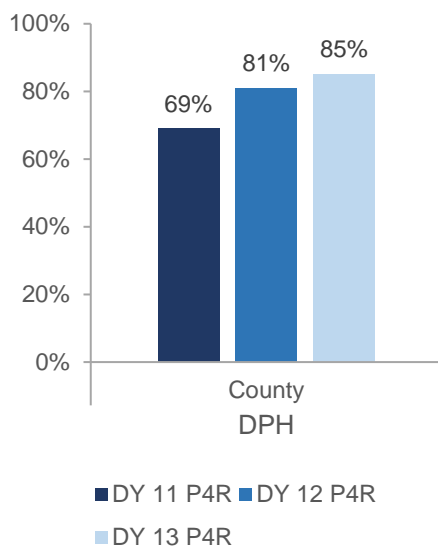


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.4.4 – Screening for Clinical Depression and Follow-Up

Metric 2.4.4 measured the percentage of individuals age 12 and older screened for clinical depression on the date of the encounter using an age-appropriate standardized depression screening tool, and if positive, a follow-up plan is documented on the date of the positive screen (PRIME Metric Specs, DY 13YE). Hospitals were intended to improve identification and treatment of depression in its early stages by increasing routine screenings for depression as a part of primary care for both children and adults.

The intended direction of Metric 2.4.4 was an increase in rates over time. DPH Counties reported an increase in the percentage of clinical depression screenings from 20% in DY 11 to 27% in DY 12 and to 58% in DY 13 (Exhibit 245). DMPHs did not report data this metric. In DY 13, the individual achievement rates for Metric 2.4.4 ranged from 3% to 68% for DPHs (data not shown).

**Exhibit 245: PRIME Self-Reported Clinical Depression Screening Rates for Metric 2.4.4**
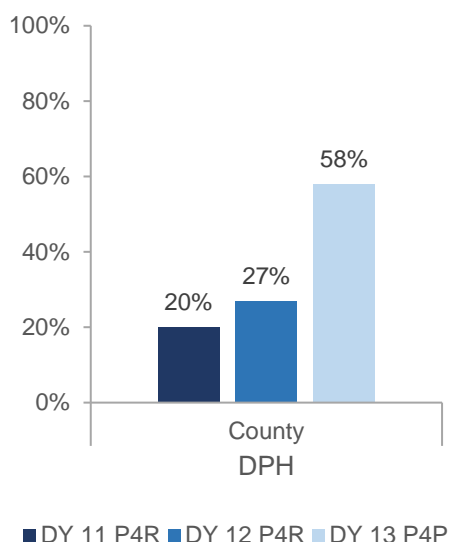


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 2.4.5 – Tobacco Assessment and Counseling (13 yo and older)

Metric 2.4.5 measured the percentage of patients aged 13 years and older who were screened for tobacco use 1 or more times within 24 months and who received cessation counseling intervention if identified as a tobacco user (PRIME Metric Specs, DY 13YE). Hospitals were intended to promote adult tobacco screening and tobacco cessation interventions for those who use tobacco products, which is successful in helping tobacco users quit and lower their risk for heart disease, lung disease, and stroke.

The intended direction of Metric 2.4.5 was an increase in rates over time. DPH Counties reported an increase in the percentage of well child visits from 64% in DY 11 to 88% in DY 12 and 95% in DY 13 (Exhibit 246). DMPHs did not report performance data this metric. In DY 13, the individual achievement rates for Metric 2.4.5 ranged from 79% to 100% for DPHs (data not shown).

**Exhibit 246: PRIME Self-Reported Tobacco Assessment and Counseling Rates for Metric 2.4.5**
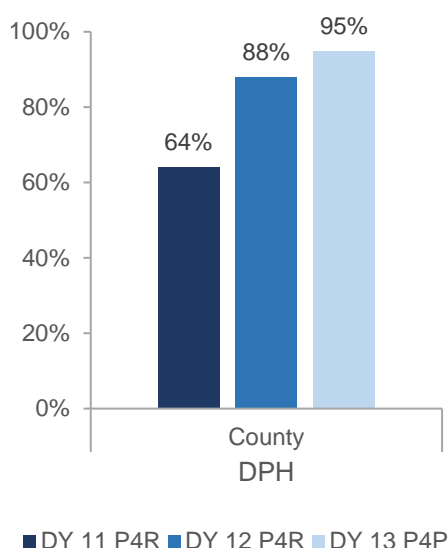


■DY 11 P4R ■DY 12 P4R ■DY 13 P4P

*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 2.4.6 – Well Child Visits - First 15 Months of Life

Metric 2.4.6 measured the percentage of children who turned 15 months old during the measurement year and had 6 or more well child visits with a primary care physician (PCP) during their first 15 months of life (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase well child visits at age-appropriate times because early interventions increase overall wellness and reduced medical costs.

The intended direction of Metric 2.4.6 was an increase in rates over time. This metric was removed and replaced by Metric 2.4.8 in the PRIME Project 2.4 measure set in December 2017. Thus, County hospitals did not report data for DY 13, but reported 38% of well child visits in DY 11 and 49% in DY 12 (Exhibit 247). DMPHs did not report performance data this metric.

**Exhibit 247: PRIME Self-Reported Well Child Visits for Metric 2.4.6**
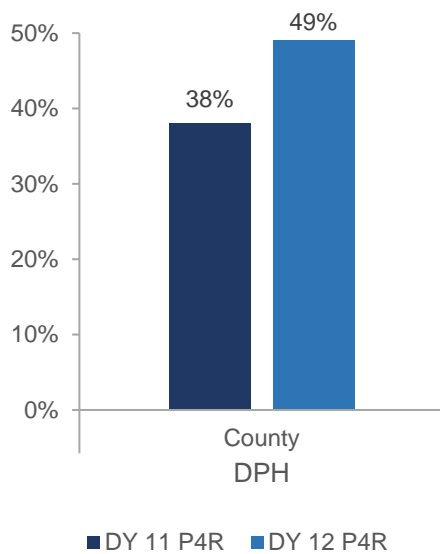


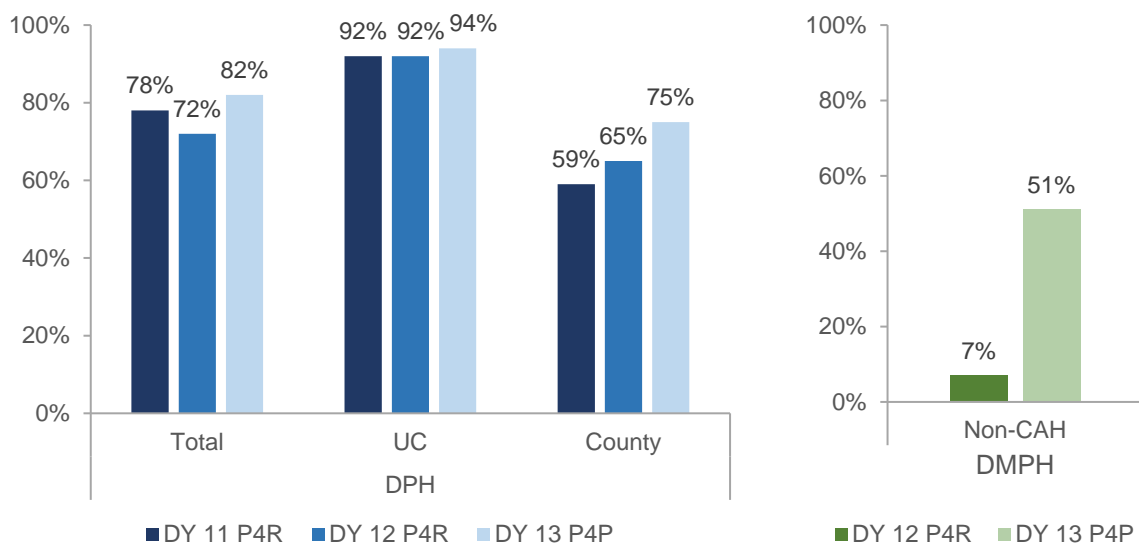*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting.*

## Metric 2.4.7 – Well Child Visits - Third, Fourth, Fifth, and Sixth Years of Life

Metric 2.4.7 measured the percentage of ages 3 to 6 who had 1 or more well- child visits with a primary care physician (PCP) during the measurement period. Hospitals were intended to increase well child visits in order to assess physical, emotional, and social development (PRIME Metric Specs, DY 13YE). Hospitals were intended to encourage well child visits that would ultimately influence health and development as the child progresses towards adulthood.

The intended direction of Metric 2.4.7 was an increase in rates over time. DPH Counties reported a decrease in the percentage of well child visits from 88% in DY 11 to 87% in DY 12, but an increase to 93% and DY 13 (Exhibit 248). DMPHs did not report performance data for this metric. In DY 13, the individual achievement rates for Metric 2.4.7 ranged from 82% to 100% for DPHs (data not shown).

**Exhibit 248: PRIME Self-Reported Well Child Visit Rates for Metric 2.4.7**



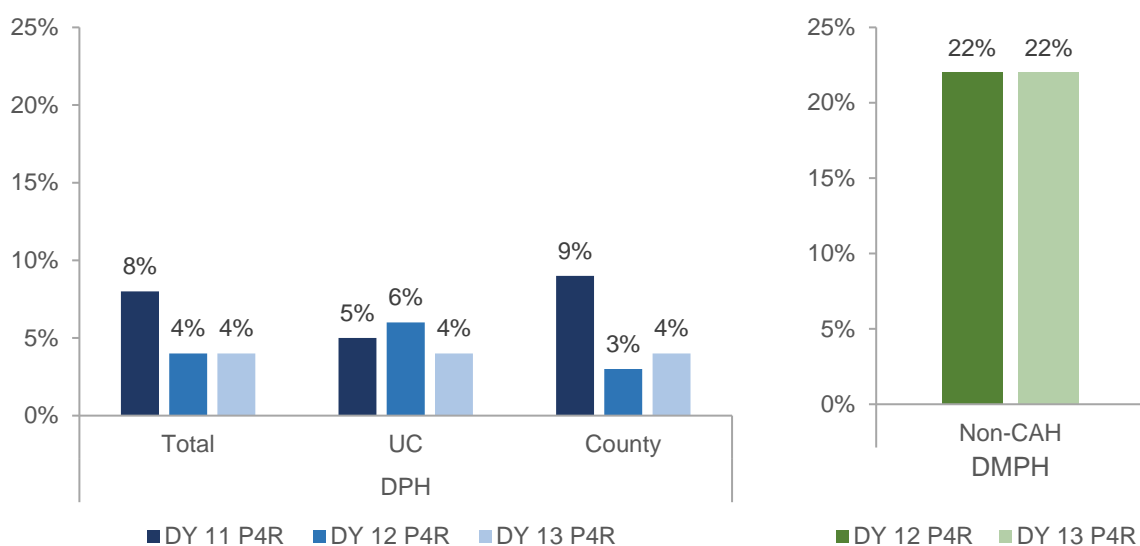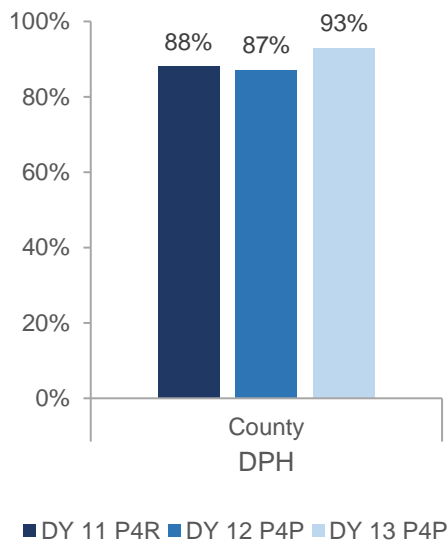*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.4.8 – Comprehensive Medical Evaluation Following Foster Youth Placement in Foster Care

Metric 2.4.8 measured the number of patients with an encounter with a primary care provider within 30 days of their Date of Removal (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase the rate of medical evaluations for foster children to ensure foster children have timely access to appropriate medical care.

The intended direction of Metric 2.4.8 was an increase in rates over time. This metric was added in DY 13 to replace 2.4.6 in PRIME measure set in December 2017. Thus, County hospitals did not report this metric in DY 11 nor DY 12, but reported 69% medical evaluations in DY 13 (Exhibit 249). DMPHs did not report performance data for this metric. In DY 13, the individual achievement rates for Metric 2.4.8 ranged from 41% to 78% for DPHs (data not shown).

**Exhibit 249: PRIME Self-Reported for Comprehensive Medical Evaluation\* Rates for Metric 2.4.8**
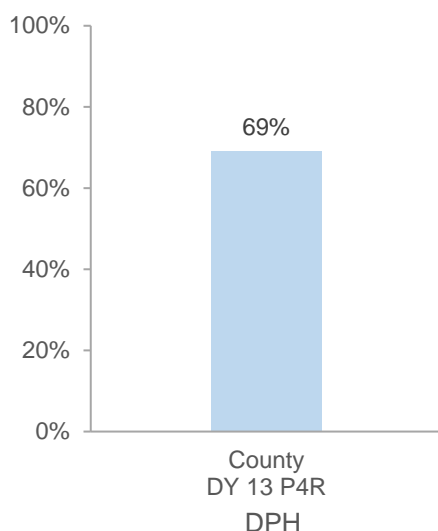


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, this metric was implemented in DY 13.*
*\* Denotes innovative metric.*

## Summary of Key Findings

Project 2.4 was designed to implement integrated health homes for children in the foster system by providing fully integrated health services and thereby improving the quality of care and health of foster children. It was initially implemented by 5 County DPHs in DY 11, but 1 subsequently dropped the project due to a low denominator. About half of all core components were applicable to all participating hospitals, the other components to the majority of hospitals.

When implementing this project, hospitals established needed infrastructure including specific pediatric care teams and multi-disciplinary case conferences and care coordination strategies including promotion of integrated care between primary, behavioral health, and dental care, expanding staff and clinic capacity, improving systems for data sharing outside and within the system, and standardizing processes for capturing and reporting care for children in foster care.

To implement this projects, hospitals collaborated across agencies to identify and serve children and used qualitative and quantitative information and a standardized questionnaire to identify patient risk factors. They also participated in learning collaboratives beyond those provided by PRIME such as monthly meetings between PRIME hospitals to discuss the Project 2.4 innovative metric and an independent focus group to gain perspectives from young adults. Hospitals experienced challenges to project implementation including barriers to communication and data sharing between agencies, the need for targeted outreach to effectively engage the population and the unintended provision of the same services to a single foster child by multiple county hospitals. The top data-related challenges were the need for a high frequency of data updates, difficulties establishing robust systems for data exchange, the need to link or reconcile data across agencies, the use of multiple EHRs and inconsistencies in documentation of screening and care. Hospitals addressed these challenges by establishing formal data linkages between across agencies, establishing internal systems for tracking care for foster children, and increasing in-person collaboration between the hospital and external agencies.

Project 2.4 metrics were 2.4.1-Adolescent Well-Care Visit; 2.4.2-Developmental Screening in the First 3 Years of Life; 2.4.3-Documentation of Current Medications in the Medical Record (0-18 yo); 2.4.4-Screening for Clinical Depression and Follow-Up; 2.4.5-Tobacco Assessment and Counseling (13 yo and older); 2.4.6-Well Child Visits - First 15 Months of Life; 2.4.7-Well Child Visits - Third, Fourth, Fifth, and Sixth Years of Life; 2.4.8-Comprehensive Medical Evaluation Following Foster Youth Placement in Foster Care. Performance was measured by 8 metrics; 7 were standard metrics and 1 innovative. Participating hospitals showed progress in 7 metrics (2.4.1, 2.4.2, 2.4.3,

2.4.4, 2.4.5, 2.4.6, 2.4.). For 1 metric (2.4.8) there was only 1 year of data available, thus no trend was evaluated. Metric 2.4.6. was discontinued by end of DY 12 because hospitals lacked adequate denominators and was replaced in DY 13 with an innovative metric (2.4.8).

Overall, hospitals made significant progress in implementing Project 2.4 by establishing pediatric care teams, developing specific care coordination strategies addressing the complex care needs of foster children, conducting risk assessments, and multi-disciplinary case conferences. Hospitals reported improved performance in all metrics with more than 1 year of available data.

# Project 2.5 - Transition to Integrated Care: Post Incarceration

## Project Overview

Project 2.5 was designed to improve the transition of care for those recently incarcerated from the criminal justice system into the public health care system. The main goals of the project were to enroll patients post-incarceration in health coverage; establish a link with, and engage them in primary care; and coordinate their care between medical, behavioral health, and social services. Specific objectives can be found in Attachment Q.

2 hospitals participated in Project 2.5 and reported metric performance data. Both hospitals were DPH County hospitals (Exhibit 250). Among the DMPHs, 2 chose to participate in DY 11, of which both were DMPH non-CAHs. Tulare dropped the project in DY 12 on 11/30/16, and the hospital subsequently closed in 2017. Tri-City Medical Center dropped the project on 09/29/16. The number of participating DMPH Non-CAHs in DY 12 and DY 13 was 0. Due to the limited number of hospitals participating in these projects and to reduce the survey burden on hospitals, the information on this project is limited to data from hospital annual reports and interviews.

**Exhibit 250: PRIME Project 2.5 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 4 | 2 | 2 |
| **Total DPH** | 2 | 2 | 2 |
| **DPH UC** | 0 | 0 | 0 |
| **DPH County** | 2 | 2 | 2 |
| **Total DMPH** | 2 | 0 | 0 |
| **DMPH Non-CAH** | 2 | 0 | 0 |
| **DMPH CAH** | 0 | 0 | 0 |

*Source: Data provided by DHCS.*
*Notes: On 11/30/16, Tulare dropped the project and the hospital subsequently closed in 2017. Tri-City Medical Center dropped the project on 09/29/16. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Hospitals were encouraged to implement suggested core components of the project as an indication of their overall approach to their care transition post incarceration (Exhibit 251). Hospitals were to target patients who were ages 50 or older, were to be released or had been in the past 6 months, and had a chronic condition. High risk patients, including those at high risk of recidivism were to be identified and care coordination and linkage to primary care were to be delivered by a peer with past incarceration history.

The program was to use evidence-based practice guidelines to provide primary, secondary, and tertiary preventions services including management of chronic conditions. The program activities were expected to reduce avoidable emergency department visits and hospitalizations and improve patients' health outcomes. Kern Medical noted 4 core components were applicable (core components 1, 2, 9, 14) and Los Angeles noted 7 applicable components (core components 2, 3, 7, 9, 10, 11, 16). Both hospitals found 2 common were applicable (core components 2, 9), 6 were not applicable to either hospital (core components 4, 5, 8, 12, 13, 15), and 8 were applicable for only 1 hospital (core components 1, 3, 5, 6, 10, 11, 14, 16).

**Exhibit 251: PRIME Project 2.5 Core Components**

| Core Component | Kern Medical Center | Los Angeles County Department of Health Services |
|---|---|---|
| 1. Develop a care transitions program for those individuals who have been individuals sentenced to prison and/or jail that are soon-to-be released/or released in the prior 6 months who have at least one chronic health condition and/or over the age of 50. | Applicable | Not Applicable |
| 2. Develop processes for seamless transfer of patient care upon release from correctional facilities, including: a. Identification of high-risk individuals (e.g, medical, behavioral health, recidivism risk) prior to time of release; b. Ongoing coordination between health care and correctional entities (e.g., parole/probation departments); c. Linkage to primary care medical home at time of release; d. Ensuring primary care medical home has adequate notification to schedule initial post release intake appointment and has appropriate medical records prior to that appointment, including key elements for effective transition of care; e. Establishing processes for follow-up and outreach to individuals who do not successfully establish primary care following release; f. Establishing a clear point of contact within the health system for prison discharges. | Applicable | Applicable |
| 3. Develop a system to increase rates of enrollment into coverage and assign patients to a health home, preferably prior to first medical home appointment. | Not Applicable | Applicable |
| 4. Health System ensures completion of a patient medical and behavioral health needs assessment by the second primary care visit, using a standardized questionnaire including assessment of social service needs. Educational materials will be utilized that are consistent with cultural and linguistic needs of the population. | Not Applicable | Not Applicable |
| 5. Identify specific patient risk factors which contribute to high medical utilization; a. Develop risk factor-specific interventions to reduce avoidable acute care utilization. | Not Applicable | Not Applicable |

| Core Component | Kern Medical Center | Los Angeles County Department of Health Services |
|---|---|---|
| 6. Provide coordinated care that addresses co-occurring mental health, substance use and chronic physical disorders, including management of chronic pain. | Not Applicable | Applicable |
| 7. Identify a team member with a history of incarceration (e.g., community health worker) to support system navigation and provide linkages to needed services if the services are not available within the primary care home (e.g., social services and housing) and are necessary to meet patient needs in the community. | Not Applicable | Applicable |
| 8. Evidence-based practice guidelines will be implemented to address risk factor reduction (e.g., immunization, smoking cessation, screening for HCV, trauma, safety, and overdose risk, behavioral health screening and treatment, individual and group peer support) as well as to ensure appropriate management of chronic diseases (e.g., Asthma, Cardiovascular Disease, COPD, Diabetes). | Not Applicable | Not Applicable |
| 9. Develop processes to ensure access to needed medications, DME or other therapeutic services (dialysis, chemotherapy) immediately post-incarceration to prevent interruption of care and subsequent avoidable use of acute services to meet those needs. | Applicable | Applicable |
| 10. Engage health plan partners to pro-actively coordinate Long Term Care services prior to release for timely placement according to need. | Not Applicable | Applicable |
| 11. Establish or enhance existing data analytics systems using health, justice and relevant community data (e.g., health plan), to enable identification of high-risk incarcerated individuals for targeted interventions, including ability to stratify impact by race, ethnicity and language. | Not Applicable | Applicable |
| 12. Implement technology-enabled data systems to support pre-visit planning, point-of-care delivery, population/panel management activities, care coordination, and patient engagement, and to drive operational and strategic decisions including continuous QI activities. | Not Applicable | Not Applicable |
| 13. To address quality and safety of patient care, implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff, and senior leadership. | Not Applicable | Not Applicable |
| 14. Improve staff engagement by: a. Implementing a model for team-based care in which staff performs to the best of their abilities and credentials; b. Providing ongoing staff training on care model; c. Involving staff in the design and implementation of this project. | Applicable | Not Applicable |
| 15. Engage patients and families using care plans, and self-management education, including individual and group peer support, and through involvement in the design and implementation of this project. | Not Applicable | Not Applicable |

| Core Component | Kern Medical Center | Los Angeles County Department of Health Services |
|---|---|---|
| 16. Participate in the testing of novel metrics for this population. | Not Applicable | Applicable |

*Source: UCLA analysis of the approved 5-year plans, https://www.dhcs.ca.gov/provgovpart/Pages/Approved-5-Year-Project-Plans.aspx. Notes: N=2 hospitals participating in Project 2.5, Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component, The 5-year plans were non-binding for the core components.*

## Project Selection

During Interviews and in their annual reports, reasons for selection of this project included the large volume of incarcerated individuals and the need to reconnect incarcerated patients with their health care providers. Hospitals further explained:

*"… the reason we did that is not because we're great at it, and we may actually struggle in our performance in that, but it was something we believed in. We thought that is such a vulnerable population, it's a population we need to collaborate with our folks at the jails much better on to try to give these people reconnected back with their medical homes when they're released from custody." (Los Angeles)*

*"When we looked at our organization as a whole, what some of our strategic priorities were and some of the current initiatives that we were undertaking, the post-incarcerated population is that we have really focused on. We provide the care in our local county jail facility here … we have been very interested in in terms of improving those transitions….When the inmates are incarcerated, everything is tailored to them that their medications are brought directly to them, the doctors are brought to them, but the second they're released from jail, they're on their own and they might not know necessarily where to turn, how to set up an appointment, health literacy tends to be lower. (Kern Medical)*

## Challenges and Solutions to Transition to Integrated Care

### Implementation Challenges and Solutions

In their annual reports, both hospitals reported their main challenges to be identifying individuals interfacing with the criminal justice system and tracking their care. Identifying individuals was accomplished by coordinating with jails to identify patients to be released. Tracking and service delivery was then accomplished by using electronic

tools, such as registries and care management templates. During the interview, they further explained these challenges:

*"But the real challenge with that one is how do we identify the patients being released from custody that are ours, then reengaging them and getting them back in. There's a different set of work. All of the measures within 2.5 are present elsewhere in PRIME. The real work of that one is not the individual measures—we're already doing that work to improve the care in our medical homes for everybody we touch. The challenge in 2.5 is actually touching them. It's actually getting them in so we can touch them with the improvements that we made, so there's an area of synergy with that one especially. But the real work of that one, the unique work of that one is actually getting them to the medical home." (Los Angeles)*

*"One of the biggest challenges that we have is communication with the population when they're released from prison. We're working closely with the Sheriff on this, but these patients can be ... These inmates can be released at any time and at first identifying when they've been released in a timely manner and then two, once they have been released, how do we contact them? … One thing we're trying to do is schedule a follow up appointment while they're incarcerated or while they're being released and coordinating transportation for them because once we're able to get them into our system, it's much easier for us to keep them in the system, but the challenge is getting them there in the first place…. We're moving the jail to an electronic medical record so that we'll have better access to their information. We'll be able to really transition that care and get their full med list, get all of that relevant details of the healthcare provided to them while incarcerated so that we can make better decisions and we have a smoother transition when they are incarcerated, but still, the biggest challenge we have right now is that the communication with them upon release." (Kern)*

## Data- and Metric-Related Challenges and Solutions

In their annual reports, hospitals also reported their challenges to measuring specific metrics (Exhibit 252). Challenges often centered on data-related issues including ability to capture the correct data, incorporate different data into a single system. Other issues such as patient engagement and compliance with care and changing provider practices also emerged. Solutions included improvements to systems to consolidate data and technology or other solutions to improving patient engagement.

Los Angeles reported the most data related challenges, including poor data integration due to different systems and difficulty merging data. The latter was an issue due to different data structures, duplicate and incorrect identifications (IDs), as well as

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ambiguous relations among different data sources. To solve these challenges, Los Angeles changed workflows, built new EHR functionality, and merged.

Kern reported the most patient engagement issues such as following-up with patients, and reaching out to patients due to incorrect and outdated contact information. Kern began verifying contact information and collecting secondary contact information to prevent this issue in the future. Other patient related challenges included monitoring patients and non-compliant patients. To solve these issues Kern implemented new screening programs and improved outreach to non-compliant patients respectively.

**Exhibit 252. Metric-Related Challenges and Solutions for Project 2.5**

| Metric | Hospital | Challenges | Solutions |
|---|---|---|---|
| **Alcohol and Drug Misuse (SBIRT)** | Los Angeles | - Scarcity of evidence-based tools for screening<br>- Limited EHR functionality<br>- Lack of standardized protocols and policies using screening tools<br>- Inadequate transitions from medical to behavioral health or social services<br>- Limitations in availability of substance use services providers due to high rates of these problems in the county | - Changing workflows and building new EHR functionality<br>- Improvements in care transitions due to merging of departments under the Department of Health Care Services |
| **Controlling Blood Pressure** | Los Angeles | - Loss to follow-up among patients with high blood pressure<br>- Poor data integration due to different systems<br>- Difficulty merging data with different data structures, incompleteness, duplicate and incorrect IDs, and ambiguous relations among different data sources | - Adding close-timeframe nurse visits (5-7 days) after a visit with high blood pressure<br>- Merging multiple data sources such as data repository, eCQM report, and incarceration data with EHR records |
| **Controlling Blood Pressure** | Kern | - Difficulty in outreach to patients with uncontrolled blood pressure because the contact information was incorrect or outdated | - Verifying contact information and collecting secondary contact information so that communication can be established |
| **Prevention Quality Overall** | Los Angeles | - On-demand accessibility to members of the PCMH<br>- Poor data integration (see previous measure) | - Implementing call centers that have waiting queues, and allowing for operational metrics such as wait time |

| Metric | Hospital | Challenges | Solutions |
|---|---|---|---|
| **Composite #90** | | - Difficulty merging data (see previous measure) | - Providing many staff with wireless phones to answer calls even when not at their desks<br>- Merging multiple data sources (see previous measure)<br>- Achieving NCQA Medical Home recognition in our Ambulatory Care Network led to improved access, prevention, ownership and commitment to being ready to accept handoffs from the jails |
| **Prevention Quality Overall Composite #90** | Kern | - Patient engagement and outreach | - Dedicating staff phone outreach to recently incarcerated patients in order to connect them with preventative care services, including help in managing diabetes, ischemic vascular disease, and hypertension<br>- Partnering with the clinical staff at the jail to identify and provide early outreach to patients transitioning out of incarceration |
| **Screening for Clinical Depression and follow-up** | Los Angeles | - Depression screening<br>- Follow-up as some patients are resistant to treatment of any kind (pharmacologic or otherwise) or in denial about their condition<br>- Records with intervention or follow-up plans might be under-counted because codes for RXNORM and SNOWMED from the specification manual were not found in Department of Health Services Electronic Health Record and only antidepressants listed under Order Therapeutic Class were solely used to identify the intervention activities/follow-up plans | - Reminders in EHR to providers to screen for depression<br>- Capture referrals to County Department of Mental Health staff via eConsult system<br>- Repaired the logic of the EHR which calculated the PHQ-9 scores incorrectly<br>- Co-located County Department of Mental Health staff helpful in developing treatment plans for patients not wanting to start pharmacotherapy |
| **Screening for Clinical Depression and follow-up** | Kern | - Monitoring patients | - Administering screenings through a technology platform which allows for instant notifications to the care team for any flags identified |

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| Metric | Hospital | Challenges | Solutions |
|---|---|---|---|
| | | | - Extraction of PHQ-9 scores for evaluation and follow-up in new platform |
| **Tobacco Assessment and Counseling** | Los Angeles | - Improving assessment rate and treatment and counseling options<br>- Improving referral and follow-up<br>- Prescribing restriction on pharmacologic smoking cessation aids<br>- Adoption of the new PCMH workflows designed to address this measure<br>- Patients smoking status might change during the measurement period and the same patient might be screened more than once and provide conflicting responses during the measurement year | - Developing standard work processes for both nursing and providers<br>- Partnership with the California Smokers Helpline to integrate referral system (eConsult) with 1-800-NO-BUTTS counseling services<br>- Removing prescribing restrictions on pharmacologic smoking cessation aids<br>- Use of open sessions to teach the workflow with coaches deployed throughout facilities to ensure new workflows are being taught to and used by front-line providers<br>- EHR Tobacco screening and follow-up records were identified based on social history and pharmacotherapy data |
| **Tobacco Assessment and Counseling** | Kern | - Non-compliant patients | - Increasing outreach to those who were found to be non-compliant<br>- Standardizing note across primary care clinics, prompting care takers to ask appropriate questions and provide interventions and counseling as appropriate<br>- Contracting with the California Smokers Helpline as a source of referrals for those using tobacco |

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*Notes: EHR: electronic health record, ECQM: Electronic Clinical Quality Measure, NCQA: National Committee for Quality Assurance, SBIRT: Screening, Brief Intervention and Referral to Treatment, PCMH: patient-centered medical home, ID: Identification, PHQ-9: Patient Health Questionnaire-9.*

## Hospital-Reported Metric Performance

Performance of hospitals in Project 2.5 was measured by 5 metrics, all of which were standard metrics (Exhibit 253). The majority of metrics were intended to show progress by increasing rates over time with the exception of 2.5.3, which demonstrated progress by decreasing rates over time. UCLA categorized 2 as outcome metrics and 3 as process metrics. The target population criteria included 2 primary criteria: first, patients who were incarcerated in prison and/or jail that are soon-to-be released, or released during the 6 months prior to the start of the measurement period, as identified by the PRIME entity; and second, patients who had at least 1 chronic health condition, were at least 50 years old, or both as of the date of the first encounter with the PRIME Entity during the measurement period (PRIME Metric Specs, DY 13YE).

**Exhibit 253: PRIME Project 2.5 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measure Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| Alcohol and Drug Misuse (SBIRT) | 2.5.1 | Oregon Health Authority | N/A | Increase | Process |
| Controlling Blood Pressure | 2.5.2 | NCQA | 0018 | Increase | Outcome |
| Prevention Quality Overall Composite #90 | 2.5.3 | AHRQ | N/A | Decrease | Outcome |
| Screening for Clinical Depression and Follow-Up | 2.5.4 | CMS | 0418 | Increase | Process |
| Tobacco Assessment and Counseling | 2.5.5 | AMA/PCPI | 0058 | Increase | Process |

*Notes: SBIRT: Screening, Brief Intervention and Referral to Treatment, NCQA: National Committee for Quality Assurance, CMS: Centers for Medicare & Medicaid Services, AMA: American Medical Association, PCPI: Physician Consortium for Performance Improvement, AHRQ: Agency for Healthcare Research and Quality.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.

## Metric 2.5.1 – Alcohol and Drug Misuse (SBIRT)

Metric 2.5.1 measured the proportion of patients 12 years or older in the Project 2.5 Target Population receiving outpatient care who had 1 or more screenings, interventions, and referral treatment services for alcohol and drug abuse (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase the detection and treatment of substance abuse in order to reduce future health complications.

Progress was demonstrated through an increase in rates over time. DPH County hospitals reported stable rates in DY 11 and DY 12 (Exhibit 254). In DY 13, the weighted average rate doubled from 20% to 40%. In DY 13, the individual achievement rates for Metric 2.5.1 ranged from 19% to 63% for DPHs (data not shown).

**Exhibit 254: PRIME Self-Reported Alcohol and Drug Misuse Rates for Metric 2.5.1**
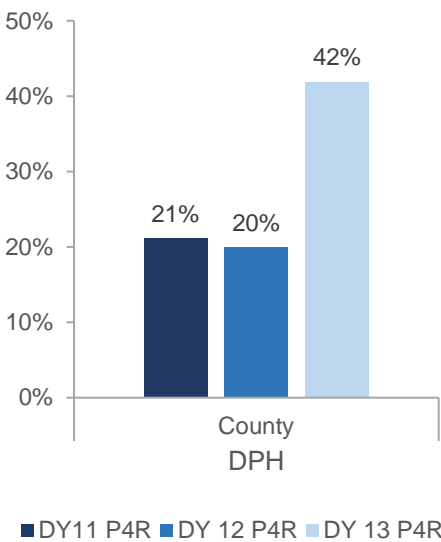


Legend: ■DY11 P4R ■DY 12 P4R ■DY 13 P4R

*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting.*

## Metric 2.5.2 – Controlling Blood Pressure

Metric 2.5.2 measured the proportion of patients between the ages of 18 and 85 that had at least 1 outpatient encounter with a diagnosis of hypertension and had their blood pressure (BP) adequately controlled. For patients between the ages of 18 and 59, adequately controlled BP was defined as <140/90 mmHg. For patients between the ages of 60 and 85 with a diagnosis of diabetes, adequately controlled BP was <140/90 mmHg. For patients between the ages of 60 and 85 without a diagnosis of diabetes, adequately controlled BP was <150/90 mmHg (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase early detection of hypertension so that patients could start interventions earlier.

Progress was demonstrated through an increase in rates over time. DPH County hospitals reported an increase in the proportion of patients with controlled BP from 44% to 63% in DY 12 (Exhibit 255). The weighted average remained stable from DY 12 to DY 13. In DY 13, the individual achievement rates for Metric 2.5.2 ranged from 57% to 72% for DPHs (data not shown).

**Exhibit 255: PRIME Self-Reported Controlling Blood Pressure Rates for Metric 2.5.2**
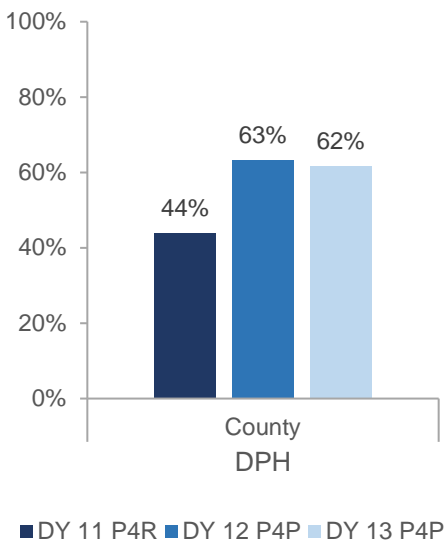


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

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## Metric 2.5.3 – Prevention Quality Overall Composite #90

Metric 2.5.3 measured the proportion of patients 18 years of age or older who were discharged and met the inclusion and exclusion rules for the numerator in following PQIs: #1, 3, 5, 7, 8, 10-12, 14-16. This was also in Metrics 1.2.8 and 2.3.3 (Exhibit 107). Hospitals were intended to support standardized, evidence-based measures of health care quality that can be used to highlight potential quality improvement areas.

Progress was demonstrated through a decrease in rates over time. The DPH County hospitals reported a decline in the weighted average rate from 3.1% in DY 11 to 2.2% in DY 13 (Exhibit 256). In DY 13, the individual achievement rates for Metric 2.5.3 ranged from 0.59% to 3% for DPHs (data not shown).

**Exhibit 256: PRIME Self-Reported Prevention Quality Overall Composite Rates for Metric 2.5.3**
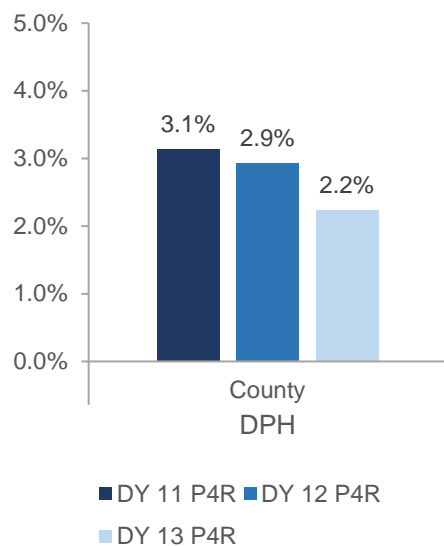


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting*

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## Metric 2.5.4 – Screening for Clinical Depression and Follow-Up

Metric 2.5.4 measured the proportion of patients 18 years of age or older who have been screened for clinical depression using an age appropriate standardized tool and if they had a positive result, had a documented follow-up plan (PRIME Metric Specs, DY 13YE). Hospitals were intended to promote the identification and treatment of depression in its early stages in order to avoid serious complications later in life.

Progress was demonstrated through an increase in rates over time. DPHs County hospitals reported an increase in the weighted average rate of documentations from 14% in DY 11 to 62% in DY 12 and 65% in DY 13 (Exhibit 257). In DY 13, the individual achievement rates for Metric 2.5.4 ranged from 56% to 70% for DPHs (data not shown).

**Exhibit 257: PRIME Self-Reported Screening for Clinical Depression and Follow-Up Rates for Metric 2.5.4**



■ DY 11 P4R ■ DY 12 P4R ■ DY 13 P4P

*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 2.5.5 – Tobacco Assessment and Counseling

Metric 2.5.5 measured the proportion of patients 18 and older who were screened for tobacco use at least once within 24 months and who received tobacco cessation intervention if identified as a tobacco user (PRIME Metric Specs, DY 13YE). Hospitals were intended to promote screenings and tobacco cessation interventions for adult smokers.

Progress is demonstrated through an increase in rates over time. DPH County hospitals reported an increase in the weighted average rate of interventions from 58% in DY 11 to 81% in DY 12 (Exhibit 258). The average rate decreases to 75% in DY 13. In DY 13, the individual achievement rates for Metric 2.5.5 ranged from 67% to 96% for DPHs (data not shown).

**Exhibit 258: PRIME Self-Reported Tobacco Assessment and Counseling Rates for Metric 2.5.5**
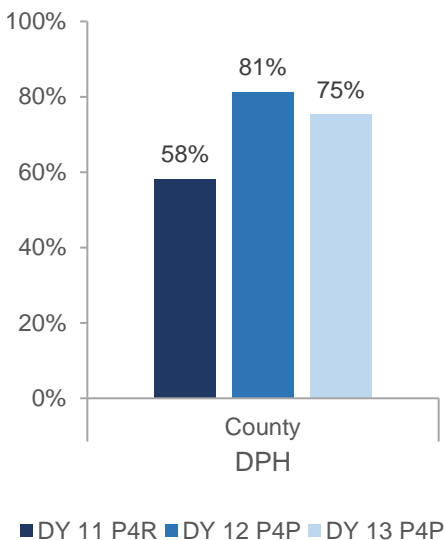


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Summary of Key Findings

Two DPHs participated in Project 2.5 and reported metric performance data. When detailing on their rationale for selecting this project, both hospitals emphasized the level of need in their community and their perceived importance of engaging formerly incarcerated patients in care.

Data- and metric-related challenges included difficulties in identifying and tracking eligible patients, limited ability to capture the correct data and incorporate different data into a single system, difficulties with patient engagement, compliance with care, and changing provider practices. These challenges have been addressed by improvements to systems to consolidate data as well as by data and technology-driven solutions to improve patient engagement.

Project 2.5 metrics were 2.5.1-Alcohol and Drug Misuse (SBIRT); 2.5.2-Controlling Blood Pressure; 2.5.3-Prevention Quality Overall Composite #90; 2.5.4-Screening for Clinical Depression and Follow-Up; 2.5.5-Tobacco Assessment and Counseling. Performance of hospitals participating in this project was measured by 5 standard metrics. Of these, 3 measured process (2.5.1, 2.5.4, 2.5.5) and 2 measured outcomes of care (2.5.2, 2.5.3). DPHs reported continuous improved performance in 2 metrics (2.5.3, 2.5.4,) and mixed but improved performance in 3 metrics (2.5.1, 2.5.2, 2.5.5).

Overall, hospitals made significant progress in implementing Project 2.5 by increasing detection and treatment of substance abuse, hypertension, depression, and tobacco use as well as supporting standardized, evidence-based measures of health care quality. However, they varied in their progress in project implementation and metrics progress.

# Project 2.6 – Chronic Non-Malignant Pain Management

## Project Overview

Project 2.6 was intended to promote identification and management of chronic pain using evidence-based models that are designed to improve outcomes. These goals were achieved by developing infrastructure, such as developing protocols and training providers about multimodal approaches to pain, and implementation activities, including monitoring adherence to policies and utilizing screening tools. Specific objectives can be found in Attachment Q.

There were 13 hospitals in Project 2.6 in DY 11 and all reported metric performance data. Of these, 8 were DPHs (Alameda, Contra Costa, Natividad, Riverside, San Francisco, San Mateo, UC Davis, and UC Irvine) and 5 were DMPHs (Kaweah Delta, Bear Valley, Mammoth, Plumas, and Tahoe Forest). This number increased to 14 hospitals after 1 DPH County hospital (Arrowhead) added the project in DY 12 (Exhibit 259).

**Exhibit 259: PRIME Project 2.6 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 13 | 14 | 14 |
| **Total DPH** | 8 | 9 | 9 |
| **DPH UC** | 2 | 2 | 2 |
| **DPH County** | 6 | 7 | 7 |
| **Total DMPH** | 5 | 5 | 5 |
| **DMPH Non-CAH** | 1 | 1 | 1 |
| **DMPH CAH** | 4 | 4 | 4 |

*Source: Data provided by DHCS.*
*Notes: DMPH (CAH and Non-CAH) reported no data in DY 11 as they were under infrastructure phase. Arrowhead added the project in DY12 on 5/4/2017. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

Participating hospitals reported whether and when they implemented the suggested core components of this project as part of their overall approach to chronic non-malignant pain management. In the interim survey, 9 hospitals reported they had developed a process for scheduling pain focused follow-up patient visits to ensure that patients receive refills in a timely manner and 7 reported implementing or adapting a state or nationally recognized methodology for the assessment and management of chronic pain prior to PRIME (

Exhibit 260). Hospitals planned to or trained providers to identify signs of prescription opioid use disorders and provide treatment options for patients diagnosed with opioid use disorders, including Suboxone treatment, referral to methadone maintenance, referral to inpatient and outpatient substance use (10). During PRIME, about half to all participating hospitals reported implementing the core components.

**Exhibit 260: PRIME Project 2.6 Core Components**

| Core Component | Started Implementation Prior to PRIME | Selected for PRIME |
|---|---|---|
| Develop an enterprise-wide Chronic Non-Malignant Pain management strategy. | 4 | 14 |
| Demonstrate engagement of patients in the design and implementation of the project. | 3 | 8 |
| Implement or adapt a state or nationally recognized methodology for the assessment and management of chronic pain. | 7 | 12 |
| Implement protocols for primary care management of patients with chronic pain including: a. A standard standardized Pain Care Agreement; b. Standard work and policies to support safe prescribing practices; c. Comprehensive pain history including psycho/social evaluation, functional evaluations, care plan, pain medication risk/benefit informed consents, ongoing monitoring of plan/outcomes (e.g., use of standardized monitoring template for follow-up visits for CNP), aberrant behavior screening and management protocols; and d. Guidelines regarding maximum acceptable dosing. | 7 | 12 |
| Provide culturally, linguistically and literacy level-appropriate patient education on the pathology of chronic pain, rationale for rehabilitation and expected goals of treatment. | 4 | 9 |
| Coordinate a chronic pain care team that minimally consists of a physician champion and medical support staff. Suggestions for care clinicians from other disciplines include occupational and physical therapy, behavioral health, pharmacy, substance use disorder specialists, neurology, occupational medicine, anesthesiology/pain management, home care, social work, and physical medicine and rehabilitation. | 6 | 10 |
| Implement technology-enabled data systems to support pre-visit planning, point of care delivery, and team based population/panel management and care coordination. | 2 | 8 |
| Determine population ICD-9/ICD-10 codes for data collection that is unique to patients with chronic pain on opioids and develop a registry for pain assessments, care agreements, medication refill standing orders and urine toxicology screening. | 2 | 9 |
| Utilize provider activity report card to provide feedback to providers on how their chronic pain management practice compares to peers and benchmarks. | 1 | 8 |
| Establish a policy for monitoring and maintaining opioid agreements for prescription refills with other clinics, pharmacies, dentists and specialists. | 4 | 9 |

| Core Component | Started Implementation Prior to PRIME | Selected for PRIME |
|---|---|---|
| Develop a process for scheduling pain focused follow-up patient visits to ensure that patients receive refills in a timely manner while also receiving recommended monitoring for signs of diversion or misuse. | 9 | 9 |
| Develop staff and clinician training regarding the organization's process for managing patients with chronic non-malignant pain. | 7 | 11 |
| Train providers to identify signs of prescription opioid use disorders and provide treatment options for patients diagnosed with opioid use disorders, including Suboxone treatment, referral to methadone maintenance, referral to inpatient and outpatient substance use disorder treatment facilities, and referral to needle exchanges. | 4 | 10 |
| Develop and implement protocols for prescribing naloxone to patients receiving opioids for chronic pain. | 3 | 7 |
| Identify standardized multidimensional pain assessment, functional assessment, psychological assessment, and opioid assessment tools that meet the needs of the care clinicians and are appropriate for the patient populations. | 7 | 10 |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. Timely, relevant and actionable data is used to support patient engagement, and drive clinical, operational and strategic decisions including continuous QI activities. | 4 | 9 |

Source: UCLA analysis of the interim survey, April to May 2018.
Notes: N=14 hospitals participating in Project 2.6.

## Infrastructure

### Use of Frameworks for Pain Management

In the interim survey, the majority of hospitals (8 of 9 DPHs and all 5 DMPHs) reported using existing pain management frameworks (Exhibit 261). DPHs most commonly used the Medical Board of California framework (7 DPHs) and the American Pain Society Framework (4 DPHs). Among participating DMPHs, The American Pain Society Framework and the 1 developed by the Centers of Disease Control and Prevention have each been used by 3 hospitals, while only 2 DMPHs noted using the Institute for Clinical Improvement model and 1 hospital reported using the Medical Board of California framework.

**Exhibit 261: Frameworks Chosen for Pain Management Modeling, by Hospital Type**
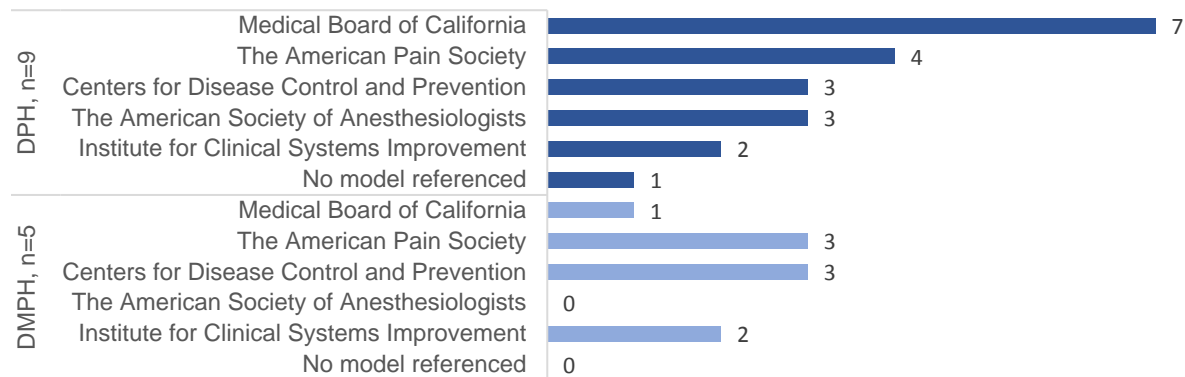


*Source: UCLA analysis of the interim survey, April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive, some hospitals noted use of more than 1 model.*

During interviews, a hospital discussed how these frameworks were incorporated into the medical records:

> *"We implemented within Epic a series of assessment tools to guide our clinicians to work through that assessment. So these are well-validated tools that were introduced to us from our pain management colleagues and from, obviously, national guidelines. And so we have these tools now embedded in our electronic health record to guide clinicians in doing these assessments." (UC Davis)*

## Training and Protocols for Staff and Providers

In the interim survey, hospitals reported on strategies to prepare providers and staff on implementing Project 2.6. Most hospitals educated providers and developed referral protocols for pain or addiction specialists (8 DPHs and 3 DMPHs for each; Exhibit 262). DMPHs most commonly distributed guidelines (2 DPHs, 6 DMPHs) and used IT to track opioid prescriptions (2 DPHs, 5 DMPHs), including training staff to access CURES 2.0 (Controlled Substance Utilization Review and Evaluation System) California's Prescription Drug Monitoring Program (PDMP).

**Exhibit 262: Strategies to Train Staff and Providers to Diagnose, Document, and Treat Opioid Disorder, by Hospital Type**
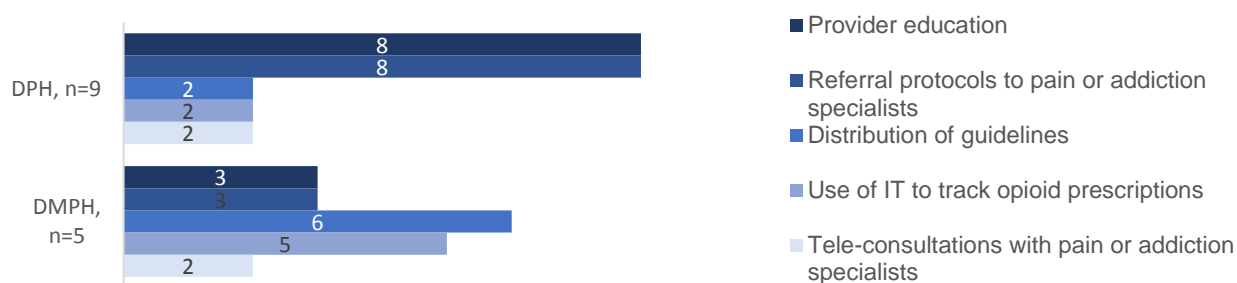


*Source: UCLA analysis of the interim survey, April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

In interviews, a hospital discussed the importance of staff trainings and another provided details of the education methods:

> *"We're going PDSAs around ensuring that we're providing good opioid education, engaging in multimodal pain management, enlisting the help of the team members to build out a more comprehensive approach to pain as opposed to just the network."* (UC Davis)

> *"For staff training, we do have pharmacy technicians or patient care advocates that do help coordinate some of the care, whether it's helping to follow up with physicians that have referred that we require other documentation on, or helping to set up appointments, helping to follow up on your drug screens that aren't getting sent across, and making sure that patients are being appropriately monitored."* (Kaweah)

> *"We [had] discussions with the hospitalists as well as the clinical staff… to streamline our provider education... Some of them weren't aware… that the nurses had a uniform way to document, so that the providers … would know right where to look …*

*to help with the continuation of care, especially for patients that frequented the emergency department." (Natividad)*

In the interim survey, 4 hospitals trained PCPs and 3 trained specialists to identify signs of opioid use disorders prior to PRIME (Exhibit 263). Trainings were provided as part of conferences, through educational materials, and (Continuing Medical Education) CME Program for specialists. During PRIME, 8 hospitals trained PCPs and 6 trained specialists. Training of dentists was less common, a reason was that dentists were not practicing in their facilities.

**Exhibit 263: Provider Types Trained to Identify Signs of Prescription Opioid Use Disorders Before and During PRIME**
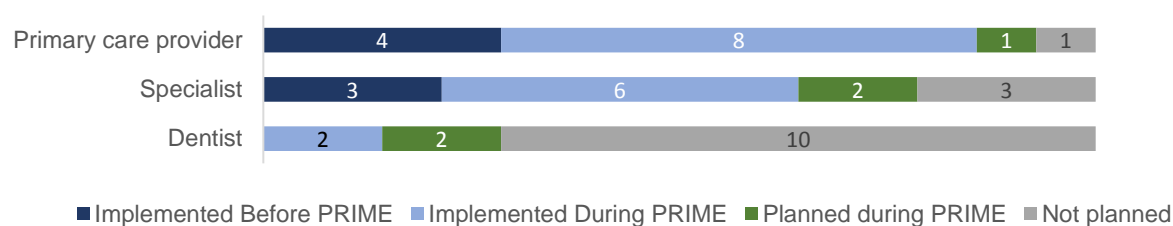


Source: UCLA analysis of the interim survey, April to May 2018.
Notes: N= 14 hospitals participating in Project 2.6, Responses were not mutually exclusive.

During interviews, a hospital discussed how a multidisciplinary committee was created due to PRIME participation:

*"We developed the Chronic Pain Multidisciplinary Committee that… with the way things are going with chronic pain and opioids in the United States … probably would have happened at some point, but the original implementation of it … was because of PRIME." (Kaweah)*

In the interim survey, most hospitals reported including PCPs and medical support staff in their chronic pain teams (12 of 14 for each; Exhibit 264). Other common chronic pain team members were pharmacists (9), behavioral health specialists (8), and anesthesiologists or pain management providers (8).

**Exhibit 264: Chronic Pain Team Members Under PRIME**

| Team Member | Count |
|---|---|
| Primary care provider | 12 |
| Medical support staff | 12 |
| Pharmacist | 9 |
| Behavioral health specialist | 8 |
| Anesthesiology/pain management provider | 8 |
| Substance abuse disorder specialist | 7 |
| Social worker | 7 |
| Occupational and/or physical therapist | 6 |

*Source: UCLA analysis of the interim survey, April to May 2018.*
*Notes: N= 14 hospitals participating in Project 2.6, Responses were not mutually exclusive.*

In interviews, a hospital discussed the need for pain psychologist and another created a new fellowship for an addictionologist:

*"At one point in time, our pain management clinic employed pain psychologists. And we unfortunately lost those folks to other entities, and now we're looking to restaff our pain management clinic with pain psychologists." (UC Davis)*

*"Our behavioral health and recovery services piece of our health system that has applied and then approved by the fellowship... One of the really incredible opportunities here is if we can really figure out how do this that we'll really be able to bring these services to patients who are in our psychiatric, and ... medical emergency rooms, … and surgical inpatient services, and then to outpatient services in both primary care, pain, and psychiatry." (San Mateo)*

## Pain Management Protocols and Standards

Hospitals were encourage to use a standardized approach for identifying at-risk patients. In the survey almost all hospitals indicated using ICD-10 codes for chronic pain to identify patients (8 DPHs, 5 DMPHs; Exhibit 265). Fewer DPHs (5) and DMPHs (3) employed ICD-10 codes to identify patients who were prescribed opioids. One DPH did not use ICD-10 codes to identify patients for Project 2.6.

**Exhibit 265: ICD Codes Identifying Patients with Chronic Pain or Opioid Prescriptions during PRIME, by Hospital Type**
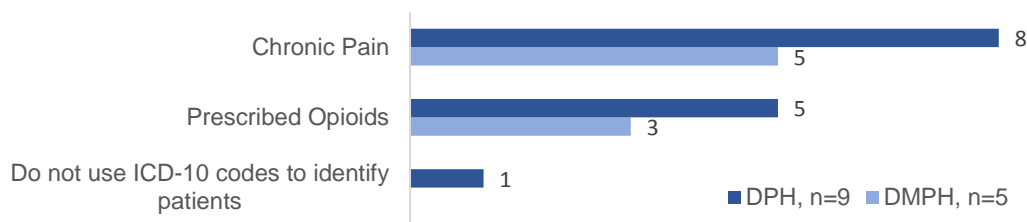
| Category | DPH, n=9 | DMPH, n=5 |
|---|---|---|
| Chronic Pain | 8 | 5 |
| Prescribed Opioids | 5 | 3 |
| Do not use ICD-10 codes to identify patients | 1 | |

Hospitals reported on development of policies on prescription refills and training staff on those policies. Most hospitals established policies for physicians (8), followed by policies for specialists (5), pharmacists (4), and dentists (2; Exhibit 266). Training of physicians and specialists has been reported for 4 hospitals. A hospital trained its pharmacists and no hospital indicated training of dentists.

**Exhibit 266: Establishing Policies on Tracking Prescription Refills and Training Providers on Such Policies Under PRIME**



*Source: UCLA analysis of the interim survey, April to May 2018.*
*Notes: N= 14 hospitals participating in Project 2.6, Responses were not mutually exclusive.*

The pain management registry has been used by 9 hospitals (Exhibit 267). Among these hospitals, most (8) had urine toxicology screenings and 5 had care agreements in this registry prior to PRIME. During PRIME, 5 more hospitals implemented the former and 6 hospitals implemented the latter.

**Exhibit 267: Pain Management Registry Content Before and During PRIME**
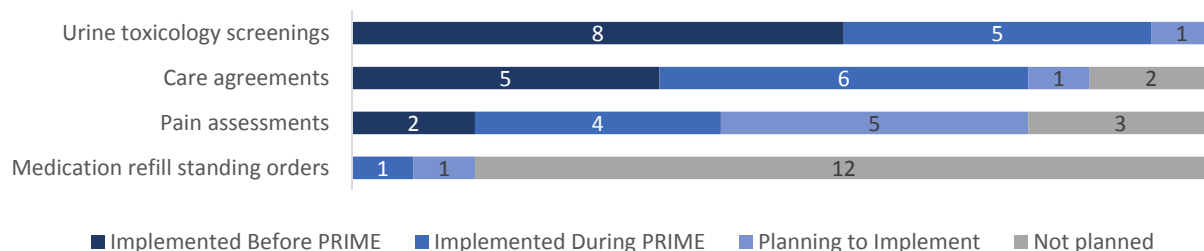
| Category | Implemented Before PRIME | Implemented During PRIME | Planning to Implement | Not planned |
|---|---|---|---|---|
| Urine toxicology screenings | 8 | 5 | 1 | |
| Care agreements | 5 | 6 | 1 | 2 |
| Pain assessments | 2 | 4 | 5 | 3 |
| Medication refill standing orders | 1 | 1 | | 12 |

■ Implemented Before PRIME  ■ Implemented During PRIME  ■ Planning to Implement  ■ Not planned

*Source: UCLA analysis of the interim survey, April to May 2018.*
*Notes: N= 14 hospitals participating in Project 2.6, Responses were not mutually exclusive.*

During interviews, a hospital discussed how they developed the standardized pain agreements in their registry:

> *"Prior to PRIME, the health department did it their way and their pain agreement and whatever they did, and the hospital did it their way. This forced us to look at how do we all do it and how do we standardize. And again, I think the overarching leadership committee helped bridge that." (Natividad)*

## Project Implementation

### Implementation Setting

In the interim survey, 7 DPHs reported implementing this project system-wide, followed by on campus outpatient departments (4; Exhibit 268). Among DMPHs on campus outpatient departments was the most common (3), followed by off campus clinics and practices (2).

**Exhibit 268: Chosen Settings for Project Implementation by Hospital Type During PRIME, by Hospital Type**
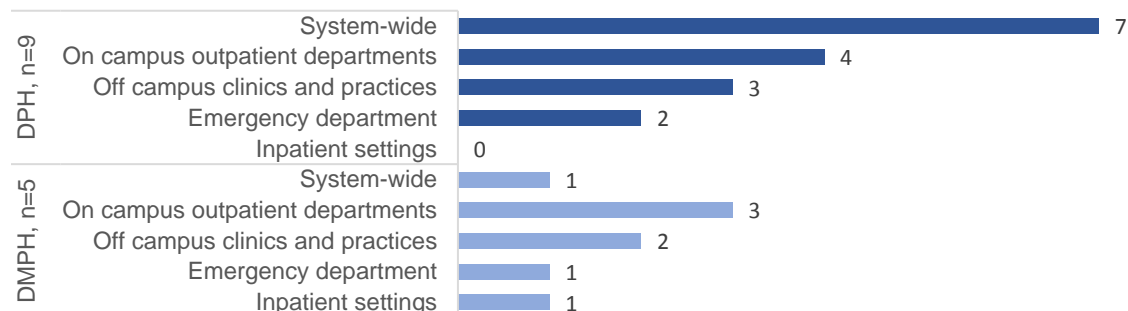
| | | Value |
|---|---|---|
| **DPH, n=9** | System-wide | 7 |
| | On campus outpatient departments | 4 |
| | Off campus clinics and practices | 3 |
| | Emergency department | 2 |
| | Inpatient settings | 0 |
| **DMPH, n=5** | System-wide | 1 |
| | On campus outpatient departments | 3 |
| | Off campus clinics and practices | 2 |
| | Emergency department | 1 |
| | Inpatient settings | 1 |

In interviews hospitals discussed the value of system-wide implementation and what was required to implement this project in outpatient setting:

*"We see so much addiction in our patients and we really don't currently have the resources county-wide to support them all and I think this will help create the structure, and also a way to train providers across from emergency department to inpatient to outpatient on some things that actually individual providers can do without actually being an addictionologist. We're working really hard to get that in place and we're pretty excited about the possibilities." (San Mateo)*

*"We have an inpatient pain service, where we have pharmacists that see patients too in the hospital, but we did not have an outpatient service. So it was brand new where we had to write all the policies, all the procedures, figure out which patients, where we'll see patients. And then the whole process of getting patients to clinic. Getting the referrals from the primary care providers, setting up the appointments. Getting the integration with all these different locations, and then coming down to the actual procedures of how are we going to run this clinic? How are we going to see patients? How often?" (Kaweah)*

### Strategies to Promote Guidelines Concordant Pain Management

In the interim survey, some hospitals monitored physicians (4 of 8 with policies for physicians, policies shown in Exhibit 266), specialists (3 of 5 with policies for specialists), pharmacists (3 of 4 with policies for pharmacists), and dentists (2 of 2 with policies for dentists) on whether they followed established policies for tracking prescription refills (Exhibit 269).

**Exhibit 269: Monitoring Providers on Adherence to Policies Tracking Prescription Refills Under PRIME**



Physicians 4
Specialists 3
Pharmacists 3
Dentists 2

A hospital described how they used their EHR to combine physician monitoring and an activity report card to provide feedback to providers regarding how their chronic pain management practice compared to peers.

> *"We have a tool within Epic called Healthy Planet. [It has a] metrics dashboard for each and every individual clinician, and they get to see not only their scores, their score card, but their department's score card… [checking] the CURES report, the PDMP, and have we done a proper assessment in management of chronic pain in a multimodal approach? And so we can look and see how each of us individually are doing and how folks in our department are doing." (UC Davis)*

## Pain and Substance Use Assessment tools used by clinicians

Hospitals reported which assessment tools they used for Project 2.6; all hospitals used at least 1 assessment tool and 6 hospitals noted that they utilized multiple tools. All 14 hospitals applied the Patient Health Questionnaire (PHQ-9) to assess depression in patients, fewer used other mental health screening tests, like the Generalized Anxiety Disorder Screener (GAD-7): 7 hospitals; Exhibit 270). Many hospitals also mentioned applying different tests examining patients' pain or physical function and level of disability, including BPI (4), FAQ5 (4), and Oswestry Low Back Disability Index (4). Hospitals utilized more than 11 tools assessing patients' substance use, including AUDIT (8), ORT (7), and CAGE (6). Safer prescribing screening tools included assessing the risk for opioid medication misuse in chronic pain patients, predicting compliance with opioid treatment for chronic non-cancer pain, and determination of compliance monitoring levels and frequency.

**Exhibit 270: Assessment Tools Used by PRIME Hospitals During PRIME**



| Category | Tool | Value |
|---|---|---|
| Mental Health | Generalized Anxiety Disorder Screener (GAD-7) | 7 |
| | Patient Health Questionnaire (PHQ-9) | 14 |
| Physical function/ disability or pain | Oswestry Low Back Disability Index | 4 |
| | Brief Pain Inventory (BPI) | 4 |
| | Physical Functional Ability Questionnaire (FAQ5) | 4 |
| Alcohol/Drug or safer opioid prescribing | Opioid Risk Tool (ORT) | 7 |
| | Pain Medicine Questionnaire (PMQ) | 3 |
| | Screening Instrument for Substance Abuse Potential… | 1 |
| | Prescription Drug Use Questionnaire (PDUQ) | 1 |
| | DIRE Tool | 3 |
| | SOAPP or SOAPP-R | 3 |
| | AUDIT or AUDIT-C | 8 |
| | CAGE/CAGE-AID | 6 |
| | CRAFFT Screening Test | 3 |
| | Drug Abuse Screening Test (DAST) | 4 |
| | Current Opioid Misuse Measure (COMMTM) | 3 |

*Source: UCLA analysis of the interim survey, April to May 2018.*
*Notes: N= 14 hospitals participating in Project 2.6; Responses were not mutually exclusive; AUDIT: Alcohol Use Disorders Identification Test; AUDIT-C: Alcohol Use Disorders Identification Test-Concise; CAGE: Have you ever felt you should CUT down on your drinking? Have people ANNOYED you by criticizing your drinking? Have you ever felt bad or GUILTY about your drinking? Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (EYE- opener)?; CAGE-AID, CAGE Questions Adapted to Include Drug Use; DIRE: Diagnosis, Intractability, Risk, Efficacy Score; SOAPP, Screener and Opioid Assessment for Patients with Pain SOAPP-R, Screener and Opioid Assessment for Patients with Pain-Revised; CRAFFT: 1. Have you ever ridden in a CAR driven by someone (including yourself) who was "high" or had been using alcohol or drugs? 2. Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in? 3. Do you ever use alcohol or drugs while you are by yourself, or ALONE? 4. Do you ever FORGET things you did while using alcohol or drugs? 5. Do your FAMILY or FRIENDS ever tell you that you should cut down on your drinking or drug use? 6. Have you ever gotten into TROUBLE while you were using alcohol or drugs? PC-PTSD, Primary Care – Post Traumatic Stress Disorder; PHQ-4, Patient Health Questionnaire-4.*

In interviews a hospital discussed the difficulty of getting physicians on board in using different assessment tools:

*"When we think about all the different assessment tools, there are dozens of new data points for our frontline staff and our clinicians to collect. I think that trying to provide the rationale to our physicians as to why those data points are important as opposed to just the narrative in their clinic note is challenging. We have to always explain structured data elements versus unstructured data elements within the electronic health record. And a lot of our docs tend to push back on double documentations. So trying to retrain them to enter data in a structured way as opposed to just simply a narrative way, i.e. dictation or typing, sometimes can be challenging." (UC Davis)*

Furthermore, hospitals reported on whether they monitored prescription drug misuse and what types of misuse. Most common practices included prescription monitoring programs to detect physician or pharmacy shopping (8 DPHs, 5 DMPHs), physician-patient contracts concerning opioid treatment (8 DPHs, 5 DMPHs), and urine drug toxicology screening (8 DPHs, 5 DMPHs; Exhibit 271).

**Exhibit 271: Monitoring for Signs of Diversion or Misuse During PRIME, by Hospital Type**
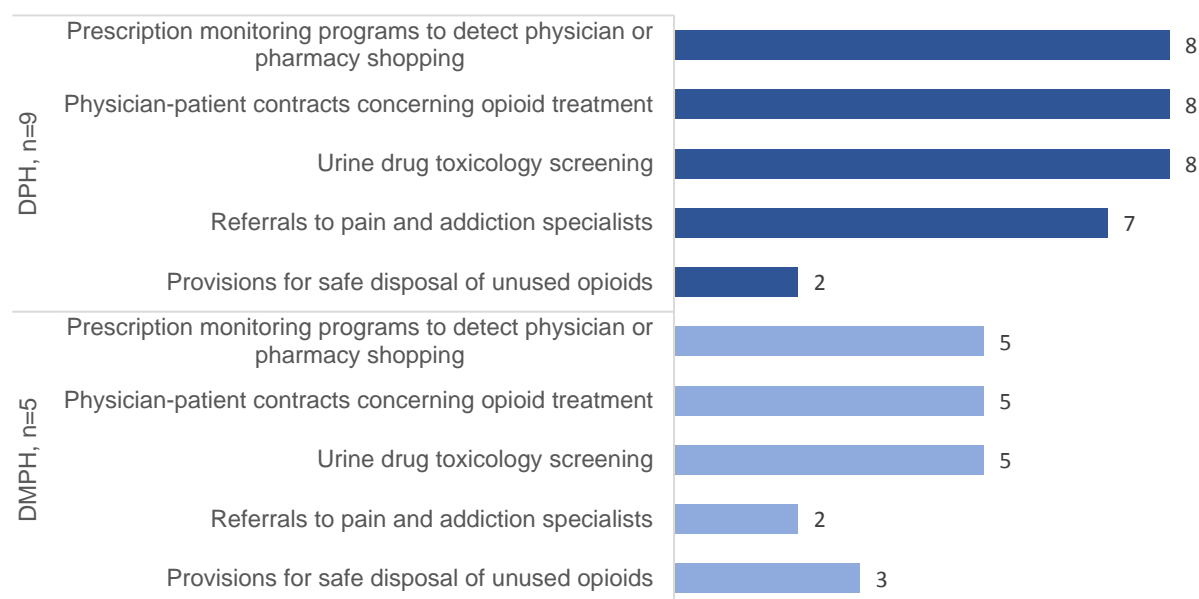


*Source: UCLA analysis of the interim survey, April to May 2018.*
*Notes: DPH: designated public hospital; DMPH: district and municipal public hospital; Responses were not mutually exclusive.*

In interviews a hospital discussed gathering patient input on what to monitor:

*"We went out and went to pain management behavior health groups, and we conducted surveys of patients regarding chronic pain agreements, urine toxicology, and various parts of our pain management service lines." (Contra Costa)*

The most common pain management protocol employed prior to PRIME initiation was the use of pain agreements with patients according to the interim survey (10; Exhibit 272). During PRIME, 9 hospitals implemented or modified safe prescribing practices, followed by using comprehensive pain histories and developing care management plans (8).

**Exhibit 272: Protocols for Pain Management Before and During PRIME**
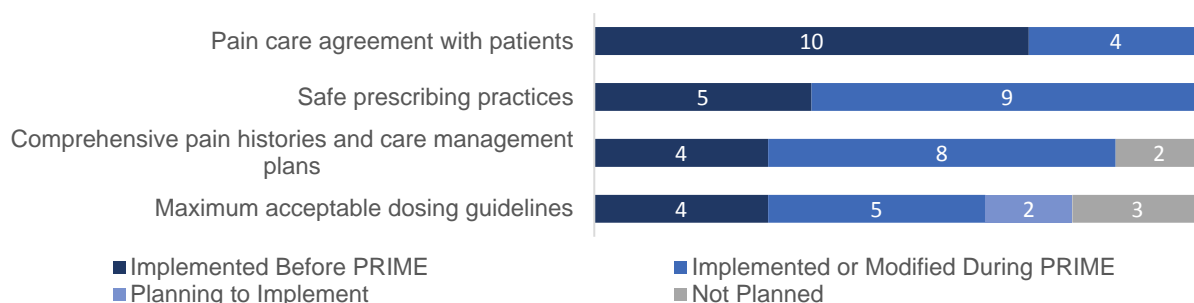


Source: UCLA analysis of the interim survey, April to May 2018.
Notes: N= 14 hospitals participating in Project 2.6; Responses were not mutually exclusive.

During interviews, hospitals discussed implementing safe prescribing practices and maximum dosing guidelines:

*"We've had a medical staff committee, which is called Safe Opiate Prescribing… for 7 years. Generally speaking, we would like to have a service line where opiates can be safely prescribed in their lowest dose for the shortest amount of time, with the least poly-pharmacy. And that there is a sort of team approach to the care of these patients. That they're co-managed with behavioral health, physical therapy, as well as other integrated services... It's not simply another policy to back up practices, so that it's not left only to the lone primary care provider to interface with a patient, and to not be supported." (Contra Costa)*

*"We've got a task force right now building out tools to track all new opiate prescription, whether it's from the emergency department or post-surgical. We're working on an institution-wide policy to limit what those post-surgical prescriptions would look like, but we're building out the data tools to identify each and every opioid prescription that happens in our health system." (UC Davis)*

Prior to PRIME, the interim survey showed 4 DPHs already had a process for scheduling pain-focused follow-up visits, 2 developed this process during PRIME, and the following 3 DPHs were planning to implement this process (Exhibit 273). During Prime, 4 DMPHs developed this process and 1 had not yet planned this process.

**Exhibit 273: Process for Scheduling Pain-Focused Follow-up Visits Before and During PRIME, by Hospital Type**
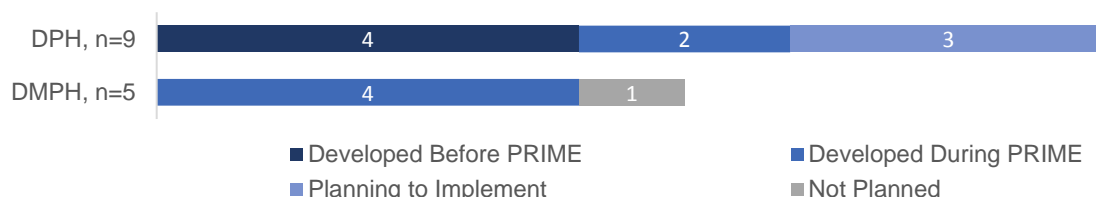


| | Developed Before PRIME | Developed During PRIME | Planning to Implement | Not Planned |
|---|---|---|---|---|
| DPH, n=9 | 4 | 2 | 3 | |
| DMPH, n=5 | | 4 | | 1 |

*Source: UCLA analysis of the interim survey, April to May 2018.*
*Notes: DPH: designated public hospital; DMPH: district and municipal public hospital.*

In an interview, a hospital described their rationale for scheduling pain-focused visits:

> *"For example, going over the pain agreement can take 20 to 30 minutes and primary care doctors have 15 to 20 minutes to see patients. So it can be very, very labor intensive to do the pain agreement, safely prescribe, [and explain] the need for a urine toxicology... these visits take a long time." (Contra Costa)*

An education brochure regarding pain management has been provided to patients by 10 hospitals, 3 hospitals translated the brochure into multiple languages, 2 modified them for cultural diversity, and 1 modified them for patient literacy level (Exhibit 274). Videos were used by 2 hospitals and other resources, such as pain support groups, were provided by 3 hospitals (data not shown).

**Exhibit 274: Provision and Tailoring Of Patient Educational Materials Regarding Chronic Pain and the Goals of Treatment, During PRIME**
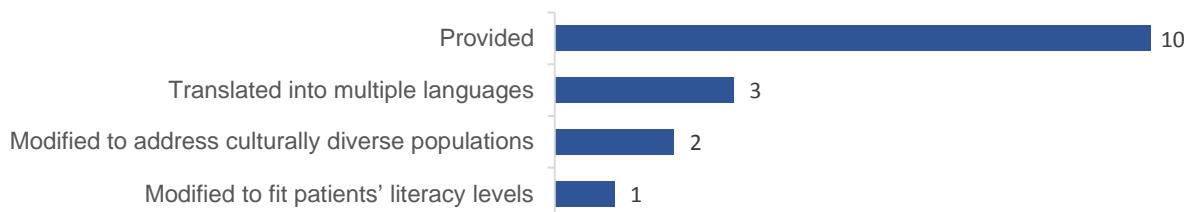


| | |
|---|---|
| Provided | 10 |
| Translated into multiple languages | 3 |
| Modified to address culturally diverse populations | 2 |
| Modified to fit patients' literacy levels | 1 |

*Source: UCLA analysis of the interim survey, April to May 2018.*
*Notes: N= 14 hospitals participating in Project 2.6; Responses were not mutually exclusive.*

In an interview, a hospital described their process for tailoring patient materials:

*"We have pain agreements... however the literacy level is higher than a third or fourth grade level... And they've been translated into Spanish, but we have 30 other languages that they could potentially have other translations too. So our language translation and language services are working on doing other translations in other languages of the pain agreements." (Contra Costa)*

The majority of participating hospitals reported that they commonly provided referrals for methadone maintenance (10 of 14 hospitals), substance use disorder treatment facilities (9), and Suboxone treatment (8, data not shown). Few hospitals (4) reported commonly offering referral to needle exchange programs.

### Participation in Learning Collaboratives

Participation in learning collaboratives outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF has been reported by 4 DPHs and 4 DMPHs. Other learning collaboratives included: the Institute for Healthcare Improvement Chronic Pain Collaborative, California Quality Collaborative, and UC Davis Project ECHO (Extension for Community Health Care Outcomes).

### Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10). DPH hospitals reported spending a medium level (6.3) of overall effort in implementing Project 2.6 and DMPH hospitals reported spending a high level (7.6) of overall effort to implement (Exhibit 403). Among DPHs, ratings of effort were high for engaging internal stakeholders (7.0), and implementation requirements (7.6). On average, DMPHs reported requiring high effort for unanticipated change in metrics (7.0), engaging internal stakeholders (8.4), revision or modification of project (7.6), staff training (7.6), resource intensity (7.4), and implementation requirements (8.4).

### Challenges and Solutionsto Chronic Non-Malignant Pain Management

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 2.6 (Challenges Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (8) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the majority of hospitals (7) was variation in documentation within the system by providers and staff. The top solution identified by the hospitals (6) was EHR/IT standardization or expansion across system. The second solution identified by the hospitals (4) was standardizing processes for documentation.

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## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 2.6 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by half of the hospitals (7) was processes not being established system-wide. The second challenge cited by the hospitals (3) was inadequate follow-up processes to document patient outcomes and silo-ed departments and difficulty collaborating (3). The top solution identified by the majority of hospitals (8) was implementing provider and staff training and increased capacity. The second solution identified by the hospitals (6) was standardizing processes across system.

During interviews, a hospital further discussed how changes to medical records helped in the success of this project:

> *"I think probably our greatest efforts have been to have improved EHR tools for providers. We have a number of smart phrases. A number of pain template notes, that's really helped do proper documentation." (Contra Costa)*

Another hospital discussed the difficulty in collecting necessary data:

> *"It's still somewhat of a problem because a lot of that data is within physicians' notes where they talked about physical therapy or rest-and-ice therapy or sending them off for surgical intervention. A lot of that's going to be manual extraction, and I don't think there's a good way to prevent that, enable to obtain that data without looking at individual notes and doing the manual extraction from that data." (Kaweah)*

## Hospital-Reported Metric Performance

Performance of hospitals in Project 2.6 was measured by the following 5 metrics (Exhibit 275). All 5 metrics were intended to show progress by increasing rates over time. UCLA categorized all 5 as process metrics.

### Exhibit 275: PRIME Project 2.6 Metric Details

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **Alcohol and Drug Misuse (SBIRT)** | 2.6.1 | Oregon CCO | N/A | Increase | Process |
| **Assessment and Management of Chronic Pain: Patients Diagnosed with Chronic Pain Who Are Prescribed an Opioid Who** | 2.6.2* | AHRQ | N/A | Increase | Process |

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| Have an Opioid Agreement Form and an Annual Urine Toxicology Screen | | | | | |
| Patients with Chronic Pain on Long Term Opioid Therapy Checked in PDMPs | 2.6.3* | AHRQ/SFHN, AHS, UCSD | N/A | Increase | Process |
| Screening for Clinical Depression and follow-up | 2.6.4 | CMS | 0418 | Increase | Process |
| Treatment of Chronic Non-Malignant Pain with Multi-Modal Therapy | 2.6.5* | SFHN, AHS, UCSD | N/A | Increase | Process |

*Source: PRIME Metrics Specs, DY13YE.*

*Notes: CCO: Coordinated Care Organizations, AHRQ: Agency for Healthcare Research and Quality, SFHN: San Francisco Health Network, AHS: Alameda Health System, UCSD: University of California, San Diego, CMS: Centers for Medicare & Medicaid Services, SBIRT: Screening, Brief Intervention, and Referral to Treatment, PDMP: Prescription Drug Monitoring Programs, * Denotes innovative metric.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. DMPHs did not report data in DY 11 for this project.

## Metric 2.6.1 – Alcohol and Drug Misuse (SBIRT)

Metric 2.6.1 measured the unique counts of individuals from the denominator with 1 or more screening, brief intervention, and referral to treatment (SBIRT) services among patients in the Project 2.6 Target Population (with a moderate to severe chronic pain diagnosis and without cancer nor enrolled in hospice) aged 12 years or older who received a qualifying outpatient service during the measurement period. (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase alcohol-related disorder detection and intervention in order to decrease risk of alcohol and drug related complications.

The intended direction of Metric 2.6.1 was an increase in rates over time. Overall, DPHs reported mixed trends in weighted average rates (Exhibit 276). DPH UCs reported a constant rate at 0.1% in DY 11 and DY 12, then increased to 2% in DY 13, while DPH County hospitals reported an increase from 4.2% in DY 11 to 5% in DY 13. The DMPHs started implementation in DY 12 and reported an overall increase in weighted average rates. DMPH Non-CAHs reported increased rates from 0% in DY 12 to 48% in DY 12, and DMPH CAHs reported an increase from 2.1% in DY 12 to 11% in DY 13.

**Exhibit 276: PRIME Self-Reported Alcohol and Drug Misuse Rates for Metric 2.6.1**
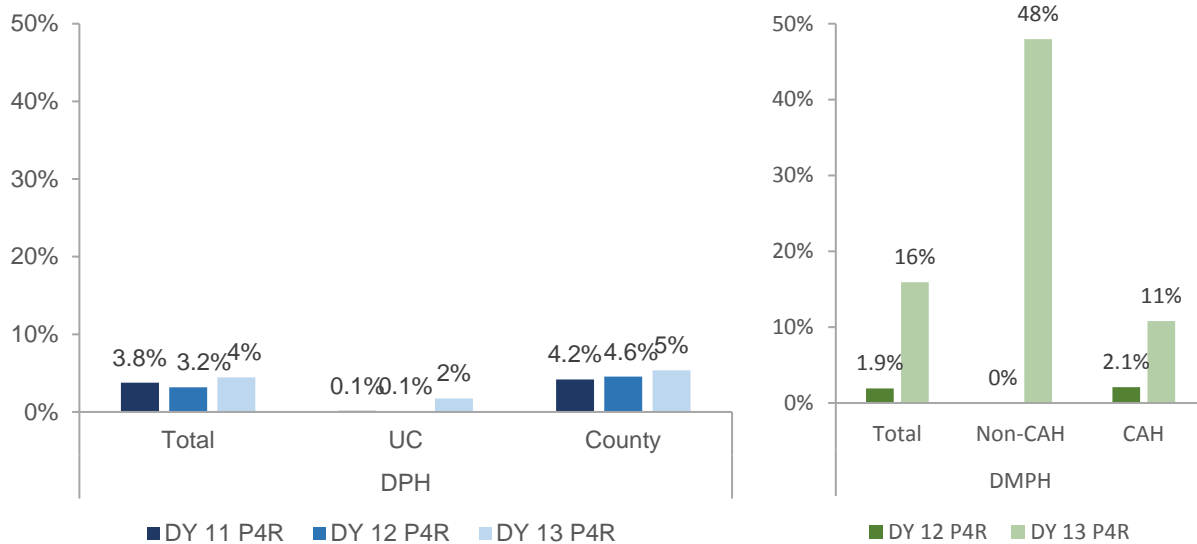


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.6.2 – Assessment and Management of Chronic Pain: Patients Diagnosed with Chronic Pain Who Are Prescribed an Opioid Who Have an Opioid Agreement Form and an Annual Urine Toxicology Screen

Metric 2.6.2 measured the number of patients with documentation of patient provider agreement or toxicology testing at least once during the measurement period among the Project 2.6 Target Population on long-term opioid therapy (patients with active prescriptions of opioid-containing medication for greater than 90 consecutive days, PRIME Metric Specs, DY 13YE). Hospitals were intended to enhance appropriate opioid therapy management for patients with chronic pain. In DY 13 this metric was modified to be an innovative metric.

The intended direction of Metric 2.6.2 was an increase in rates over time. Overall, DPHs reported mixed trends in assessment and management of chronic pain rates (Exhibit 277). DPH UCs reported an increase from 13% in DY 11 to 43% in DY 13, while DPH County hospitals reported a decrease from 34% in DY 11 to 31% in DY 12 and DY 13. DMPHs started implementation in DY 12, and reported an increase in weighted average rates from 23% in DY 12 to 35% in DY 13. DMPH Non-CAHs reported an increase from 11% in DY 12 to 27% in DY 13, and DMPH CAHs reported an increase from 27% in DY 12 to 38% in DY 13.

**Exhibit 277: PRIME Self-Reported Assessment and Management of Chronic Pain Rates for Metric 2.6.2**
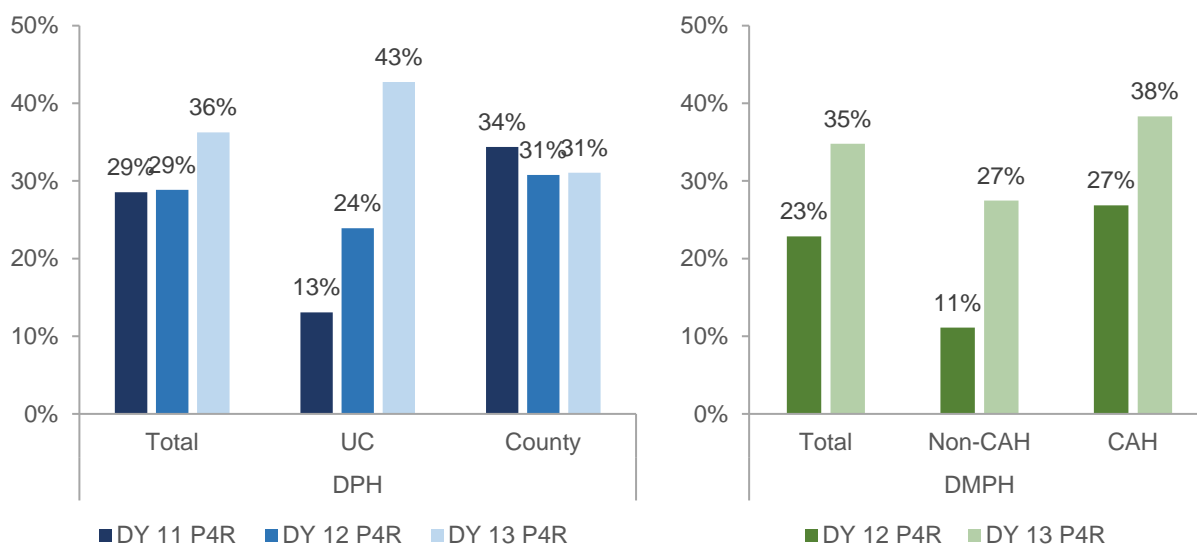
*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.6.3 – Patients with Chronic Pain on Long Term Opioid Therapy Checked in PDMPs

Metric 2.6.3 measured the proportion of patients on long-term opioid therapy who had annual checks for prescription drug monitoring programs (PDMPs) among the Project 2.6 Target Population on long-term opioid therapy (patients with active prescriptions opioid-containing medication for greater than 90 consecutive days, PRIME Metric Specs, DY 13YE). Hospitals were intended to minimize the risk of opioid prescribing by multiple prescribers.

The intended direction of Metric 2.6.3 was an increase in rates over time. DPHs reported increasing trends in weighted average rates for Metric 2.6.3 (Exhibit 278). DPH UCs reported an increase from 16% in DY 11 to 66% in DY 13, and DPH County hospitals reported constant rates at 29% from DY 11 to DY 12, and an increase to 50% in DY 13. DMPHs started implementation in DY 12, and reported an overall increase in weighted average rates. DMPH Non-CAHs reported an increase from 0% in DY 12 to 32% in DY 13, and DMPH CAHs reported an increase from 37% in DY 12 to 47% in DY 13.

**Exhibit 278: PRIME Self-Reported Prescription Drug Monitoring Program (PDMP) Review\* Rates for Metric 2.6.3**



*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, \* Denotes innovative metric.*

Metric 2.6.4 measured the proportion of patients screened for clinical depression using a standardized tool and, if positive, had a follow-up plan documented among the Project 2.6 Target Population aged 18 and over (PRIME Metric Specs, DY 13YE). Hospitals were intended to identify and treat depression in its early stages.

The intended direction of Metric 2.6.4 was an increase in rates over time. Overall, DPHs reported an increase in depression screening and follow-up rates (Exhibit 279). DPH UCs reported an increase from 3% in DY 11 to 64% in DY 13, and DPH County hospitals reported an increase from 34% in DY 11 to 73% in DY 13. DMPHs started implementation in DY 12 and reported an increase in weighted average rates from 39% in DY 12 to 57% in DY 13. DMPH Non-CAHs reported an increase from 4% in DY 12 to 72% in DY 13, and DMPH CAHs reported an increase from 44% in DY 12 to 53% in DY 13.

**Exhibit 279: PRIME Self-Reported Depression Screening and Follow-Up Rates for Metric 2.6.4**



*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 2.6.5 – Treatment of Chronic Non-Malignant Pain with Multi-Modal Therapy

Metric 2.6.5 measured the proportion of patients who received a recommendation, education about, prescription for, or referral to non-opioid pain management in the outpatient setting among the Project 2.6 Target Population (PRIME Metric Specs, DY 13YE). One of the contributing factors of the opioid overuse and overdose epidemic has been the overprescribing of opioids by healthcare providers. A multi-modal, multidisciplinary approach to pain management could help increase utilization of non-opioid treatment modalities.

The intended direction of Metric 2.6.5 was an increase in rates over time. DPHs reported mixed trends in treatment of chronic non-malignant pain with multi-modal therapy rates (Exhibit 280). DPH UCs reported an increase from 87% in DY 11 to 88% in DY 12, and then a decrease to 84% in DY 13, while DPH County hospitals reported a decrease from 80% in DY 11 to 79% in DY 12, then an increase to 85% in DY 13. DMPHs started implementation in DY 12 and reported an overall increase in weighted average rates. DMPH Non-CAHs reported an increase from 0% in DY 12 to 35% in DY 13, and DMPH CAHs reported an increase from 82% in DY 12 to 94% in DY 13.

**Exhibit 280: PRIME Self-Reported Multi-Modal Therapy\* Rates for Metric 2.6.5**
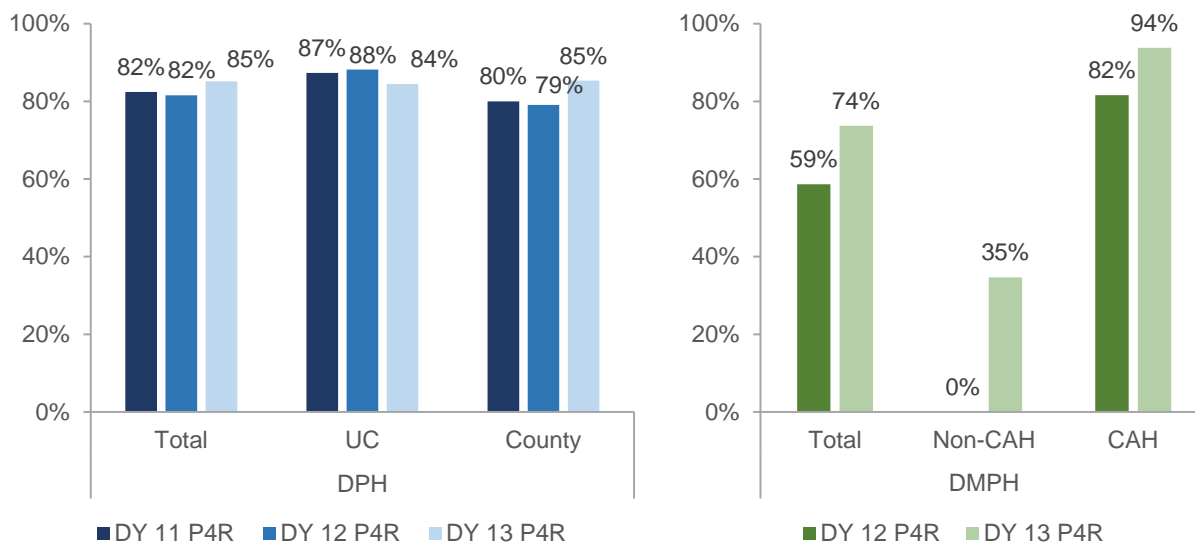


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, \* Denotes innovative metric.*

## Summary of Key Findings

Project 2.6 was designed to promote identification and management of chronic pain using evidence-based models that are designed to improve outcomes. Nine DPHs and 5 DMPHs participated. About half to all participating hospitals newly selected or implemented the core components for this project. Hospitals established needed infrastructure by using evidence-based pain management frameworks (13), developing referral protocols for pain or addiction specialists (11), educating providers (11), distributing guidelines (8), or tracking opioid prescription patterns by providers (7). Hospitals trained PCPs (8) and specialists (6) to identify signs of prescription opioid use disorders and established multi-disciplinary chronic pain teams consisting of PCPs (12), medical staff (12), pharmacists (9), behavioral health specialists (8), and anesthesiologists or pain management providers (8). They used standardized approaches to identify at-risk patients, including ICD-10 codes (13), urine toxicology screenings (13), care agreements (11), and policies for physicians (8) and other medical professionals (11).

Hospitals implemented this project system-wide (8), on campus outpatient departments (7), or in off campus clinics and practices (5) and monitored adherence for tracking prescription refills in physicians (4), specialists (3) and others (5). Hospitals used the Patient Health Questionnaire (PHQ-9) (14), AUDIT (8), BPI (4), FAQ5 (4), and the Oswestry Low Back Disability Index (4) for depression, substance use, and pain management. Hospitals monitored physician or pharmacy shopping (13), physician-patient contracts concerning opioid treatment (13) and urine drug toxicology screening (13). All hospitals used pain care agreement with patients and safe prescribing practices protocols and many developed a scheduling process for pain-focused follow-up visits (10), handed out education brochures regarding pain management (10), and referred patients for methadone maintenance (10), substance use disorder treatment facilities (9), and Suboxone treatment (8). Participation in learning collaboratives beyond those provided by PRIME was reported by 8 hospitals. The overall level of difficulty in implementing this project was medium for DPHs (7.6 out of 10) and high for DMPHs (8.4 out of 10). Data and metric-related challenges to implementation included the lack of IT or EHR functionality (8), variation in documentation (7), the lack of established system-wide processes (7), and inadequate availability of services (4). The most successful solutions were expansion of the EHR across the system (6), standardized documentation processes for providers and staff (5), trained providers and staff (8), and standardized processes (6).

Project 2.6 metrics were 2.6.1 -Alcohol and Drug Misuse (SBIRT); 2.6.2-Assessment and Management of Chronic Pain: Patients Diagnosed with Chronic Pain Prescribed an

Opioid and Have an Opioid Agreement Form and an Annual Urine Toxicology Screen; 2.6.3-Patients with Chronic Pain on Long Term Opioid Therapy Checked in PDMPs; 2.6.4 -Screening for Clinical Depression and Follow-Up; and 2.6.5-Treatment of Chronic Non-Malignant Pain with Multi-Modal Therapy. Performance of hospitals in Project 2.6 was measured by 5 metrics. Two were standard metrics and 3 innovative metrics. All were process metrics. DPHs showed progress in 3 metrics (2.6.2, 2.6.3, 2.6.4) and had mixed but overall improved results in 2 metrics (2.6.1, 2.6.5). DMPHs showed progress in all 5 metrics (2.6.1, 2.6.2, 2.6.3, 2.6.4, 2.6.5).

Overall, hospitals were successful in establishing the infrastructure to better manage patients with chronic pain by developing specific protocols and strategies for providers, establishing multi-disciplinary chronic pain teams and provide staff training. Implementation of common assessment tools, monitoring of policies on drug prescription, newly developed pain management protocols, processes for scheduling follow-up visits and referrals account for the significant progress that has been achieved implementing Project 2.6. Hospitals reported improvements in all metrics with variations in progress in project implementation and metrics.

# Project 2.7 - Comprehensive Advanced Illness Planning and Care

## Project Overview

Project 2.7 was designed to improve the quality of end of life care by ensuring access to comprehensive palliative care that is in alignment with patient preferences in hospital and community settings. Goals were to be accomplished by establishing an infrastructure for delivery of palliative care, such as multidisciplinary care teams that are located in outpatient and inpatient settings and are trained to deliver this care; as well as following appropriate care processes, such as providing the needed care and linking patients to community-based providers. Specific objectives can be found in Attachment Q.

Project 2.7 was not required for DPHs. Five DPHs participated in this project (Los Angeles, San Joaquin, UC Los Angeles, UC San Diego, and UC San Francisco) and 8 DMPHs (Antelope Valley, Kaweah Delta, Marin, Palomar, Salinas Valley, Sierra View, Tri-City, and Washington). Tri-City stopped participation in this project in July 2018 after completing the survey and interview, and thus is included in these analyses. There were 13 entities participating in this project at the time the survey data was collected (Exhibit 281).

**Exhibit 281: PRIME Project 2.7 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 13 | 13 | 12 |
| **Total DPH** | 5 | 5 | 5 |
| **DPH UC** | 3 | 3 | 3 |
| **DPH County** | 2 | 2 | 2 |
| **Total DMPH** | 8 | 8 | 7 |
| **DMPH Non-CAH** | 8 | 8 | 7 |
| **DMPH CAH** | 0 | 0 | 0 |

*Source: Data provided by DHCS.*
*Notes: Among the DMPH Non-CAHs, Tri-City dropped in DY 13 on July 15, 2018. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the suggested core components of this project as part of their overall approach to comprehensive advanced illness planning and care (Exhibit 282). In the interim survey, 9 hospitals reported they had begun establishing care goals consistent with patient and family preferences, and developing protocols for management/control of pain and other symptoms patients with advanced illness prior to PRIME. Five hospitals established or expanded both ambulatory

and inpatient palliative care programs prior to PRIME. During PRIME, all or nearly all participating hospitals reported implementing all the core components except for providing access to clinical psychologist on the palliative care team to address psychological needs of patient and the family members during the advanced illness and provide grief counseling and support to the family after death of their loved ones.

**Exhibit 282: PRIME Project 2.7 Core Components**

| Core Component | Started Implementation Prior to PRIME | Selected for PRIME |
|---|---|---|
| Establish or expand both ambulatory and inpatient palliative care programs that provide: a. Total, active and individualized patient care, including comprehensive assessment, inter-professional care planning and care delivery b. Support for the family c. Interdisciplinary teamwork d. Effective communication (culturally and linguistically appropriate) e. Effective coordination f. Attention to quality of life and reduction of symptom burden g. Engagement of patients and families in the design and implementation of the program. | 5 | 13 |
| Develop criteria for program inclusion based on quantitative and qualitative data: a. Establish data analytics systems to capture program inclusion criteria data elements. | 2 | 12 |
| Implement, expand, or link with, a Primary Palliative Care training program for front- line clinicians to receive basic PC training, including Advanced Care Planning, as well as supervision from specialty PC clinicians. a. Assure key palliative care competencies for primary care providers by mandating a minimum of 8 hours of training for front line clinicians in communication skills and symptom management | 2 | 10 |
| Develop comprehensive advance care planning processes and improve implementation of advance care planning with advanced illness patients. | 3 | 13 |
| Establish care goals consistent with patient and family preferences, and develop protocols for management/control of pain and other symptoms in patients with advanced illness, including a holistic approach that includes spiritual and emotional needs. | 9 | 13 |
| Improve completion of POLST with eligible patients and participate in the state-wide POLST registry. | 2 | 10 |
| Provide access to clinical psychologist on the Palliative care team to address psychological needs of patient and the family members during the advanced illness and provide grief counseling and support to the family after death of their loved ones. | 1 | 4 |

| Core Component | Started Implementation Prior to PRIME | Selected for PRIME |
|---|---|---|
| Enable concurrent access to hospice and curative-intent treatment, including coordination between the providing services. | 3 | 8 |
| Develop partnerships with community and provider resources including Hospice to bring the palliative care supports and services into the practice, including linkage with PC training program. | 5 | 12 |
| For advanced illness patients transitioning between primary care, hospital, skilled nursing facilities (SNFs), and/or home-based environments, ensure that the advance care plan is clearly documented in the medical record and transmitted in a timely manner to the receiving facilities and care partners who do not have access to the health system's medical record. | 1 | 9 |
| Engage staff in trainings to increase role-appropriate competence in palliative care skills, with an emphasis on communication skills. | 3 | 11 |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | 2 | 11 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=13 hospitals participating in Project 2.7 completed the survey, Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component, Since the interim survey hospitals may have implemented or dropped activities under a core component.*

## Infrastructure

### Registry and Telehealth

In the interim survey, participating hospitals were asked if they participated or had plans to participate in a Physician Orders for Life-Sustaining Treatment (POLST) registry as part of PRIME (Exhibit 283). Two DMPHs indicated current participation in POLST, with 2 DPHs and 2 DMPHs planning participation during PRIME.

**Exhibit 283: Participation in a Provider Orders for Life-Sustaining Treatment (POLST) Registry During PRIME, by Hospital Type**
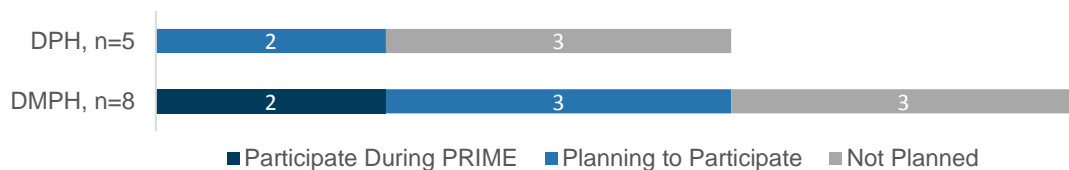


DPH, n=5: Planning to Participate 2, Not Planned 3
DMPH, n=8: Participate During PRIME 2, Planning to Participate 3, Not Planned 3

■ Participate During PRIME  ■ Planning to Participate  ■ Not Planned

During interviews, a hospital discussed how advanced care planning was supported by their electronic systems and standardized workflows during PRIME:

> *"Our advanced care planning, where we basically offered all patients that we would be happy to provide them additional counseling and resources to get their advanced care planning completed, and all they had to do is send a My-chart message, send a little message back to us and let us know how we could help. [POLST are] just scanned media documents. That one was super easy, and now we have a flag so that every patient I see it's on their health maintenance topic. Hey, hey, you better do advance care planning." (UC San Diego)*

In the interim survey, 2 of 13 participating hospitals indicated using telehealth services for palliative care during PRIME and 2 participating hospitals had plans to implement telehealth services for palliative care during PRIME (Exhibit 284). A participating hospital indicated using telehealth for home health during PRIME and 3 hospitals had plans to implement telehealth for home health during PRIME. Lastly, 9 participating hospitals had no plans to implement telehealth for palliative care or home health during PRIME.

**Exhibit 284: Use of Telehealth for Palliative Care and Home Health During PRIME**
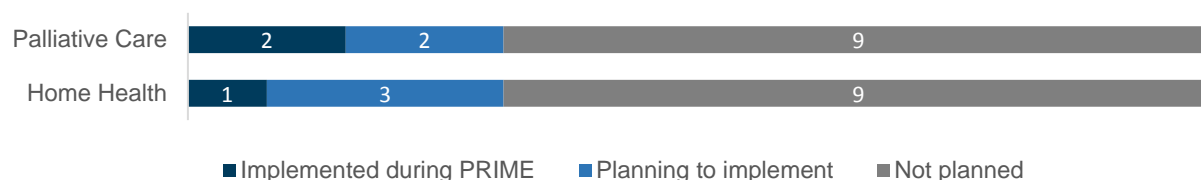
| | | |
|---|---|---|
| Palliative Care | 2 | 2 | 9 |
| Home Health | 1 | 3 | 9 |

■ Implemented during PRIME   ■ Planning to implement   ■ Not planned

## Staffing and Workforce Development

Three quarters of participating hospitals reported providing palliative care training for frontline clinicians in regards to advanced care planning (10), communication skills (10), and symptom management (10; Exhibit 285). Over half of participating hospitals (7 of 13) provided supervision from specialty palliative care clinicians in training front-line clinicians.

**Exhibit 285: Elements of Primary Palliative Care Training Program for Front Line Staff and Clinicians During PRIME**

| | |
|---|---|
| Training on Advanced Care Planning | 10 |
| Training for front line clinicians in communication skills | 10 |
| Training for front line clinicians in symptom… | 10 |
| Supervision from specialty palliative care clinicians | 7 |

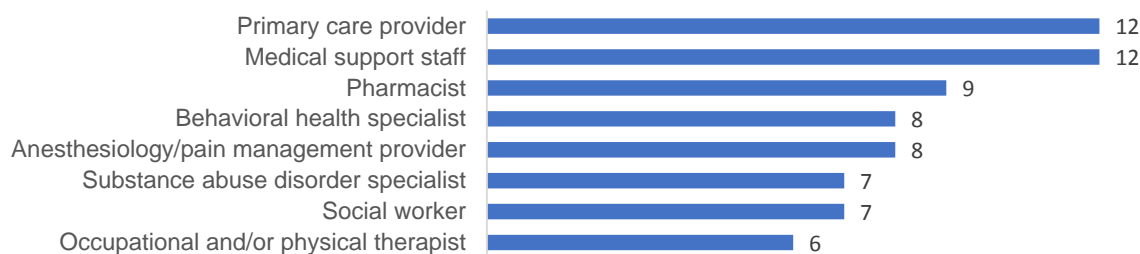*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=13 hospitals participating in Project 2.7, Responses were not mutually exclusive.*

During interviews, a hospital described their palliative care consults in the following manner, emphasizing the need to change physician culture and understanding in order to effectively offer them to patients with advanced illness:

*"Our consults are physician based and physician driven. So we really wanted to focus more on meeting with the physicians and educating the physicians about how can we increase the number of palliative care consults that we have at our organization. And that's why we steered away from educating the frontline staff. The biggest difficulty with this project for our organization is trying to change the culture surrounding what exactly a palliative care consult is and who would qualify for palliative care. …We're still trying to educate [physicians] regarding getting palliative care on board for patients who have an advanced illness, or who have a diagnosis in general." (Palomar)*

In the interim survey, all hospitals reported that they had a palliative care team and that the team included a palliative doctor and social worker (13; Exhibit 286). Other common team members included: chaplain or other religious/spiritual leader (11), social services (11), and relevant specialists (9). More than half of teams involved family members and a pharmacist (7). Dieticians (5), psychologists (4), and physical therapists (3) were less often involved in PRIME palliative care teams. However, hospitals may have had these staff during other periods of PRIME, as hiring staff was part the implementation process and turn-over was reported as a challenge.

**Exhibit 286: Members of Palliative Care Teams During PRIME**
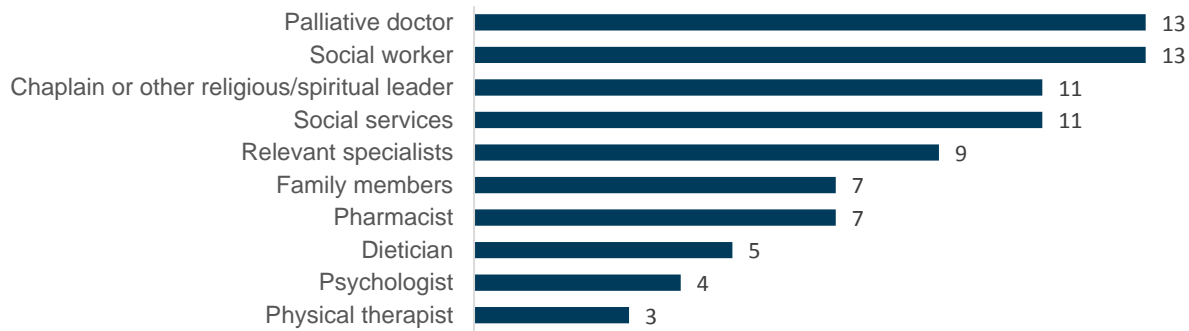
| Member | Count |
|---|---|
| Palliative doctor | 13 |
| Social worker | 13 |
| Chaplain or other religious/spiritual leader | 11 |
| Social services | 11 |
| Relevant specialists | 9 |
| Family members | 7 |
| Pharmacist | 7 |
| Dietician | 5 |
| Psychologist | 4 |
| Physical therapist | 3 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=13 hospitals participating in Project 2.7, Responses were not mutually exclusive.*

During interviews, some hospitals indicated that creation of the outpatient palliative care team required that they hire new types of staff. For example, one hospital reported:

*"We reached out to the local hospice locations ... And we were able to get a contract with them so that our physicians here are able to either follow-up with them at the hospice location or have our social worker or our nurse be able to reach out to them and see how they're doing. We do follow-up phone calls. That's the only thing that we were able to do that's outpatient. ... but that contract just became in effect since we just hired a licensed social worker." (Antelope Valley)*

In the interim survey, all hospitals reported having an ambulatory palliative care team and the majority had a palliative care team in both inpatient and outpatient settings (Exhibit 287).

**Exhibit 287. Location of Palliative Care Team Under PRIME, by Hospital Type**
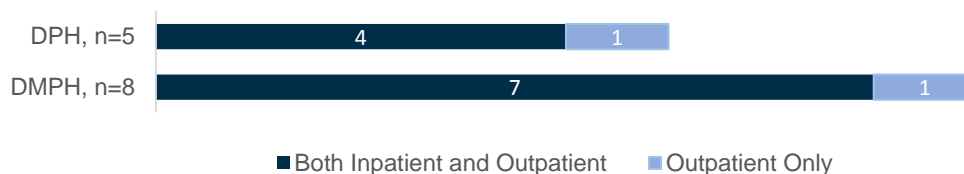
| Hospital Type | Both Inpatient and Outpatient | Outpatient Only |
|---|---|---|
| DPH, n=5 | 4 | 1 |
| DMPH, n=8 | 7 | 1 |

■ Both Inpatient and Outpatient  ■ Outpatient Only

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=13 hospitals participating in Project 2.7, DPH: designated public hospital, DMPH: district and municipal public hospital.*

Concurrently with PRIME, a statute was enacted instructing DHCS to "establish standards and provide technical assistance for Medi-Cal managed care plans to ensure

delivery of palliative care services" (Senate Bill No. 1004, Hernandez, Chapter 574, Statutes of 2014). DHCS noted that:

*"A number of Medi-Cal managed care health plans, hospitals and health systems, and other providers are already incorporating palliative care strategies such as advance care planning, pain and symptom management, and palliative care consultations into their overall models of care. DHCS encourages those strategies to improve patient satisfaction and outcomes for Medi-Cal beneficiaries at all stages of life and illness, and to help meet the goals of Let's Get Healthy California and the DHCS Quality Strategy." (DHCS)*

In interviews, a hospital described how they coordinated with Medi-Cal managed care plans that fund this service, and the data challenges that arose from the arrangement:

*"We don't do hospice at DHS, but it is a covered benefit for MediCal-managed care. For our Medi-Cal managed care lives, our health plans pay those hospice providers directly. That means we never know if the patient actually saw the hospice provider, what their date of entry into hospice was, and what their date of death was in order to be able to respond and report on that metric. What we have to do is we have to go to our plan and say, "Which of our patients did you pay hospice for, and can we get this particular data?" So that's a challenge. Now for those patients that are uninsured in the PRIME eligible population, we actually pay the hospice providers … directly, and that data is easier to get." (Los Angeles)*

In interviews, a hospital described how they did not provide hospice services directly, but rather contracted with external agencies to provide these services and meet the PRIME metrics:

*"We partnered with a couple of the Palliative [and hospice] care agencies that are within our community and we formed a joint operating committee team. And so when PRIME came in, we did a spin-off specific to PRIME on metric needs and focusing on that patient population… We don't have a hospice agency within our organization." (Palomar)*

In the interim survey, participating hospitals indicated the types of partnerships they had established for palliative care supports and services during PRIME (

Exhibit 288). Most frequently, participating hospitals partnered with hospice (5 DPHs, 8 DMPHs) and palliative care training programs (2 DPHs, 7 DMPHs). Housing, church, and food service partners were rare.

**Exhibit 288: Partnership Types for Palliative Care Supports and Services During PRIME, by Hospital Type**
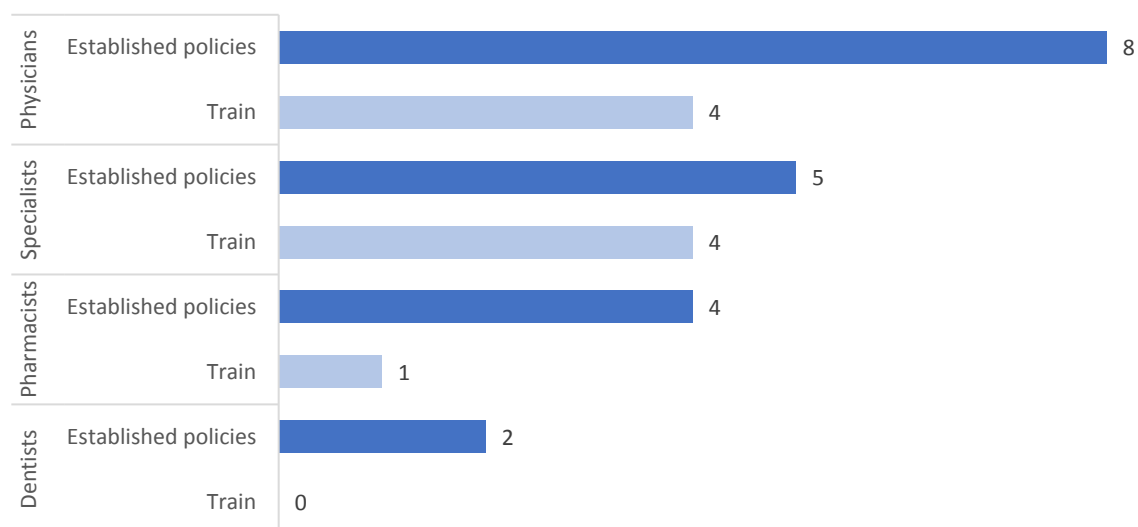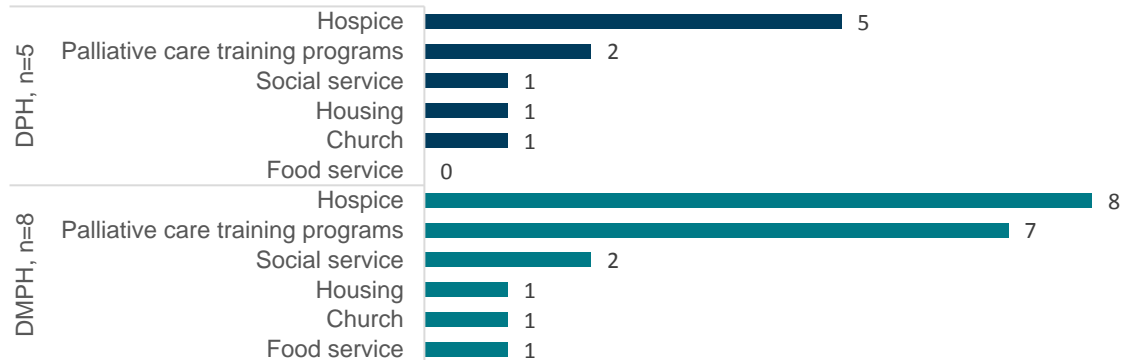


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

## Protocols and Program Components

All 13 participating hospitals developed or planned to develop quantitative inclusion criteria for determining patients who would benefit from receipt of advanced illness planning and care (

Exhibit 289). Most often, both qualitative and quantitative inclusion criteria were developed during PRIME (7). Few participating hospitals had implemented these criteria prior to PRIME (2-3). A majority (8) hospitals had implemented data analytics systems (e.g., dashboards) to capture relevant information for advanced illness planning and care, with 3 more hospitals planning to implement during PRIME.

**Exhibit 289: Use of Criteria and Data Analytics for Advanced Illness Planning and Care, Before and During PRIME**
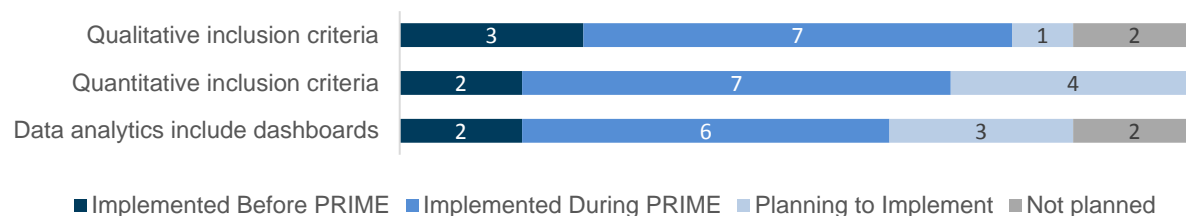


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=13 hospitals participating in Project 2.7.*

Participating hospitals were asked to identify at what stage they implemented common components of ambulatory and inpatient palliative care programs (Exhibit 290). Most

often, participating hospitals had implemented family support (9), effective communication (9), and attention to quality of life and symptom reduction (8), prior to PRIME. During PRIME, common additions to ambulatory and inpatient palliative care programs included effective coordination (9), inter-professional care planning (9), and individualized and comprehensive patient assessments (7).

**Exhibit 290: Components of Ambulatory and Inpatient Palliative Care Programs, Before and During PRIME**
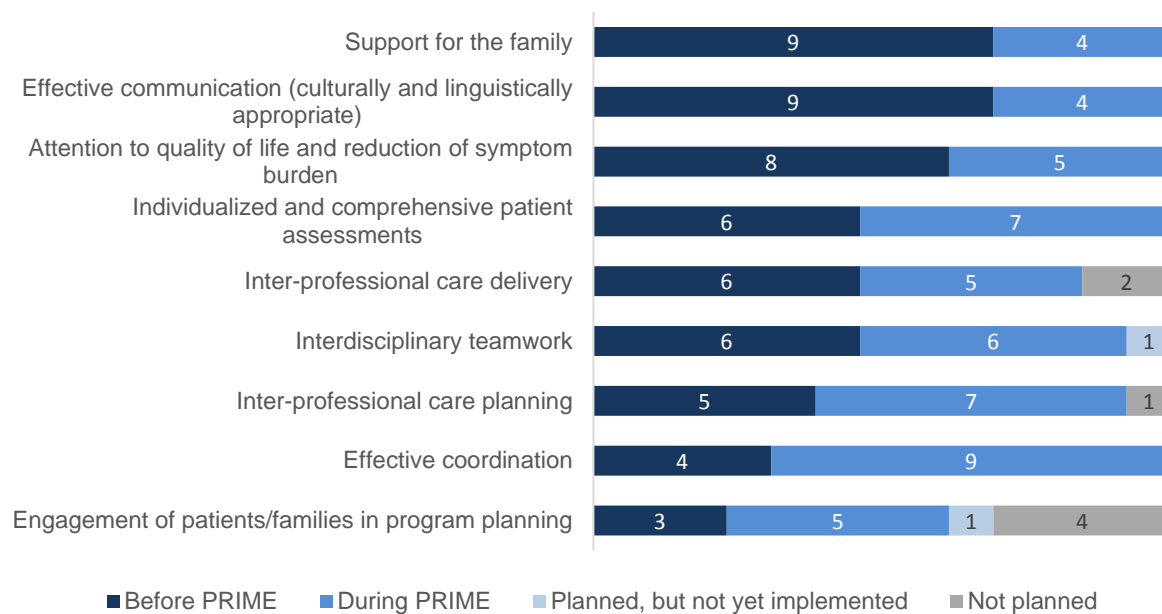


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=13 hospitals participating in Project 2.7, Responses were not mutually exclusive.*

During interviews, a hospital reflected on the change in follow-up for advanced illness patients in the following way:

> *"[As a result of PRIME] we're able to follow-up with the patients when they leave. We just don't set it up and say, 'Okay, bye.' We're able to follow-up with them and see how long has the patient been there, if their accommodations are what they need. We can ask the doctor to write additional orders so that the hospice care can provide different types of medication. So it becomes less difficult for the patient and the family to be able to have hospice care." (Antelope Valley)*

## Project Implementation

### Delivery of Palliative Care

As indicated in the interview survey, as part of advanced care planning processes during PRIME, all hospitals (5 DPHs, 8 DMPHs) offered patient education on advance directives that aligned with values and preferences (Exhibit 291). Additionally, all DMPHs (8) offered palliative care services at time of diagnosis of advanced illness and prioritized enhancing patient and family understanding about illness and end-of-life issues. A few DPHs (1) and DMPHs (4) also ensured that outcomes matched patient preferences.

**Exhibit 291: Components of Comprehensive Advanced Care Planning Processes Developed During PRIME, by Hospital Type**
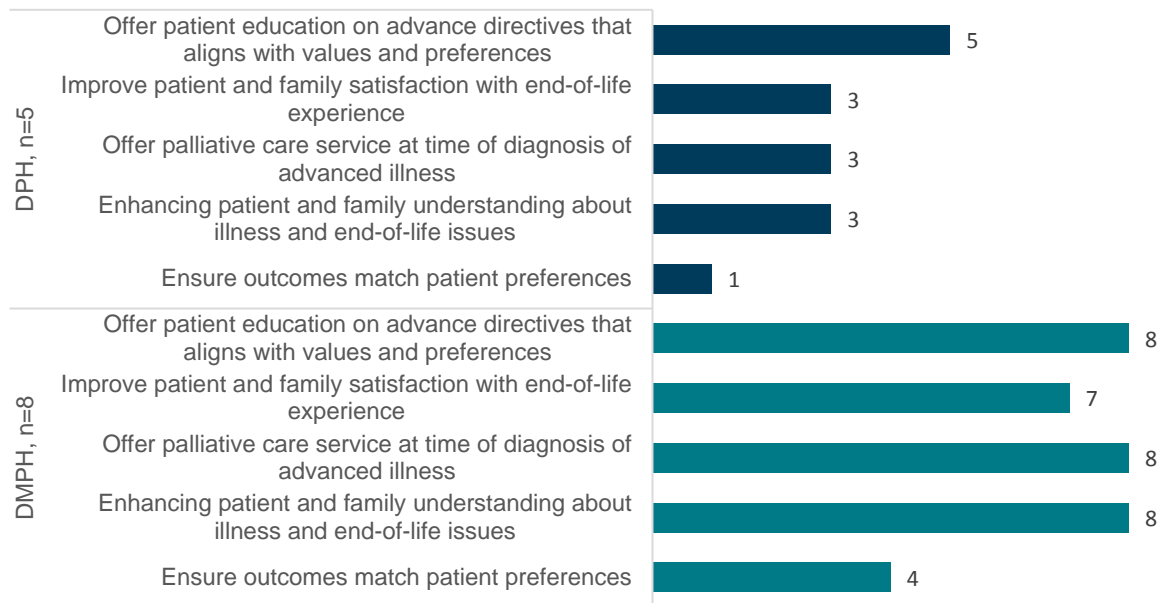


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

Exhibit 292 provides examples of how participating hospitals established advance care planning goals consistent with family and patient preferences.

**Exhibit 292: Selected Examples Related to the Establishment of Advance Care Planning Goals Consistent with Family/Patient Preferences During PRIME**

| Hospital | Example |
|---|---|
| **Washington** | Washington emphasized how building a relationship was fundamental to helping patients and families establish care goals consistent with their preferences. In order to do this, the Palliative Care team first ensures that patients and families understand |

| Hospital | Example |
|---|---|
| | what the provider has shared regarding health status, prognosis, and treatment options. The team is available to answer questions and helps the family process the information. The team works to explore and understand the patient's expectations, beliefs, and goals. When appropriate, the team may help patients or families reframe the information or diagnosis in a context appropriate to their cultural or spiritual beliefs. Additionally, the team may help to facilitate family meetings or discussions and help process disagreements. |
| **Kaweah Delta** | Kaweah Delta emphasized how the palliative care team ensures that the first visits allow the patient and family to express their needs and treatment goals. |
| **UC San Diego** | UC San Diego refined preexisting standardized templates for goals of care conversations in both the ambulatory and inpatient setting. They also provided a brief primary palliative care education by a specialist palliative physician and social worker on how to have these conversations and how to translate them into healthcare goals, in a patient friendly manner. UC San Diego has adopted a new system-wide advance directive that is patient friendly and accessible. |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=13 hospitals participating in Project 2.7.*

Hospitals were asked to indicate improvements to advanced care planning processes they had engaged in as a result of PRIME (Exhibit 293). DPHs most commonly encouraged providers to initiative advance care planning discussions (5) and offered advance care planning at point of diagnosis of advanced illness (3). DMPHs most commonly offered advance care planning at point of diagnosis of advanced illness (6) and encouraged providers to have discussions that are patient-centered (6).

**Exhibit 293: Improvements to Advanced Care Planning Processes Developed during PRIME, by Hospital Type**

Participating hospitals indicated that hospice providers most often could access the advanced illness care plan through the EHR (7), followed by fax (3) and email (1; lowed by fax (3) and email (1).
Exhibit 294). Accessibility was more limited for skilled nursing facility providers as 4 hospitals indicated accessibility through the EHR, followed by fax (3) and email (1).

**Exhibit 294: Advanced Illness Care Plan Available to Skilled Nursing Facility and Hospice Providers**
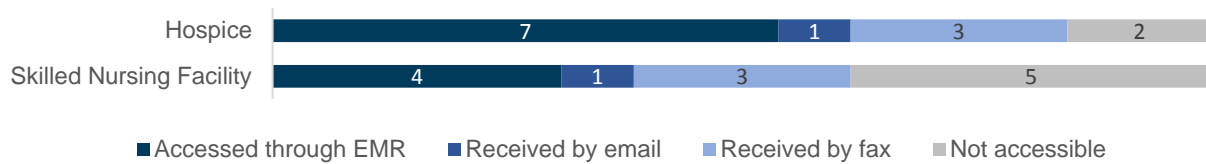
The majority of participating DMPHs (5) had established a palliative care program in both ambulatory and inpatient settings (Exhibit 295). Hospitals varied in their establishment of palliative care programs with more than half having a program in both ambulatory and inpatient settings (2 DPHs, 5 DMPHs).

**Exhibit 295: Establishment of Ambulatory Care and Inpatient Palliative Care Programs During PRIME, by Hospital Type**
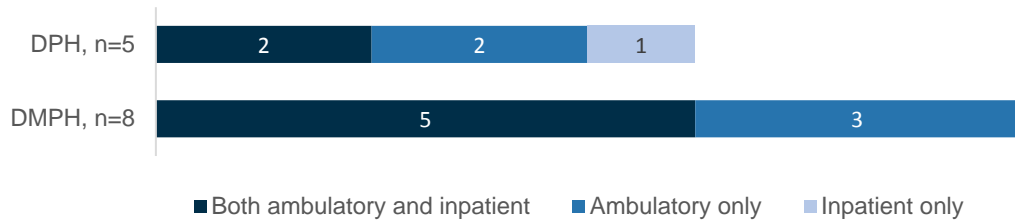
## Participation in Learning Collaboratives

Three DPHs and 4 DMPHs reported participating in learning collaboratives outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF. Learning

collaboratives included the California Advanced Illness Collaborative (CAIC), California Health Care Foundation Partnership Program, Center to Advance Palliative Care, and Palliative Care Quality Network.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10). Hospitals reported spending an overall high level of effort in implementing Project 2.7 (DPH 8.0, DMPH 7.6; (Exhibit 403). Among DPHs, ratings of effort were high for unanticipated change in metrics (7.4), engaging internal stakeholders (7.0), resource intensity (8.2), and implementation requirements (7.6). DMPHs reported requiring high effort for all the elements.

## Challenges and Solutions to Improving Advanced Illness Planning and Care

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 2.7 (Challenges Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (7) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the majority of hospitals (6) was requiring manual tracking or chart review. The top solution identified by the hospitals (3) was EHR/IT standardization or expansion across system and implementing standardized tools/screening (3). The second solution identified by the majority of hospitals (3) was implementing provider and staff training and increased capacity.

In interviews, a hospital discussed their challenges in ensuring the implementation of appropriate health information technology, particularly amongst outside agencies to facilitate data sharing:

> *"There are a few hospice agencies that we established MOUs with and refer to but if it's concurrent access they, I don't think that they have EHRs and it's difficult to get reporting. So one of the measures in this one was the referral to hospice and if they expired within 3 days. When we're trying to collect data for this, there is no way for the hospice agencies to inform us when a patient has expired. We had to physically call all of those offices. So I think the concurrent access wasn't a limitation on our end but on their end." (Salinas)*

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## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 3.4 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by the hospitals (5) was inadequate availability of services. The second challenge cited by the hospitals (3) was processes not being established system-wide and having a small denominator or numerator (3). The top solution identified by the hospitals (5) was expanding services and availability. The second solution identified by the hospitals (2) was implementing provider and staff training and increased capacity.

In interviews, DMPHs discussed their challenges related to positively influencing metrics when they have had to rely on outside community partnerships for implementation:

> *"Now of course the question is, do you improve your system in your organization does that help to promote relationships out into the community? Or do you make a better system within your 4 walls of your organization? For the DMPH's we're really forced to have to make partnerships out in the community, but then how much leverage do we actually have to control and make influence on those metrics, maybe beyond our control? And so that's where it has been a challenge."* (Palomar)

> *"So that's the only outpatient thing that we do have since we are not a healthcare system and we're a district. It's very challenging to meet the outpatient metrics."* (Antelope Valley)

## Hospital-Reported Metric Performance

Performance of hospitals in Project 2.7 was measured by the following 6 metrics (Exhibit 296). Half were standard metrics, and the others were innovative metrics. The majority of metrics were intended to show progress by increasing rates over time. All were categorized as process metrics.

**Exhibit 296: PRIME Project 2.7 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| Advance Care Plan | 2.7.1 | NCQA | 0326 | Increase | Process |
| Ambulatory Palliative Team Established | 2.7.2* | UCSF | N/A | Increase | Process |
| MWM#8 - Treatment Preferences (Inpatient) | 2.7.3 | UNC Chapel Hill | 1641 | Increase | Process |
| MWM#8 - Treatment Preferences (Outpatient) | 2.7.4* | UCSF | N/A | Increase | Process |
| Palliative Care Service Offered at Time of Diagnosis of Advanced Illness | 2.7.5* | UCSF | N/A | Increase | Process |
| Proportion Admitted to Hospice for Less Than 3 Days | 2.7.6 | ASCO | 0216 | Decrease | Process |

*Source: PRIME Metrics Specs, DY 13YE*
*Notes: NQF: National Quality Forum, NCQA: National Committee for Quality Assurance, MWM: Measuring What Matters, ASCO: American Society of Clinical Oncology, \* Denotes innovative metric.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on

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data availability. DMPHs did not report data in DY 11 for this project. Metrics 2.7.2 and Metric 2.7.5 were linked, so if the hospital had a care team (yes to 2.7.2), then they reported data for 2.7.5.

## Metric 2.7. 1– Care Plan

Metric 2.7.1 measured the number of patients with an advanced care plan or a documented surrogate decision maker (NQF 0326, QPP; PRIME Metric Specs, DY 13YE). Hospitals were intended to better establish and clarify patient wishes regarding their medical treatment.

The intended direction of Metric 2.7.1 was an increase in rates over time. Among the DPHs, the weighted average rate of patient documentation of an advanced care plan showed an increasing trend; the reported rate was 43% in DY 11, then 51% in DY 12, and reached 59% in DY 13 (Exhibit 297). DPH UC rates fluctuated and DPH County rates increased between DY 11 and DY 12, then remained stable in DY 13. DMPH Non-CAHs did not report data until DY 12; rates increased between DY 12 (36%) and DY 13 (54%). In DY 13, the individual achievement rates for Metric 2.7.1 ranged from 27% to 99% for DPHs and 18% to 100% for DMPHs (data not shown).

**Exhibit 297: PRIME Self-Reported Care Plan Rates for Metric 2.7.1**



Source: UCLA analysis of the self-reported data, data received July 2019.

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*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 2.7.2 – Ambulatory Palliative Team Established

Metric 2.7.2 was an innovative metric that determined whether PRIME entities had a multidisciplinary care team available to provide palliative care or symptom management services to patients with advanced illness (PRIME Metric Specs, DY 13YE). Hospitals were intended to provide quality ambulatory palliative care by establishing the multidisciplinary care team. Metrics 2.7.2 and Metric 2.7.5 were linked, so if the hospital had a care team (yes to 2.7.2), then they reported data for 2.7.5.

The intended direction of Metric 2.7.2 was an increase in rates over time. The data for this metric was primarily narrative. In DY 11, all 4 DPHs reported 0 for the numerator and denominator and received an achievement value of 1 for describing the structure of their care teams (data not shown). The team was to include a physician, nurse, social worker, pharmacist, and chaplain, and at least 1 of whom had evidence of training in palliative care. In DY 11, none of the DPHs met the care team criteria and DMPHs did not report in DY 11.

In DY 12, the definition was changed to exclude a pharmacist and converted the role of chaplain to be a spiritual care professional. All hospitals reported that they had a care team in DY 12 and DY 13, but some did not specify the members. As previously shown in the self-reported data section above (Exhibit 286), the hospitals had varied membership in the team. No DMPH CAHs reported this metric. Many hospitals noted in their self-reported data that staff turnover, opening a new service line and creating new job descriptions, and recruiting and hiring were challenges to completing this metric.

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## Metric 2.7.3 – Treatment Preferences (Inpatient)

Metric 2.7.3 measured the number of patients in an acute hospital setting in which the patient or responsible party was asked about preference regarding use of life-sustaining treatments (MWM#8, PRIME Metric Specs, DY 13YE). Hospitals were intended to improve patient and family satisfaction outcomes by ensuring patients have an opportunity to express their preferences of life-sustaining forms of treatment in the inpatient setting.

The intended direction of Metric 2.7.3 was an increase in rates over time. DPHs reported weighted average rates that increased over time; the first reported rate was 53% in DY 11, which increased to 79% in DY 12, then to 90% in DY 13 (Exhibit 298). Both DPH UC and DPH County rates also showed increasing trends throughout the 3 demonstration years. The participating DMPH Non-CAHs did not report metric performance data until DY 12 (53%), which increased in DY 13 (96%). In DY 13, the individual achievement rates for Metric 2.7.3 ranged from 74% to 95% for DPHs and 89% to 100% for DMPHs (data not shown).

**Exhibit 298: PRIME Self-Reported Inpatient Treatment Preference Rates for Metric 2.7.3**



Source: UCLA analysis of the self-reported data, data received July 2019.

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*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

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## Metric 2.7.4 – Treatment Preferences (Outpatient)

Metric 2.7.4 measured the number of patients in an ambulatory setting with documented or confirmed preferences about life-sustaining treatments or hospitalization (MWM#8; PRIME Metric Specs, DY 13YE). Hospitals were intended to focus on thorough care by explicitly considering the outpatient palliative care patients' preferences for life-sustaining treatments.

The intended direction of Metric 2.7.4 was an increase in rates over time. DPHs reported outpatient treatment preferences rates that increased over time; the first reported rate was 75% in DY 11, then 77% in DY 12, and reaching 88% in DY 13 (Exhibit 299). Both DPH UC and DPH County rates increased over time. Participating DMPH Non-CAHs did not begin reporting metric performance data until DY 12 (18%), which then increased to 54% in DY 13. In DY 13, the individual achievement rates for Metric 2.7.4 ranged from 72% to 92% for DPHs and 32% to 100% for DMPHs (data not shown).

**Exhibit 299: PRIME Self-Reported Outpatient Treatment Preferences\* Rates for Metric 2.7.4**
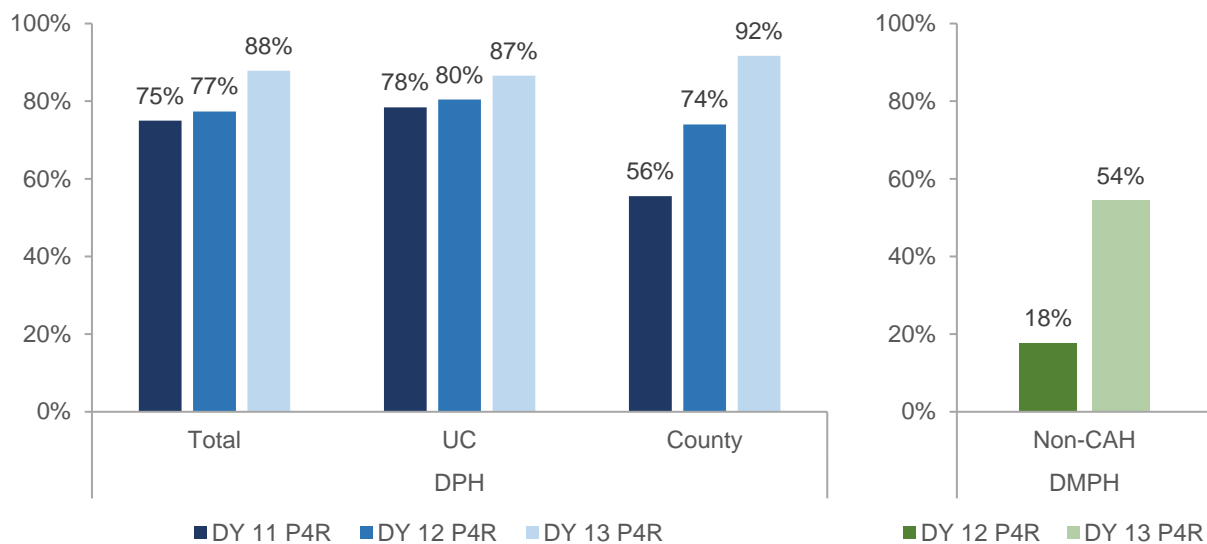


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, \* Denotes innovative metric.*

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## Metric 2.7.5 – Palliative Care Service Offered to Patients with Advanced Illness

Metric 2.7.5 measured the palliative care services/referrals offered during the measurement period to patients with advanced illness (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase palliative care services to patient who may benefit from them. Metrics 2.7.2 and Metric 2.7.5 were linked, so if the hospital had a care team (yes to 2.7.2), then they reported data for Metric 2.7.5.

The intended direction of Metric 2.7.5 was an increase in rates over time. Participating DPHs reported palliative care service offered to patients with advanced illness rates that fluctuated; the rate decreased from 16% in DY 11 to 14% in DY 12, then increased to 18% in DY 13 (Exhibit 300). DPH UC and DPH County rates did not follow any patterns. DMPH Non-CAHs did not report metric performance data in DY 11. In DY 12, DMPH Non-CAH rates started at 9%, which then increased to 23% in DY 13. In DY 13, the individual achievement rates for Metric 2.7.5 ranged from 9% to 36% for DPHs and 4% to 39% for DMPHs (data not shown).

**Exhibit 300: PRIME Self-Reported Palliative Care Services Offered to Patients with Advanced Illness\* Rates for Metric 2.7.5**
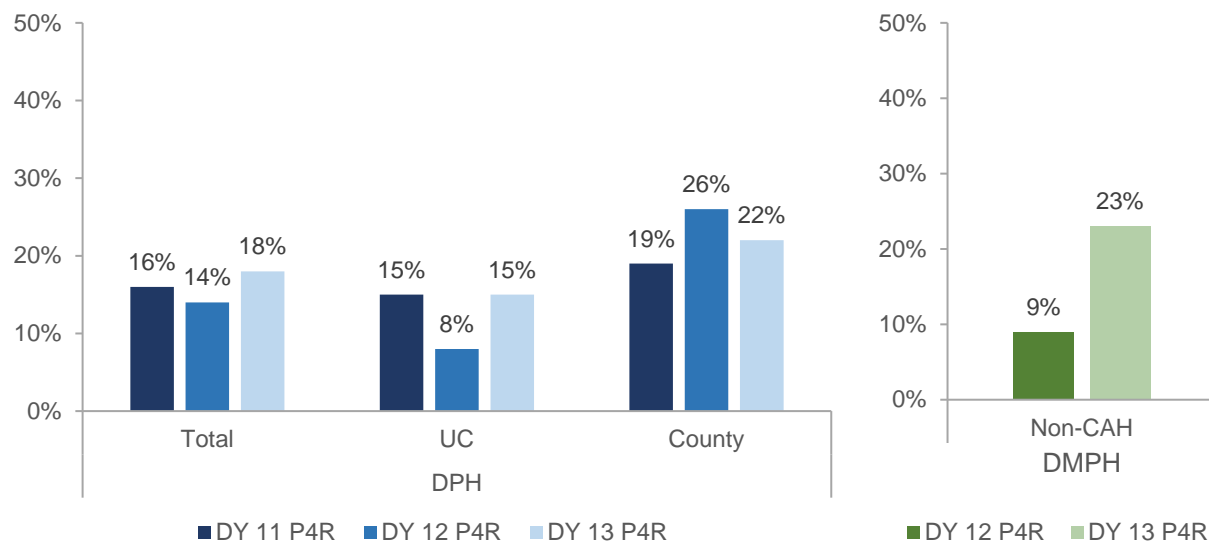


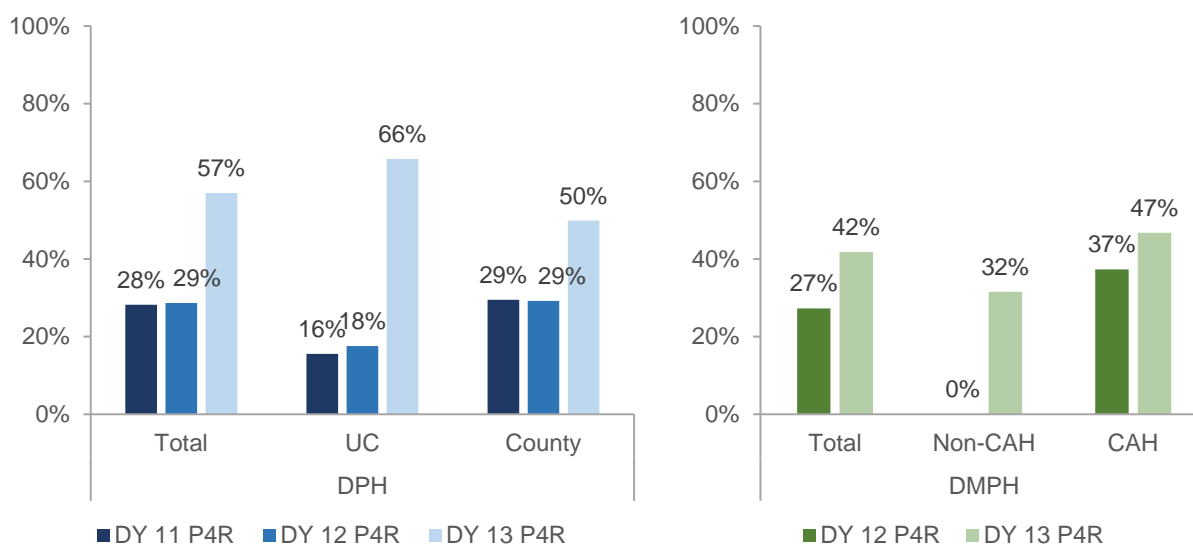*Source: UCLA analysis of the self-reported data, data received July 2019.*
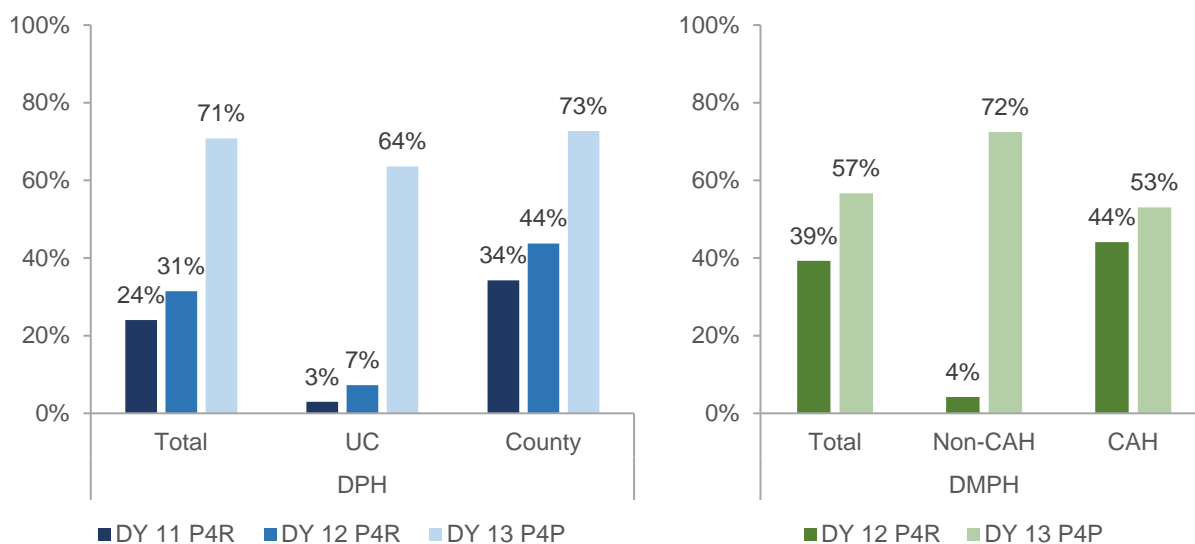*Notes: DPH: designated public hospital, UC: University of California, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance. \* Denotes innovative metric.*

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## Metric 2.7.6 – Proportion Admitted to Hospice for Less than 3 Days

Metric 2.7.6 measured the percentage of patients who spent fewer than 3 days in hospice (NQF 0216, PRIME Metric Specs, DY 13YE). Hospitals were intended to ensure patients receive earlier referrals and admissions to hospice.

The intended direction of Metric 2.7.6 was a decrease in rates over time. DPHs reported hospice admissions rates that decreased, starting at 29% in DY 11, then 14% in DY 12, and at 11% in DY 13 (Exhibit 301). Both DPH UC and DPH County rates decreased over time. As for DMPH Non-CAHs, no metric performance data was reported in DY 11. DMPH Non-CAH rates remained stable at around 20% in DY 12 and DY 13. In DY 13, the individual achievement rates for Metric 2.7.6 ranged from 2% to 24% for DPHs and 0% to 34% for DMPHs (data not shown).

**Exhibit 301: PRIME Self-Reported Hospice Admission Less than 3 Days Rates for Metric 2.7.6**



*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance, Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Summary of Key Findings

Five DPHs and 8 DMPHs participated in Project 2.7 and reported metric performance data. Except for 1 core component, almost all participating hospitals implemented all the core components during PRIME. Reporting on needed infrastructure, almost half of all (6) participating hospitals indicated participation or planned participation in a Provider Orders for Life-Sustaining Treatment (POLST) registry, while majority of hospitals (9) had no plans to implement telehealth for palliative care or home health as part of PRIME. Some hospitals provided palliative care training for frontline clinicians (10), communication skills (10), and symptom management (10). Hospitals created palliative care teams under PRIME with a palliative care doctor and a social worker (13), had a palliative care team in both inpatient and outpatient settings (10), and partnerships with hospice (13), and cooperated with palliative care training programs (9). Hospitals developed or planned to develop quantitative inclusion criteria for determining patients who would benefit from receipt of advanced illness planning and care (13), either implemented data analytics systems to capture relevant information for advanced illness planning and care or planned to do so as part of PRIME (11). Common additions to ambulatory and inpatient palliative care programs during PRIME included effective coordination (9), inter-professional care planning (9), and individualized and comprehensive patient assessments (7). Additionally, Senat Bill No. 1004 resulted in DHCS's implementation of a Medi-Cal palliative care program through managed care and fee-for-service providers.

To implement Project 2.7, all hospitals indicated offering patient education (13). Most hospitals encouraged providers to initiate advance care planning discussions (10) and offered advance care planning at point of diagnosis of advanced illness (9). Hospitals allowed hospice providers accessed the advanced illness care plan through EHR (7), fax (3) and email (1). Hospitals (6) had a palliative care program in both ambulatory and inpatient settings. The overall level of difficulty implementing this project has been high for DPHs (8.0 out of 10) and DMPHs (7.6 out of 10).

Data and metric-related challenges to implementation included lack of data query ability, tracking, or reporting function (7), requirements of manual tracking or chart review (6), inadequate availability of services (5), lack of system-wide processes (3) and small denominator or numerators (3). These challenges were addressed by standardizing EHR/IT processes (3), implementing standardized tools/screening (3), provider and staff training and increased capacity (3), as well as through expansion of services and availability of services (5).

Project 2.7 metrics were 2.7.1-Advance Care Plan; 2.7.2-Ambulatory Palliative Team Established; 2.7.3-MWM#8 - Treatment Preferences (Inpatient); 2.7.4-MWM#8 -

Treatment Preferences (Outpatient); 2.7.5-Palliative Care Service Offered at Time of Diagnosis of Advanced Illness; 2.7.6-Proportion Admitted to Hospice for Less Than 3 Days. Performance of hospitals in Project 2.7 was measured by 6 metrics, 3 standard and 3 innovative metrics. All of these metrics measured processes. Hospitals showed improvement in 5 metrics (2.7.1, 2.7.2, 2.7.3, 2.7.4, and 2.7.6). While results were mixed for DPHs in 1 metric (2.7.5), DMPHs showed progress in this metric.

Overall, hospitals made progress in Project 2.7 by establishing and clarifying both inpatient and outpatient treatment preferences and care plans, improving palliative care services to patients with advanced illnesses, and referring patients to hospice earlier. Hospitals reported improvements in the majority of metrics. However, they varied in their progress in project implementation and metrics progress.

# Domain 3- Resource Utilization Efficiency

## Project 3.1 Antibiotic Stewardship

### Project Overview

Project 3.1 was designed to reduce the resistance of infections to antimicrobials by implementing an antibiotic stewardship program that reduces antibiotic use for non-bacterial diseases and optimizes antibiotic use for bacterial infections. These goals were to be achieved by developing the necessary infrastructure such as a multidisciplinary and trained team and protocols for appropriate antibiotic use; as well as implementing the project broadly through stewardship rounds and monitoring provider performance. Specific objectives can be found in Attachment Q.

A total of 13 hospitals chose to participate and reported metric performance data for Project 3.1, which was not required for DPHs. Five hospitals were DPHs (Los Angeles, UC San Diego, Arrowhead, UC Irvine, and Alameda). Eight DMPHs participated, including Tri-City, Antelope Valley, Palomar, Salinas Valley, San Gorgonio, Pioneers Memorial, and Northern Inyo (a CAH). One DMPH, Jerold Phelps, stopped working on Project 3.1 half way through DY 12 (January 2017), prior to the interim survey (Exhibit 302), bringing the total number of hospitals down to 12.

**Exhibit 302: PRIME Project 3.1 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 13 | 12 | 12 |
| **Total DPH** | 5 | 5 | 5 |
| **DPH UC** | 2 | 2 | 2 |
| **DPH County** | 3 | 3 | 3 |
| **Total DMPH** | 8 | 7 | 7 |
| **DMPH Non-CAH** | 6 | 6 | 6 |
| **DMPH CAH** | 2 | 1 | 1 |

*Source: Data provided by DHCS.*
*Notes: Among the DMPH CAHs, Jerold Phelps dropped in DY 12 on January 11, 2017. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the suggested core components of this project as an indication of their overall approach to antibiotic stewardship (Exhibit 303). In the interim survey, 8 hospitals reported that they had begun

developing antimicrobial stewardship policies and procedures and 7 reported utilizing state and/or national resources to develop and implement an antibiotic stewardship program prior to PRIME. During PRIME, half to all of participating hospitals reported implementing all the core components, except for adopting a "public commitment" strategy in outpatient clinics to encourage providers not to prescribe antibiotics for upper respiratory tract Infections (URIs) and publishing organization-wide provider level antibiotic prescribing dashboards.

### Exhibit 303: PRIME Project 3.1 Core Components

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Utilize state and/or national resources to develop and implement an antibiotic stewardship program, such as the California Antimicrobial Stewardship Program. Initiative, or the IHI-CDC 2012 Update "Antibiotic Stewardship Driver Diagram and Change Package" a. Demonstrate engagement of patients in the design and implementation of the project. | 7 | 11 |
| Develop antimicrobial stewardship policies and procedures. | 8 | 12 |
| Participate in a learning collaborative or other program to share learnings, such as the "Spotlight on Antimicrobial Stewardship" programs offered by the California Antimicrobial Stewardship Program Initiative. | 5 | 8 |
| Create standardized protocols for ordering and obtaining cultures and other diagnostic tests prior to initiating antibiotics. | 4 | 10 |
| Develop a method for informing clinicians about unnecessary combinations of antibiotics. | 6 | 12 |
| Based on published evidence, reduce total antimicrobial Days of Therapy (DOT) by providing standards and algorithms for recommended agents by disease type, focusing on short course regimens (e.g., 3-5 days of therapy for uncomplicated cystitis, 7 days for uncomplicated pyelonephritis, 5-7 days for uncomplicated non-diabetic cellulitis, 5 day therapy for community acquired pneumonia (CAP), 7-8 days for therapy for VAP or hospital acquired pneumonia). | 5 | 9 |
| Develop evidence-based CPOE algorithms and associated clinician training, to support antibiotic stewardship choices during order entry. These could include approaches such as guidelines for duration of antibiotics, within drug class auto-switching for specific antibiotics and doses, or restriction of specific antibiotics at the point of ordering (e.g., broad spectrum agents). | 4 | 10 |
| Implement stewardship rounds focusing on high yield drugs to promote de-escalation after the drugs are started, such as regular antibiotic rounds in the ICU. | 6 | 10 |
| Improve diagnostic and de-escalation processes to reduce unnecessary antibiotic use based upon length of therapy or antibiotic spectrum, such as: a. Procalcitonin as an antibiotic decision aid b. Timely step-down to oral antibiotic therapy to support early discharge from the hospital for acute infections c. Use of oral antibiotics for osteomyelitis to reduce prolonged IV exposures. | 5 | 8 |

| | | |
|---|---|---|
| Evaluate the use of new diagnostic technologies for rapid delineation between viral and bacterial causes of common infections. | 3 | 8 |
| Adopt the recently described "public commitment" strategy in outpatient clinics to encourage providers not to prescribe antibiotics for URIs | 1 | 5 |
| Publish organization-wide provider level antibiotic prescribing dashboards with comparison to peers and benchmarks. Contribute system level data for a similar dashboard across all public health care systems. | 0 | 5 |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | 1 | 6 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=12 hospitals participating in Project 3.1 completed the interim survey.*

## Infrastructure

### Models for Antibiotic Stewardship Programs

In the interim survey, all but 1 hospital indicated that they used models for implementing antibiotic stewardship programs and some hospitals implemented more than 1 model (Exhibit 304). The California Antimicrobial Stewardship Program (2 DPHs, 5 DMPHs) was the most common model selected, followed by the CDC Antibiotic Stewardship Driver Diagram Change Package (1 DPH, 4 DMPHs). Two DPHs developed an in-house model, which DMPHs did not do. Other models adopted by hospitals included the Joint Commission Standards (1 DPH, 1 DMPH), Society for Healthcare Epidemiology of America (1 DMPH), LeapFrog (1 DPH), and the Infectious Disease Society of America (1 DMPH).

**Exhibit 304: Models of Antibiotic Stewardship Implemented by Participating Hospitals Under PRIME**
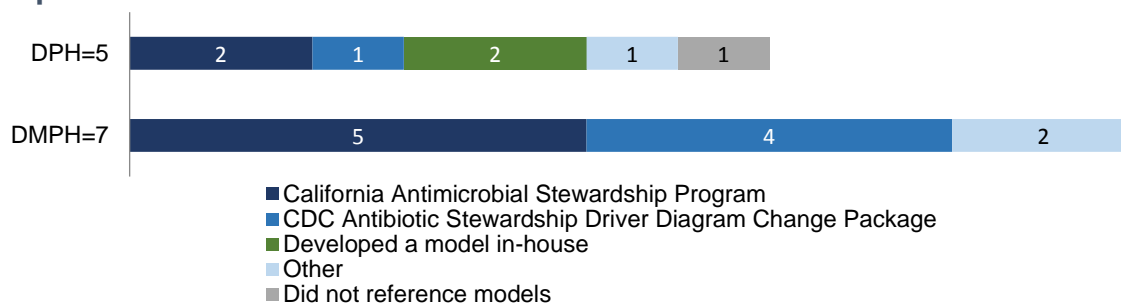


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=12 hospitals participating in Project 3.1 completed the interim survey, DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

In an interview, 1 hospital with an internally developed model explained its focus:

> *"[We] focused on upfront restriction, downstream de-escalation, establishment of antibiotic guidelines for various diseases, Expected Practices, and various forms of education." (Los Angeles)*

### Protocols on Antibiotic Use

In the survey almost all hospitals reported having established policies for antimicrobial stewardship with pharmacist providers (11) and physicians (10). Half of the hospitals had established policies with specialist providers (6, data not shown).

The departments implementing policies on antimicrobial stewardship varied across hospitals (Exhibit 305). Three DPHs and 3 DMPHs adopted policies system-wide. Two DPHs implemented policies hospital-wide and 2 within their Emergency Department. Implementation on a campus clinic, off campus clinic or in other department each were

reported by 1 DPH. Among DMPHs, most hospitals reported adopting policies within the hospital (6) or within the Emergency Department (5). Three DMPHs stated system-wide implementation and 1 reported it for their off campus clinic.

**Exhibit 305: Settings for the Implementation of Antimicrobial Use Policies Under PRIME**
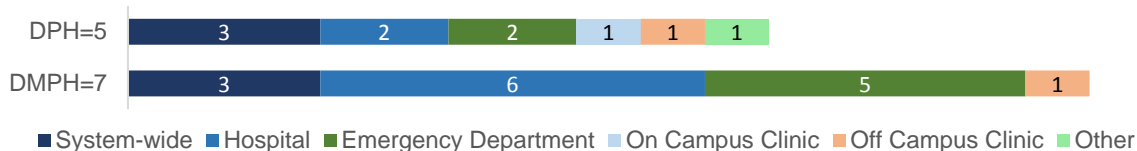


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=12 hospitals participating in Project 3.1 completed the interim survey, DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

Of the 2 approaches pursued, system-wide change or change at department level, interviews highlighted the overall difficulty of changing existing processes as stated by 1 hospital:

> *"Changing provider practice as it relates to antibiotic prescription is very difficult, and we have engaged in teaching of all of our providers about what appropriate antibiotics are, and developing antibiotic antibiograms for everybody." (Alameda)*

In the interim survey, hospitals reported if they trained staff on policies regarding antimicrobial stewardship. Almost all hospitals reported that they trained physicians (11) and pharmacy staff (11). Half of the hospitals also trained their specialists (7, data not shown).

## Project Implementation
### Stewardship Rounds
In the interim survey, all but 2 hospitals (1 DPH, 1 DMPH) reported conducting antibiotic stewardship rounds for Project 3.1. (Exhibit 306). Among the DPHs, 3 hospitals invited a physician champion and pharmacist. Medical support staff and anesthesiology and pain management providers were each mentioned by 1 DPH. DMPHs mostly invited pharmacists (5) and medical support staff to join stewardship rounds. Few reported included physician champions or providers from anesthesiology and pain management. The participating CAH involved physician champions, medical support staff and pharmacists. Hospitals were asked about other types of providers who could be involved.

**Exhibit 306: Antibiotic Stewardship Rounds Attendees During PRIME**
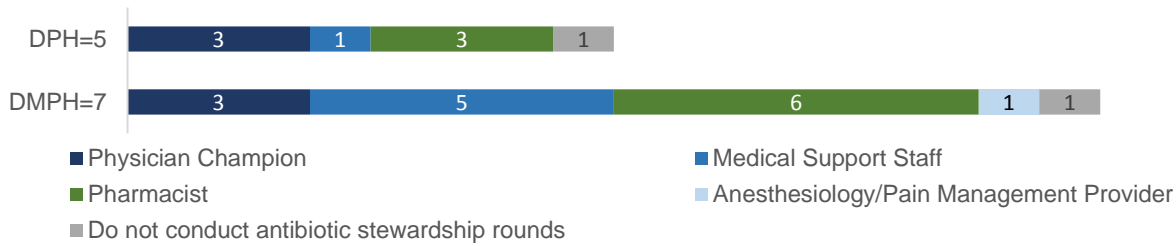


DPH=5: Physician Champion 3, Medical Support Staff 1, Pharmacist 3, Do not conduct antibiotic stewardship rounds 1

DMPH=7: Physician Champion 3, Medical Support Staff 5, Pharmacist 6, Anesthesiology/Pain Management Provider 1, Do not conduct antibiotic stewardship rounds 1

Legend:
- Physician Champion
- Medical Support Staff
- Pharmacist
- Anesthesiology/Pain Management Provider
- Do not conduct antibiotic stewardship rounds

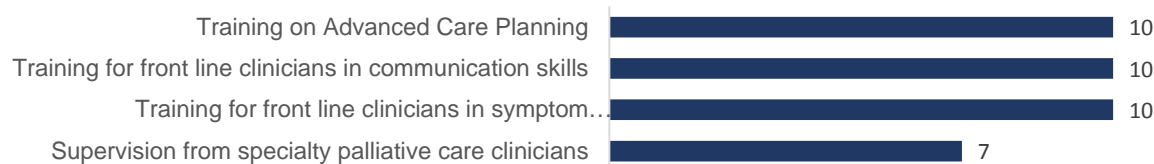*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=12 hospitals participating in Project 3.1 completed the interim survey, DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

One hospital without stewardship rounds due to staff shortages described its workaround:

> *"[We] do not conduct antibiotic stewardship rounds, we do not have a full time ID [infectious disease] physician on staff which makes it difficult to complete daily rounds. Currently pharmacy and infection control practitioner work with nursing on collaborative processes to conduct rounds." (Pioneers)*

## Strategies on Antibiotic Use

When reporting on their different strategies on antibiotic use, nearly all hospitals indicated having a "Public Commitment" Strategy in place to remind providers and patients about avoiding prescription of antibiotics for upper respiratory infections, such as acute bronchitis (4 DPHs, 5 DMPHs; Exhibit 307). Among participating DPHs, most hospitals reported applying this strategy within the Emergency Department (3) or in on campus clinics (2). Broader implementation, system- or hospital-wide as well as off-campus implementation was reported by 1 DPH. The Emergency Department was named most often as the setting for implementing the Public Commitment Strategy in DMPHs, reported by 5 DMPHs. The strategy was used hospital-wide by 3 DMPHs. Only 1 hospital reported its application system-wide or in their off campus clinic and none of the DMPHs implemented it in their on campus clinics.

**Exhibit 307: Implementation of the "Public Commitment" Strategy Under PRIME**
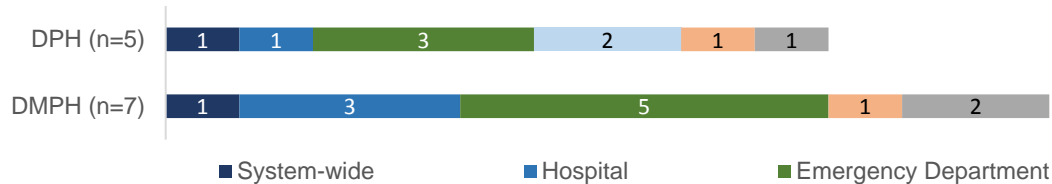


DPH (n=5): System-wide 1, Hospital 1, Emergency Department 3, 2, 1, 1

DMPH (n=7): System-wide 1, Hospital 3, Emergency Department 5, 1, 2

Legend:
- System-wide
- Hospital
- Emergency Department

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=12 hospitals participating in Project 3.1 completed the interim survey, DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

Those hospitals not applying a "Public Commitment" strategy developed and displayed educational materials on appropriate antibiotic use in their Emergency Departments or had strict antibiotic prescriptions guidelines in place already as stated in interviews:

> *"Our ED physician in charge of quality mentioned that this also is a QRS [CMS Quality Rating System] measure that the physician group had picked, so they were going to be working on it anyway… And you don't really need a public statement saying we're going to do it, they just did it already." (Palomar)*

> *"They had something a little different. They had notifications in the urgent care setting where patients could read the difference between bacterial and viral (infections)." (Salinas)*

### Performance Monitoring

Most hospitals stated monitoring adherence to policies in physicians (9 of 12) and pharmacy staff (9) with 5 hospitals also monitoring their specialist providers (data not shown). In interviews, a hospital particularly noted the positive impact of the antibiotic stewardship on educating and monitoring physicians on existing strategies:

> *"The antibiotic stewardship component has really gotten us engaged again … [in] monitoring things and talking to physicians about we do things, the antibiotic usage, particularly post-op." (Tri-City)*

Different methods were applied by hospitals to make staff aware of excessive or redundant combinations of antimicrobial medication (Exhibit 308). Among the DPHs, 2 hospitals reported relying on CPOE/EHR notifications, and 1 hospital used secure mail messages. Four DPHs also used other methods, including pharmacists sending notifications, notifying whole teams, or reaching out individually to providers outside the hospital's system. DMPHs relied on CPOE/EHR notifications (3), print-out notifications (3) and other methods, such as reaching out individually through phone calls or holding meetings with respective prescribers (4). One DMPH described not having implemented a specific method to raise awareness of inappropriate use of antibiotic combinations.

**Exhibit 308: Methods Highlighting Unnecessary Combination of Antibiotics During PRIME**
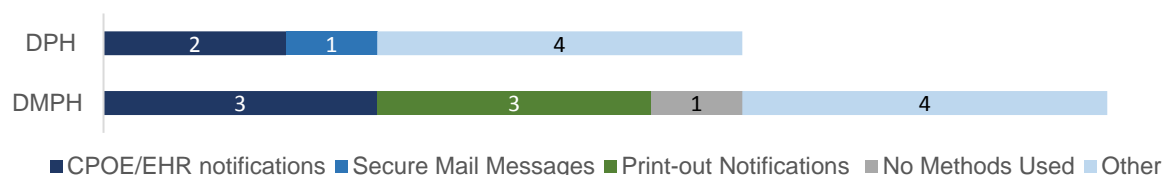


Legend: CPOE/EHR notifications, Secure Mail Messages, Print-out Notifications, No Methods Used, Other

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=12 hospitals participating in Project 3.1 completed the interim survey, DPH: designated public hospital, DMPH: district and municipal public hospital, CPOE/EHR: Computerized Physician Order Entry/Electronic Health Record, Responses were not mutually exclusive.*

## Participation in Learning Collaboratives

Participation in learning collaboratives beyond those provided by DHCS, Harbage Consulting, SNI/CAPH and DHLF have been reported by 2 DPHs, all 6 DMPHs, and the participating CAH (Exhibit 309). Learning collaboratives included: the Vizient ASP Collaborative, Annual Conferences of SHEA (Society for Healthcare Epidemiology of America), APIC (Association for Professionals in Infection Control and Epidemiology), Physician and pharmacist MAD-ID (Making a Difference in Infectious Diseases) training, and IDSA (Infectious Diseases Society of America). The CDPH (California Department of Public Health) HAI (Healthcare-Associated Infections) provided guidance to hospitals via the CDPH California Antibiotic Stewardship Program Initiative (ASP), including a Spotlight to highlight participants' progress.

**Exhibit 309: Participation in Learning Collaboratives During PRIME**



*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=12 hospitals participating in Project 3.1 completed the interim survey, DPH: designated public hospital, DMPH: district and municipal public hospital.*

In interviews, a hospital discussed their decision not to participate in learning collaboratives:

> *"They actually had an antimicrobial stewardship committee within the organization already… [so we] piggybacked on a committee that already existed." (Salinas)*

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10). Hospitals reported spending an overall medium level of effort in implementing Project 3.1 (DPH 4.2; DMPH 6.2; (Exhibit 403). Among DPHs, ratings of effort were mostly medium and low with effort to implement (6.0) being the highest. On average, DMPHs reported requiring high effort for unanticipated change in metrics (7.3), conducting staff training (7.3), resource intensity (7.4) and implementation requirements (7.2).

In interviews, a hospital explained that level of effort depended on the quality of the engagement of departments in this project:

> *"Our pharmacy, it's probably 1 of the best run departments in this whole hospital… All we had to do was have a couple conversations with them and they utilized the resources amazingly well… We talked to them, showed them what we're looking for or any problems and they came up with absolutely everything from beginning to end."* (Arrowhead)

## Challenges and Solutions to Antibiotic Stewardship

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 3.1 (Challenges Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (10) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the majority of hospitals (6) was requiring manual tracking or chart review. The top solution identified by the hospitals (4) was EHR/IT standardization or expansion across system. The second solution identified by the majority of hospitals (2) was standardizing processes for documentation and provider and staff training and increased capacity (2). Hospitals reported a variety of different solutions and no single solution was identified by the majority of hospitals.

In interviews, a hospital emphasized the fundamental importance of solving IT and software issues to improve on Project 3.1:

> *"We just couldn't find the right software to do it really easily. We still plan to do it, but without the right software and the manpower dedicated towards making a prescriber level dashboard it ends up kind of competing for resources."* (Palomar)

## Metric-Related Challenges and Solutions

Hospitals most commonly reported that processes have not been established system-wide was their most challenging metric-related issue (5 of 12), followed by the silo-ed function of departments (2) and the level of staff turnover (2), which was rated the second most challenging (Challenges Exhibit 406: ; Solutions Exhibit 407). The most successful and second most successful solution to these challenges have been implementation of provider and staff training (6), and standardization of processes across systems (5).

In interviews hospitals mentioned the importance of staff education and training, but also discussed the importance of providing continuous feedback to improve quality further:

> *"Some of [our quality improvement strategy] is feedback, but through our ASP Committee… We do send out a letter and an antibiogram (a summary of antimicrobial susceptibilities testing results for microorganisms submitted to the hospital's laboratory) by mail to everyone who is a registered member of the staff every year, and we talk about a couple of things that we want to be focusing on for the year… We're actually the only community hospital in the entire state of California with a PGY2 residency in infectious disease." (Palomar)*

## Hospital-Reported Metric Performance

Performance of hospitals in Project 3.1 was measured by the following 5 metrics (Exhibit 310). Among these metrics, 5 were standard metrics and 1 was an innovative metric. The majority of the metrics were designed to show progress by decreasing rates over time. Four metrics were categorized as process metrics and 1 metric as an outcome metric.

**Exhibit 310: PRIME Project 3.1 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis#** | 3.1.1 | NCQA | 0058 | Increase | Process |
| **Avoidance of Antibiotic Treatment with Low Colony Urinary Cultures (retired after DY 11)** | 3.1.2* | UCD, UCI, UCSD | N/A | Decrease | Process |
| **National Healthcare Safety Network (NHSN) Antimicrobial Use Measure** | 3.1.3 | CDC | 2720 | Decrease | Process |
| **Peri-Operative Prophylactic Antibiotics Administered After Surgical Closure^** | 3.1.4 | CMS | N/A | Decrease | Process |
| **Reduction in Hospital Acquired Clostridium Difficile Infections** | 3.1.5 | NHSN | N/A | Decrease | Outcome |

*Notes: NQF: National Quality Forum, NCQA: National Committee for Quality Assurance, UCD: University of California, Davis, UCI: University of California, Irvine, UCSD: University of California, San Diego, CDC: Centers for Disease Control and Prevention, CMS: Centers for Medicare & Medicaid Services, NHSN: National Healthcare Safety Network. * Denotes innovative metric. # Metric in DY 11 was reported as "Patients who were dispensed antibiotic medication on or 3 days after the index episode start date (a higher rate is better). The measure is reported as an inverted rate (i.e. 1-numerator/denominator) to reflect the number of people not dispensed an antibiotic." In DY 12, the metric changed "prescribed" to "not prescribed or dispensed" and removed the inverted rate. ^Metric name in DY 11 was "Prophylactic antibiotics discontinued at time of surgical closure."*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. DMPHs did not report data in DY 11 in Project 3.1. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had constraints on data availability.

## Metric 3.1.1 – Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis

Metric 3.1.1 measured the proportion of patients with an outpatient or emergency department (ED) visit with a diagnosis of acute bronchitis who were not prescribed antibiotics (NQF 0058; PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce misuse and overuse of antibiotics; this metric aimed to help raise awareness among healthcare providers about inappropriate antibiotic use. Note that a trend-break notice was issued for this metric (PPL-17-007 DY 12) to clarify that the rate is for PRIME 3.1 Target Population with a diagnosis of acute bronchitis who were *not* prescribed antibiotics.

The intended direction of Metric 3.1.1 was an increase in rates over time; however, the trend-break in DY 12 complicates the interpretation of this data. Among the DPHs, rates of patients with acute bronchitis without an antibiotic prescription increased from 39% in DY 11 to 47% in DY 12, then reached 54% in DY 13 (Exhibit 311). DPH UC rates did not follow a pattern, and DPH County rates followed an upward trend. DMPHs did not start reporting metric performance data until DY 12 (57%), which increased to 79% in DY 13. Both DMPH Non-CAHs and DMPH CAHs increased rates from DY 12 to DY 13. In DY 13, the individual achievement rates for Metric 3.1.1 ranged from 49% to 77% for DPHs and 67% to 100% for DMPHs (data not shown).

**Exhibit 311: PRIME Self-Reported Avoidance of Antibiotic Treatment Rates for Acute Bronchitis for Metric 3.1.1**

*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance.*

*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 3.1.2 – Avoidance of Antibiotic Treatment for Low Colony Urinary Cultures

Metric 3.1.2 measured the number of new systemic antibiotics administered to PRIME hospital patients with predetermined levels of colony counts of specified pathogens (PRIME Metric Specs, DY 13YE). Hospitals were intended to decrease unnecessary use of antibiotics by only treating patients who show bacterial levels consistent with infection (>100,000 colony forming units/ml). This metric numerator was the number of new systemic antibiotics administered for the denominator urine cultures within 2 days before or after a collected urine culture and continued more than 2 days after the urine result is finalized. The denominator was the number of urine cultures collected in inpatients where the colony counts of any identified pathogen (bacteria or fungi) are <100,000 CFU's/ml, and there was no other positive (bacteria or fungi) microbiology culture at another site within 2 days before or after the collection of the urine culture.

Decreasing rates indicated an improved performance for this metric by avoiding antibiotic treatment for low colony cultures. Only DPHs reported this metric because it was retired after DY 11. The total weighted average rate of DPHs was 15% in DY 11 (Exhibit 312). The DPH UC rate was 11%, and the DPH County rate reached 25%.

**Exhibit 312: PRIME Self-Reported Avoidance of Antibiotic Treatment Rates for Low Colony Urinary Cultures\* Rates for Metric 3.1.2**
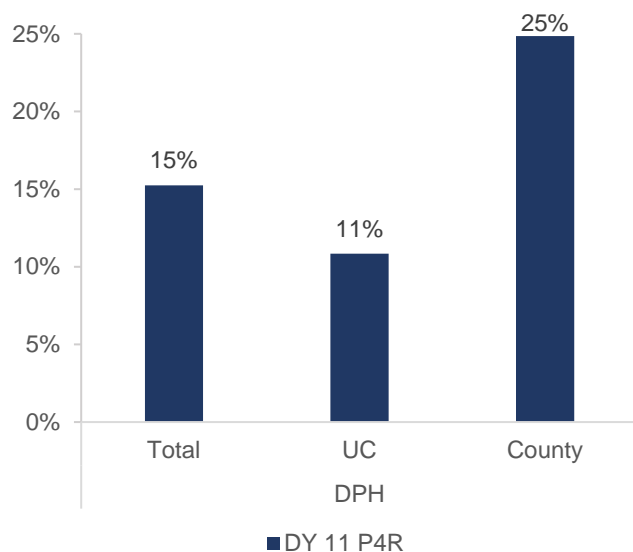


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, P4R: pay-for-reporting, \* Denotes innovative metric.*

## Metric 3.1.3 – National Healthcare Safety Network Antimicrobial Use Measure

Metric 3.1.3 measured the proportion of aggregate sum of days for which any specific antimicrobial agent was administered to individual patients (NQF 2720, PRIME Metric Specs, DY 13YE). Hospitals were intended to evaluate their antimicrobial usage trends and determine and reduce unnecessary antimicrobial usage in order to decrease antibiotic resistance.

Decreasing rates indicated an improved performance for this metric. DPH rates did not follow a trend; the rate was 19% in DY 11, which increased to 22% in DY 12, and then decreased to 15% in DY 13 (Exhibit 313). DPH UC rates also fluctuated, and DPH County rates decreased over time. DMPHs did not begin reporting metric performance data until DY 12. The weighted average rate of DMPHs remained stable at around 25-26% in DY 12 and DY 13. DMPH Non-CAH and DMPH CAH rates also remained stable. In DY 13, the individual achievement rates for Metric 3.1.3 ranged from 10% to 28% for DPHs and 10% to 58% for DMPHs (data not shown).

**Exhibit 313: PRIME Self-Reported Antimicrobial Use Rates for Metric 3.1.3**
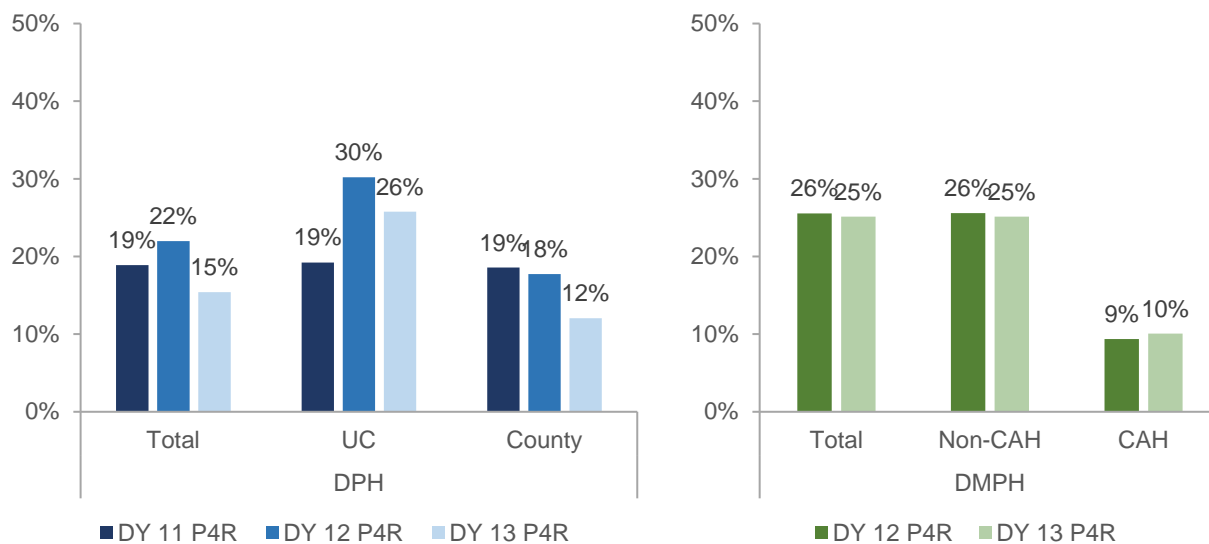


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting.*

## Metric 3.1.4 – Peri-Operative Prophylactic Antibiotics Administered After Surgical Closure

Metric 3.1.4 measured the number of surgical cases in which peri-operative prophylactic antibiotics are administered after surgery (PRIME Metric Specs, DY 13YE). The rationale for this metric was to discourage providers from administering antimicrobial agent doses after the surgical incision is closed in the operating room.

This metric aimed at preventing SSI, or surgical site infections, so lower rates indicated improved performance. DPHs reported an increase between DY 11 (17%) and DY 12 (53%), then a decrease in DY 13 (44%; Exhibit 314). DPH UC and DPH County rates followed a similar increasing then decreasing pattern. DMPHs did not report metric performance data in DY 11. In DY 12, DMPHs reported a rate of 39%, which then increased to 47% in DY 13. DMPH Non-CAH increased between DY 12 and DY 13, and DMPH CAH decreased. Hospitals ascribed the lack of improvement to the challenge that PRIME guidelines contradicted national/international guidelines on peri-operative antibiotic administration. In DY 13, the individual achievement rates for Metric 3.1.4 ranged from 21% to 68% for DPHs and 2% to 75% for DMPHs (data not shown).

**Exhibit 314: PRIME Self-Reported Peri-Operative Antibiotic Administration Rates for Metric 3.1.4**
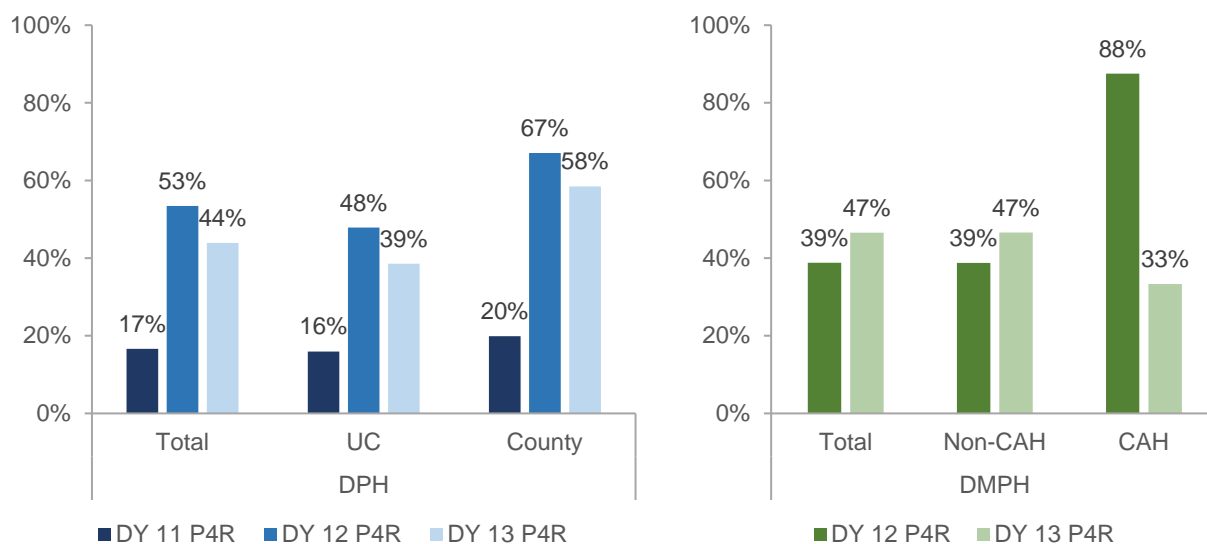


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting.*

## Metric 3.1.5 – Reduction in Hospital Acquired Clostridium Difficile Infections (CDI)

Metric 3.1.5 measured the ratio of total number of observed hospital-onset CDI laboratory-identified events (LabID) events over the total number of expected hospital-onset CDI LabID events ([PRIME Metric Specs, DY 13YE](#)). Hospitals were intended to reduce hospital-onset CDI LabID occurrences by improving hospital management of infection and sanitation.

For Metric 3.1.5, successful performance was measured by a decrease in outcomes over time. The achievement rate was not a weighted average because the underlying data was reported as a standardized infection ratio (SIR), and hospitals used the CDC National Healthcare Safety Network (NHSN) website to calculate the expected cases data. DPHs reported a decreasing ratio, going from 0.91 in DY 11 to 0.58 in DY 13 (Exhibit 315). DPH UC rates followed a similar decreasing trend, but DPH County rates did not show a pattern. DMPHs did not report data until DY 12. DMPHs decreased from 1.01 in DY 11 to 0.90 in DY 12; DMPH Non-CAHs also decreased between demonstration years. In DY 13, the individual achievement rates for Metric 3.1.5 ranged from 0.25 to 0.96 for DPHs and 0.64 to 1.17 for DMPHs (data not shown).

**Exhibit 315: PRIME Self-Reported Observed to Expected Hospital-Onset Clostridium Difficile Event Ratios for Metric 3.1.5**
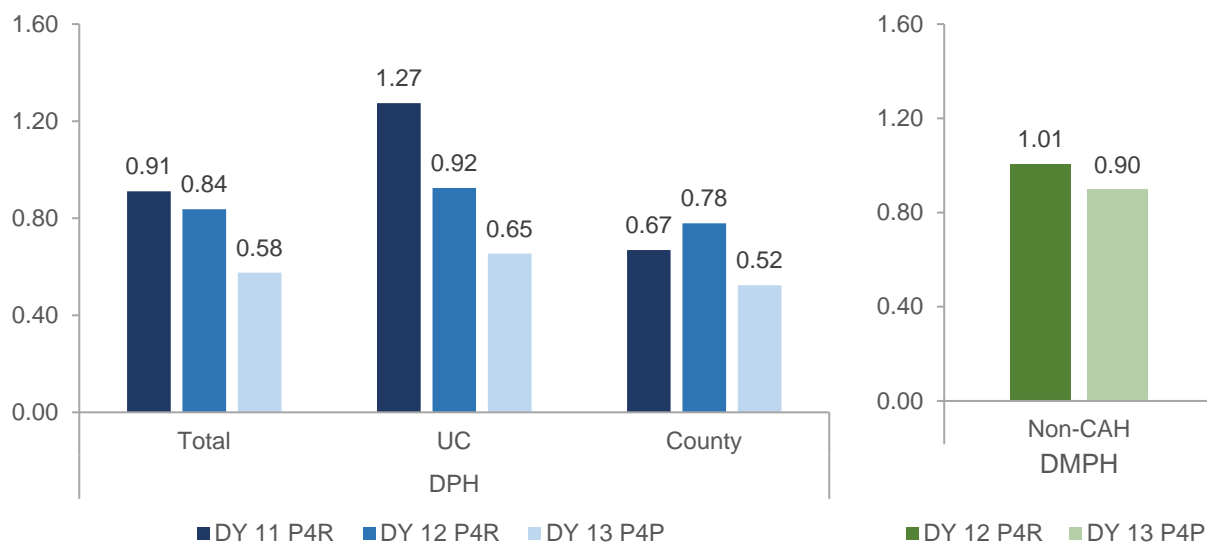


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY: demonstration year, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Summary of Key Findings

Project 3.1 was designed to reduce the resistance of infections to antimicrobials by implementing an antibiotic stewardship program. It was implemented by 5 DPHs and 8 DMPHs. The majority had newly selected or implemented the core components of this project. Hospitals reported on specific infrastructure established for this project and nearly all utilized 1 or more antibiotic stewardship models (11) including the California Antimicrobial Stewardship Program (7) and the CDC antibiotic stewardship diver diagram change package (5). Hospitals most commonly established antimicrobial use policies system-wide (6), in the hospital (8), and the emergency department (7).

When reporting on how this project was implemented, almost all hospitals organized stewardship rounds (10). Hospitals mostly invited pharmacists (9), and physician champions (6); DMPHs generally included medical support staff (5, DPH 1). Hospitals conducted training on antimicrobial policies, particularly to physicians (11) and pharmacy staff (11) and monitored physicians (9), and pharmacy staff (9) on adherence to policies. Many hospitals also implemented the "Public Commitment" strategy in their hospitals (9) and most established it mainly within their Emergency Departments (8). All hospitals participated in 1 or more learning collaboratives during PRIME. The overall level of difficulty in implementing this project was medium (DPHs 6.0 and DMPHs 6.7 of 10). Data and metric-related challenges to implementation included the lack of IT/EHR functionality (10), followed by manual tracking of data (6), and lack of system-wide processes (5). The most successful solutions were the standardization of EHR/IT (4), provider and staff training (6), and standardization of processes (5).

Performance of hospitals in Project 3.1 was measured by 5 metrics, including 4 standard metrics. The 1 innovative metric (denoted with an *) was removed after DY 11 (3.1.2), so no trend was evaluated; a lower rate indicated improved performance for 4 metrics (denoted with a #); and 4 were process and 1 was an outcome metric. Metrics were 3.1.1 Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis; 3.1.2* Avoidance of Antibiotic Treatment with Low Colony Urinary Cultures; 3.1.3# National Healthcare Safety Network (NHSN) Antimicrobial Use Measure; 3.1.4# Peri-Operative Prophylactic Antibiotics Administered After Surgical Closure; and 3.1.5# Reduction in Hospital Acquired Clostridium Difficile Infections. Both DPHs and DMPHs showed progress over time in 2 metrics (3.1.1 and 3.1.5). DPHs had mixed results for 2 metrics (3.1.3 and 3.1.4). DMPHs did not show performance improvement for 1 metric (3.1.4) but showed progress for 1 metric (3.1.3).

Overall, hospitals made progress in establishing the needed infrastructure by focusing on the selection of 2 evidence-based models, establishing policies in hospitals, emergency

departments, and system-wide. Hospitals promoted best practices by organizing stewardship rounds for team members such as pharmacists and medical support staff and trained these and other staff. Hospitals reported progress in the implementation of 2 metrics and no change for others.

# Project 3.2 Resource Stewardship: High-Cost Imaging

## Project Overview

Project 3.2 was designed to increase efficiencies in health care utilization by reducing inappropriate utilization of high-cost imaging studies. These goals were to be achieved by developing the needed infrastructure such as evidence-based models and methods on appropriate use of imaging, and availability of protocols and decision support tools; as well as the processes to be followed such as monitoring imaging use. Specific objectives can be found in Attachment Q.

Project 3.2 was not required for DPHs. Participating hospitals included 5 DPHs (San Joaquin, UC Davis, Contra Costa, San Mateo, and Kern Medical) and 4 DMPHs (Antelope Valley, Palomar, and El Centro) (Exhibit 316). Washington selected Project 3.2, but dropped before they began reporting the metrics and did not complete the survey.

**Exhibit 316: PRIME Project 3.2 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 9 | 8 | 8 |
| **Total DPH** | 5 | 5 | 5 |
| **DPH UC** | 1 | 1 | 1 |
| **DPH County** | 4 | 4 | 4 |
| **Total DMPH** | 4 | 3 | 3 |
| **DMPH Non-CAH** | 3 | 3 | 3 |
| **DMPH CAH** | 0 | 0 | 0 |

*Source: Data provided by DHCS.*
*Notes: At the start of PRIME in DY 11, DMPHs had the option to report Infrastructure Building Milestones, rather than reporting these metrics, Washington Hospital Healthcare System dropped the project on 05/02/17 and was excluded from data analysis, DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

In the interim survey, participating hospitals reported whether and when they implemented the suggested 6 core components of this project as an indication of their overall approach to resource stewardship for high cost imaging. Four of the components were new to the hospitals; 2 hospitals reported implementing an imaging management program and 1 reported providing staff training on project components prior to PRIME (Exhibit 317). During PRIME, between nearly half to all participating hospitals reported

implementing all the core components. The most common components pertained to identifying which imaging test should be assessed for overuse (7) and training staff about the project components (7).

**Exhibit 317: PRIME Project 3.2 Core Components**

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Implement an imaging management program, demonstrating engagement of patients in the design and implementation of components of the project. | 0 | 4 |
| Program should include identification of top imaging tests whose necessity should be assessed for possible overuse. Criteria for assessment could include:<br>a. Frequency and cost of inappropriate/unnecessary imaging i. Appropriate Use: Beginning with state or nationally recognized models or guidelines (e.g., American College of Radiology Appropriateness Criteria, American College of Cardiology Appropriate Use Criteria) and incorporating pertinent local factors, programs will set out definitions for appropriateness<br>ii. Cost: Programs will identify imaging studies associated with high costs due to high cost per study or high volume across the system<br>b. Unwarranted practice variation within the participating DPHs/DMPHs<br>c. Data completeness and ability to report the extent of a-c, building data capacity where needed<br>d. Whether there are established, tested and available evidence-based clinical pathways to guide cost-effective imaging choices. | 0 | 7 |
| Establish standards of care regarding use of imaging, including:<br>a. Costs are high and evidence for clinical effectiveness is highly variable or low.<br>b. The imaging service is overused compared to evidence-based appropriateness criteria. c. Lack of evidence of additional value (benefits to cost) compared to other imaging options available to answer the clinical question. | 0 | 6 |
| Incorporate cost information into decision making processes:<br>a. Develop recommendations as guidelines for provider-patient shared decision conversations in determining an appropriate treatment plan.<br>b. Implementation of decision support, evidence-based guidelines and medical criteria to recommend best course of action | 0 | 4 |
| Provide staff training on project components including implementation of recommendations, and methods for engaging patients in shared decision making as regards to appropriate use of imaging. | 1 | 7 |
| Implement an imaging management program, demonstrating engagement of patients in the design and implementation of components of the project. | 2 | 5 |

## Infrastructure

### Models and Methods for High-Cost Imaging Stewardship Programs

In the interim survey, all 8 participating hospitals reported using at least 1 model when designing Project 3.2 (data not shown). The model most commonly selected was the American College of Radiology Appropriateness Criteria model, chosen by 4 DPHs and 2 DMPHs. The American College of Cardiology Appropriate Use Criteria had not been applied by any hospital. Four hospitals (2 DPHs, 2 DMPHs) also stated using other frameworks than the models mentioned in the survey, including nationally published clinical decision rules (1 DPH), Choosing Wisely (1 DPH, 1 DMPH), and Image Wisely (1 DMPH).

Beyond using existing models and frameworks when designing Project 3.2, hospitals also assessed their current performance and analyzed patients' social determinants, as indicated in interviews:

> *"We conducted a thorough data analysis to see the ordering pattern of our physicians." (UC Davis)*

> *"Specifically for 3.2, it was really looking at what's keeping our patients from getting the best care that they can receive. It really helped us... Understanding the social determinants that go into what the patient is going through, that really colors all of our quality improvement efforts." (Kern Medical)*

The majority of participating DPHs (4 of 5) noted comparing their organization with others to assess and design strategies on the use of imaging studies (data not shown). Comparisons were mainly focused on other California hospitals (2), less often on specific PRIME hospitals (1) or national hospitals (1).

All 8 hospitals used methods to determine which procedures were high-cost imaging (Exhibit 318). Most hospitals stated comparing the level of use (overuse) to evidence-based appropriateness criteria (3 DPHs, 2 DMPHs). Two DPHs also stated using the lack of evidence of additional value compared to other imaging options to determine procedures that are high-cost imaging, and 1 DPH mentioned comparing costs and available evidence for clinical effectiveness. Other than the comparison of imaging

services against evidence-based appropriateness criteria (2 DMPHs), 1 DMPH also considered the lack of evidence of additional value compared to other options when deciding on high-cost imaging procedures. Other procedures applied, included the use of published guidelines (1 DPH) and appropriate use criteria (1 DMPH).

**Exhibit 318: Methods to Identify High-Cost Imaging Procedures Under PRIME**
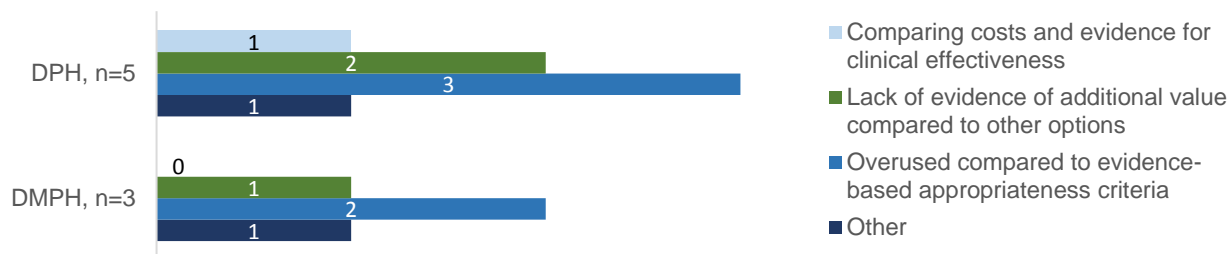


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive.*

In interviews, a hospital described their approach and challenges faced when applying evidence-based appropriateness criteria for Project 3.2:

> *"Running reports to see what diagnosis code was associated with a given order. And, again, there's a particular ICD-10 code that haunts my nightmare… This is the generic code for headache. And seeing how many clinicians would choose that diagnosis code, even when you look at the documentation that they provided, and then that patient might have had a brain tumor in the past, but they just didn't choose an ICD-10 code for brain tumor. So they're ordering the test for the right reason, but choosing the wrong code." (UC Davis)*

## Protocols and Decision Tools

The interim survey showed that all participating hospitals established decision tools to support staff on questions of high-cost imaging (Exhibit 319). Almost all DPHs and DMPHs reported using evidence-based guidelines for selection of imaging studies or decision support tools for selection of imaging studies (4 of 5 DPHs, 2 of 3 DMPHs for both). Another DMPH reported pending implementation of a decision support tool.

**Exhibit 319: Decision Support Tools for High-Cost Imaging Under PRIME**
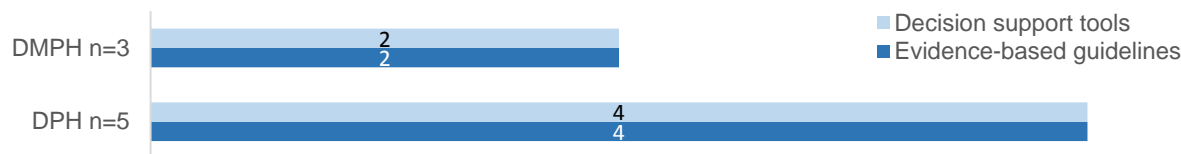
*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital,*
*Responses were not mutually exclusive.*

In interviews, a hospital explained their perspective on provision of support tools:

*"We're going to follow certain models ... We want them to make their clinical decision. We're going to trust that whichever way they go, but what we're trying to do is get it to make sure that we're providing them the clinical decision support that's necessary to make the most important decisions." (Kern Medical)*

## Project Implementation

### Monitoring of Imaging Use

All participating hospitals indicated monitoring CT and MRI procedures (5 DPHs, 3 DMPHs). None of the hospitals reported focusing on PET or other nuclear imaging procedures (Exhibit 320).

**Exhibit 320: Imaging Procedures Monitored During PRIME**
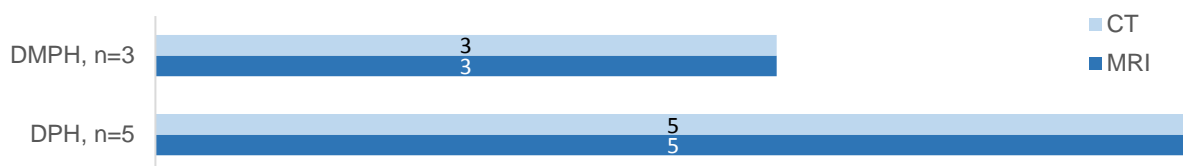


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, Responses were not mutually exclusive*

Interviews showed that reviewing and monitoring the use of high-cost imaging started for some hospitals due to PRIME:

*"When it comes to running reports and looking at the numbers, that started with PRIME." (UC Davis)*

### Participation in Learning Collaboratives

Four hospitals (2 DPHs, 2 DMPHs) reported participating in learning collaboratives other than those provided by DHCS, Harbage Consulting, SNI/CAPH, or DHLF (data not shown). These collaboratives included America's Essential Hospitals Population Health Learning Network, Institute for Healthcare Improvement (IHI), Improvement Team Collaborative Events, Choosing Wisely, and Collaboration with California Health & Wellness to retrieve data from HealthNet.

In interviews, a hospital emphasized the complex approach to Project 3.2, the different elements that fed into and guided the specific project activities:

*"We have our PRIME steering committee where we go through these various data elements, learning collaboratives and learning, but then we work with each specific project team. For this 3.2, we work with our radiology and our emergency departments and our informatics." (Kern Medical)*

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10). DPH hospitals reported spending a high level (8.0) of overall effort in implementing Project 3.2 and DMPH hospitals reported spending a medium level (6.7) of overall effort to implement (Exhibit 403). Among DPHs, ratings of effort were high for unanticipated changes in metrics (7.5), engaging internal stakeholders (7.0), resource intensity (8.2), and implementation requirements (7.6). On average, DMPHs reported requiring high effort for unanticipated changes in metrics (10), engaging internal stakeholders (10), staff training (9.3), resource intensity (7.3), and implementation requirements (10).

Concerning the difficulty engaging with internal stakeholders, 1 hospital emphasized the resistance faced from medical staff, as well as a way to increase their organization's level of effort by providing regular meetings and performance feedback:

*"… it's the most difficult that we have because we advise, don't do imaging just for routine headaches. And like I said, a lot of the doctors will feel, they will say, "I personally feel that it was necessary, that's why we did it." They will fight us of why they did it." (Antelope Valley)*

*"So out of most of these metrics, we met most of them except the first 1, because the effort of implement, we know we have those quarterly meetings. I know that I had two meetings before that quarterly meeting with them in regards to this and let them know, "Hey, this is where you're at right now… I gave them their update for April and May and June right away so that they can see where they're at. And of course, I saw a huge jump May and June of their numbers." (Antelope Valley)*

## Challenges and Solutions to High-Cost Imaging

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 3.2 (Challenges Exhibit 404; Solutions Exhibit 405). The top challenge cited by the hospitals (3) was requiring manual tracking or chart review. The second challenge cited by the hospitals (2) was variation in system due to multiple

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EHRs/IT systems. The top solution identified by the hospitals (2) was EHR/IT standardization or expansion across system.

Hospitals reported a variety of different challenges and solutions and no single challenge or solution was identified by the majority of hospitals.

*"The most difficult is changing physician behaviors. And so, without a system in place to change those behaviors where we can track, monitor, and hard wire it. We were trying to do it through basic EMR changes, around changing the orders and had some success. But overall we haven't been able to make a big enough impact without critical decision support software." (Palomar)*

## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 3.2 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenges cited by the hospitals were already performing at a high level (2), processes not being established system-wide (2), and silo-ed departments and difficulty collaborating (2). The top solution identified by the hospitals (3) was standardizing processes across systems. The second solution identified by the hospitals (2) was establishing meetings across teams. Hospitals reported a variety of different challenges and solutions and no single challenge or solutions was identified by the majority of hospitals.

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## Hospital-Reported Metric Performance

Performance of hospitals in Project 3.2 was measured by 4 metrics (Exhibit 321). Three were standard metrics and 2 innovative metrics. The majority of these metrics were intended to show progress by increasing rates over time.

**Exhibit 321: PRIME Project 3.2 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| Imaging for Routine Headaches | 3.2.1* | WHA | N/A | Decrease | Process |
| Appropriate Emergency Department Utilization of CT for Pulmonary Embolism | 3.2.2 | ACEP | 0667 | Increase | Process |
| Use of Imaging Studies for Low Back Pain (LBP) | 3.2.3 | NCQA | 0052 | Increase | Process |
| Use of Imaging Studies for Low Back Pain (Anytime): Appropriate Imaging for LBP | 3.2.4* | LACDHS to Med Current | Variation on 0552 | Increase | Process |
| Use of Imaging Studies for Low Back Pain (Anytime): Inappropriate Imaging for LBP | | | | Decrease | |

*Source: PRIME Metrics Specs, DY13YE.*

*Notes: NCQA: National Committee for Quality Assurance, WHA: Washington Health Alliance, ACEP: American College of Emergency Physicians, LACDHS: Los Angeles County, Department of Health Services, CT: Computed Tomography, LBP: Low Back Pain, * Denotes innovative metric.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the

hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. One DMPH reported data in DY 11 for Project 3.2.

## Metric 3.2.1 – Imaging for Routine Headaches

Metric 3.2.1 measured the proportion of patients with an outpatient diagnosis of headache that received a Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) related procedure within 30 days of the diagnosis (PRIME Metric Specs, DY 13YE). Hospitals were expected to apply the Choosing Wisely technique, developed by a national initiative of the American Board of Internal Medicine Foundation (ABIM) and designed to reduce unnecessary and inappropriate ordering of tests. This metric was a process measure with improvement reflected by decreasing rates. Among the DPHs, the number of patients receiving a CT or MRI related procedure within 30 days remained stable from DY 11 to DY 13 at 13-14% (Exhibit 322). Among the DMPHs, the number of patients receiving such procedures increased from DY 12 (34%) to DY 13 (43%). DMPHs particularly highlighted the challenge in performance due to the metric's design that excluded secondary diagnoses or admitting diagnoses that would have provided justification for imaging. One DMPH reported data in DY 11, their rate was 25% (data not shown). In DY 13, the individual achievement rates for Metric 3.2.1 ranged from 8% to 17% for DPHs and 20% to 55% for DMPHs (data not shown).

**Exhibit 322: PRIME Self-Reported Imaging Rates for Routine Headaches\* Rates for Metric 3.2.1**
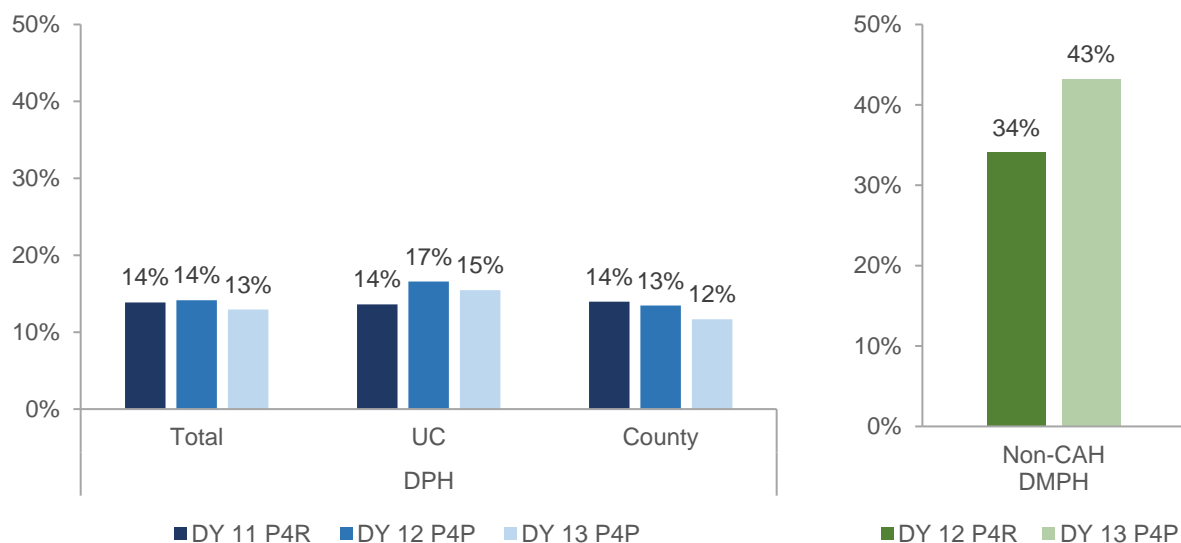
*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, CT: Computed Tomography, MRI: Magnetic Resonance Imaging, \* Denotes innovative metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 3.2.2 – Appropriate Emergency Department Utilization of CT for Pulmonary Embolism

Metric 3.2.2 measured the percentage of emergency department visits of patients with a CT pulmonary angiogram who had either moderate or high clinical probability for pulmonary embolism, a positive result or elevated D-dimer result (PRIME Metric Specs, DY 13YE). This metric was designed to promote appropriate ordering of CT pulmonary angiography based on pre-test conditions. The achievement of Metric 3.2.2 was measured by an increase in rates over time. DPH UCs reported a decrease in achievement rates in DY 12 and increase in DY 13 (Exhibit 323). DPH County hospitals saw an increase in achievement rates from 40% in DY 11 to 89% in DY 13. DMPHs reported an increase from 23% in DY 12 to 56% in DY 13. In DY 13, the individual achievement rates for Metric 3.2.2 ranged from 68% to 100% for DPHs and 34% to 68% for DMPHs (data not shown).

**Exhibit 323: PRIME Self-Reported Appropriate Emergency Department Utilization of CT for Pulmonary Embolism Rates for Metric 3.2.2**



*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*

## Metric 3.2.3 – Use of Imaging Studies for Low Back Pain

Metric 3.2.3 measured the proportion of patients with a diagnosis of uncomplicated lower back pain during either an outpatient or emergency department visit that did not have an imaging study conducted within 28 days of the diagnosis (PRIME Metric Specs, DY 13YE). Hospitals were intended to reduce unnecessary imaging for lower back pain. This metric was reported as an inverted rate with higher rates indicating improved performance. For the DPHs, the proportion of patients not receiving unnecessary imaging of lower back pain remained relatively high from 87% in DY 11 to 90% in DY 13 (Exhibit 324). Among the 3 DMPHs, rates increased from 40% in DY 12 to 75% in DY 13. In DY 13, the individual achievement rates for Metric 3.2.3 ranged from 87% to 99% for DPHs and 67% to 78% for DMPHs (data not shown).

**Exhibit 324: PRIME Self-Reported Imaging Studies for Low Back Pain Rates for Metric 3.2.3**
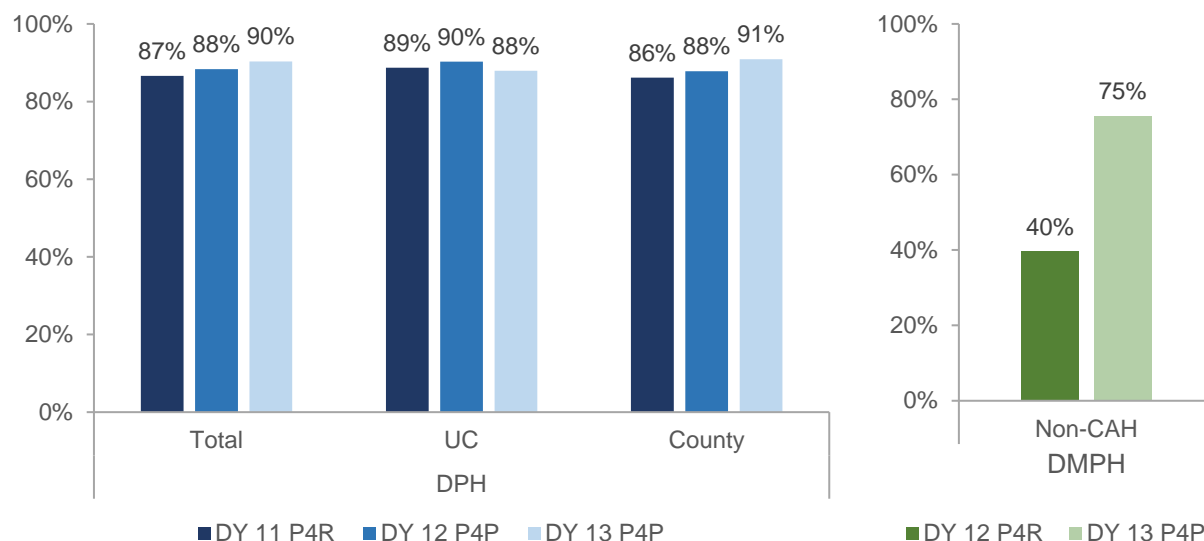


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance.*
*Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Metric 3.2.4 – Use of Imaging Studies for Low Back Pain (Anytime): Appropriate and Inappropriate Imaging

Metric 3.2.4 measured the proportion of patients who received an imaging study with a principal diagnosis of low back pain in the 6 months prior to or on the imaging date, with or without clinical red flags (PRIME Metric Specs, DY 13YE). Hospitals were intended to promote appropriate imaging for lower back pain by applying clinically appropriate indications for imaging. Improved performance was shown by an increase in rates for appropriate imaging and a decrease in rates for inappropriate imaging. The metric for DY 11 had 3 stratified levels: optimal, borderline, and suboptimal. In DY 12 the metric steward changed and the metric was converted to 2 scoring levels: appropriate and inappropriate. In DY 11, a larger percentage of patients received suboptimal imaging (9%) than optimal imaging (7%; Exhibit 325). DPHs improved from DY 12 to DY 13 in by increasing the rates of appropriate (6% to 11%) and decreasing the rates of inappropriate imaging (17% to 11%). Among DMPHs, inappropriate imaging increased from DY 12 (24%) to DY 13 (28%). In DY 13, the individual achievement rates for the appropriate ranged from 4% to 32% for DPHs and 3% to 65% for DMPHs; the individual achievement rates for inappropriate ranged from 0.3% to 15% for DPHs and 19% to 50% for DMPHs (data not shown).

**Exhibit 325: PRIME Self-Reported Appropriate and Inappropriate Imaging for Low Back Pain\* Rates for Metric 3.2.4**
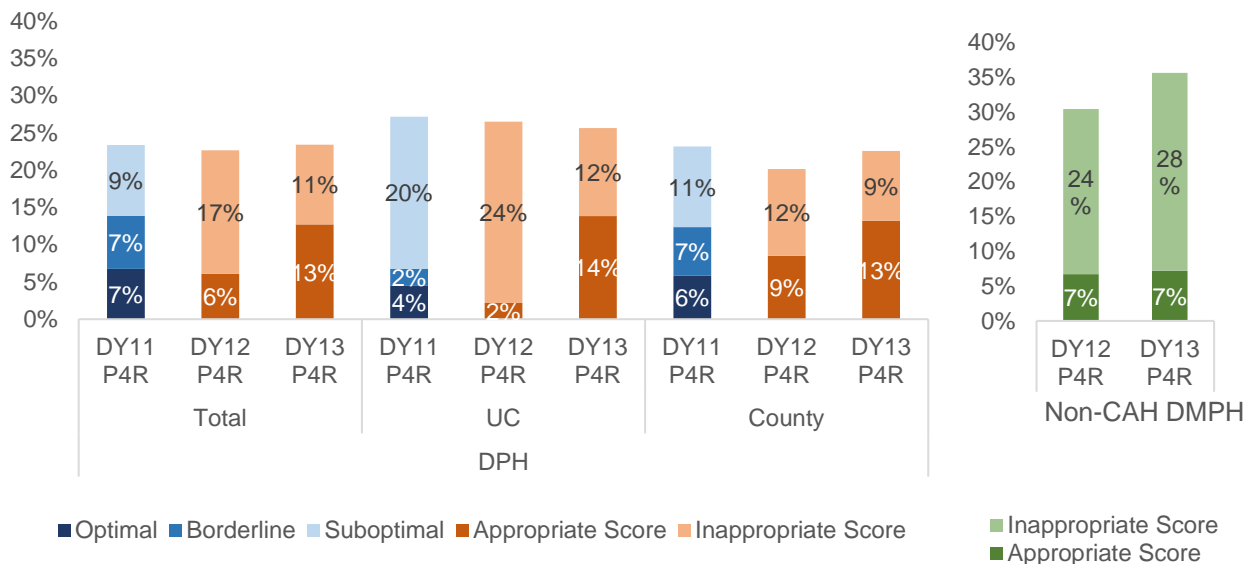
*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, \* Denotes innovative metric.*
*\* Since 1 DMPH reported in DY 11, their DY 12 rate was P4P, but the other DMPHs were newly reporting and were P4R. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH.*

## Summary of Key Findings

Project 3.2 was designed to increase efficiencies in health care utilization by reducing inappropriate utilization of high-cost imaging studies. Five DPHs and 3 DMPHs participated. During PRIME, between nearly half to all participating hospitals reported implementing all the core components. The most common components selected were identifying which imaging test should be assessed for overuse (7) and training staff about the project components (7).

When detailing the infrastructure established for this project, most hospitals reported applying the American College of Radiology Appropriateness Criteria model (6). Other frameworks used included nationally published clinical decision rules (1), Choosing Wisely (2) and Image Wisely (1). Strategies for high-cost imaging have mainly been developed by comparing their organization with other hospitals (4).

When implementing this project, the majority of hospitals indicated providing support in decision-making on high-cost imaging (8), especially with evidence-based guidelines and decision support tools (6). All participating hospitals monitored the use of CT and MRI imaging procedures and none monitored PET or nuclear imaging procedures for PRIME implementation. Participation in learning collaboratives beyond those provided by PRIME has been reported by 4 hospitals. The level of effort spent on this project has been high (8 of 10), with the utmost efforts being reported for project implementation (10), engagement with internal stakeholders (10) and efforts due to unanticipated changes in metrics (10). The top data and metric-related challenges to implementation cited by hospitals were requirements of manual tracking and chart review (3), variation in systems due to multiple EHRs/IT systems (2), challenges due to performance already being at a high level (2), lack of processes being established system-wide (4) and silo-ed operation of departments (2). Hospitals addressed these challenges by standardization of EHR/IT processes or expansion across systems (2), standardization of processes across systems (3) and having meetings across teams (2).

Performance of hospitals in Project 3.2 was measured by 4 metrics; 2 were standard and 2 were innovative metrics (denoted with an *); in most of the rates an increase indicated improvement, but in one sub-rate a lower rate indicated better performance (indicated by a #). All of these metrics measured processes. Metrics were: 3.2.1* Imaging for Routine Headaches; 3.2.2 Appropriate Emergency Department Utilization of CT for Pulmonary Embolism; 3.2.3 Use of Imaging Studies for Low Back Pain (LBP); 3.2.4* Use of Imaging Studies for Low Back Pain with sub-rates for Inappropriate and Appropriate Imaging#. DPHs reported mixed performance rates for 1 metric (3.2.1) and improved performance rates for 2 metrics (3.2.2, 3.2.3). Performance rates for DMPHs showed improvements in

2 metrics (3.2.2, 3.2.3) and no improvement in 1 metric (3.2.1). Metric 3.2.4 included two rates that were intended to trend in opposite directions, both of the rates improved for DPHs (increasing appropriate and decreasing inappropriate imaging), but DMPHs had mixed results (stable appropriate, but increased inappropriate imaging).

Overall, hospitals made significant progress in implementing Project 3.2. All hospitals focused on monitoring the use of CT and MRI imaging to reduce the number of unnecessary/inappropriate studies and improve the use of evidence-based, lower cost imaging modalities when imaging is authorized. Hospitals established needed infrastructure by using a variety of evidence-based models to develop protocols and decision support tools to promote appropriate use. Hospitals monitored use to promote better stewardship and improved the processes through standardization and improving provider buy-in by engaging them in meetings. Hospitals reported improvements in the majority of metrics with variations in progress in project implementation and metrics.

# Project 3.3. Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals

## Project Overview

Project 3.3 was designed to promote resource stewardship to reduce costs and move toward efficient use of high-cost medications or moderate-cost medications with high prescribing volume. Under this PRIME project, participating PRIME hospitals strove to develop robust resource stewardship programs. This was to be accomplished through a developed decision analysis and increased use of decision support mechanisms that provide the impact of high-cost pharmaceuticals on the hospital population in terms of both outcomes and efficient use of available resources in order to guide clinician use of targeted therapies involving high-cost medications. By establishing multidisciplinary teams of experts with committed time to monitor and contain pharmaceuticals costs and investing in resource stewardship, the project aimed at yielding significant savings. Specific objectives included increasing the appropriate use of high-cost pharmaceutical therapies, decreasing inappropriate use of high-cost pharmaceutical therapies, improving use of shared decision making with patients, driving down health-care costs through improved used of targeted mediations and prescribing behaviors, and optimizing 340b, if eligible. Specific objectives can be found in Attachment Q.

Project 3.3 was not a required project and 8 hospitals chose to participate in this project (Exhibit 326). Participating hospitals included 7 DPHs, including 3 UC systems (Los Angeles, San Diego, and San Francisco) and 4 county systems (Los Angeles, San Francisco, Riverside, and Santa Clara). Palomar, a DMPH also participated in the project. All 8 hospitals completed the interim survey.

**Exhibit 326: PRIME Project 3.3 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| Total Participating Hospitals | 8 | 8 | 8 |
| Total DPH | 7 | 7 | 7 |
| DPH UC | 3 | 3 | 3 |
| DPH County | 4 | 4 | 4 |
| Total DMPH | 1 | 1 | 1 |
| DMPH Non-CAH | 1 | 1 | 1 |
| DMPH CAH | 0 | 0 | 0 |

*Source: Data provided by DHCS.*
*Notes: Among the DPH County hospitals, Alameda Health System dropped the project in DY 12, among the DMPH non-CAHs, Tulare Regional Medical Center dropped in DY12, Palomar Medical Center dropped in DY 13, and Tri-City Medical Center dropped in DY 13, at the start of PRIME, DMPHs had the option to report Infrastructure Building Milestones, rather than reporting these metrics, DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the 11 suggested core components of this project as an indication of their overall approach to resource stewardship for high-cost pharmaceuticals (Exhibit 327). In the interim survey, 4 hospitals reported that prior to PRIME they had begun implementing or expanding a high-cost pharmaceuticals management program and 4 reported developing formulary alignment with local health plans. During PRIME, all or nearly all participating hospitals reported implementing all the core components except for improving the process for proper billing of medications through clinician education and decision support processes. The 340B federal program allows eligible public hospitals to purchase outpatient pharmaceuticals at the manufacturer's reduced, wholesale price.

### Exhibit 327: PRIME Project 3.3 Core Components

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Implement or expand a high-cost pharmaceuticals management program. | 4 | 6 |
| Implement a multidisciplinary pharmaceuticals stewardship team. | 3 | 7 |
| Develop a data analytics process to identify the participating PRIME hospital highest cost pharmaceuticals (high-cost medications or moderate-cost meds with high prescribing volume). Identify high-cost medications whose efficacy is significantly greater than available lower cost medications. <br> a. using purchase price data, identify the top 20 medications and medication classes, focusing on the following: analgesics, anesthetics, anticoagulants, anti-neoplastics, diabetes, hepatitis c, immunoglobulins, mental health (anti-depressants/sedatives/ anti-psychotics), respiratory (COPD/asthma), rheumatoid arthritis <br> i. exclude anti-infectives and blood products (addressed in separate prime projects) | 2 | 6 |

| | | |
|---|---|---|
| Develop processes for evaluating impact of high-cost, high-efficacy drugs, particularly drugs to treat conditions (e.g., HCV) or to address circumstances (e.g., oral anticoagulants for patients without transportation for blood checks) more prevalent in safety net populations:<br>a. Consider criteria that include ability of identified medications to improve patient health, improve patient function and reduce use of health care services. | 2 | 4 |
| Develop processes to impact prescribing by providers by establishing standards of care regarding prescribing of high-cost pharmaceuticals, including:<br>a. Use of decision support/CPOE, evidence-based guidelines and medical criteria to support established standards;<br>b. Develop processes to improve the appropriate setting for medication delivery; including, transitioning pharmaceutical treatment to the outpatient setting wherever possible;<br>c. Promote standards for generic prescribing;<br>d. Promote standards for utilizing therapeutic interchange. | 3 | 6 |
| Improve the process for proper billing of medications, through clinician education and decision support processes. | 2 | 2 |
| Develop formulary alignment with local health plans. | 4 | 3 |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership rapid cycle improvement using standard process improvement methodology. | 1 | 3 |
| Develop organization-wide provider level dashboards to track prescribing patterns for targeted high-cost pharmaceuticals. Dashboard to include comparisons to peers and benchmarks. Contribute system level data for a similar dashboard across all public health care systems. | 1 | 5 |
| Develop processes for working with providers with prescribing patterns outside established standards, to identify and reduce barriers to meeting prescribing standards:<br> a. Develop guidelines and provide staff training on methods for engaging patients in shared decision making for developing treatment plans within the context of the established standards. | 1 | 3 |
| Maximize access to 340b pricing:<br>a. Share templates for contracting with external pharmacies<br>b. To improve program integrity, share tools for monitoring of 340b contract compliance | 3 | 3 |

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## Infrastructure

### Selection Process for Choosing Pharmaceuticals

The metrics for Project 3.3 required hospitals to identify specific pharmaceuticals for tracking and management (Exhibit 331). Hospitals were required to target 3 or more new high-cost pharmaceuticals in each DY (DY 11: 3, DY 12: 6, DY 13: 9, DY 14: 12, and DY 15: 15). The DMPH was not required to select pharmaceuticals in DY 11, but thereafter was on the same ramp-up as the DPHs. At the end of DY 15, hospitals would be monitoring 15 of the top 20 of their high-cost pharmaceuticals.

Hospitals were encouraged to focus on classes of pharmaceuticals and pharmaceuticals to treat specific conditions: pain (analgesics, anesthetics), cardiovascular disease (anticoagulants); cancer (anti-neoplastic); diabetes; hepatitis C; immune deficiencies/autoimmune diseases, including rheumatoid arthritis (immunoglobulins); mental health (anti-depressants/sedatives/anti-psychotics); and respiratory diseases (COPD/asthma). Of these classes of pharmaceuticals, hospitals most commonly selected medications for diabetes, mental illness, respiratory disease, hepatitis C, and cancer. Beyond the medication classes that were suggested to hospitals, some chose to focus on pharmaceuticals treating other medical conditions including: hypercholesterolemia, gastroesophageal diseases, inflammatory arthritis, benign prostatic hyperplasia, blood disorders, and osteoporosis.

Data for targeted medications was available from DY 11-14. Hospitals frequently selected brand-name pharmaceuticals; although more than half of the medications identified by brand-name were selected by only 1 hospital, the types of pharmaceuticals were less varied. For example, the following brand-name and generic medications were all selected for the treatment of high blood sugar and diabetes: Exenatide, Farxiga, insulin glargine, Invokana, Januvia, Jardiance, Levemir, metformin, Onglyza, Tradjenta, Tresiba, Trulicity, and Victoza.

The most commonly selected high-cost pharmaceuticals were Epclusa, Mavyret, and Zepatier (for hepatitis C), as 6 hospitals from DY 11-14 picked these brands (Exhibit 328). Additionally, in DY 14 alone, Mavyret was chosen by 5 hospitals, which was the most picked pharmaceutical in a single DY. Harvoni, another pharmaceutical used to

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treat hepatitis C, was chosen by 5 hospitals from DY 11-14 and was the most common pharmaceutical in DY 11 when chosen by 3 hospitals. Xarelto, an anticoagulant, was also chosen by 5 hospitals from DY 11-14. Finally, bupropion, an anti-depressant and smoking cessation aid was chosen by 4 hospitals in DY 13, making it the most common pharmaceutical choice of its DY.

**Exhibit 328: High-Cost Pharmaceuticals Chosen Under PRIME**

| Medication | Total | Medical Condition Category |
|---|---|---|
| Epclusa | 6 | Hepatitis C |
| Zepatier | 6 | Hepatitis C |
| Mavyret | 6 | Hepatitis C |
| Xarelto | 5 | Cardiovascular Diseases |
| Harvoni | 5 | Hepatitis C |
| Bupropion | 4 | Mental Illness |
| Advair | 4 | Respiratory Diseases |
| Invega | 3 | Mental Illness |
| Eliquis | 3 | Cardiovascular Diseases |
| Enbrel | 3 | Autoimmune Diseases/Immune Deficiencies |
| Humira | 3 | Autoimmune Diseases/Immune Deficiencies |
| Insulin glargin | 3 | Diabetes |
| Remicade | 3 | Autoimmune Diseases/Immune Deficiencies |
| Vortioxetine | 2 | Mental Illness |
| Spiriva | 2 | Respiratory Diseases |
| Trastuzumab | 2 | Cancer |
| Exentatide | 2 | Diabetes |
| Qvar | 2 | Respiratory Diseases |
| Metformin | 2 | Diabetes |
| Truvada | 2 | Autoimmune Diseases/Immune Deficiencies (HIV) |

*Source: UCLA analysis of the medications reported to DHCS as of May 15, 2019.*
*Note: N=8 hospitals participating in Project 3.3, numbers include the number of specific medications that treat the condition, Responses were not mutually exclusive.*

Hospitals identified several reasons why these medications were selected, including high cost per unit (such as specialty and biologic pharmaceutical), high volume of people using a medication (including high volume and low efficacy), generic pharmaceutical with significant increase in costs, and life-long duration of use. The hospitals also assessed situations such as brand name pharmaceuticals for rare conditions and high-risk patient populations (data not shown).

In interviews hospitals reflected on their rationale behind choosing specific pharmaceuticals:

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*"We ran the report, and realized that there is a high-cost pharmaceutical with a generic alternative, and it really made no sense for us to have that high-cost pharmaceutical listed." (UC Los Angeles)*

*"We're picking Lantus and insulins, because it costs a hundred dollars for a vial of insulin… it's a high-use medium-cost drug, which is allowed with 3.3. So, we are fixing the diabetes at the same time we're fixing their adherence." (Palomar)*

In their year-end reports, hospitals discussed using data from a variety of sources including purchase price data from the hospital's inpatient pharmacy or the managed care plan claims data, internal utilization and population management tools, and outpatient pharmacy data.

In interviews, a hospital discussed the impact of the specific data source on the outcomes of which medications were selected.

*"The whole concept of what was proposed through PRIME never really gelled appropriately to make sense, because it was all based on claims data, which is all retrospective ...and not accessible for most health systems. And even the ones that do have access to it, it's pretty crummy data… The changes to the EHR that we did do were really based on trying to be proactive and prospective about being able to identify high-cost medications by different plan type. And because there is no standard around which plan covers which medication, and which is high-cost, and which there are good alternatives, made it really difficult to put any single standard because it has to be adjusted by the plan and what the plan covers and what the copays are. So if you're an organization like us that covers 40 or 50 different health plans, putting something in place that's going to be applicable to all patient populations is really difficult… And we're finding a way to do it if the plans can provide us with that data. But it's a pretty sophisticated technical solution." (UC San Francisco)*

### Protocols for High-Cost Pharmaceuticals

In the interim survey, hospitals examined different aspects when assessing which high-cost medications that were chosen for Project 3.3 (Exhibit 329). The impact of the high-cost medications on improvements in health was assessed by 3 hospitals, 2 hospitals examined reductions in future use of health care and improvement in functions each. Assessments of patient safety and cost data for medications with low-cost alternatives that had equal efficacy had been reported by 3 hospitals.

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**Exhibit 329: Methods used to Examine Efficacy and Utility of Pharmaceuticals selected Under PRIME**



| | |
|---|---|
| Reduction in future use of health care | 2 |
| Improvements in function | 2 |
| Improvements in health | 3 |
| Other | 3 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Notes: N=8 hospitals participating in Project 3.3, Responses were not mutually exclusive, some hospitals noted use of more than 1 method.*

## 340B Participation

The 340B federal program allows some hospitals to purchase outpatient pharmaceuticals at the manufacturer's reduced, wholesale price. By reducing the hospital's costs for pharmaceuticals purchased under this program, participating hospitals will be able to continue to provide needed healthcare services to low-income or uninsured patients (MACPAC).Eligible entities include FQHCs and look-alikes, Disproportionate Share Hospitals, Critical Access Hospitals, and some other types of safety net programs and providers (HRSA). Hospitals must recertify their eligibility annually. Hospitals reported that they managed their 340B programs by a variety of tools, including purchasing Macro Helix software for inpatient medications, and using WellPartner, pharmacies, and Verity for ambulatory care medications. A DMPH described using claims from their contracted FQHCs' 340b claims databases to generate data for the metrics. In the interview, San Francisco mentioned that litigation and reduced federal reimbursement made the sustainability of this program vulnerable.

## Project Implementation

### Multidisciplinary Stewardship Team

In the interim survey, all 8 participating hospitals reported including a physician champion and pharmacist in their pharmaceutical stewardship team (Exhibit 330). While 5 hospitals also included medical support staff, other staff were less frequently included in this team.

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**Exhibit 330: Types of Providers involved in Pharmaceutical Stewardship Team Under PRIME**



| Provider | Count |
|---|---|
| Pharmacist | 8 |
| Physician Champion | 8 |
| Medical Support Staff | 5 |
| Anesthesiology and Pain... | 3 |
| Substance Abuse Disorder Specialist | 2 |
| Behavioral Health Specialist | 2 |
| Neurologist | 2 |
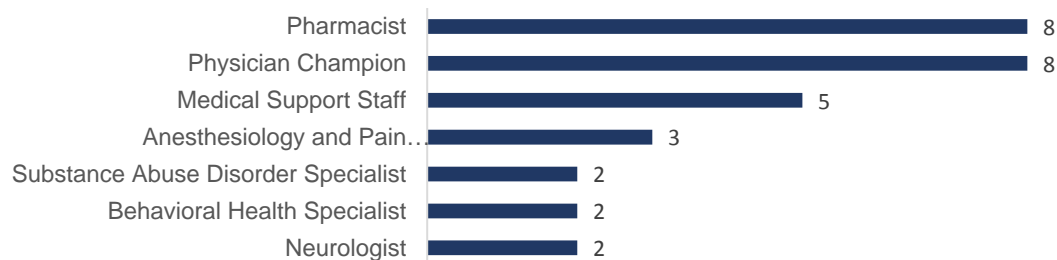
*Source: UCLA analysis of the interim survey, April to May 2018.*
*Note: N=8 hospitals participating in Project 3.3, Responses were not mutually exclusive.*

## Strategies Used to Change Practice Patterns of Providers

The strategies to change provider practice patterns included: increase in frequency of feedback (5), additional training guidelines (3), and provision of mentoring (1). Other strategies used by participating hospitals included: virtual pharmacy interventions, increasing stakeholder involvement, additional training on ordering protocols, the use of EHR related tools.

In interviews, a hospital described the important role stewards play in changing practice patterns of providers, specifically in reference to adapting the smart tool:

*"The major 1 is for the providers to adopt the smart tool. With that is the order set. Some providers are pushing back, or most of them actually. They don't really want to have an order set. But our work group is really good, and that's partly because the steward. It is easy for them to have the providers adopt this smart tool." (Santa Clara Valley)*

Hospitals utilized their EHRs that included pharmaceutical data from inpatient and outpatient clinics and managed care health plan data to implement prescribing protocols. The availability of a comprehensive EHR and functioning needed for implementation of this project was described in (EHR Functionality). Most hospitals utilized their EHR to establish medication prescribing protocols to influence provider prescribing patterns and align with insurance formularies. One example of how this can be implemented is Riverside (DY13YE self-report):

*"A pharmacy governance committee was formed with the area health plans pharmacy department... Key pharmacy leaders share ideas, patient care solutions, and align formularies based on best practices. Additionally, as part of enhancing population health, RUHS has developed an Asthma medications order set that aligns with the*

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*different health plans and the RUHS formulary to assist providers when ordering medications and avoid therapy delays." (Riverside)*

## Participation in Learning Collaboratives

Participation in learning collaboratives beyond those led by DHCS, Harbage Consulting, SNI/CAPH, or DHLF were mentioned by 2 hospitals in the interim survey. The Primary Care based Hepatitis C Treatment Expansion Initiative was reported by 1 hospital, the California Perinatal Quality Care Collaborative (CPQCC) /Statewide Collaborative and AHRQ/National Collaborative by another.

In their self-report a hospital noted participation in an informal collaborative:

*"The Chief Pharmacy Officers of the five University of California Medical Centers participating in PRIME meet monthly to discuss opportunities to reduce cost of drugs through contracting and supply chain tools, and sharing success stories for optimizing their use at the patient and service level. This has resulted in ongoing cost reduction, primarily on inpatient care." (UC San Diego)*

Another hospital discussed participating in local collaboratives and working on other types of quality metrics:

*"The Pharmacy team working on Project 3.3 – High-Cost Pharmaceuticals (HCP), is participating in a pharmacy-level clinical integrated network (CIN) collaboration with the area health plan and some other area hospitals to enhance care delivery within the Inland Empire region. RUHS is a participating entity in the Leapfrog Group and 1 of the measures recommended by Leapfrog Group is an NQF measure related to the accuracy of medication reconciliation. While the PRIME metric on medication reconciliation assesses whether medication reconciliation is being performed at each patient encounter, the Leapfrog initiative enhances this measure by addressing the quality of medication reconciliation being performed. RUHS has a pilot program involving pharmacy technicians who collect medication lists for all patients admitted through the emergency department. A pharmacist assesses the quality of medication reconciliation and reports are returned to the quality department." (Riverside)*

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10). Hospitals reported spending an overall high level of effort in implementing Project 3.3 (DPH 7.7, DMPH 10; Exhibit 403). Among DPHs, ratings of effort were high for engaging internal

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stakeholders (7.1), resource intensity (7.6), and implementation requirements (8.4). On average, DMPHs reported requiring high effort for unanticipated changes in metrics (7.0), engaging internal stakeholders (8.0), revision or modification of project (10), personnel reorganization (7.0), resource intensity (8.0), and implementation requirements (10).

## Challenges and Solutions to High-Cost Pharmaceuticals

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 3.3 (Challenges Exhibit 404; Solutions Exhibit 405). The top challenge cited by the majority of hospitals (4) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The second challenge cited by the hospitals (2) was variation in documentation within the system by providers and staff, variation in system due to multiple EHRs/IT systems (2), and requiring manual or chart review (2). The top solution identified by the hospitals (3) was EHR/IT standardization or expansion across system.

In the interview, a hospital discussed how they planned to use data to address challenges of implementing this project:

> *"We think at the end of the day, that will really drive behavior, and mostly because it will give the physicians, at the point of entry, two key pieces of information. One, that this will cost the patient "x" out of pocket, which I think then they could share with the patients and say, "Okay, I can order this 1, but this is how much it's going to cost you." And B, that there would be lower cost alternatives that are covered there. That information, right now, is not anywhere. So having that solution is really important. But implementing it for all those different plans is really difficult." (UC San Francisco)*

### Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 3.3 (Challenges Exhibit 406: ; Solutions Exhibit 407). The top challenge cited by half of the hospitals (4) was processes not being established system-wide. The second challenge cited by the hospitals (2) was silo-ed departments and difficulty collaborating and small denominator or numerator (2). The top solutions identified by the hospitals (2) was implementing provider and staff training and increased capacity and standardizing processes across systems (2). The second solution identified by the hospitals (2) was enhancing outreach and capacity to follow up with patients. Hospitals reported a variety of different challenges and solutions and no single challenge or solution was identified by the majority of hospitals.

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In interviews, hospitals also reported the innovative nature of metrics for Project 3.3 and replacing 3.3.2 in DY 11 with 3.3.4 in DY 12 as challenging:

*"… I thought this project was going to focus on the inappropriate high-cost use of meds anywhere, and then it just became an ambulatory project.... But then the restrictions in the metric made it just be kind of a very invaluable project, which is too bad because everybody should be tackling this. And as you know, the metrics ... They never just got consensus on the concept of what they were trying to do here, I believe. … I was on many of those stakeholder calls with the measure stewards, and I gave them a really hard time … This is a project that I think could've had really wide-ranging implications, and just was so rigid and not well thought out. But that happens with innovative metrics, I suppose." (UC San Francisco)*

One hospital discussed how their EHR solution resulted in an unexpected problem in the metrics:

*"…[we] realized that there is a high-cost pharmaceutical with a generic alternative…[which we removed from our list] and so the amount that that drug was ordered just went to zero, or the brand name drug that was ordered went to zero, and the generic went up. But in terms of PRIME, that's a zero percent performance, because we actually fixed the problem… So … there's sometimes a … disconnect between the measure and what it's measuring, and the intent of the core component. And the measures are not measuring those core components, or they're not measuring activities that speak to the core component." (UC Los Angeles)*

A DMPH described the difficulty of applying the metrics if the hospital is primarily conducting emergency and inpatient visits or depending on external outpatient provider data:

*"Definitely the hardest component... by having to record on a rolling six month basis …because their encounters have to have been essentially an ED encounter. If I have patient on insulin …And if I actually go to fix that adherence, I'm working against myself, because then they may not be admitted within the next six months and then they'll fall out of my PRIME measure. So, I've never quite had lower than 30 in my denominator, but I do have 1 measure where I'm at zero, my numerator and then when you layer on that you're trying to create change in an organization where you don't own it… you want to give them good care, but then they have been really sick then to stay in my recording." (Palomar)*

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*"We were surprised actually six months ago where we thought we had seasoned data... And then 1 of the FQHCs matched it in a different way, and the numbers just shot up. And then we realized that the data integrity was bad on the other 1 too. So we fixed that with both of them and we're going to have our best set of numbers... That's where we have the real challenge, because we're having to leverage our acute care patients and match those with the external data and trying to make sure that those really are the same patients. So we're having to do Excel, data matching, and then manually validating... we might have more, but this is the best information we have."* (Palomar)

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## Hospital-Reported Metric Performance

Performance of hospitals in Project 3.3 was measured by 4 metrics (Exhibit 331), although in DY 12, the metric that measured documentation of current medication in the medical record in DY 11 was replaced with an innovative and more specific metric that measured documentation of medication reconciliation. All the metrics measured whether processes were improving, as shown by increasing rates over time. The population for Project 3.3 were patients receiving 2 or more of the targeted high-cost pharmaceuticals in the DY (PRIME Metric Specs, DY 13YE). Because the list of targeted pharmaceuticals increased each year, the hospitals were required to develop 2 rates for each metric: Rate #1: metric performance based on the high-cost pharmaceuticals targeted for management in the prior DY, which serves as the pay for performance rate and Rate #2: Metric performance based on the high-cost pharmaceuticals targeted for management in the current DY, which serves as the baseline for the next year.

**Exhibit 331: PRIME Metrics for Project 3.3**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| **Adherence to Medications** | 3.3.1* | SCVHS | Variation on 2467 | Increase | Process |
| **Documentation of Current Medications in the Medical Record (metric discontinued after DY11)** | 3.3.2 | CMS | 0419 | Increase | Process |
| **High-Cost Pharmaceutical Ordering Protocols** | 3.3.3* | SCVHS | N/A | Increase | Process |
| **Documentation of Medication Reconciliation in the Medical Record for Patients on High-Cost Pharmaceuticals (new metric in DY12)** | 3.3.4* | SCVHS | N/A | Increase | Process |

*Source: PRIME Metrics Specs, DY 13YE*
*Notes: NQF: National Quality Forum, SCVHS: Santa Clara Valley Health System, CMS: Centers for Medicare and Medicaid Services. * Denotes innovative metric.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by

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the overall denominator. This process was repeated for each metric. Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. No DMPHs reported data in DY 11 for Project 3.3.

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## Metric 3.3.1 – Adherence to Medications

This metric was designed to measure the percentage of patients in the Project 3.3 population who had taken 80% of the prescribed dose when taking at least 2 medications of the specified high-cost pharmaceuticals (PRIME Metric Specs, DY 13YE). Hospitals were expected to increase patients' adherence to prescribed high-cost pharmaceuticals. This metric had 2 rates, Rate #1 reflected performance for the pharmaceuticals targeted in the prior DY and Rate #2 reflected the performance in all of the pharmaceuticals targeted for current DY.

The intended direction of Metric 3.3.1 was an increase in rates over time. Adherence to high-cost pharmaceuticals was measured for the 3 pharmaceuticals selected in DY 11 and tracked in DY 12. Among the 7 participating DPHs, this rate increased from 30% (Rate #1 for DY 11) to 76% (Rate #2 in DY 12) and the rate of increase varied between UC and County DPHs (Exhibit 332). For the 1 participating DMPH, data was not reported in DY 11 and the rate of 68% was for DY 12.

**Exhibit 332: PRIME Self-Reported Rate of Patient Adherence to High-Cost Pharmaceuticals for Three Medications\* in DY 11 and DY 12 for Metric 3.3.1**
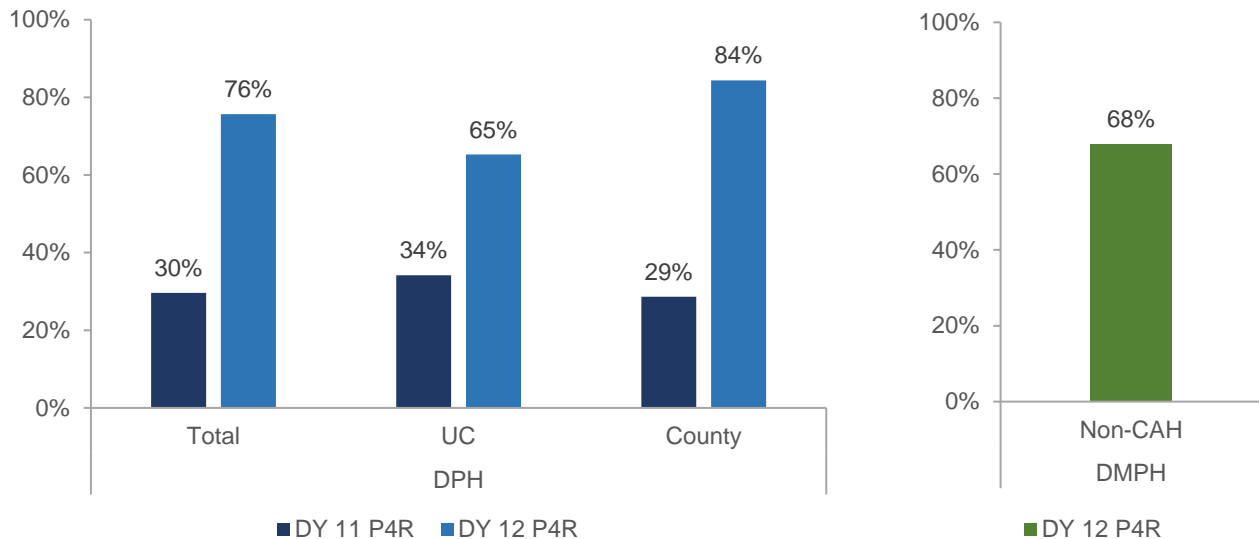


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY 11: Rate #1, DY 12: Rate #2, P4R: pay-for-reporting, P4P: pay-for-performance, \*Denotes innovative metric.*

Three new pharmaceuticals were added in DY 12 for a total of 6 medications. The rate of adherence was tracked in DY 12 and DY 13. Patient adherence rate for DPHs declined

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from 69% (Rate #1 DY 12) to 58% (Rate #2 DY 13) and the rate of declined differed between UC and County DPHs (Exhibit 333). This rate also declined for the participating DMPH.

**Exhibit 333: PRIME Self-Reported Rate of Patient Adherence to High-Cost Pharmaceuticals for Six High-Cost Pharmaceuticals\* in DY 12 and DY 13 for Metric 3.3.1**
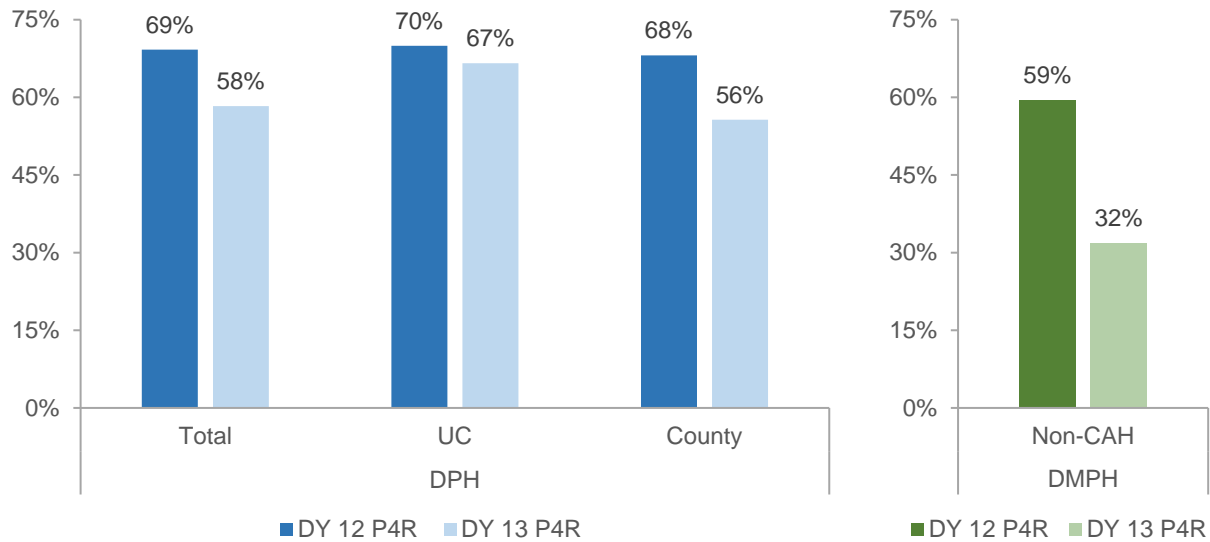


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY 12: Rate #1, DY 13: Rate #2, P4R: pay-for-reporting, P4P: pay-for-performance, \*Denotes innovative metric.*

In DY 13, each hospital added 3 new medications, for a total of 9 targeted pharmaceuticals (Rate #1 for DY 13). Among DPHs, 59% reported adherence to high-cost pharmaceuticals (65% for UC and 54% for County), and the participating DMPH reported 33% adherence rate (data not shown).

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## Metric 3.3.2 – Documentation of Current Medications in the Medical Record

This metric measured how frequently providers recorded all medications and supplements, including names, dosages, frequency, and administration route, at each visit in the medical records of adult patients ([PRIME Metric Specs, DY 13YE](#)). This measure was intended to promote providers' monitoring of use of pharmaceuticals to reduce the risk of adverse drug events.

The achievement of Metric 3.3.2 was measured by an increase over time; however, no trend was observed because the metric was inactivated and replaced by Metric 3.3.4 following DY 11. Participating DPHs reported that 75% of patients' medical records contained a list of current pharmaceuticals, including 76% among UCs and 74% among County DPHs (data not shown). DMPHs did not report any rates in DY 11.

## Metric 3.3.3 – High-Cost Pharmaceutical Ordering Protocols

This metric measured and tracked the percent of newly prescribed pharmaceuticals in which a specified ordering protocol was employed, relative to the number of newly prescribed targeted high-cost pharmaceuticals. The protocol components are described in the [PRIME Metric Specs, DY 13YE](#). Ordering protocols needed to list lower cost alternatives and appropriateness of therapy for identified/newly prescribed high cost pharmaceuticals.

For Metric 3.3.3, successful performance was measured by an increase in rates over time. For the 3 or more pharmaceuticals selected and tracked in DY 11 and DY 12 by DPHs, the rate of abiding by protocols increased from 1.3% of newly prescribed high-cost pharmaceuticals to 34%, respectively (Exhibit 334). The increase was concentrated among County DPHs. DMPHs did not report data in DY 11 for this metric. All 3 UCs and the sole DMPH reported a numerator of 5 or less for both rates in DY 12.

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**Exhibit 334: PRIME Self-Reported High-Cost Pharmaceutical Ordering Protocols for Three High-Cost Pharmaceuticals* in DY 11 and DY 12 for Metric 3.3.3**
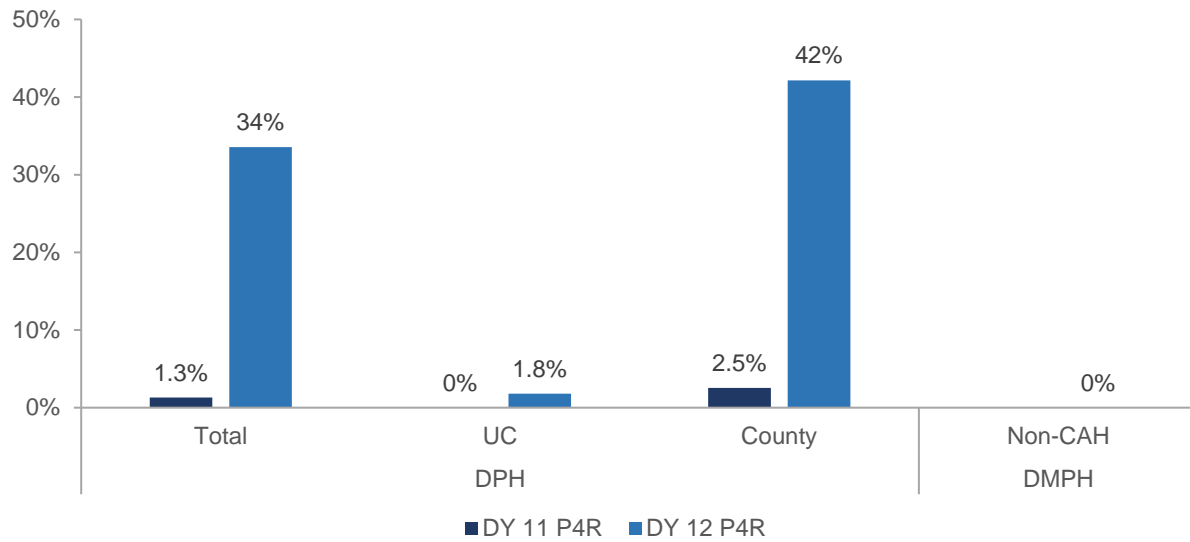


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DY 11: Rate #1, DY 12: Rate #2, P4R: pay-for-reporting, P4P: pay-for-performance, *Denotes innovative metric.*

Six high-cost pharmaceuticals were tracked in DY 12 and DY 13 and DPHs reported an increase from 16% to 47% (Exhibit 335). The DMPH reported a numerator of 0 for both rates in DY 12 and a numerator of 1 in DY 13 for both rates.

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**Exhibit 335: PRIME Self-Reported High-Cost Pharmaceutical Ordering Protocols for Six High-Cost Pharmaceuticals\* in DY 12 and DY 13 for Metric 3.3.3**
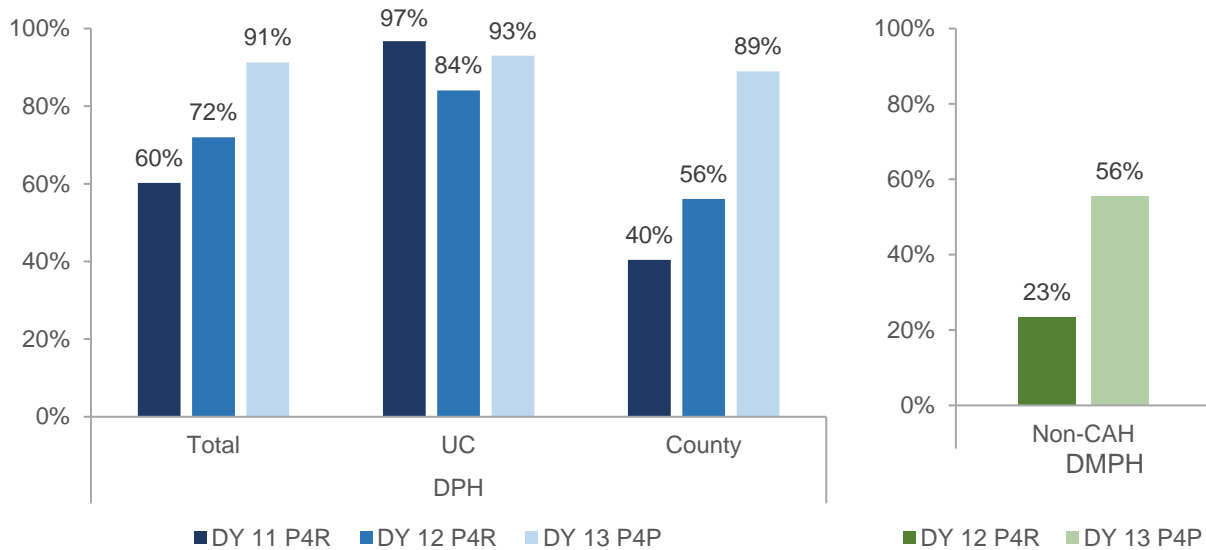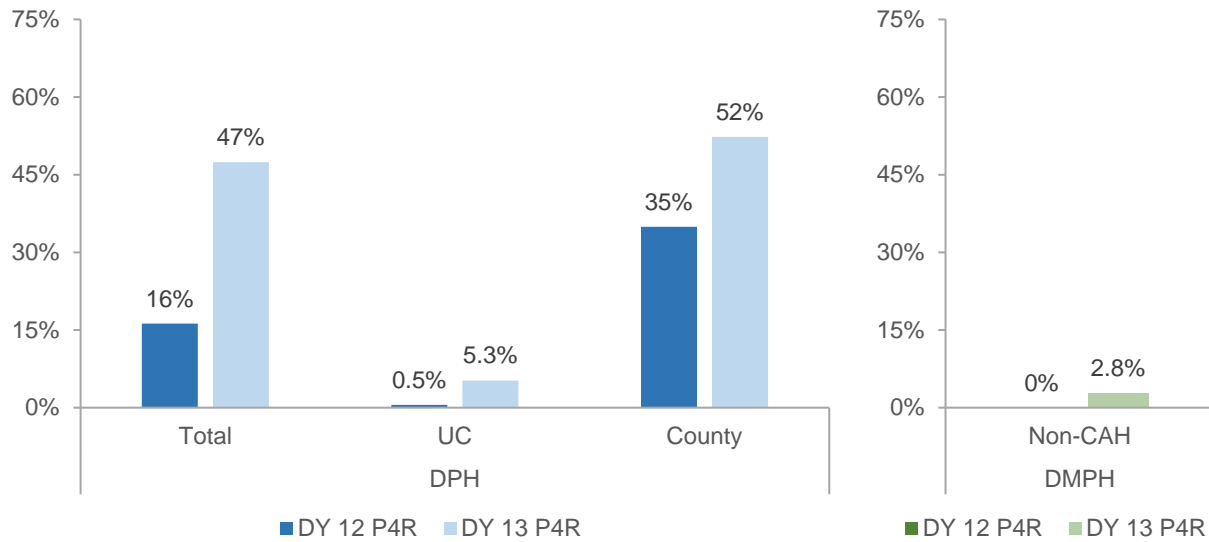


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital, DPH DY 12: Rate #1, DY 13: Rate #2, DY 11 data was not reported by DMPHs. P4R: pay-for-reporting, P4P: pay-for-performance, \* Denotes innovative metric.*

Nine high-cost pharmaceuticals were tracked in DY 13 by DPHs, and 29% of these were in compliance with protocols (data not shown).

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## Metric 3.3.4 – Documentation of Medication Reconciliation in the Medical Record for Patients on High-Cost Pharmaceuticals

In DY 12, a new metric was used to measure what proportion of medical records included medication reconciliation when patients were prescribed at least 2 high-cost pharmaceuticals (PRIME Metric Specs, DY 13YE). Hospitals were intended to increase efficiency of use of high-cost pharmaceuticals. This metric replaced metric 3.3.1 in DY 12. The intended direction of this metric was an increase in rates over time. Hospitals were required to target at least 3 new medications in each DY, so metrics in Project 3.3 had two rates, Rate #1: performance on the high cost pharmaceuticals targeted in the prior DY and Rate #2: performance on the high cost pharmaceuticals targeted for management in the current DY.

Three or more high-cost pharmaceuticals were tracked in DY 12 for Rate #1 by DPHs. They reported that 60% of medical records indicated such medication reconciliation, including 85% of UC and 41% of County DPHs (data not shown). The DMPH reported a numerator of zero for this metric in DY 12.

Six high-cost pharmaceuticals were tracked in DY 12 (Rate #2) and DY 13 (Rate #1). Among DPHs, the rate of reconciliation for high-cost pharmaceuticals changed from 70% to 78% with variations in these rates for UC and County DPHs (Exhibit 336). The participating Non-CAH DMPH indicated a rate of 71% in DY 13. The rate of 0 in DY 12 for the DMPH is due a numerator of 0.

**Exhibit 336: PRIME Self-Reported Documentation of Medication Reconciliation for Six High-Cost Pharmaceuticals\* in DY 12 and DY 13 for Metric 3.3.4**
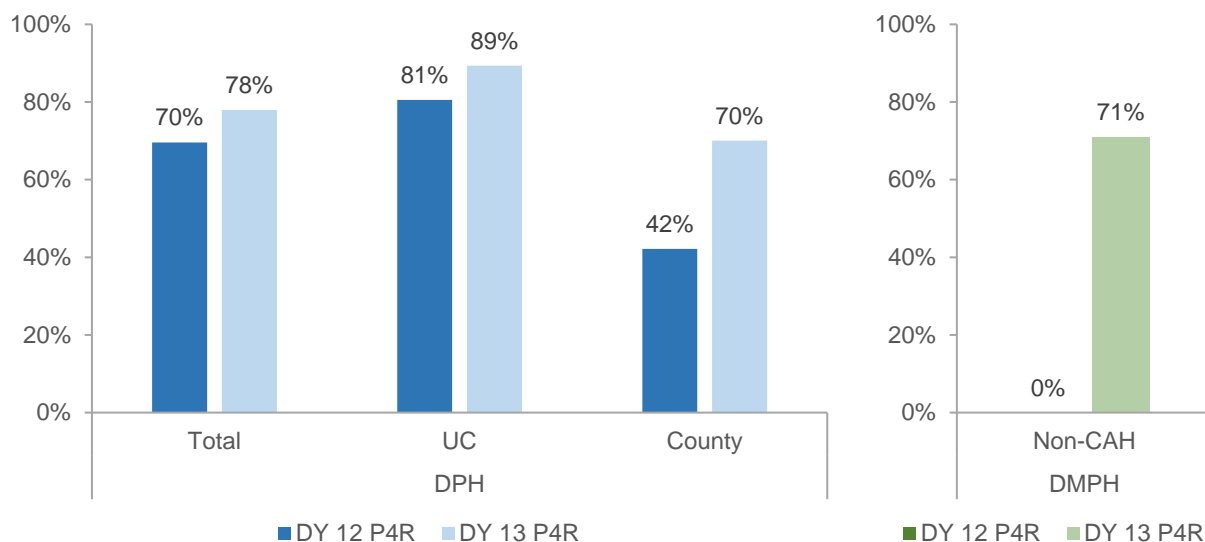
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Nine high-cost pharmaceuticals were tracked in DY 13, with DPHs reporting reconciliation of these medications for 82% of patients taking these pharmaceuticals (including 90% of UC and 68% of County; data not shown). The participating DMPH reported medication reconciliation for 71% of patients taking these pharmaceuticals.

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## Summary of Key Findings

Seven DPHs and 1 DMPH participated in Project 3.3 in order to improve stewardship of high-cost medications or moderate-cost medications with high prescribing volume and reported metric performance data. During PRIME, there was variation in the number of core components that were chosen by hospitals for implementation; the most common was implementing a multidisciplinary pharmaceuticals stewardship team.

Hospitals included a variety of medical conditions and different pharmaceuticals treating each of the selected conditions. Selection of pharmaceuticals was based on utilization levels overall and at inpatient and outpatient pharmacies. The rationale applied to the selection process was mainly based on the impact of pharmaceuticals on improvements in health (3) and on assessments of patient safety and cost data for medications with low-cost alternatives that had equal efficacy (3). Hospitals who participated in the 340B program to purchase outpatient pharmaceuticals at the manufacturer's wholesale price reported tools and software that allowed them to manage medications and use this data for the metrics.

When reporting on how this project was implemented, hospitals indicated mainly including physician champions (8) and pharmacists (8) or medical support staff (5) under PRIME. Hospitals tried to change provider practice pattern by increasing feedback frequency (5), more training guidelines (3) and providing mentoring (1). They also participated in 4 different learning collaboratives (Primary Care based Hepatitis C Treatment Expansion Initiative, CPQCC/Statewide Collaborative and AHRQ/National Collaborative). Participating hospitals reported a high level of difficulty in implementing Project 3.3 with the overall level of effort being higher for the DMPH (10 of 10) than the DPHs (7.7).

Data and metric-related challenges to implementation included lack of IT and health information infrastructure (4), variation in documentation and systems used (2), lack of processes being established system-wide (4), silo-ed operation of departments (2) and small denominators or numerators (2). These challenges were addressed by standardizing IT and health information processes, standardizing of processes (2) and implementing provider and staff training (2).

Performance in Project 3.3 was measured by 1 standard and 3 innovative metrics (denoted with an *). Metrics were 3.3.1* Adherence to Medications; 3.3.2 Documentation of Current Medications in the Medical Record; 3.3.3* High-Cost Pharmaceutical Ordering Protocols; and 3.3.4* Documentation of Medication Reconciliation in the Medical Record for Patients on High-Cost Pharmaceuticals. All metrics measured processes and increasing rates indicated improvement. Metrics had 2 rates, Rate #1 was a trend from

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the prior year and Rate #2 included the 3 additional targeted medications each year. DPHs improved performance rates in 2 metrics (3.3.3, 3.3.4) but mixed results in 1 metric (3.3.1); there was no trend for the metric that was discontinued following DY 11 (3.3.2). Due to limited data availability, the DMPH did not show a trend in 3 metrics (3.3.2, 3.3.3, 3.3.4), and performance did not improve for 1 metric (3.3.1).

Overall, hospitals succeeded in implementing this project by selecting high cost or moderate cost medications with high volume and improving the appropriate use of these medications. Hospitals used various selection criteria to identify their targeted medications, including the impact on health and patient safety. Hospitals focused on changing provider practices by incorporating additional team members such as a pharmacist and medical support staff, improved system-wide standardization of processes, and increased the frequency of feedback on performance as a strategy to promote stewardship. Hospitals reported mixed performance in metrics with different levels of improvements for DPHs and limited data availability for the DMPH.

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# Project 3.4 – Resource Stewardship: Blood Products

## Project Overview

Project 3.4 was designed to promote efficiency in management of blood products and transfusion, which are highly common and costly procedures. This goal was to be achieved by using evidence-based guidelines and decision support tools, developing and streamlining clinical processes, and tracking clinical outcomes to better manage blood products. Further detail on objectives and suggested core components of this project can be found in Attachment Q.

Project 3.4 was an optional project. Five hospitals participated in Project 3.4 and reported metric performance data and completed the interim survey. Of these, 2 were DPHs (Natividad and Ventura) and 3 were DMPH non-CAHs (El Camino, Antelope Valley, and Salinas Valley; Exhibit 337). No DPH UCs or DMPH CAHs participated in this project.

**Exhibit 337: PRIME Project 3.4 Participating Hospitals by Hospital Type and Demonstration Year (DY)**

|  | DY 11 | DY 12 | DY 13 |
|---|---|---|---|
| **Total Participating Hospitals** | 5 | 5 | 5 |
| **Total DPH** | 2 | 2 | 2 |
| **DPH UC** | 0 | 0 | 0 |
| **DPH County** | 2 | 2 | 2 |
| **Total DMPH** | 3 | 3 | 3 |
| **DMPH Non-CAH** | 3 | 3 | 3 |
| **DMPH CAH** | 0 | 0 | 0 |

*Source: Data provided by DHCS.*
*Notes: At the start of PRIME, DMPHs had the option to report Infrastructure Building Milestones, rather than reporting these metrics. DPH: designated public hospital, DMPH: district and municipal public hospital, UC: University of California, CAH: critical access hospital.*

Participating hospitals reported whether and when they implemented the 8 suggested core components of this project as an indication of their overall approach to managing blood products and transfusions (Exhibit 338). In the interim survey, 4 hospitals reported prior to PRIME that they had begun implementing a transfusion committee and 2 reported development of processes for evaluating the impact of blood products use. During PRIME, all or nearly all participating hospitals reported implementing all the core components except for participating in testing of novel metrics for a blood products management program.

**Exhibit 338: PRIME Project 3.4 Core Components**

| Core Component | Started Implementation Prior to PRIME | Continued or Selected Under PRIME |
|---|---|---|
| Implement or expand a patient blood products management program. | 0 | 4 |
| Implement or expand a Transfusion Committee consisting of key stakeholder physicians and medical support services, and hospital administration. | 4 | 5 |
| Utilize at least 1 nationally recognized patient blood management program methodology, e.g., The Joint Commission, American Association of Blood Banks (AABB) | 1 | 5 |
| Develop processes for evaluating impact of blood product use including appropriateness of use, adequacy of documentation, safety implications, cost, and departmental budget. Develop a data analytics process to track these and other program metrics. | 2 | 5 |
| Establish standards of care regarding use of blood products, including: a. Use of decision support/ Computerized physician order entry (CPOE), evidence based guidelines and medical criteria to support and/or establish standards. | 0 | 4 |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | 1 | 5 |
| Develop organization-wide dashboards to track provider level blood use patterns. Dashboard to include comparisons to peers and benchmarks. Contribute system level data for a similar dashboard across all public health care systems. | 0 | 4 |
| Participate in the testing of novel metrics for patient blood products management | 0 | 1 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: N=5 hospitals participating in Project 3.4, Hospitals that selected a core component may have implemented specific aspects rather than all potential activities of a core component, Since the interim survey, hospitals may have implemented or dropped activities under a core component.*

## Infrastructure

### Use of Blood Management Program Methodology

Blood management program methodology is an evidence-based, multidisciplinary approach to optimizing the care of patients who might need a transfusion. In the interim survey, all hospitals followed 1 or more blood management programs, including American Association of Blood Banks (AABB, 4), The Joint Commission (TJC, 3) and the Society for the Advancement of Blood Management (SABM, 1; data not shown). One hospital indicated that during PRIME, they were planning to obtain an AABB Certification.

## Standard Protocols for Use of Blood Products

In the interim survey, both participating DPHs (2) and 2 DMPHs reported having computerized physician order entries. Additionally, both the DPHs (2) and 1 DMPH employed decision support tools based on evidence-based guidelines.

One hospital discussed how new support tools had been added since the implementation of Project 3.4:

> *"We were successful in putting [in] place a pre-operative anemia screening process where we now modify the timeframe for [obstetrics] women to see the surgeon in the clinic for their pre-op evaluation where they do the history and physical." (Natividad)*

## Project Implementation

### Monitoring Blood Produce Use

In the interim survey, participating hospitals reported that they monitored the use of blood products by assessing the adequacy of documentation and appropriateness of use of blood products (2 DPHs, 3 DMPHs; Exhibit 339). Additional hospitals (1 DPH, 3 DMPHs) examined the safety implications of blood products. Others considered costs and departmental budgets.

**Exhibit 339: Elements in the Evaluation of Impact of Blood Products Under PRIME, by Hospital Type**
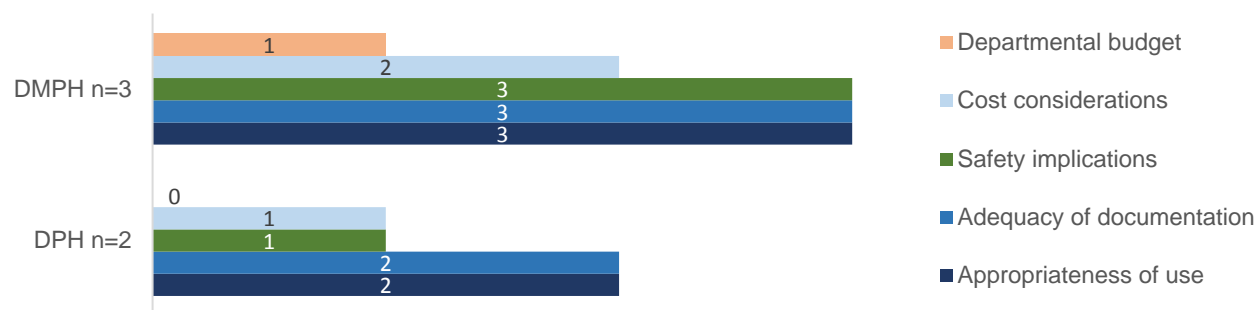


*Source: UCLA analysis of the interim survey, data received April to May 2018.*
*Note: N= 5 hospitals participating in Project 3.4. Notes: DPH: designated public hospital; DMPH: district and municipal public hospital.*

During interviews, 1 hospital discussed the benefits of documentation and another pointed out the difficulty of ensuring timely availability of data:

> *"Our data reporting has really helped us here and every week the pre-op nurses get an email report of the patient scheduled for surgery whether or not there's a pre-operative hemoglobin there and then they can modify when they do their pre-op visit based on that if they have to get it in, or they can change the surgery's scheduling." (Natividad)*

*"It's hard since most of these patients do go outside of our hospital to have these labs done for elective surgery… more than half the time, [blood lab requests are] not placed 14 to 45 days prior, it's days before the surgery or even the day of surgery." (Antelope Valley)*

In the interim survey, hospitals reported on their most effective quality improvement efforts to improve management of blood products using Plan-Do-Study-Act (PDSA) cycles (data not shown). Three hospitals reported that they used PDSAs to change the order sets. For example, requiring that the provider identify the type of indication for each unit, to discourage automatically ordering 2 units of blood. The second most commonly mentioned change using PDSAs was updating the computerized physician order entry to include emergency situations and to follow established guidelines about when transfusion is appropriate, mentioned by 2 hospitals.

Two hospitals used PDSAs to implement pre-op anemia screening protocols, such as developing a registry to track patients scheduled for surgery, so the outpatient provides could ensure the patient had timely pre-op hemoglobin testing. One hospital implemented real-time audits to provide immediate feedback to providers.

## Participation in Learning Collaboratives

Two DPHs and 3 DMPHs reported participating in learning collaboratives. These included: PDCA (plan–do–check–act or plan–do–check–adjust) cycle resources, Society for the Advancement of Blood Management (SABM) annual meeting, video presentations, and shared clinical references via reference library resources, as well as the collaboratives hosted by DHCS, Harbage, and DHLF.

## Level of Effort

Hospitals were asked in the interim survey to rate their level of effort on various domains of project implementation. On a scale of low to high (1 to 10) effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10). DPH hospitals reported spending a high level (8.5) of overall effort in implementing Project 3.4 and DMPH hospitals reported spending a medium level (6.0) of overall effort to implement (Exhibit 403). Among DPHs, ratings of effort were high for engaging internal stakeholders (9.5). On average, DMPHs reported requiring high effort for conducting staff training (7.3) and meeting implementation requirements (7.0).

## Challenges and Solutions to Resource Stewardship: Blood Products

### Data-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 data-related challenges and solutions in implementing Project 3.4 (Challenges: Exhibit 404; Solutions Exhibit 405). The top

challenge cited by of hospitals (2) was variation in documentation within the system by providers and staff. The second challenge cited by the majority of hospitals (3) was IT infrastructure, lacking data query ability, tracking, or reporting functions. The top solution identified by the majority of hospitals (3) standardizing processes for documentation. The second solution identified by the hospitals (1) was developing and clarifying operational definitions or systems.

## Metric-Related Challenges and Solutions

In the interim survey, hospitals reported their top 2 metric-related challenges and solutions in implementing Project 3.4 (Challenges Exhibit 406: ; Solutions Exhibit 407). Hospitals reported a variety of different challenges and solutions and no single challenge or solution was identified by the majority of hospitals. The top challenges cited by the hospitals were already performing at a high level (1), silo-ed departments and difficulty collaborating (1), and small denominator or numerator (1). The second challenge cited by the hospitals (2) was inadequate availability of services. The top solutions identified by the hospitals was implementing provider and staff training (1) and increased capacity and establishing meetings across teams (1). Three hospitals reported that their challenges had not been resolved.

During interviews, a hospital indicated the challenges of small denominators, metric time-frames, and alignment of the project with existing goals:

> *"Our participation in them doesn't align with the operations and care that we provide for our patients [and] we cannot meet the 30 patient volume threshold... It was very challenging to meet the metrics due to the time frames specified in the metric specification. Some of our selected elective surgeries are scheduled less than 7 days in advance and that makes it challenging to have a pre-op anemia screening within 14-45 prior to surgery." (Salinas Valley)*

## Hospital-Reported Metric Performance

Performance of hospitals in Project 3.4 was measured by 5 metrics (Exhibit 340). All of these metrics were considered innovative and originated from the American Association of Blood Banks (AABB), but starting in DY 11, the metric steward became the Joint Commission (Joint Commission). Three metrics were intended to show progress by decreasing rates over time and 2 showed improvement by increasing rates over time. UCLA categorized 4 as process metrics and 1 as an outcome metric.

**Exhibit 340: PRIME Project 3.4 Metric Details**

| Metric Name | Metric ID Number | Measure Steward | NQF Number | Achievement Measured by Increase or Decrease | Measures Care Delivery Process vs. Outcomes of Care |
|---|---|---|---|---|---|
| ePBM-01 Pre-Op Anemia Screening, Selected Elective Surgical Patients | 3.4.1* | AABB/TJC | N/A | Increase | Process |
| ePBM-02 Pre-Op Hemoglobin Level, Selected Elective Surgical Patients | 3.4.2*^ | AABB/TJC | N/A | Increase | Process |
| ePBM-03 Pre-Op Type and Crossmatch, Type and Screen, Selected Elective Surgical Patients | 3.4.3* | AABB/TJC | N/A | Increase | Process |
| ePBM-04 Initial Transfusion Threshold | 3.4.4*^ | AABB/TJC | N/A | Increase | Process |
| ePBM-05 Outcome of Patient Blood Management, Selected Elective Surgical Patients | 3.4.5* | AABB/TJC | N/A | Decrease | Outcome |

*Source: PRIME Metrics Specs, DY 13YE*
*Notes: NQF: National Quality Forum, AABB/TJC: American Association of Blood Banks/The Joint Commission, ePBM: Electronic Patient Blood Management, * Denotes innovative metric. ^ Metric included a stratification that was not available in the data analyzed by UCLA.*

Hospitals reported metrics data semiannually; UCLA analyzed the year-end reports for each demonstration year (DY). Data included the rate, as well as the numerator and denominator used to calculate that rate for each metric, for each DY. UCLA calculated the weighted average for each metric by summing the numerators and the denominators separately for all hospitals that reported data, and then divided the overall numerator by the overall denominator. This process was repeated for each metric. Metrics were

designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the 5 demonstration years of PRIME. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. DMPHs did not report data in DY 11 for Project 3.4.

## Metric 3.4.1 –Pre-Op Anemia Screening, Selected Elective Surgical Patients

Metric 3.4.1 measured the proportion of selected elective surgical patients in the Project 3.4 Target Population aged 18 years and over with documentation of preoperative anemia screening between 14-45 days before their surgery start date (ePBM-01; PRIME Metric Specs, DY 13YE). Hospitals were intended to increase earlier detection of anemia in order to intervene with effective blood resource management by applying the most appropriate transfusion-sparing strategy and avoid subsequent risks of potential postsurgical complications.

The intended direction of this metric was an increase in rates over time. Among the DPHs, there was an increase in the weighted average rates from 26% in DY 11 and DY 12 to 48% in DY 13 (Exhibit 341). The DMPHs started implementation in DY 12, and preoperative anemia screening rates remained stable at 33% for DY 12 and DY 13.

**Exhibit 341: PRIME Self-Reported Pre-Op Anemia Screening\* Rates for Metric 3.4.1**
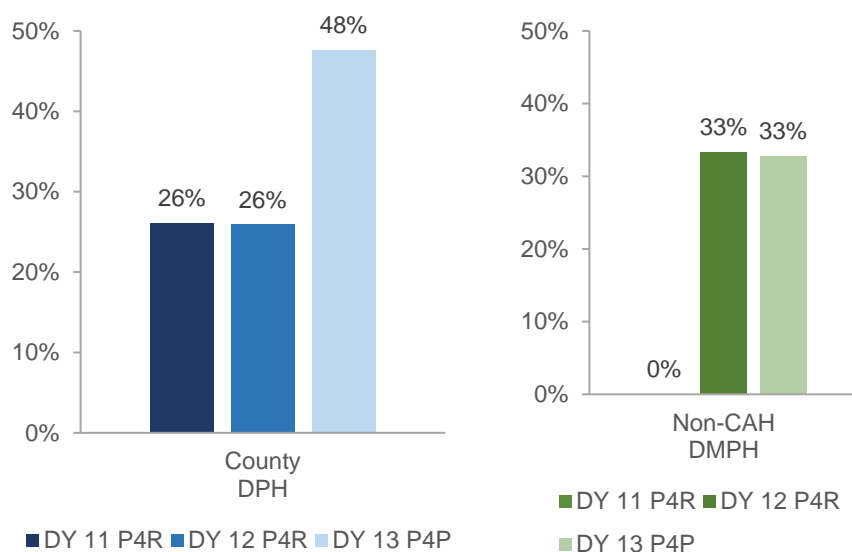


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, \* Denotes innovative metric.*

## Metric 3.4.2 –Pre-Op Hemoglobin Level, Selected Elective Surgical Patients

Metric 3.4.2 measured the number of patients who received a preoperative hemoglobin level laboratory test within 45 days prior to the start of their elective surgical procedure among patients in the Project 3.4 Target Population aged 18 and over who received a whole blood or packed red blood cell transfusion (ePBM-02; PRIME Metric Specs, DY 13YE). Hospitals were intended increase testing for hemoglobin levels to identify patients with suboptimal hemoglobin levels. Through early detection, hospitals would have the opportunity to implement the most appropriate transfusion-sparing blood management strategies and reduce blood transfusions and adverse surgical procedure outcomes.

Achievement in this metric would be measured by increasing the pre-operative testing, decreasing the number of transfusions that fall outside of the hemoglobin level criteria, and shifting the stratified rates over time. However, data about the hemoglobin level stratification was not consistently available to assess whether there was a shift in the metric. The DPHs maintained relatively stable rates for reporting preoperative hemoglobin tests between DY 11 and DY 13. However, the DY 11 denominator was under 10 for both DPHs; in DY 12, 3 of the 5 hospitals had a denominator at or below 10; and in DY 13, 4 of the 5 had a denominator at or below 18 (Exhibit 342). The rates among the DMPHs slightly decreased from 95% for DY 12 to 93% in DY 13.

**Exhibit 342: PRIME Self-Reported Pre-Op Hemoglobin Level Assessment\* Rates for Metric 3.4.2**
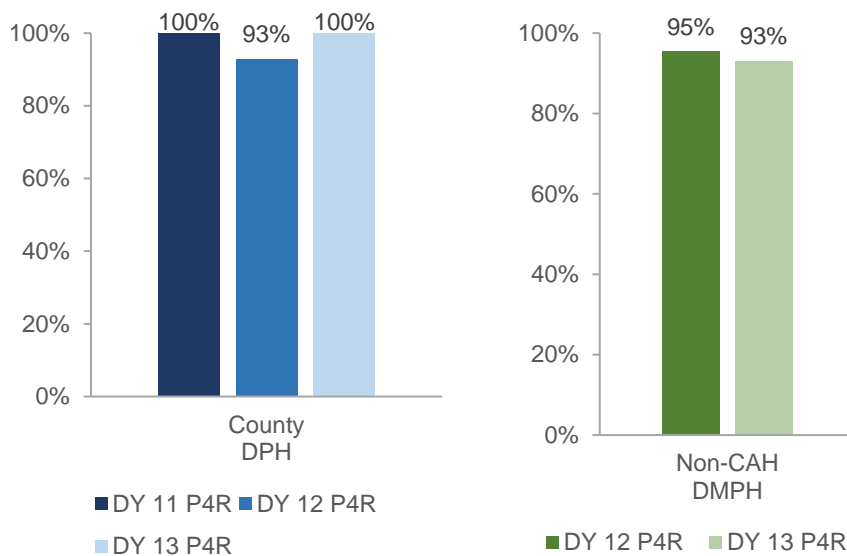
*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital,*
*CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, ***
*Denotes innovative metric.*

## Metric 3.4.3 – Pre-Op Type and Crossmatch, Type and Screen, Selected Elective Surgical Patients

Metric 3.4.3 measured the proportion of selected elective surgical patients in the Project 3.4 Target Population aged 18 and over who received a Pre-Operative blood type status screening or crossmatch within 45 days prior to the start of their surgical procedure (ePBM-03; PRIME Metric Specs, DY 13YE). This metric was intended to encourage hospitals to improve protocols for earlier identification of patients' blood type and subsequently enhance blood availability and reduce surgery delays.

The intended direction of this metric was an increase over time. For the DPHs, there was a consistent increase in blood type screening and crossmatch rates from 77% in DY 11 to 87% in DY 13 (Exhibit 343). The DMPHs had decreasing rates from 71% in DY 12 to 53% in DY 13. DMPHs explained the decrease in rates by the challenge of screening patients ahead of time in case of acute emergencies, or without medical justification for screening in low-risk procedures.

**Exhibit 343: PRIME Self-Reported Pre-Op Crossmatch and Screening\* Rates for Metric 3.4.3**
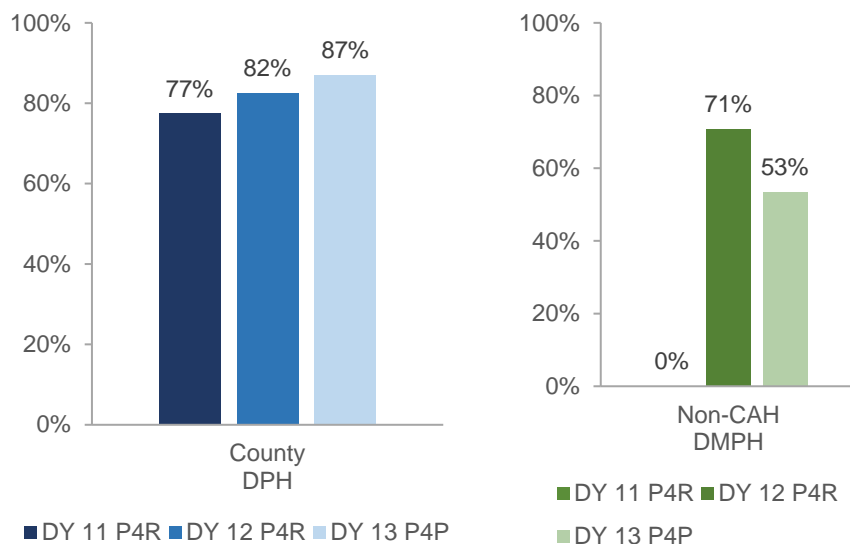


*Source: UCLA analysis of the self-reported data, data received July 2019.*
*Notes: N=2 DPHs and 3 DMPHs participated in Project 3.4, DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, \*Denotes innovative metric.*

## Metric 3.4.4 –Initial Transfusion Threshold

Metric 3.4.4 measured the proportion of patients in the Project 3.4 Target Population aged 18 and over receiving their first unit of a whole blood or packed cell transfusion who also received a laboratory test that assessed preoperative hemoglobin levels within 45 days prior to the start of their blood transfusion (ePBM-04; PRIME Metric Specs, DY 13YE). Hospitals were intended to administer transfusions after assessing proper hemoglobin levels in order to reduce transfusion-associated complications, including mortality and infection.

The purpose of this measure is to utilize initial transfusion hemoglobin thresholds to shift the proportion of initial units infused for patients with the higher hemoglobin values to those with lower hemoglobin values. If the stratified data had been available for UCLA analysis, successful performance would be measured by increasing rates over time. However, stratified results by hemoglobin level prior to the first transfusion were not available due to the small population size and limited number of hospitals that reported such data each year. Both DPHs and DMPHs maintained rates of 99-100% throughout implementation of this metric, indicating that almost all PRIME patients who underwent a blood transfusion had a laboratory test that assessed hemoglobin levels prior to the procedure (Exhibit 344) however, UCLA was not able to determine whether a shift in transfusions for lower hemoglobin values occurred.

**Exhibit 344: PRIME Self-Reported Initial Transfusion\* Rates for Metric 3.4.4**
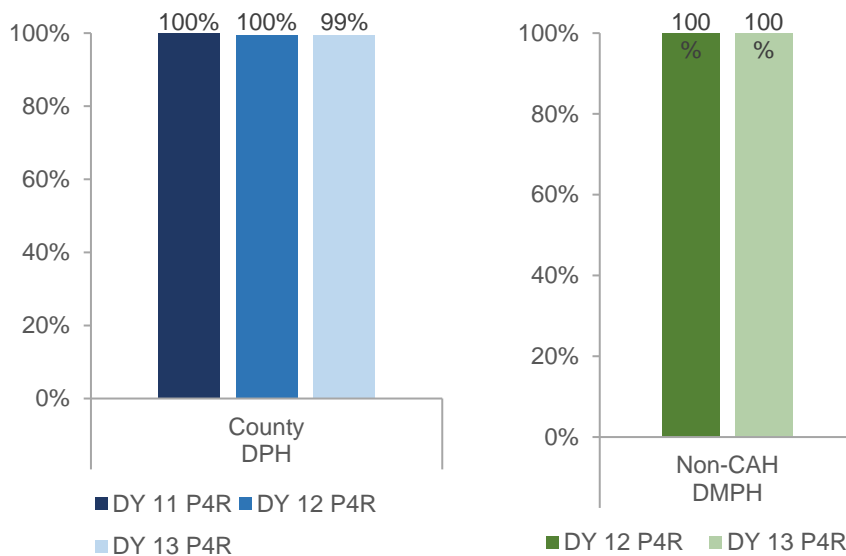
## Metric 3.4.5 – Outcome of Patient Blood Management, Selected Elective Surgical Patients

Metric 3.4.5 was designed to determine which patients received a red blood cell transfusion among elective surgical patients in the Project 3.4 Target Population aged 18 years and older who had a preoperative anemia screening (ePBM-05; PRIME Metric Specs, DY 13YE). This metric was intended to encourage hospitals to reduce rates of transfusions of elective surgical patients receiving allogenic or directed donation red blood cell transfusions.

Achievement was measured by a decrease in outcomes. For the DPHs, weighted average rates increased from 3% in DY 11 to 12% in DY 12 but decreased to 6% in DY 13 (Exhibit 345). For the DMPHs, transfusion rates increased from 5% in DY 12 to 25% in DY 13. Due to barriers in data management and differences in conventional physician practices, some hospitals did not meet the 30-patient volume threshold for certain DYs.

**Exhibit 345: PRIME Self-Reported Blood Management\* Rates for Metric 3.4.5**
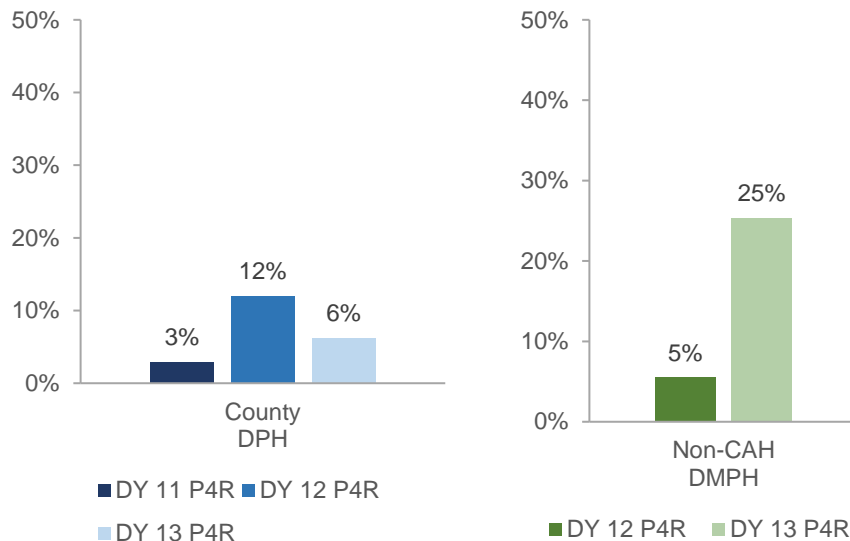


*Source: UCLA analysis of the self-reported data, July 2019.*
*Notes: N=2 DPHs and 3 DMPHs participated in Project 3.4, DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital, P4R: pay-for-reporting, P4P: pay-for-performance, \*Denotes innovative metric.*

## Summary of Key Findings

Project 3.4 was designed to promote efficiency in the management of blood products and transfusion, which are a highly common and costly procedure. Two DPHs and 3 DMPHs participated and reported metric performance data and completed the interim survey. During PRIME, all or nearly all participating hospitals reported implementing all the core components, except for participating in testing of novel metrics for a blood products management program. Hospitals implementing this project reported applying 1 or more blood management programs from the American Association of Blood Banks (AABB). When asked about the specific infrastructure established, hospitals indicated using computerized physician order entries (4) and specific decision support tools based on evidence-based guidelines (3).

When detailing on specific measures supporting the implementation of this project, hospitals monitored the use of blood products by assessing the adequacy of documentation and appropriateness of use of blood products (5) and examination of safety implications of blood products (4). The most effective quality improvement efforts using Plan-Do-Study-Act (PDSA) cycles have been the change of order sets (3), updating computerized physician order entries to include emergencies and follow transfusion guidelines (2), and implementation of pre-op anemia screening protocols (2). All 5 hospitals mentioned participation in learning collaboratives. The overall level of difficulty in implementing Project 3.4 was high for DPHs (8.5 of 10) and medium for DMPHs (6). The highest level of effort has been spent on engaging internal stakeholders (4) and conducting staff training, respectively meeting implementation requirements (3).

Data and metric-related challenges to implementation included variation in documentation within the system (2), lack of IT infrastructure (3), the challenge that hospitals were already performing at a high level (1), silo-ed operation of departments (1), small denominators or numerators (1) and inadequate availability of services (2). These most successful solutions to these challenges were standardization of documentation processes (3), development and clarification of operational definitions or systems (1), implementation of provider and staff training (1), increased capacity and establishing meetings across teams (1).

Metrics were 3.4.1* ePBM-01 Pre-Op Anemia Screening, Selected Elective Surgical Patients; 3.4.2* ePBM-02 Pre-Op Hemoglobin Level, Selected Elective Surgical Patients; 3.4.3* ePBM-03 Pre-Op Type and Crossmatch, Type and Screen, Selected Elective Surgical Patients; 3.4.4* ePBM-04 Initial Transfusion Threshold; and 3.4.5* ePBM-05 Outcome of Patient Blood Management, Selected Elective Surgical Patients. Performance in Project 3.4 was measured by 5 innovative metrics. Of these, 4 measured

processes (3.4.1, 3.4.2, 3.4.3, 3.4.4) and 1 measured outcomes (3.4.5). All hospitals were above 90% for 3.4.2 and 3.4.4; however UCLA was not able to assess whether there was an improvement, due to the absence of consistent stratified data and a large enough sample size. DPHs improved in 2 metrics (3.4.1, 3.4.3), reported steady results at 100% in 1 metric (3.4.4) and mixed results in 2 metrics (3.4.2 and 3.4.5). DMPHs reported no change in rates for 2 metrics (3.4.1 and 3.4.4) and inconsistent or declining results for 3 metrics (3.4.2, 3.4.3, and 3.4.5). The size of the denominator was a challenge to reporting performance and multiple hospitals did not meet the 30-patient volume threshold for Metrics 3.4.2 and 3.4.5.

Overall, hospitals made significant progress in implementing Project 3.4 by implanting blood products management programs and methodologies; establishing a transfusion committee; and evaluating the impact of using blood products, including performance feedback and dashboards. Hospitals generally had improvements in the majority of metrics as well as overall high performance in 2 metrics. However, they varied in their progress in project implementation.

# Trends in Achievement of Metric Rates for PRIME and Comparison Patients

UCLA assessed the impact of PRIME using the difference-in-difference (DD) methodology. This methodology consisted of identifying changes in trends in specific metrics before (baseline) and during PRIME among patients of hospitals participating in PRIME and similar patients who received care elsewhere. To do this, UCLA used Medi-Cal enrollment and claims data to identify PRIME and comparison patients. Patient attribution to PRIME and selection of the final analytic samples for the DD analyses is described in detail in the Appendix D. Detailed Quantitative (Difference-in-Difference) Data and Methodology (Methods Appendix). The baseline period included July 2014 to June 2016, with the latter fiscal year overlapping with the first six months of PRIME implementation. The inclusion of DY 11 (January 2016 to June 2016) in the baseline period was because there were data limitations in the Medi-Cal data prior to July 2014 (). Furthermore, DPHs were also reporting DY 11 as the baseline for their performance metrics, and the majority of DMPHs had not begun implementation or reporting of metrics in this year. Subsequently, the PRIME implementation period used in the DD analyses was DY 12 and DY 13. Data for DY 14 was incomplete at the time of preparation of this report. One limitation to this approach was that DY 12 was a baseline year for DMPHs before PRIME implementation truly began for these hospitals.

To conduct the DD analyses, UCLA created a final analytic sample from a master dataset of over 2.4 million Medi-Cal enrollees who had received at least one service from PRIME or comparison hospitals (Methods Appendix). The DPH analytic sample included 131,049 unique Medi-Cal enrollees who had two or more primary care visits to a DPH in both DY 12 and DY 13 (Exhibit 365). The DPH comparison sample included 197,112 Medi-Cal enrollees with similar characteristics. The DMPH sample included 111,208 unique Medi-Cal enrollees who had two or more encounters of any type to a DMPH in both DY 12 and DY 13. The DMPH comparison sample included 340,201 Medi-Cal enrollees with similar characteristics.

For analyses of metrics that reflected individual-level changes such as increased rates of breast and cervical cancer screening, each sample was further restricted to those who were observed for a minimum of two months in the baseline and post periods (DY 10, DY 11, DY 12, and DY 13). This criterion restricted the DPH sample to 95,164 and the DMPH sample to 71,715. To analyze each metric, the sample was further restricted to the appropriate denominator identified in the PRIME Reporting Manual DY 13YE unless otherwise noted (Construction of Process and Outcome Metrics). For analyses of

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metrics that reflected change in specific events (e.g., readmissions) or procedures (e.g., cesarean sections), the DPH and DMPH samples were only restricted to the appropriate denominator identified in the PRIME Reporting Manual DY 13YE unless otherwise noted. The same methodology was applied to identify the DPH and DMPH comparison analytic samples. UCLA also constructed similar analytic samples in OSHPD data (Methods Appendix).

**Exhibit 346: Sample Sizes for PRIME Medi-Cal Analyses**

| PRIME Samples for DD Analyses | | | | |
|---|---|---|---|---|
| Sample | DPH | DPH Comparison | DMPH | DMPH Comparison |
| Final Analytic Sample | 131,049 | 197,112 | 111,208 | 340,201 |
| Individual-Level Analytic Sample | 95,164 | 157,294 | 71,715 | 251,390 |

*Source: UCLA analysis of Medi-Cal data, January to August 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*
*DD: difference-in-difference. Individual-level analytic sample was further restricted based on the denominator for each metric. The event-level sample was based on the overall analytic sample and further restricted based on the denominator for each metric.*

## Characteristics and Service Utilization of PRIME Medi-Cal Samples

The data show that the DPH sample was somewhat older, had more Asian Americans and Pacific Islanders, and fewer English speakers, compared to the DMPH sample (Exhibit 347). In contrast, patients in the DMPH sample were more often white or Latino and female.

**Exhibit 347: Sociodemographic Characteristics of PRIME Final Analytic Samples**

| | DPH | DMPH |
|---|---|---|
| N | 131,049 | 111,208 |
| Age | | |
| 0-18 | 22.6% | 25.9% |
| 19-35 | 15.4% | 22.5% |
| 36-50 | 18.5% | 18.2% |
| 51-64 | 32.8% | 21.0% |
| 65+ | 10.8% | 12.4% |
| Race/Ethnicity | | |
| White | 19.8% | 29.6% |
| Latino | 40.8% | 51.1% |
| African American | 10.2% | 4.5% |
| Asian American and Pacific Islander | 15.4% | 4.6% |
| Native American/Alaska Native | 0.4% | 0.9% |
| Other | 6.4% | 2.9% |
| Unknown | 7.0% | 6.4% |
| Gender | | |
| Female | 58.6% | 62.9% |
| Male | 41.4% | 37.1% |
| Language | | |
| English | 59.1% | 64.4% |
| Spanish | 30.1% | 32.2% |
| Chinese | 2.3% | 0.3% |
| Vietnamese | 1.8% | 0.2% |
| Other[1] | 4.9% | 1.3% |

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| | DPH | DMPH |
|---|---|---|
| Unknown | 1.7% | 1.7% |

*Source: UCLA analysis of Medi-Cal data, January to August 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.* [1]: *Other languages include American Sign Language, Japanese, Korean, Tagalog, Cambodian, Armenian, Ilocano, Mien, Hmong, Lao, Turkish, Hebrew, French, Polish, Russian, Portuguese, Italian, Arabic, Samoan, Thai, Farsi, and other non-English languages.*

The examination of behavioral and physical health conditions of the PRIME final analytic sample indicated a notable number of patients with behavioral health conditions such as anxiety, depression, or substance use disorders (Exhibit 348). Comparing the DPH sample with the DMPH sample showed that the former had a lower prevalence of behavioral health conditions, a higher prevalence of physical health conditions, and higher overall diagnosis severity than the latter.

**Exhibit 348: Behavioral and Physical Health Conditions of PRIME Final Analytic Samples in Demonstration Year (DY) 13**

| Health Conditions | DPH | DMPH |
|---|---|---|
| Behavioral Health | | |
| Anxiety | 11.6% | 14.8% |
| Depression | 11.8% | 11.8% |
| Serious Mental Illness (SMI) | 7.9% | 9.3% |
| Substance Use Disorder | 10.4% | 10.8% |
| Alcohol Use Disorder | 6.5% | 6.3% |
| Physical Health | | |
| Hypertension | 33.7% | 28.3% |
| Diabetes | 23.5% | 18.3% |
| Hyperlipidemia | 15.0% | 13.4% |
| Obesity | 12.3% | 11.0% |
| Asthma | 9.9% | 10.9% |
| Chronic Obstructive Pulmonary Disease | 6.8% | 9.3% |
| Stroke | 2.8% | 3.0% |
| Diagnosis Severity | | |
| Average CDPS Risk Score | 1.2 | 1.0 |

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*Notes: SMI = serious mental illness, which included schizophrenia, bipolar disorder, and recurrent depression. CDPS: Chronic Illness and Disability Payment System, measuring the diversity of diagnoses and burden of illness and used here as an indicator of severity. DPH: designated public hospital, DMPH: district and municipal public hospital.*

The DPH sample was enrolled for an average of 9.0 months in DY 13, and this length was shorter for the DMPH sample at an average of 7.9 months (Exhibit 349). Examining the health care utilization of the DPH analytic sample indicated that in DY 13, 97% had any evaluation and management (E&M) visits, 11% used mental health services (MHS), 42% ever had emergency room (ER) visits, and 16% ever had inpatient admissions. In addition, the DPH sample had 782 E&M visits and lower numbers of MHS visits (51), ER visits (127), and inpatient admissions (34) per 1,000 member months. Compared to the DPH sample, the DMPH sample had a lower level of use of E&M (81%) and MHS visits (8%) but a higher level of use of ER visits (51%) and inpatient admissions (19%).

**Exhibit 349: Enrollment and Service Utilization of PRIME Final Analytic Samples in Demonstration Year (DY) 13**

| Medi-Cal Enrollment Length and Service Utilization | DPH | DMPH |
|---|---|---|
| Length of Medi-Cal Enrollment | | |
| Average Number of Months in Medi-Cal | 9.0 | 7.9 |
| Evaluation and Management (E&M) Visits | | |
| Ever had an E&M Visit | 97% | 81% |
| E&M Visits per 1,000 Member Months | 782 | 613 |
| Mental Health Services (MHS) | | |
| Ever Received MHS | 11% | 8% |
| MHS per 1,000 Member Months | 51 | 39 |
| Emergency Room (ER) Visits | | |
| Ever Had an ER Visit | 42% | 51% |
| ER Visits per 1,000 Member Months | 127 | 222 |
| Inpatient Admissions (IP) | | |
| Ever Had an IP Admission | 16% | 19% |
| IP Admissions per 1,000 Member Months | 34 | 42 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*
*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

UCLA examined the impact of a less restrictive sampling methodology by requiring two or more primary care visits to a participating hospital in either DY 12 or DY 13. This method led to a 3-fold increase in the DPH and a two-fold or greater increase in the DMPH sample (Methods Appendix). The more restrictive samples differed in age, race/ethnicity, and English speakers than the less restrictive samples. In addition, the

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more restrictive samples had a higher burden of disease and higher level of use than the less restrictive samples. UCLA chose the more restrictive samples because it controlled for the longer time period of exposure to PRIME interventions.

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## Difference-in-Difference Analysis

### Domain 1 Metrics

Four Domain 1 metrics could be calculated following the PRIME Reporting Manual DY 13YE metric specifications, including two process metrics (1.6.2: Breast Cancer Screening, 1.6.3: Cervical Cancer Screening) and two outcome metrics (1.2.8: Prevention Quality Indicators (PQI), 1.3.4: Post Procedure Emergency Department (ED) Visits) using the Medi-Cal samples described above. UCLA calculated two additional process metrics for Project 1.6 (annual human papillomavirus screening rates, annual Pap screening rates) and two additional outcome metrics for Project 1.2 (proportion of patients who had a primary care visit following diabetes diagnosis, proportion of patients who had a primary care visit following a hypertension diagnosis) that involved the same conditions as Metrics 1.2.4.d and 1.2.5.b but could not be constructed as indicated by DHCS in metric specifications due to limitations of using claims data. UCLA created two additional outcome metrics related to Project 1.2 (number of primary care visits per 1,000 Medi-Cal member months) and Project 1.3 (number of specialty care visits per 1,000 Medi-Cal member months), which were not required as performance metrics from PRIME hospitals but were conceptualized as informative intermediate outcomes of potential changes in patterns of delivery of primary and specialty care (Methods Appendix). Demographic information for each metric is included in Description of Patients in Each Group for the Difference in Difference Analysis.

The DD analyses using Medi-Cal samples reflected the comparison of changes in trends for PRIME and comparison Medi-Cal beneficiaries or patients. The DD analyses using OSHPD data reflected the comparison of changes in trends for PRIME and comparison hospitalizations. As a result, these results should be interpreted as complementary.

Assessment of differences in the required Domain 1 metric values achieved before and after PRIME implementation indicated significant improvements in two PRIME program process measures, 1.6.2 and 1.6.3, for the DPH patients vs. their respective comparison group (Exhibit 350). For example, the rate of breast cancer screening after PRIME increased by 18.19% compared to before PRIME implementation for DPH patients. This rate also increased among the comparison group (12.65%). However, the increase for Medi-Cal patients in participating DPH was significantly greater than the comparison group (DD: 5.53%). Similarly, the changes in cervical cancer (Pap and HPV) screening (DD: 3.10%), as well as annual HPV screening (DD: 4.00%) and annual Pap smear rates (DD: 4.28%), which were surrogate metrics, were greater for Medi-Cal patients of participating DPHs than the comparison group. The trends for these metrics for DMPH patients were different, particularly for breast and cervical cancer screening

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where the increase among DMPH patients was significantly lower than the increase among their comparison group. Since DMPH patients were defined as having any two visits not limited to primary care, influencing changes would be harder for these types of metrics.

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**Exhibit 350: Difference-in-Difference Analyses of Domain 1 Process Measures between PRIME Medi-Cal Samples**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| 1.6.2 – Breast Cancer Screening | | | | | | | |
| DPH PRIME | 7,900 | 46.22 | 60.82 | 69.27 | 74.14 | 18.19* | 5.53* |
| DPH Comparison | 30,362 | 43.75 | 58.68 | 63.71 | 64.03 | 12.65* | |
| DMPH PRIME | 1,576 | 32.03 | 44.40 | 43.81 | 44.26 | 5.82* | -4.94* |
| DMPH Comparison | 44,589 | 40.13 | 52.93 | 57.37 | 57.22 | 10.76* | |
| 1.6.3 – Cervical Cancer Screening | | | | | | | |
| DPH PRIME | 11,362 | 21.86 | 35.81 | 48.14 | 52.04 | 21.25* | 3.10* |
| DPH Comparison | 54,237 | 33.53 | 49.98 | 58.64 | 61.19 | 18.16* | |
| DMPH PRIME | 2,725 | 28.31 | 43.57 | 49.50 | 50.46 | 14.04* | -3.01* |
| DMPH Comparison | 80,629 | 31.94 | 47.74 | 55.67 | 58.11 | 17.05* | |
| Annual Human Papillomavirus Screening Rates[+] | | | | | | | |
| DPH PRIME | 12,441 | 3.01 | 5.06 | 14.74 | 11.97 | 9.32* | 4.00* |
| DPH Comparison | 59,948 | 5.69 | 9.35 | 12.77 | 12.91 | 5.32* | |
| DMPH PRIME | 3,099 | 2.61 | 4.84 | 9.71 | 13.05 | 7.66* | 2.19* |
| DMPH Comparison | 88,366 | 4.79 | 8.68 | 11.97 | 12.43 | 5.47* | |
| Annual Pap Screening Rates[+] | | | | | | | |
| DPH PRIME | 12,441 | 14.16 | 16.21 | 23.22 | 16.76 | 4.80* | 4.28* |
| DPH Comparison | 59,948 | 21.15 | 23.86 | 24.59 | 21.46 | 0.52* | |
| DMPH PRIME | 3,099 | 17.84 | 19.81 | 19.05 | 19.47 | 0.44 | -0.52 |
| DMPH Comparison | 88,366 | 20.37 | 22.46 | 23.75 | 20.99 | 0.96* | |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. * Denotes $p < 0.05$ for difference-in-difference analysis. [+] Denotes innovative and surrogate metric for Project 1.6, which determine specific screening test rates on an annual basis in contrast to a look-back period specified by the PRIME Reporting Manual DY 13YE for Metric 1.6.3. Values for rate measures are percentage points.*

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Prevention Quality Indicators (PQI) are a composite set of ambulatory care sensitive conditions, including diabetes, hypertension, and asthma, which high-quality outpatient care and early intervention can prevent the need for hospitalization or further severe complications. Assessment of differences in outcome metric values achieved indicated an increase in discharge of patients with PQI admissions for patients of participating DPHs before and after PRIME (0.72%) and a decline among comparison hospital patients (-0.01%), leading to a total significant difference of (DD: 0.73%; Exhibit 351). The PQI rate also increased for Medi-Cal patients of participating DMPHs and in contrast to their respective comparison group (DD: 1.00%).

Similarly, the rate of post-procedure emergency room visits/admissions increased more for participating DPH patients than the comparison group (DD: 1.89%). But this difference was statistically similar between patients of participating DMPHs and their respective comparison group due to small samples (DD: 1.94). In addition, the number of primary care visits per 1,000 Medi-Cal members increased at the same statistically similar level for both DPH patients and comparison group (DD: 58.33) but increased more for the DMPH patients than the comparison group (DD: 75.33). The DD for the proportion of patients with a primary care visit following a diagnosis of diabetes or hypertension increased more for DPH patients than the respective comparison group (diabetes DD: 8.37%, hypertension DD: 6.29%). The same was observed for hypertension diagnosis for DMPH patients (DD: 1.56%), but the DD for diabetes diagnosis was not significant (0.15%). The number of primary care visits per 1,000 Medi-Cal enrollees increased at the same rate for the DPH patient sample and its comparison group (DD: 58.33) but increased more for DMPH patients than their respective comparison group (DD: 75.33). The number of specialty care visits per 1,000 Medi-Cal enrollees also increased at the same rate for DPH patients sample and its comparison group (DD: 163.84) but increased more for DMPH patients than their respective comparison group (DD: 147.90).

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**Exhibit 351: Difference-in-Difference Analyses of Domain 1 Outcome Measures between PRIME Medi-Cal Samples**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| **1.2.8 – PQI** | | | | | | | |
| DPH PRIME | 77,251 | 3.13 | 3.02 | 3.74 | 3.85 | 0.72* | 0.73* |
| DPH Comparison | 118,821 | 2.67 | 2.59 | 2.82 | 2.42 | -0.01 | |
| DMPH PRIME | 15,489 | 2.21 | 2.19 | 3.02 | 3.16 | 0.89* | 1.00* |
| DMPH Comparison | 188,638 | 2.37 | 2.36 | 2.35 | 2.16 | -0.11* | |
| **1.3.4 – Post Procedure Emergency Room Visits/Admissions** | | | | | | | |
| DPH PRIME | 9,087 | 8.07 | 11.08 | 11.21 | 11.49 | 1.77* | 1.89* |
| DPH Comparison | 12,589 | 7.88 | 10.76 | 9.47 | 8.95 | -0.12 | |
| DMPH PRIME | 794 | 10.20 | 12.85 | 14.88 | 12.33 | 2.08 | 1.94 |
| DMPH Comparison | 16,411 | 6.94 | 8.81 | 8.40 | 7.63 | 0.14 | |
| **Primary Care Follow-Up Rates for Diabetes+** | | | | | | | |
| DPH PRIME | 9,468 | 18.69 | 20.75 | 27.29 | 32.67 | 10.26* | 8.37* |
| DPH Comparison | 16,999 | 21.47 | 23.81 | 25.45 | 23.59 | 1.89* | |
| DMPH PRIME | 6,760 | 9.92 | 10.65 | 12.43 | 13.43 | 2.65* | 0.15 |
| DMPH Comparison | 26,161 | 19.43 | 20.74 | 23.26 | 21.90 | 2.50* | |
| **Primary Care Follow-Up Rates for Hypertension+** | | | | | | | |
| DPH PRIME | 20,014 | 19.95 | 19.74 | 23.38 | 26.66 | 5.17* | 6.29* |
| DPH Comparison | 31,346 | 27.31 | 27.16 | 27.06 | 25.18 | -1.12* | |
| DMPH PRIME | 14,229 | 14.89 | 13.35 | 14.74 | 15.27 | 0.89* | 1.56* |
| DMPH Comparison | 49,239 | 25.70 | 23.52 | 24.51 | 23.36 | -0.68* | |
| **Primary Care Visits per 1,000 Medi-Cal Enrollees** | | | | | | | |
| DPH PRIME | 95,164 | 254.46 | 340.63 | 401.90 | 816.35 | 311.58* | 58.33 |
| DPH Comparison | 157,294 | 416.40 | 575.30 | 769.58 | 728.62 | 253.25* | |
| DMPH PRIME | 10,350 | 386.41 | 376.89 | 424.47 | 421.04 | 41.11* | 75.33* |
| DMPH Comparison | 251,390 | 446.92 | 437.63 | 429.61 | 386.49 | -34.22* | |
| **Specialty Care Visits per 1,000 Medi-Cal Enrollees** | | | | | | | |

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| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| DPH PRIME | 95,164 | 257.90 | 281.89 | 264.00 | 298.70 | 11.45 | 163.84 |
| DPH Comparison | 157,294 | 604.27 | 644.34 | 476.17 | 467.67 | -152.38 | |
| DMPH PRIME | 10,350 | 773.59 | 704.26 | 835.79 | 853.68 | 105.81* | 147.90* |
| DMPH Comparison | 251,390 | 420.10 | 380.04 | 362.78 | 353.18 | -42.09* | |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. * Denotes $p < 0.05$ for difference-in-difference analysis. [+] Denotes innovative and surrogate metric for Project 1.2. Values for rate measures are percentage points. For the measures Primary Care and Specialty Care Visits per 1,000 Medi-Cal Enrollees, values are visits per 1,000 Medi-Cal Enrollees.*

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The DD analyses of the overall California hospital discharges from OSHPD data showed a statistically similar but an increasing trend in the PQI Metric for DPHs compared to their respective comparison hospitals (DD: -0.26%); (Exhibit 352). This same trends were observed for Medi-Cal California hospital discharges (DD: 0.51%). The trend for DMPHs was relatively similar for overall discharges (DD: 0.23%) but not similar for Medi-Cal discharges (DD: -0.89%).

**Exhibit 352: Difference-in-Difference Analyses of Overall California Hospital Discharges for Prevention Quality Indicators (PQI)**

| Insurance Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| 1.2.8 – Prevention Quality Indicators (PQI) – Overall | | | | | | | |
| DPH PRIME | 1,028,872 | 11.23 | 10.93 | 11.00 | 12.33 | 0.58* | -0.26 |
| DPH Comparison | 1,321,615 | 11.98 | 11.95 | 11.98 | 13.64 | 0.84* | |
| DMPH PRIME | 633,492 | 18.00 | 17.94 | 18.03 | 18.97 | 0.53* | 0.23 |
| DMPH Comparison | 754,756 | 17.00 | 17.00 | 16.81 | 17.80 | 0.30 | |
| 1.2.8 – Prevention Quality Indicators (PQI) – Medi-Cal | | | | | | | |
| DPH PRIME | 475,025 | 12.96 | 12.39 | 12.52 | 14.01 | 0.58* | 0.51 |
| DPH Comparison | 326,761 | 14.68 | 14.17 | 13.91 | 15.10 | 0.07 | |
| DMPH PRIME | 163,725 | 22.69 | 22.01 | 20.82 | 22.40 | -0.73 | -0.89 |
| DMPH Comparison | 214,287 | 20.65 | 20.27 | 20.24 | 20.99 | 0.16 | |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total discharges analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. * Denotes p < 0.05 for difference-in-difference analysis. Values for rate measures are percentage points.*

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## Domain 2 Metrics

Two Domain 2 metrics could be calculated following DHCS metric-specifications, including one process measure (2.1.6: Prenatal Care) and one outcome measure (2.2.1: Readmissions) using the Medi-Cal samples. UCLA calculated one additional outcome measure for Project 2.1 (Cesarean Section) that involved the same conditions as Metric 2.1.5 but could not be constructed completely as indicated by DHCS in metric specifications due to limitations of using claims data to define nulliparous patients. UCLA calculated two additional outcome measures for Project 2.2 (Outpatient Follow-Up Visit Rates within 30 Days, Outpatient Follow-Up Visit Rates within Seven Days) that were not required as performance metrics from PRIME hospitals but related to Project 2.2 and conceptualized as informative intermediate outcomes of potential changes in follow-up care after hospitalization.

Assessment of differences in the required Domain 2 process metrics before and after PRIME implementation indicated significant improvement for DPH patients (13.61%) and their comparison group (6.5%) in delivery of prenatal care (Exhibit 353). This rate was significantly higher for DPH patients (DD: 7.12%). However, the prenatal care rate for DMPH patients did not increase significantly and this rate was statistically similar between DMPH patients and their comparison group (DD: -0.54%).

**Exhibit 353: Difference-in-Difference Analyses of Domain 2 Process Measures between PRIME Medi-Cal Samples**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| 2.1.6 – Prenatal Care | | | | | | | |
| DPH PRIME | 2,044 | 15.22 | 25.17 | 32.46 | 35.15 | 13.61* | 7.12* |
| DPH Comparison | 4,934 | 11.63 | 19.29 | 22.82 | 21.09 | 6.50* | |
| DMPH PRIME | 1,992 | 9.21 | 14.66 | 22.18 | 12.21 | 5.26 | -0.54 |
| DMPH Comparison | 9,863 | 12.20 | 19.04 | 20.84 | 22.01 | 5.80* | |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. \* Denotes p < 0.05 for difference-in-difference analysis. Values for rate measures are percentage points.*

Among outcome metrics, the rate of Cesarean sections related to Project 2.1 declined for both DPH and DMPH patients and their respective comparison groups (Exhibit 354). But these rates of decline were statistically similar (DPH DD: 1.33%, DMPH DD: -2.60%). The outpatient follow-up visit rates within seven days of hospitalization

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increased significantly for both DPH and DMPH patients and their respective comparison groups. These rates were also significantly higher for both DPH and DMPH patients vs. their respective comparison groups (DPHs DD: 5.84%, DMPH patients DD: 2.52%). The rates of all cause readmissions did not change significantly for DPH patients and its comparison group, but this rate increased significantly for the DMPH patients and at a higher rate than their comparison group (1.87%).

**Exhibit 354: Difference-in-Difference Analyses of Domain 2 Outcome Measures between PRIME Medi-Cal Samples**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| 2.1.5 – Cesarean Section | | | | | | | |
| DPH PRIME | 3,396 | 14.46 | 23.17 | 14.86 | 8.42 | -7.17* | 1.33 |
| DPH Comparison | 7,803 | 16.63 | 25.95 | 16.57 | 9.02 | -8.50* | |
| DMPH PRIME | 2,748 | 16.71 | 28.02 | 14.85 | 9.29 | -10.29* | -2.60 |
| DMPH Comparison | 14,055 | 14.69 | 25.28 | 15.10 | 9.47 | -7.70* | |
| 2.2.1 – Readmissions | | | | | | | |
| DPH PRIME | 46,007 | 11.40 | 13.16 | 14.25 | 15.20 | 2.45* | 0.07 |
| DPH Comparison | 55,056 | 10.53 | 12.25 | 14.55 | 12.97 | 2.37* | |
| DMPH PRIME | 20,211 | 8.43 | 10.14 | 12.60 | 13.43 | 3.73* | 1.87* |
| DMPH Comparison | 82,268 | 9.86 | 11.78 | 12.74 | 12.62 | 1.86* | |
| Outpatient Follow-Up Visit Rates within 30 Days[+] | | | | | | | |
| DPH PRIME | 63,496 | 76.12 | 80.82 | 87.95 | 87.41 | 9.21* | 5.04* |
| DPH Comparison | 84,964 | 76.86 | 81.48 | 84.79 | 81.91 | 4.17* | |
| DMPH PRIME | 49,974 | 69.40 | 72.61 | 75.47 | 77.99 | 5.72* | 1.87* |
| DMPH Comparison | 137,109 | 70.84 | 74.13 | 76.51 | 76.16 | 3.85* | |
| Outpatient Follow-Up Visit Rates within Seven Days[+] | | | | | | | |
| DPH PRIME | 63,496 | 48.88 | 53.41 | 59.70 | 60.91 | 9.16* | 5.84* |
| DPH Comparison | 84,964 | 48.75 | 53.39 | 55.53 | 53.24 | 3.31* | |
| DMPH PRIME | 49,974 | 43.41 | 46.22 | 48.74 | 52.81 | 5.96* | 2.52* |
| DMPH Comparison | 137,109 | 43.76 | 46.69 | 48.16 | 49.18 | 3.45* | |

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*Source: UCLA analysis of Medi-Cal data, July to August 2019.*
*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. * Denotes* p *< 0.05 for difference-in-difference analysis, + Denotes innovative and surrogate metric for Project 2.2. Values for rate measures are percentage points.*

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The DD analyses of the overall California hospital discharges from OSHPD data (DPH DD: 0.75%, DMPH DD: -0.06%) and Medi-Cal California hospital (DPH DD: 0.54%, DMPH DD: 0.01%) discharges showed a statistically similar but declining trend for all-cause readmissions for DPHs and DMPHs compared to their respective comparison hospitals.

**Exhibit 355: Difference-in-Difference Analyses of Overall California Hospital Discharges with Readmissions**

| Insurance Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| 2.2.1 – All-Cause Readmissions – Overall | | | | | | | |
| DPH PRIME | 863,051 | 14.58 | 12.64 | 11.78 | 11.12 | -2.16* | 0.75 |
| DPH Comparison | 1,073,597 | 12.77 | 11.05 | 9.42 | 8.58 | -2.91* | |
| DMPH PRIME | 504,382 | 11.45 | 9.57 | 8.50 | 7.61 | -2.45* | -0.06 |
| DMPH Comparison | 620,073 | 12.06 | 10.27 | 9.06 | 8.49 | -2.39* | |
| 2.2.1 – All-Cause Readmissions – Medi-Cal | | | | | | | |
| DPH PRIME | 403,421 | 15.35 | 14.51 | 13.31 | 12.75 | -1.90* | 0.54 |
| DPH Comparison | 269,510 | 15.08 | 14.40 | 12.67 | 11.93 | -2.44* | |
| DMPH PRIME | 131,395 | 11.52 | 10.68 | 10.26 | 9.79 | -1.07* | 0.01 |
| DMPH Comparison | 182,483 | 14.00 | 13.19 | 12.50 | 12.52 | -1.08* | |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total discharges analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. * Denotes p < 0.05 for difference-in-difference analysis. Values for rate measures are percentage points.*

## Domain 3 Metrics

Two Domain 3 metrics could be calculated following DHCS metric-specifications, including outcome measures (3.1.1: Avoidance of Antibiotic Treatment with Acute Bronchitis, 3.2.1: Imaging for Routine Headaches) using Medi-Cal data. UCLA calculated one additional outcome measure, Metric 3.2.4, for Project 3.2 (Inappropriate Imaging Studies for Low Back Pain) that was based on an updated DY 14 measure designed to address measurement challenges of Metric 3.2.4 used in previous years Appendix, Exhibit).

Assessment of differences in the required Domain 3 metrics before and after PRIME implementation indicated significant increase in avoidance of antibiotic treatment of patients with acute bronchitis for DPH patients (5.36%) and their comparison group (4.52%); (Exhibit 356). But the difference in the proportion increase between the two groups was not statistically significant (DD: 0.84%). In contrast, this difference was statistically significant for DMPH patients and their comparison group (DD: 5.52%). Assessment of differences in proportion imaging studies for routine headaches indicated a similar rate of decline between DPH and DMPH patients and their respective comparison groups (DPH DD: -1.39%, DMPH DD: 2.30%). In contrast, the proportion of inappropriate imaging studies for low back pain declined significantly more for DPH and DMPH patients compared to their respective comparison groups (DPH DD: -3.94%, DMPH DD: -10.85%).

**Exhibit 356: Difference-in-Difference Analyses of Domain 3 Process Measures between PRIME Medi-Cal Samples**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| 3.1.1 – Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis | | | | | | | |
| DPH PRIME | 4,247 | 51.79 | 49.37 | 49.41 | 62.47 | 5.36* | 0.84 |
| DPH Comparison | 20,356 | 49.79 | 47.14 | 50.88 | 55.10 | 4.52* | |
| DMPH PRIME | 5,830 | 50.95 | 49.30 | 56.91 | 64.79 | 10.72* | 5.52* |
| DMPH Comparison | 28,451 | 50.17 | 48.14 | 52.20 | 56.52 | 5.20* | |
| 3.2.1 – Headache Imaging | | | | | | | |
| DPH PRIME | 11,369 | 36.32 | 26.16 | 11.46 | 9.80 | -20.61* | -1.39 |
| DPH Comparison | 33,825 | 35.72 | 25.69 | 12.02 | 10.96 | -19.22* | |
| DMPH PRIME | 11,184 | 36.94 | 26.28 | 13.71 | 15.95 | -16.77* | 2.30 |

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| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| DMPH Comparison | 48,959 | 35.88 | 25.84 | 11.92 | 11.67 | -19.07* | |
| 3.2.4 – Inappropriate Low Back Pain Imaging | | | | | | | |
| DPH PRIME | 12,365 | 45.39 | 44.99 | 41.81 | 39.17 | -4.70* | -3.94* |
| DPH Comparison | 46,056 | 41.12 | 39.63 | 40.55 | 38.68 | -0.76 | |
| DMPH PRIME | 12,327 | 43.76 | 44.40 | 34.28 | 30.77 | -11.55* | -10.85* |
| DMPH Comparison | 63,233 | 41.65 | 41.79 | 41.98 | 40.07 | -0.70 | |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. * Denotes p < 0.05 for difference-in-difference analysis. Metric 3.2.4 implemented in DY 14.*

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## Summary of Key Findings

Difference-in-difference (DD) analyses were conducted to assess change in selected PRIME metrics for DPH and DMPH patients before and during PRIME implementation and in contrast to their respective comparison groups. The analyses were done for metrics that could be constructed using Medi-Cal administrative and California Hospital Discharge data. When possible, additional related metrics were created and analyzed using the DD methodology.

For Domain 1, two required process (breast and cervical cancer screening) and two required outcome (PQI and post procedure ED visits) metrics were analyzed. Both DPH and DMPH patients showed improved process metrics, and this improvement was greater for DPH patients than their comparison group but not for DMPH patients. DPH and DMPH patients did not show progress in the required outcome metrics for this domain. The results of California discharge data for the PQI metric were similar to the results of Medi-Cal data. Two surrogate process (HPV and Pap screening) and two surrogate outcome (primary care follow-up rates for patients with diabetes and hypertension) metrics were also analyzed. DPHs also improved these process and outcome metrics more than their comparison groups. However, the results for DMPH patients were mixed. Two optional outcome metrics (primary care visits per 1,000 Medi-Cal enrollees, specialty care visits per 1,000 Medi-Cal enrollees) metrics were analyzed. DMPHs improved for these outcome metrics more than their comparison groups. DPH patients did not show differences in progress compared to their comparison groups.

For Domain 2, one required process (prenatal care) and two required outcome (Cesarean and all-cause readmissions) metrics were analyzed. DPH patients showed greater improvement in the process metric, but DMPH patients did not show progress. Both DPH and DMPH patients did not show greater improvement than their respective comparison groups in their outcome metrics. The results of California discharge data did not show any improvements in the outcome metrics for all PRIME and Comparison hospitals. Two surrogate outcome measures (outpatient follow-up visits within 30 and seven days of discharge) were also examined and showed greater progress for both DPH and DMPH patients than their respective comparison groups.

For Domain 3, two required process (avoidance of antibiotic treatment in adults with acute bronchitis and imaging for routine headaches) and another process metric required for DY 14 were analyzed. DPH patients did not show greater progress in the first two required metrics but showed progress for the last one. DMPH patients showed greater progress for the first and last measures but not for imaging for routine headaches.

PRIME Interim Evaluation| Trends in Achievement of Metric Rates for PRIME and Comparison Patients Difference-in-Difference Analysis

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Overall, DPH and DMPH patients showed progress in most process metrics and some outcome metrics, and their progress was sometimes greater than their respective comparison groups. However, PRIME and comparison hospitals did not show a differential rate of progress for all metrics examined using OSHPD data.

PRIME Interim Evaluation| Trends in Achievement of Metric Rates for PRIME and Comparison Patients Difference-in-Difference Analysis

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## Conclusions

The detailed analyses of data available for this evaluation indicated significant differences between DPHs and DMPHs that set the context for PRIME implementation and outcomes of the program. PRIME implementation was guided by a series of core components per project that proposed the development of infrastructure and activities to be undertaken to implement projects. The analyses of data showed that hospitals nearly always followed these core components and that many hospitals had begun work on these components prior to PRIME. The actual activities hospitals engaged in depended on whether they had begun working on a given project prior to PRIME and the progress they had made when PRIME started. Assessment of system-wide and project-specific infrastructure development showed that in the interim and within the first 2 years of PRIME implementation, PRIME hospitals developed or enhanced their infrastructure, building on their past progress in various areas. Hospitals had varying success in different areas of infrastructure development. Similarly, PRIME hospitals instigated system-wide changes and conducted project-specific activities to implement PRIME. System-wide efforts in PRIME implementation included promoting change in organizational culture and function and project-specific implementation processes included progress in integration and redesign activities in each project.

Success of PRIME was measure by achievement of metrics as reported by PRIME hospitals and showed that hospitals successfully completed tasks and reported baseline values for the first year of data reporting, and attained pre-defined targets in later years. Hospitals were likely to have focused on complex patients and associated challenges of achieving outcome metrics in Domain 2 vs. focus on integration and care redesign and higher frequency of process metrics in Domain 1. In addition, the independently assessed change in metric rates showed progress of PRIME hospitals in process measures were consistent with other findings in this report that reflect successes in implementation of related PRIME projects. Lack of success in improving the outcome metrics were also consistent with the challenges of implementation and the lack of adequate time to reap the benefits of project implementation in the interim. Success in achievement of metrics further showed to be linked to the method of value-based payment, with hospitals having difficulties particularly for pay-for-performance metrics, given the increase in target values per year. Metric achievement rates remained stable overall across domains for pay-for-reporting metrics. The full impact of PRIME on outcomes can be more accurately assessed by the end of PRIME when efforts to fully implement all projects and address challenges to achieving metrics are finalized.

# Appendices

## Appendix A. Glossary and Key Terms

**Exhibit 357: Glossary and Key Terms**

| TERM | ACRONYM | NOTES |
|---|---|---|
| 10th revision of the International Statistical Classification of Diseases and Related Health Problems | ICD-10 | |
| Agency for Healthcare Research and Quality | AHRQ | |
| Alcohol and Drug Misuse | SBIRT | |
| Behavioral Health | BH | |
| California Association of Public Hospitals and Health Systems | CAPH | |
| California Health Care Safety Net Institute | SNI | |
| California Maternal Quality Care Collaborative | CMQCC | |
| Centers for Medicare & Medicaid Services | CMS | |
| Consumer Assessment of Healthcare Providers and Systems | CAHPS or H-CAHPS | Provider Rating |
| Critical Access Hospitals | CAH | |
| Demonstration Year | DY | See Exhibit 11 for schedule |
| Department of Health Care Services | DHCS | |
| Designated Public Hospitals | DPHs | |
| District Hospital Leadership Forum | DHLF | |
| District/Municipal Public Hospitals | DMPHs | |
| Electronic health record | EHR | |
| Emergency Department | ED | |
| Healthcare Effectiveness Data and Information Set | HEDIS | |
| National Committee for Quality Assurance | NCQA | |
| National Committee for Quality Assurance | NCQA | |
| Pay for Performance | P4P | |
| Pay for Reporting | P4R | |
| Prevention Quality Indicators | PQIs | |
| PRIME Funding Mechanics | Attachment II | |
| PRIME Projects and Metrics Protocol | Attachment Q | |

| TERM | ACRONYM | NOTES |
|---|---|---|
| Public Hospital Redesign and Incentives in Medi-Cal | PRIME | |
| Quality improvement | QI | |
| Screening, Brief Intervention and Referral to Treatment for Alcohol and Drug Misuse | SBIRT | |
| Special Terms & Conditions | STC | |
| UCLA Center for Health Policy Research | UCLA | |
| University of California | UC | |

## Appendix B. PRIME Project Selections

### Exhibit 358: DPH Project Selections

| Domain: | 1: Outpatient Delivery System Transformation and Prevention | | | | | | | 2: Targeted High Risk Or High Cost Populations | | | | | | | 3: Resource Utilization and Efficiency | | | | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Project: | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 3.1 | 3.2 | 3.3 | 3.4 | |
| **Total number of hospitals that ever selected the Project** | 24 | 24 | 19 | 14 | 18 | 14 | 10 | 20 | 30 | 26 | 5 | 3 | 14 | 13 | 12 | 9 | 8 | 6 | |
| **Number of DPHs that ever selected the Project** | 17 | 17 | 17 | 6 | 7 | 6 | 2 | 16 | 17 | 17 | 5 | 2 | 9 | 5 | 5 | 5 | 7 | 2 | |
| 1 Alameda | ✓ | ✓ | ✓ | ⊠[12] | ☑[12] | ⊠[12] | | ✓ | ✓ | ✓ | | | ✓ | | ✓ | | | | 11 |
| 2 Arrowhead | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ⊠[12] | | ☑[12] | | ✓ | | | | 9 |
| 3 Contra Costa | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | | 10 |
| 4 Kern Medical | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | ✓ | | | | | ✓ | | 9 |
| 5 Los Angeles | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | | ✓ | 13 |
| 6 Natividad | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | ✓ | | | | | ✓ | 9 |
| 7 Riverside | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | 9 |
| 8 San Francisco | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | 9 |
| 9 San Joaquin | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ | | 9 |
| 10 San Mateo | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | | | | | ✓ | | 9 |
| 11 Santa Clara | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | 9 |
| 12 UC Davis | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | 9 |
| 13 UC Irvine | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | ✓ | | ✓ | | | | 9 |
| 14 UC Los Angeles | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ | | 9 |
| 15 UC San Diego | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | | ✓ | ✓ | | ✓ | | 10 |
| 16 UC San Francisco | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | 9 |
| 17 Ventura | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | | | | ✓ | 9 |

*Alameda participated in Projects 1.4 and 1.6 for DY11, but discontinued these projects and added Project 1.5 in DY12YE. Arrowhead discontinued Project 2.4 and added Project 2.6 in DY12YE. Although Project 2.1 is required for DPHs, San Mateo was not able to implement it due to not having maternity services.*

*Source: UCLA Analysis of designated public hospital reports. Data available from April 2019.*

| | |
|---|---|
| ✓ Project implemented DY 11-13 | ⊠ Project discontinued from year prior |
| [11] Year Project discontinued or added | ☑ Project added |

## Exhibit 359: DMPH (non-CAH) Project Selections

| Domain: | 1: Outpatient Delivery System Transformation and Prevention | | | | | | | 2: Targeted High Risk Or High Cost Populations | | | | | | | 3: Resource Utilization and Efficiency | | | | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Project: | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 3.1 | 3.2 | 3.3 | 3.4 | |
| Number of DMPH non-CAHs that ever selected the Project | 4 | 4 | 2 | 6 | 7 | 4 | 7 | 4 | 12 | 9 | 0 | 1 | 1 | 8 | 6 | 4 | 1 | 4 | |
| 1 Antelope Valley | | | | | | ⊠12 | | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | ✓ | 8 |
| 2 Coalinga | | | | ⊠12 | | | ⊠12 | | | | | | | | | | | | 2 |
| 3 El Camino | ✓ | | | | | | | ✓ | | | | | | | | | | ✓ | 3 |
| 4 El Centro | | ✓ | | | | | ✓ | | | | | | | | | ✓ | | | 3 |
| 5 Hazel Hawkins | | | | | | | | | | ✓ | | | | | | | | | 1 |
| 6 Kaweah Delta | | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | | ✓ | ✓ | | | | | 7 |
| 7 Lompoc Valley | | | ✓ | | ✓ | | ✓ | | ✓ | | | | | | | | | | 4 |
| 8 Marin | | | | | | | | | | ✓ | | | | | | ✓ | | | 2 |
| 9 Oak Valley | | ✓ | | ✓ | | | | | | | | | | | | | | | 2 |
| 10 Palo Verde | ✓ | | | | | | | | ✓ | ✓ | | | | | | | | | 3 |
| 11 Palomar | | | | ⊠13 | ⊠13 | | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ⊠11 | 10 |
| 12 Pioneers | | | | ✓ | | ✓ | | | ✓ | | | | | | | ✓ | | | 4 |
| 13 Salinas Valley | | | | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | ✓ | | ✓ | | ✓ | 8 |
| 14 San Gorgonio | | | | | | | ✓ | | ✓ | | | | | | | ✓ | | | 3 |
| 15 Sierra View | | | | | | | ✓ | | ✓ | ✓ | | | | ✓ | | | | | 4 |
| 16 Sonoma Valley | | | | | | | | | ✓ | | | | | | | | | | 1 |
| 17 Sonoma West | | | | | | | | | ✓ | | | | | | | | | | 1 |
| 18 Tri-City | ⊠12 | | | ⊠13 | ✓ | | ✓ | ✓ | ✓ | ✓ | | ⊠12 | | ⊠13 | ✓ | | | | 10 |
| 19 Tulare | ⊠ | ⊠ | | ⊠ | ⊠ | ⊠ | | | | | | | | | | | | | 5 |
| 20 Washington | | | | | | | | | ✓ | | | | | | ✓ | ⊠12 | | | 3 |

Antelope Valley discontinued 1.6 after DY11. Coalinga switched 1.4 and 1.7 in DY12 and stopped PRIME participation. Palomar discontinued 3.4 in DY 11 and 1.4 and 1.5 after DY13. Tri-City discontinued 2.5 after DY12 and 1.4 and 2.7 after DY 13. Washington discontinued project 3.2 after DY11. Tulare dropped 2.5 and subsequently stopped PRIME participation.

Source: UCLA Analysis of designated public hospital reports. Data available from April 2019.

| | | | |
|---|---|---|---|
| ✓ | Project implemented DY 11-13 | ⊠ | Project discontinued |
| [11] Year Project discontinued or added | | ☑ | Project added |

## Exhibit 360: Critical Access DMPH (DMPH CAH) Project Selections

| Domain: | 1: Outpatient Delivery System Transformation and Prevention | | | | | | | 2: Targeted High Risk Or High Cost Populations | | | | | | | 3: Resource Utilization and Efficiency | | | | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Project: | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 3.1 | 3.2 | 3.3 | 3.4 | |
| **Number of DMPH CAHs that ever selected the Project** | 3 | 3 | 0 | 2 | 4 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | |
| **1** Bear Valley | | | | | | | | | | | | | ✓ | | | | | | 1 |
| **2** Eastern Plumas | ✓ | | | | | | | | | | | | | | | | | | 1 |
| **3** Healdsburg | | | | | ✓ | ✓ | | | | | | | | | | | | | 2 |
| **4** Jerold Phelps | | | | | ✓ | | | | | | | | | | | | | | 1 |
| **5** John C. Fremont | | ✓ | | | | | | | | | | | | | | | | | 1 |
| **6** Kern Valley | ✓ | | | | | | | | | | | | | | | | | | 1 |
| **7** Mammoth | ✓ | | | | | | | | | | | | ✓ | | | | | | 2 |
| **8** Mayers | | | | | ☒[13] | | ☑[13] | | | | | | | | | | | | 2 |
| **9** Mendocino | | | | | | ✓ | | | | | | | | | | | | | 1 |
| **10** Modoc | | ✓ | | | | | | | | | | | | | | | | | 1 |
| **11** Northern Inyo | | | | | | | | | | | | | | | ✓ | | | | 1 |
| **12** Plumas | | | | | | | | | | | | | ✓ | | | | | | 1 |
| **13** San Bernardino | | | | ✓ | | | | | | | | | | | | | | | 1 |
| **14** Seneca | | | | | | | | | ✓ | | | | | | | | | | 1 |
| **15** Southern Inyo | | ✓ | | | | ✓ | | | | | | | | | | | | | 2 |
| **16** Tahoe | | | | | ✓ | | | | | | | | ✓ | | | | | | 2 |
| **17** Trinity | | | | ✓ | | ✓ | | | | | | | | | | | | | 2 |

Mayers discontinued project 1.5 after DY12 and replaced it by adding project 1.7 for DY13.

Source: UCLA Analysis of designated public hospital reports. Data available from April 2019.

☐ Project implemented DY 11-13    ☐ Project discontinued

[11] Year Project discontinued or added    ☐ Project added

## Appendix C. Detailed Survey and Interview Methodology

### Interim and Follow Up Questionnaires

To gain insight into PRIME implementation in the early stages of the program, we administered an [Interim Questionnaire](#) from April to May 2018 to stakeholders from hospitals participating in PRIME, n=52. Two DMPHs did not complete the survey: Tulare and Southern Inyo.

The questionnaire included 459 questions:
- 29 questions about health system capacity (e.g., health information technology) and overarching domains of PRIME implementation were answered by all hospitals.
- 430 project-specific questions were only answered by hospitals participating in the specific PRIME projects. Hospitals completed project-specific questions if they were participating in the project at the time of survey completion (i.e., hospitals that had initiated but had withdrawn at the time of survey completion did not complete questions for such projects).

Content and Structure: Questions assessed health information technology infrastructure, project participation, specific activities related to project implementation, ratings of effort, completion of core components, use of existing frameworks or tools, staffing and workforce development, participation in learning collaboratives, and data- and metric-related challenges and solutions. Questions constituted a variety of structures: yes/no, multiple choice, ranking, Likert scale, and matrix. When applicable, hospitals were asked to differentiate timing of activities between those conducted or planned before vs. during PRIME. Questions were pilot-tested among stakeholders at 5 hospitals from February to March 2018 (Alameda, UC San Diego, Kaweah, UC Los Angeles, and Los Angeles County). Following pilot testing, we revised the structure and content of the survey to address stakeholder feedback before deploying the final survey.

Mode of Administration: Questionnaires were administered via SurveyMonkey. PRIME leads at each hospital were emailed a link to complete the survey and were instructed to involve additional team members who were most knowledgeable about implementation of specific PRIME projects.

Analysis: Three DMPHs inadvertently did not note they were critical access hospitals (CAHs) in the survey, thus UCLA reclassified them as such to reflect their CAH status (Eastern Plumas, Jerold Phelps, and John C. Fremont). Data was analyzed using Excel and Stata 12 (StataCorp. 2011. *Stata Statistical Software: Release 12*. College Station, TX: StataCorp LP). Descriptive analyses were used to assess hospital characteristics and the number and proportion of hospitals reporting participation in specific PRIME

activities. When sample sizes were sufficient (depending on project participation), descriptive results were stratified by hospital characteristics for comparison (DPH vs. DMPH, UC vs. non-UC). One member of the study team coded responses to free response questions or to responses to "Other" categories, as needed to present additional response categories.

The [Follow-up Questionnaire](#) was administered from January to May 2019 to stakeholders at participating hospitals (n=48 responded). Six hospitals did not complete the survey: Antelope Valley, Coalinga, John C. Fremont, Sierra View, Southern Inyo, and Tulare. The follow-up questionnaire included 33 questions:

- 20 questions focusing on patient population and hospital capacity were answered by all hospitals
- 13 questions focused on aspects of behavioral health integration were completed by hospitals participating in PRIME Project 1.1

Follow-up questions focused on (1) primary and specialty care capacity and (2) components of behavioral health integration. Questions about behavioral health integration focused on institutional support of behavioral health integration (questions were drafted to address components of Leadership and Governance domain of the Framework for Describing Health Care Delivery Organizations and Systems) (Pina IL, 2015), staffing and colocation levels of behavioral health providers, priorities for implementing behavioral health integration, and screening frequency and tools. The follow-up questionnaire was pilot-tested with stakeholders from the UC Los Angeles Health system, which was chosen due to the complexity of the system to gain feedback about applicability, saliency, and clarity of the questions. Following feedback, we revised the content of the follow-up survey before deploying it to participating hospitals.

## Key Informant Interviews

To gain in-depth perspectives of PRIME implementation, we conducted semi-structured key informant interviews with PRIME stakeholders and leadership with a purposive sample of participating hospitals, n=23. Hospitals were selected to represent a range of perspectives (large vs. small system, DPH vs. DMPH, urban vs. rural, representation across all PRIME projects, etc.) of PRIME implementation. We chose to interview leadership at all DPHs due to their participation in a large number of projects, prior involvement with DSRIP, and high capacity. In total, we conducted 23 interviews with all 17 DPHs, 5 DMPH non-CAHs (Antelope Valley, Kaweah Delta, Palomar, Salinas Valley, Tri-City), and 1 DMPH CAH (Mammoth) from June to August 2018. Interviews lasted 100 minutes on average.

Interview Structure: Among hospitals selected for interviews, PRIME leads were asked to include individuals who could speak to PRIME implementation processes as well as impact on care delivery processes, patient health, and improved quality of care. In additional to central PRIME Directors, key informants included CMOs, project-level managers, and Quality Improvement Coordinators. Interviews were conducted over the phone and were recorded using phone conferencing software and handheld audio recorders. Interviews were led by a member of the study team, with input from additional members of the study team as needed. Three members of the study team were present at interviews on average and took notes to record important aspects of participant perspectives.

Interview Content: Interviews focused on the general impact of PRIME, synergy of the projects with existing projects and each other, leadership and staff buy-in, recommendations for ongoing implementation of the program, and clarification or expansion upon topics noted in the questionnaire. A key focus of interviews was to gain in-depth perspectives about how PRIME has impacted care delivery capacity and processes. The interview guide was iterated following preliminary interviews to improve flow and focus of the interview, as needed.

Analysis and Framework: Interviews were transcribed verbatim and de-identified before analysis. One interview was not transcribed due to technical failure resulting in loss of the recording. For this interview, members of the study team who were present during the interview consolidated their notes which was analyzed in place of a full transcript. Using the evaluation framework as an initial guide, 3 members of the study team initially coded a subset of five interviews to identify preliminary themes, met to establish consensus on differing themes, and establish a codebook. Members of the study team who were present during interviews provided a priori themes. We used both inductive (based on emergent themes from coding of initial interviews) and deductive coding (based on a priori themes from the evaluation framework and components of the interview guide). After establishing a codebook, the remaining interviews were split among 2 members of the study team for coding. During the coding process, study team members met regularly to discuss emerging themes and refine the codebook as needed.

Analysis was completed using NVivo 12 software.

## Limitations of Qualitative Analysis

The qualitative analysis in this report relied on self-reported data (survey responses, interviews) from key informants and leadership at participating PRIME hospitals. While efforts were made to validate responses and perspectives within and across data

sources when possible, there is potential for responses to have been subject to response or social desirability bias. Due to the concurrence of PRIME with other programs focused on redesign of care processes or payment, it is difficult to isolate the effects of PRIME on care redesign. Thus, the impact of PRIME was assessed in this analysis primarily through perspectives of key informants of PRIME hospitals through in-depth interviews. While surveys and interviews included a focus on challenges and solutions to implementing PRIME projects, self-reports completed by each participating hospital will be analyzed in subsequent analyses to delve deeper into such issues. Although interviews were not conducted with all participating hospitals, interview participants were chosen to represent a range of the type of hospitals participating in PRIME and highlight key insights into the challenges, successes, and strategies for implementing PRIME. To keep response/participation burden appropriate, surveys and interviews focused on aspects of early PRIME implementation. Therefore, topics such as sustainability of PRIME activities, synergies (e.g., with other state initiatives, with hospital strategic mission), and policy implications will be covered in more depth in following analyses.

## Introduction and Instructions

This questionnaire is intended to obtain information from Designated Public Hospitals (DPHs) and District and Municipal Public Hospitals (DMPHs) on their efforts to improve care delivery and patient outcomes, as well as to reduce costs and improve efficiencies through the Public Hospital Redesign and Incentives in Medi-Cal (PRIME) Program. The questionnaire is divided into three domains: (1) Outpatient Delivery System Transformation and Prevention, (2) Targeted High-Risk or High-Cost Populations, and (3) Resource Utilization Efficiency, and includes specific sections for each project under a given domain. For each project, your team will be asked to indicate if the project is implemented, identify the core components implemented (as outlined in Attachment Q), and complete details such as reasons for selection, level of effort, methods of implementation, and specific challenges and solutions to address those challenges. This questionnaire is designed to be completed by individuals most knowledgeable in implementing each project. Depending on the organization, this may include one or more persons. The PDF can be used by multiple persons, but all responses are to be entered online in SurveyMonkey by one individual. Please note that the PDF version of this instrument is by necessity longer than the online version and contains some duplication in questions or responses.

Please do not leave any questions blank as this will reduce the time and effort required for follow-up questions to address missing information. If a project is not implemented by your organization, please indicate so. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

The UCLA evaluation team is available to answer your questions if needed. Please contact the evaluation team at prime@chpr.em.ucla.edu with questions. The SurveyMonkey link is: https://www.surveymonkey.com/r/PRIME_interim_questionnaire.

## Respondent Information

Please list the primary person who responded to each applicable section of the questionnaire and their title within the organization.

| Domain | Project | Name | Organizational Title | Email Address | Phone Number |
|---|---|---|---|---|---|
| **Domain 1: Outpatient** | 1.1: Integration of Behavioral | | | | |

| Domain | Project | Name | Organizational Title | Email Address | Phone Number |
|--------|---------|------|----------------------|---------------|--------------|
| **Delivery System Transformation and Prevention** | Health and Primary Care | | | | |
| | 1.2: Ambulatory Care Redesign: Primary Care | | | | |
| | 1.3: Ambulatory Care Redesign: Specialty Care | | | | |
| | 1.4: Patient Safety in the Ambulatory Setting | | | | |
| | 1.5: Million Hearts Initiative | | | | |
| | 1.6: Cancer Screening and Follow-Up | | | | |
| | 1.7: Obesity Prevention and Healthier Foods Initiative | | | | |
| **Domain 2: Targeted High-Risk or High-Cost Populations** | 2.1: Improvements in Perinatal Care | | | | |
| | 2.2: Care Transitions: Integration of Post-Acute Care | | | | |
| | 2.3: Complex Care Management for High Risk Medical Populations | | | | |

| Domain | Project | Name | Organizational Title | Email Address | Phone Number |
|---|---|---|---|---|---|
| | 2.6: Chronic Non-Malignant Pain Management | | | | |
| | 2.7: Comprehensive Advanced Illness Planning and Care | | | | |
| Domain 3: Resource Utilization Efficiency | 3.1: Antibiotic Stewardship | | | | |
| | 3.2: Resources Stewardship: High-Cost Imaging | | | | |
| | 3.3: Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals | | | | |
| | 3.4: Resource Stewardship: Blood Products | | | | |

Note: Projects 2.4 and 2.5 will not be assessed in the questionnaire.

This section asks questions around infrastructure and resources, overall PRIME implementation strategies, and preventive services specific to your entity. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

Infrastructure and Resources

a)  Please indicate how many electronic medical or health record (EMR/EHR) systems exist in your organization and in which settings they are operational. If you have a single EMR/EHR for the entire organization, please indicate "single EMR/EHR system-wide" in the comments.

| Setting | Number of EMRs/EHRs | Number Used for PRIME Implementation | Comment |
|---|---|---|---|
| Hospital | | | |
| Emergency Department | | | |
| Outpatient Clinic(s) | | | |

b)  If you indicated using more than one EMR/EHR for PRIME implementation, please describe how you have overcome challenges associated with multiple information technology systems. If not applicable, please denote N/A.

c)  Please indicate the functionality of the most comprehensive (implemented in multiple settings) or largest EMR/EHR system(s), whether it existed prior to PRIME, or was implemented during PRIME, and in which parts of your organization this technology is utilized.

| | Outpatient Clinics | Emergency Department | Hospital | Comment |
|---|---|---|---|---|
| a. Electronic registries | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | |
| b. Electronic patient chart | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | |
| c. Appointment scheduling | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | |
| d. Electronic prescribing and/or computerized provider order entry (CPOE) system | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | |
| e. Electronic referral management | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | |

| | Outpatient Clinics | Emergency Department | Hospital | Comment |
|---|---|---|---|---|
| f. Clinical results (e.g., laboratory tests or radiology/imaging) | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | |
| g. Patient demographics | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | |
| h. Patient information documentation (e.g., medication list, progress notes, problem list) | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | |
| i. Hospital discharge summary | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | |
| j. Pop-up alerts/prompts (e.g., abnormal test result flags, reminders for medications or preventive services) | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | ☐ Prior to PRIME ☐ During PRIME ☐ No | |

| | Outpatient Clinics | Emergency Department | Hospital | Comment |
|---|---|---|---|---|
| k. Clinical support tools (e.g., decision supports, guidelines and protocols, drug formularies) | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | |
| l. Inter-provider communication tools (including messaging and referral notes) | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | |
| m. Real-time data access for frontline providers and staff | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ No | |

d) Please indicate if your organization's EMR/EHR supports the following activities. If yes, please specify challenges in doing so. If no, please specify barriers to doing so.

| | EMR/EHR supports? | Challenges/barriers |
|---|---|---|
| Pre-visit planning | Yes | |
| | No | |
| Point of care delivery | Yes | |
| | No | |
| Population/Panel management | Yes | |

| | EMR/EHR supports? | Challenges/barriers |
|---|---|---|
| | No | |
| Communication with PCPs | Yes | |
| | No | |
| Care coordination with other providers | Yes | |
| | No | |
| Operational and strategic decisions | Yes | |
| | No | |
| Continual performance feedback and rapid cycle improvement | Yes | |
| | No | |
| Patient engagement | Yes | |
| | No | |

e) Does your most comprehensive EMR/EHR meet Meaningful Use standards (MU)?

a. Yes (please provide date: _____)
b. No, but planned (please provide date: _____)
c. No, and not planned
d. Other (please specify: _____)

a. [If yes] If yes, please indicate the estimated number of primary care providers who have attested to Meaningful Use. If none, please enter 0.

Number: _____

f) Does your EHR/EMR link across sites or to other organizations (e.g., with consent, EPIC can access databases from another site)? If yes, please specify the challenges in doing so. If no, please specify the barriers to doing so.

|  | Linked? | Challenges/barriers |
|---|---|---|
| External pharmacy (including ePrescribing) | Yes | |
| | No | |
| External lab | Yes | |
| | No | |
| External specialists | Yes | |
| | No | |
| External clinics | Yes | |
| | No | |

g) Do you participate in a Health Information Exchange (HIE)?

a) Yes (please provide start date: _____)
b) No, but planned (please provide anticipated start date: _____)
c) No, and not planned

i. Please specify the name of the HIE and the type of information exchanged. If not applicable, please enter N/A in the comments.

| Name | Type of information exchanged | Comment |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

h) Please indicate if you have created or use a registry for prevention and management of patients. Please indicate the uses of these registries (panel management, care coordination, or other). If other, please specify in comments.

| | Registry? | Panel management | Care coordination | Other (please specify) | Comment |
|---|---|---|---|---|---|
| Tobacco use | Yes | | | | |
| | No | | | | |
| Hypertension | Yes | | | | |
| | No | | | | |
| High cholesterol | Yes | | | | |
| | No | | | | |
| Heart disease | Yes | | | | |
| | No | | | | |
| Stroke | Yes | | | | |
| | No | | | | |
| Diabetes | Yes | | | | |
| | No | | | | |
| Obesity | Yes | | | | |
| | No | | | | |
| Childhood obesity | Yes | | | | |
| | No | | | | |
| Depression | Yes | | | | |
| | No | | | | |
| Pain management | Yes | | | | |
| | No | | | | |
| Substance use | Yes | | | | |
| | No | | | | |
| Asthma | Yes | | | | |
| | No | | | | |
| COPD | Yes | | | | |

| | Registry? | Panel management | Care coordination | Other (please specify) | Comment |
|---|---|---|---|---|---|
| | No | | | | |
| Breast cancer | Yes | | | | |
| | No | | | | |
| Cervical cancer | Yes | | | | |
| | No | | | | |
| Colorectal cancer | Yes | | | | |
| | No | | | | |

      i) Does your organization use Telehealth or Telemedicine services?

a) Yes, outside of organization (use of a third party)
b) Yes, within organization
c) No

a) Please indicate which of the following Telehealth or Telemedicine services are used and when this service was implemented.

| Care type | Status | Comment |
|---|---|---|
| Psychiatry | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Dermatology | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |

| Care type | Status | Comment |
|---|---|---|
| Counseling | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Physical and occupational therapy | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Home health | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Palliative Care | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Chronic disease monitoring and management | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Radiology | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Ophthalmology | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME | |

| Care type | Status | Comment |
|---|---|---|
| | ☐ No plans to implement | |
| Audiology | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Cardiology | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Oncology | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Obstetrics | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |
| Pharmacy | ☐ Prior to PRIME<br>☐ During PRIME<br>☐ Plans to implement during PRIME<br>☐ No plans to implement | |

## Overall Implementation Strategies

j) Please indicate if any of the following apply to Primary Care providers practicing at your entity and the extent of their involvement before and during PRIME.

| | Before PRIME | During PRIME | Comment |
|---|---|---|---|
| Primary care providers are organized in provider teams. | All providers<br>Some providers<br>No providers | All providers<br>Some providers<br>No providers | |
| Primary care providers are trained in team-based care delivery model. | All providers<br>Some providers<br>No providers | All providers<br>Some providers<br>No providers | |

k) Please indicate if any of the following are provided by your primary care providers (select all that apply).

i. Group visits

ii. Medication reconciliation

iii. Medication-Assistance Treatment (MAT)

iv. None of these

l) Please indicate the type of quality improvement activities your entity is engaging in and the frequency of regular quality improvement planning and implementation meetings for each project. If your entity is not participating in a project or not engaging in quality improvement activities for a specific project, please denote N/A.

| Project | N/A | Type of quality improvement activity? | Frequency of regular quality improvement planning and implementation meetings (on average)? | Comment |
|---|---|---|---|---|
| 1.1: Integration of Behavioral Health and Primary Care | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____) | |

| Project | N/A | Type of quality improvement activity? | Frequency of regular quality improvement planning and implementation meetings (on average)? | Comment |
|---|---|---|---|---|
| | | | Never | |
| 1.2: Ambulatory Care Redesign: Primary Care | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 1.3: Ambulatory Care Redesign: Specialty Care | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 1.4: Patient Safety in the Ambulatory Setting | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 1.5: Million Hearts Initiative | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 1.6: Cancer Screening and Follow-Up | | Rapid cycle improvement (e.g., PDSA cycles) | Annually<br>Quarterly | |

| Project | N/A | Type of quality improvement activity? | Frequency of regular quality improvement planning and implementation meetings (on average)? | Comment |
|---|---|---|---|---|
| | | Other activities (please specify: _____) | More frequently (please specify: _____)<br>Never | |
| 1.7: Obesity Prevention and Healthier Foods Initiative | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 2.1: Improvements in Perinatal Care | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 2.2: Care Transitions: Integration of Post-Acute Care | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 2.3: Complex Care Management for High Risk Medical Populations | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |

| Project | N/A | Type of quality improvement activity? | Frequency of regular quality improvement planning and implementation meetings (on average)? | Comment |
|---------|-----|--------------------------------------|---------------------------------------------------------------------------------------------|---------|
| 2.6: Chronic Non-Malignant Pain Management | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 2.7: Comprehensive Advanced Illness Planning and Care | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 3.1: Antibiotic Stewardship | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 3.2: Resources Stewardship: High-Cost Imaging | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____)<br>Never | |
| 3.3: Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals | | Rapid cycle improvement (e.g., PDSA cycles)<br>Other activities (please specify: _____) | Annually<br>Quarterly<br>More frequently (please specify: _____) | |

| Project | N/A | Type of quality improvement activity? | Frequency of regular quality improvement planning and implementation meetings (on average)? | Comment |
|---|---|---|---|---|
| | | | Never | |
| 3.4: Resource Stewardship: Blood Products | | Rapid cycle improvement (e.g., PDSA cycles) Other activities (please specify: _____) | Annually Quarterly More frequently (please specify: _____) Never | |

Note: Projects 2.4 and 2.5 will not be assessed in the questionnaire.

m) Please indicate the types of individuals most commonly involved in the quality improvement activities described above. (select all that apply)

a) Providers
b) Clinical support staff
c) Administrative staff
d) Senior leadership
e) Patients
f) Do not conduct quality improvement activities for PRIME
g) Other (please specify: _____)

n) Please indicate the projects in which providers receive training and monitoring and feedback information. If your entity is not participating in a project, please denote N/A.

| Project | N/A | Providers receive training | Providers receive monitoring and feedback |
|---|---|---|---|
| 1.1: Integration of Behavioral Health and Primary Care | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 1.2: Ambulatory Care Redesign: Primary Care | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 1.3: Ambulatory Care Redesign: Specialty Care | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 1.4: Patient Safety in the Ambulatory Setting | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 1.5: Million Hearts Initiative | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 1.6: Cancer Screening and Follow-Up | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 1.7: Obesity Prevention and Healthier Foods Initiative | | Annually<br>Quarterly | Annually<br>Quarterly |

| Project | N/A | Providers receive training | Providers receive monitoring and feedback |
|---------|-----|---------------------------|--------------------------------------------|
| | | When hired<br>Never | More frequently (please specify: ___)<br>Never |
| 2.1: Improvements in Perinatal Care | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 2.2: Care Transitions: Integration of Post-Acute Care | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 2.3: Complex Care Management for High Risk Medical Populations | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 2.6: Chronic Non-Malignant Pain Management | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 2.7: Comprehensive Advanced Illness Planning and Care | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 3.1: Antibiotic Stewardship | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |

| Project | N/A | Providers receive training | Providers receive monitoring and feedback |
|---|---|---|---|
| 3.2: Resources Stewardship: High-Cost Imaging | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 3.3: Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |
| 3.4: Resource Stewardship: Blood Products | | Annually<br>Quarterly<br>When hired<br>Never | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never |

Note: Projects 2.4 and 2.5 will not be assessed in the questionnaire.

o) In general, indicate who receives provider monitoring and feedback information for the projects selected above.

| Provider | | Type of feedback | Interval of feedback | Comment |
|---|---|---|---|---|
| Medical directors | Yes<br>No | Comparison to peers<br>Benchmarks<br>Other (please specify: _____)<br>No feedback provided | Annually<br>Quarterly<br>More frequently (please specify: ___)<br>Never | |
| Clinic administrators | Yes<br>No | Comparison to peers<br>Benchmarks<br>Other (please specify: _____) | Annually<br>Quarterly | |

| Provider | | Type of feedback | Interval of feedback | Comment |
|---|---|---|---|---|
| | | No feedback provided | More frequently (please specify: ___) <br> Never | |
| Physicians | Yes | Comparison to peers <br> Benchmarks <br> Other (please specify: _____) <br> No feedback provided | Annually <br> Quarterly <br> More frequently (please specify: ___) <br> Never | |
| | No | | | |
| Care teams | Yes | Comparison to peers <br> Benchmarks <br> Other (please specify: _____) <br> No feedback provided | Annually <br> Quarterly <br> More frequently (please specify: ___) <br> Never | |
| | No | | | |

p) Please indicate if patients were involved in the design and implementation of PRIME projects, along with the primary mode of engagement for those projects. If your entity is not participating in a project, please denote N/A.

| Project | Engage patients? | Primary mode of engagement <br> 1) **Patients were given evaluations to complete following a care visit** <br> 2) **Conducted patient focus groups** <br> 3) **Had a discussion in a meeting with patient representatives** <br> 4) **Patient representative included as a member of project team** <br> 5) **Other (please specify)** |
|---|---|---|
| 1.1: Integration of Behavioral Health and Primary Care | Yes <br> No | |

| Project | Engage patients? | Primary mode of engagement 1) **Patients were given evaluations to complete following a care visit** 2) **Conducted patient focus groups** 3) **Had a discussion in a meeting with patient representatives** 4) **Patient representative included as a member of project team** 5) **Other (please specify)** |
|---|---|---|
| 1.2: Ambulatory Care Redesign: Primary Care | Yes No | |
| 1.3: Ambulatory Care Redesign: Specialty Care | Yes No | |
| 1.4: Patient Safety in the Ambulatory Setting | Yes No | |
| 1.5: Million Hearts Initiative | Yes No | |
| 1.6: Cancer Screening and Follow-Up | Yes No | |
| 1.7: Obesity Prevention and Healthier Foods Initiative | Yes No | |
| 2.1: Improvements in Perinatal Care | Yes No | |
| 2.2: Care Transitions: Integration of Post-Acute Care | Yes No | |
| 2.3: Complex Care Management for High Risk Medical Populations | Yes No | |
| 2.6: Chronic Non-Malignant Pain Management | Yes No | |

| Project | Engage patients? | Primary mode of engagement<br>1) **Patients were given evaluations to complete following a care visit**<br>2) **Conducted patient focus groups**<br>3) **Had a discussion in a meeting with patient representatives**<br>4) **Patient representative included as a member of project team**<br>5) **Other (please specify)** |
|---|---|---|
| 2.7: Comprehensive Advanced Illness Planning and Care | Yes<br>No | |
| 3.1: Antibiotic Stewardship | Yes<br>No | |
| 3.2: Resources Stewardship: High-Cost Imaging | Yes<br>No | |
| 3.3: Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals | Yes<br>No | |
| 3.4: Resource Stewardship: Blood Products | Yes<br>No | |

Note: Projects 2.4 and 2.5 will not be assessed in the questionnaire.

q) Please indicate how you collect REAL (Racial, Ethnicity and Preferred Language) and SO/GI (Sexual Orientation and Gender Identity) data and document efforts to provide culturally competent care and address social determinants of health. Please specify limitations/challenges and successes in collecting REAL and SO/GI data.

| Elements | Status | Limitations and Challenges | Successes | Comment |
|---|---|---|---|---|
| Demographic data collection processes include granular REAL and SO/GI data | ☐ Collected prior to PRIME <br> ☐ Collected during PRIME <br> ☐ Plans to collect during PRIME <br> ☐ No plans to collect | | | |
| Front-line/registration staff are trained to gather complete and accurate REAL/SO/GI data | ☐ Collected prior to PRIME <br> ☐ Collected during PRIME <br> ☐ Plans to collect during PRIME <br> ☐ No plans to collect | | | |
| REAL/SO/GI data is captured through EHR/EMR | ☐ Collected prior to PRIME <br> ☐ Collected during PRIME <br> ☐ Plans to collect during PRIME <br> ☐ No plans to collect | | | |
| Implemented a process for validating REAL/SO/GI  data | ☐ Collected prior to PRIME <br> ☐ Collected during PRIME <br> ☐ Plans to collect during PRIME <br> ☐ No plans to collect | | | |
| System has capacity to stratify performance metrics by REAL/SO/GI data | ☐ Collected prior to PRIME <br> ☐ Collected during PRIME <br> ☐ Plans to collect during PRIME <br> ☐ No plans to collect | | | |
| REAL/SO/GI data is used to identify disparities for targeted interventions | ☐ Collected prior to PRIME <br> ☐ Collected during PRIME <br> ☐ Plans to collect during PRIME <br> ☐ No plans to collect | | | |

| Elements | Status | Limitations and Challenges | Successes | Comment |
|---|---|---|---|---|
| Dashboards are used to share stratified performance measures with providers | ☐ Collected prior to PRIME<br>☐ Collected during PRIME<br>☐ Plans to collect during PRIME<br>☐ No plans to collect | | | |

r) Please indicate the type of relationship between your organization and community resource providers. (select all that apply)
a. Only refer patients, but no direct relationship
b. Informal relationship with community providers
c. Memorandum of understanding
d. Joint outreach and events
e. Community providers co-located within organization
f. Contractual agreement
g. No existing relationship
h. Other (please specify: _____)

## Preventative Services

s) Please indicate if your organization has a standardized approach to tobacco screening and counseling.
a. Yes
b. No

    i. [If yes] Please indicate your organization's approach to tobacco screening and counseling.

| | Location | Comment |
|---|---|---|
| All patients are assessed in: | Inpatient | |

|  | Location | Comment |
|---|---|---|
|  | ED |  |
|  | Specialty |  |
|  | Primary care |  |
|  | Other (please specify: _____) |  |
| Patients are assessed at: | First visit |  |
|  | Every encounter |  |
|  | Annually |  |
|  | Never |  |
| Patients are counseled at: | First visit |  |
|  | Every encounter |  |
|  | Annually |  |
|  | Never |  |

t) Please indicate the protocol for assessing and counseling tobacco cessation during the visit. (select all that apply)
a) History, type, and amount of tobacco products used
b) Education about risks and effects of tobacco products
c) Patient desire for tobacco cessation assistance
d) No protocol for assessing and counseling tobacco cessation
e) Other (please specify: _____)

u) Please indicate the protocol for assisting patients who desire tobacco cessation. (select all that apply)
a) Recommend pharmacotherapy, if health conditions permit
b) Recommend behavioral therapy
c) Follow up at future appointments for adherence
d) No protocol for assisting patients who desire tobacco cessation
e) Other (please specify: _____)

## Domain 1: Outpatient Delivery System Transformation and Prevention

The following sections of the survey are structured so that your team is only asked to complete questions for the projects that your entity has selected to implement. Therefore the first 3-4 questions of each section are designed to collect selection information from all the entities.

Project specific questions will only be asked if you are implementing the project. Not all project-specific questions may be relevant to your entity's implementation of the project; please denote N/A in those cases.

## Project 1.1: Integration of Behavioral Health and Primary Care

Please consider project planning and selection questions broadly, across the entire project.

### Project Planning and Selection

1. Did you participate in Project 1.1: Integration of Behavioral Health and Primary Care?
   a) Yes
   b) No

[If no, did not implement Project 1.1]

2. If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/funding/staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 1.1]

3. If this project is not required for your organization, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts)
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)

f)  Project is required (Designated Public Hospital)
g)  Other (please specify: _____)


4.  If this project was required for your organization, please indicate which of the following apply to your organization. (select all that apply)
a)  Project has synergy with existing projects (continuation or expansion of existing efforts)
b)  Project is consistent with organizational goals
c)  Champions and opinion leaders are available
d)  Implementation is relatively easy (availability of data, concordance with existing processes of care)
e)  Project has low resource requirements (lowest cost, least time/staff needed to implement)
f)  Project is not required (District and Municipal Hospital)
g)  Other (please specify: _____)

5. Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Implement a behavioral health integration assessment tool (baseline and annual progress measurement) | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a physical-behavioral health integration program that utilizes a nationally-recognized model (e.g., the Four Quadrant Model for Clinical Integration, the Collaborative Care Model, or other IBH resources from SAMHSA) | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Integrate appropriate screening tools and decision support into the emergency department to ensure timely recognition of patients with mental health and substance use disorder problems. Enhanced access to primary care and/or to behavioral health specialists will be integrated into discharge planning for these patents. Use of 24-7 care navigators (e.g., Community Physician Liaison Program) may be used to support linkages to PCPs, MH and SUD specialists and | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| behavioral health and other community services through the discharge process | | | |
| Physical-behavioral health integration may be an implementation of a new program or an expansion of an existing program, from pilot sites to hospital and health system primary care sites or from single populations to multiple populations, (e.g., obesity, diabetes, maternal, infant, and child care, end-of-life care, chronic pain management) | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| PCHM and behavioral health providers will: a. Collaborate on evidence based standards of care including medication management and care engagement process. b. Implement case conferences/consults on patients with complex needs | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Ensure coordination and access to chronic disease (physical or behavioral) management, including self-management support to patients and their families | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Ensure systems are in place to support patient linkage to appropriate specialty physical, mental and SUD services. Preventive care screenings including behavioral health screenings (e.g., PHQ-2, PHQ-9, SBIRT) will be implemented for all patients to identify unmet needs. When screenings are positive, providers | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| will take immediate steps, including provision of brief interventions (e.g., MI techniques) to ensure access for further evaluation and treatment when necessary. Preferably, this should include a warm transfer to the appropriate provider if the screening provider is unable to provide the service | | Not selected and not implemented | |
| Provide cross-systems training to ensure effective engagement with patients with MH/SUD conditions. Ensure that a sufficient number of providers are trained in SBIRT and/or in other new tools used by providers to ensure effectiveness of treatment | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Increase access to Medication Assisted Treatment (MAT) for patients with alcohol and opioid addiction to assist in stabilizing their lives, reducing urges or cravings to use, and encourage greater compliance with treatment for co-morbid medical and mental health conditions. For alcohol use disorders these medications include naltrexone, acamprosate, and disulfiram. For opioid addiction, medication assisted treatment includes maintenance treatment with methadone and buprenorphine. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Ensure the development of a single Treatment Plan that includes the patient's behavioral health issues, medical issues, substance abuse, social and cultural and linguistic needs. This includes incorporating traditional medical interventions, as well as non-traditional interventions such as gym memberships, nutrition monitoring, healthy lifestyle coaching, or | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| access to culturally and linguistically appropriate peer-led wellness and symptoms management groups. | | | |
| Ensure a culturally and linguistically appropriate treatment plan by assigning peer providers or other frontline workers to the care team to assist with care navigation, treatment plan development and adherence. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Ensure that the Treatment Plan: a. Is maintained in a single shared EHR/clinical record that is accessible across the treatment team to ensure coordination of care planning. b. Outcomes are evaluated and monitored for quality and safety for each patient. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement technology-enabled data systems to support pre-visit planning, point-of-care delivery, care plan development, population/panel management activities, coordination and patient engagement. Develop programs to implement telehealth, eReferral/eConsult to enhance access to behavioral health services. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Demonstrate engagement of patients in the design and implementation of the project | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Increase team engagement by: a. Implementing a model for team-based care in which staff performs to the best of their abilities and credentials. b. Providing ongoing staff training on care model. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Ensure integration is efficient and providing value to patients by implementing a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

6. If you are participating in other activities related to Project 1.1 that do not fit into the above core components, please briefly describe these activities here.
7. If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 1.1: Integration of Behavioral Health and Primary Care. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

## Assessment

8. Please indicate your level of behavioral health integration within your primary care settings **prior to PRIME**?
   a) Referred patients to behavioral health providers at other locations without coordination
   b) Coordinated with behavioral health providers at other locations
   c) Colocated with behavioral health providers, but with no interaction between primary care and behavioral health providers
   d) Colocated with behavioral health providers, with some interaction between primary care and behavioral health providers
   e) Colocated with behavioral health providers, but with full collaboration between primary care and behavioral health providers in patient care delivery and management
   f) Other (please specify: _____)

9. Did you assess your behavioral health integration level prior to implementing this project under PRIME?

a) Yes
b) No

10. [If yes above] Please indicate which tool(s) you used to assess behavioral health integration prior to implementing PRIME. (select all that apply)
a) COMPASS
b) The Integrated Practice Assessment Tool (IPAT)
c) Behavioral Health Integration Capacity Assessment (BHICA)
d) Mehaf Site Self- Assessment (SSA)
e) Integrated Behavioral Health Project Tool (IBHP)
f) Tool developed internally
g) Other (please specify: _____)

11. Are you using this tool(s) to measure progress in behavioral health integration during PRIME?
a) Yes, using it annually or at regular intervals
b) Plan to use it at the end of PRIME
c) No, not using a tool to measure progress
d) Other (please specify: _____)

12. If using during PRIME, did you test how well or accurately this tool measures behavioral health integration at your organization?
a) Yes
b) No
c) N/A

13. Please indicate the model of behavioral health integration you have implemented.
a) Improving Mood— Providing Access to Collaborative Treatment (IMPACT)
b) Integrated Behavioral Health Project (IBHP)
c) Four Quadrant Model
d) Collaborative Care Model
e) None
f) Other (please specify: _____)

14. Of the QI projects that you have completed related to Project 1.1 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |

## Tools and Protocols

15. Do you provide an electronic or telephone consultation tool for primary care providers to consult with behavioral health providers prior or during referrals?
   a) Yes, electronic
   b) Yes, telephone/fax
   c) No
   d) Other (please specify: _____)

16. Please indicate if behavioral health providers are co-located in primary care settings.
   a) Yes, before PRIME
   b) Yes, as part of PRIME implementation
   c) No, planned as part of PRIME implementation
   d) No, behavioral health providers are not co-located

   i. [If behavioral health providers are co-located in primary care settings] Most commonly, what is the physical arrangements in these settings?
      1. The same office
      2. In the same building but different offices
      3. In adjacent buildings
      4. Other (please specify: _____)

   29) Please identify the types of providers co-located in primary care clinics. (select all that apply)

| Provider type | Co-located in clinic(s)? | Number of full time equivalent behavioral health providers co-located |
|---|---|---|
| Psychiatrist | In all locations<br>In some locations<br>No |  |

| Provider type | Co-located in clinic(s)? | Number of full time equivalent behavioral health providers co-located |
|---|---|---|
| Psychologist | In all locations<br>In some locations<br>No | |
| Clinical social worker | In all locations<br>In some locations<br>No | |
| MFT | In all locations<br>In some locations<br>No | |
| Peer providers/navigators | In all locations<br>In some locations<br>No | |

      i.    [If you use peer providers] What percent of peer providers are bi- or multilingual? If no peer providers, please enter N/A. _____

1) [If no behavioral health providers are co-located in primary care settings] Do you offer behavioral health telehealth appointment to patients?
      i.    Yes, with behavioral health providers in other locations of this organization
      ii.    Yes, with behavioral health providers from another organization
      iii.    No
      iv.    Other (please specify: _____)

17. Please indicate if any of following activities occur between the primary care provider/staff and behavioral health provider/staff, as well as the frequency of the occurrence.

| Activity | Frequency | Comment |
|---|---|---|
| Pre-visit planning and/or huddles | Daily<br>Weekly<br>Monthly<br>Never | |
| Case conferences | Daily<br>Weekly<br>Monthly | |

| Activity | Frequency | Comment |
|---|---|---|
|  | Never |  |
| Joint quality improvement planning and implementation | Monthly<br>Quarterly<br>Annually<br>Never |  |
| Informal (e.g. lunch) or formal meetings | Monthly<br>Quarterly<br>Annually<br>Never |  |

18. Do primary care and behavioral health providers have access to the respective EHRs?
a) There is one single EHR and both types of providers have read/write access to primary care and behavioral health records
b) There are separate EHRs and both types of providers have read access to primary care and behavioral health records
c) There are separate EHRs and only medical providers have read access to behavioral health records
d) There are separate EHRs and only BH providers have read access to primary care records
e) There are separate EHRs and neither provider has read access to the other record
f) Other (please specify: _____)

19. Is there a registry of patients with behavioral health issues?
a) Yes, existed before PRIME
b) Yes, implemented as part of PRIME
c) No, planned as part of PRIME
d) No, not planned
      i. [If yes] What type of providers are assigned to manage patients with behavioral health issues? (select all that apply)
           a. LCSW
           b. Psychiatric nurse
           c. No one
           d. Other (please specify: _____)

20. Have you developed explicit behavioral health referral processes for your primary care providers?
a) Yes, existed before PRIME

b) Yes, developed as part of PRIME implementation
c) No, planned as part of PRIME
d) No, not planned

        i.   [If yes] If you have explicit behavioral health referral processes, did you:
            1.  Develop internally
            2.  Use a guideline from another source with slight modifications
            3.  Use a guideline from another source with moderate/major modifications
            4.  Other (please specify: _____)

21. Do you have an electronic decision support tool for behavioral health referrals?
a) Yes, existed before PRIME
b) Yes, implemented as part of PRIME
c) No, planned as part of PRIME
d) No, not planned

## Planning

22. Who was involved in development of the behavioral health integration project under PRIME? (select all that apply)
a) Primary care providers
b) Behavioral health providers
c) Administrators
d) Patient representatives
e) Other (please specify: _____)

23. Have you trained or are you in the process of training primary care or behavioral health providers on how to provide team-based care?
a) Yes, both type of providers
b) Yes, primary care providers only
c) Yes, behavioral health providers only
d) No

## Integration in Emergency Department

24. Did you screen patients in the emergency department for behavioral health issues <u>prior</u> to PRIME?
a) Yes, systematically
b) Yes, most of the time
c) Yes, on a case-by-case basis
d) No

25. Are you screening patients in the emergency department for behavioral health issues <u>during</u> PRIME?
a) Yes, systematically
b) Yes, most of the time
c) Yes, on a case by case basis
d) In the process of implementing
e) No

2) [If screening during PRIME] What actions do you take if screening identifies the likelihood of a moderate or serious behavioral health problem (select all that apply)?
    a) Refer patient to a behavioral health provider
    b) Use a 24-7 care navigator or other community liaisons to link patients to PCP post discharge
    c) Make an appointment for the patient with a behavioral health provider
    d) Call behavioral health provider to visit the patient while in ED
    e) Give patient a referral and leave it to the patient to seek follow-up care
    f) Other (please specify: _____)

## Integration in Primary Care
26. During PRIME, what actions do you take upon identification of patients with behavioral health issues in primary care? (select all that apply)
a) Refer patient to a behavioral health provider
b) Make an appointment for the patient with a behavioral health provider
c) Call behavioral health provider to visit the patient during the visit
d) Give patient a referral and leave it to the patient to seek follow-up care
e) Other (please specify: _____)

27. Do you have any behavioral health integration champions?
a) Yes, a primary care provider
b) Yes, a behavioral health provider
c) Yes, other (please specify: _____)
d) No

28. Please identify if you train, monitor, or measure compliance of primary care provider with the following activities, as well as the frequency.

| | Trained | Monitored | Provide feedback |
|---|---|---|---|
| | Yes, annually | Yes, annually | Yes, annually |

|  | **Trained** | **Monitored** | **Provide feedback** |
|---|---|---|---|
| Screening for behavioral health conditions | Yes, only at baseline | Yes, only at baseline | Yes, only at baseline |
|  | Yes, other frequency (please specify: _____) | Yes, other frequency (please specify: _____) | Yes, other frequency (please specify: _____) |
|  | No | No | No |
| Motivational interviewing technique to seek care, if screening results are positive | Yes, annually | Yes, annually | Yes, annually |
|  | Yes, only at baseline | Yes, only at baseline | Yes, only at baseline |
|  | Yes, other frequency (please specify: _____) | Yes, other frequency (please specify: _____) | Yes, other frequency (please specify: _____) |
|  | No | No | No |
| Referral to behavioral health providers | Yes, annually | Yes, annually | Yes, annually |
|  | Yes, only at baseline | Yes, only at baseline | Yes, only at baseline |
|  | Yes, other frequency (please specify: _____) | Yes, other frequency (please specify: _____) | Yes, other frequency (please specify: _____) |
|  | No | No | No |
| Warm hand-off (if colocated) | Yes, annually | Yes, annually | Yes, annually |
|  | Yes, only at baseline | Yes, only at baseline | Yes, only at baseline |
|  | Yes, other frequency (please specify: _____) | Yes, other frequency (please specify: _____) | Yes, other frequency (please specify: _____) |
|  | No | No | No |

29. Please indicate the number of primary care providers that have been certified for Medication Assisted Treatment (MAT) under PRIME. If none, please enter 0.

Number: _____

30. Do the primary care providers and behavioral health providers develop a joint individual treatment plan (ITP) for patients with behavioral health issues?
a) Yes, always
b) Yes, usually
c) Yes, as needed

d) No, rarely

e) Never

    a) [If yes to ITP above] Does the ITP include non-medical interventions?
- i. Yes, always
- ii. Yes, as needed
- iii. No

    b) Indicate which non-medical interventions are included (select all that apply):
- i. Gym membership
- ii. Healthy lifestyle coaching
- iii. Peer-led classes and groups
- iv. None

    c) Where is this ITP maintained? (select all that apply)
- i. Medical EHR
- ii. Behavior health EHR
- iii. Joint medical and behavioral health EHR
- iv. Medical paper chart
- v. Behavioral health paper chart
- vi. Other (please specify: _____)

    d) Is this ITP shared with the patient in electronic or paper form?
- i. Electronic and paper
- ii. Electronic only
- iii. Paper only
- iv. Not shared

31. How would you characterize overall <u>primary care provider</u> buy-in and support for behavioral health integration in the organization?
a) Mostly not supportive
b) Somewhat not supportive
c) Neutral
d) Somewhat supportive
e) Mostly supportive

32. How would you characterize overall <u>behavioral health provider</u> buy-in and support for behavioral health integration in the organization?
a) Mostly not supportive

b) Somewhat not supportive
c) Neutral
d) Somewhat supportive
e) Mostly supportive

## Resources for Planning and Implementing

33. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

34. Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

35. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | (1) IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>(2) Variation in documentation within system <u>by providers and staff </u>(such as documenting data differently)<br>(3) Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>(4) Requires manual tracking or chart review<br>(5) Other (please specify: _____) | 1. EHR/IT Standardization/expansion across system<br>2. Implement standardized processes and policies for tracking/ documentation by providers and staff<br>3. Implement standardized tools/screening<br>4. Develop/clarify operational definitions/systems<br>5. Provider and staff training/increased capacity<br>6. Planning/process development from management or QI<br>7. Not yet resolved<br>8. Other (please specify:_____) | |
| Achieving the targeted metrics | 1. Already performing at a high level (difficult to improve further)<br>2. Inadequate availability of services/limited access and capacity to serve patients<br>3. Processes not established system-wide<br>4. Inadequate follow-up processes to document patient outcomes<br>5. Silo-ed departments/difficulty collaborating | 1. Enhance outreach/capacity to follow up with patients<br>2. Implement Provider and staff training/increased capacity<br>3. Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc) | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | 6. Small denominator or numerator (causing an unstable rate)<br>7. Staff turn-over<br>8. Other (please specify: _____) | 4. Established/standardized processes across system<br>5. Established meetings across teams<br>6. Not yet resolved<br>7. Other (please specify: _____) | |

## Project 1.2: Ambulatory Care Redesign: Primary Care

Please consider project planning and selection questions broadly, across the entire project.

### Project Planning and Selection

1) Did you participate in Project 1.2: Ambulatory Care Redesign: Primary Care?
   a. Yes
   b. No

[If no, did not implement Project 1.2]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
   a. Lack of resources/funding /staffing
   b. Lack of health information technology
   c. Already performed well in this area
   d. Not identified as a problem/not examined
   e. Not aligned with organizational goals
   f. Low priority
   g. Other (please specify: _____)

[If yes, implemented Project 1.2]

3) If this project is not required for your organization, what were the motivators for choosing this project? (select all that apply)
   a. Synergy with existing projects (continuation or expansion of existing efforts)
   b. Consistency with organizational goals
   c. Availability of champions and opinion leaders
   d. Ease of implementation (availability of data, concordance with existing processes of care)
   e. Low resource requirements (lowest cost, least time/staff needed to implement)
   f. Project is required (Designated Public Hospital)
   g. Other (please specify: _____)

4) If this project was required for your organization, please indicate which of the following apply to your organization. (select all that apply)
   a. Project has synergy with existing projects (continuation or expansion of existing efforts)
   b. Project is consistent with organizational goals
   c. Champions and opinion leaders are available

d. Implementation is relatively easy (availability of data, concordance with existing processes of care)
e. Project has low resource requirements (lowest cost, least time/staff needed to implement)
f. Project is not required (District and Municipal Hospital)
g. Other (please specify: _____)

5) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Gap analysis of practice sites within the DPH/DMPH system. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Primary Care practices will demonstrate advancement of their PCMH transformation through the use of a nationally recognized PCMH methodology | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Hiring and training of frontline workforce (e.g., medical assistants, community health workers, promotoras, health navigators or other non-licensed members of the care team) to be responsible for coordination of non-clinical services and elements of the care plan. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Implement technology-enabled data systems to support pre-visit planning, point of care delivery, population/panel management activities, care coordination, patient engagement, and operational and strategic decisions including a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership.<br>a. Implementation of Electronic Health Record (EHR) technology that meets meaningful use standards (MU) | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Ongoing identification of all patients for population management (including assigned managed care lives):<br>a. Manage panel size, assignments, and continuity to internal targets;<br>b. Develop interventions for targeted patients by condition, risk, and self- management status.<br>c. Perform preventive care services including mental health and substance misuse screenings and brief interventions (e.g., PHQ-9, SBIRT). | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Enable prompt access to care by:<br>a. Implementing open or advanced access scheduling<br>b. Creating alternatives to face-to-face provider/patient visits | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| c. Assigning frontline workers to assist with care navigation and non-clinical elements of the care plan. | | | |
| Coordinate care across settings<br>a. Identification of care coordinators at each primary care site who are responsible for coordinating care within the PCMH as well as with other facilities (e.g., other care coordinators or PCMH/DPH/DMPH high risk care managers)<br>i. Establish onsite Care/Case managers to work with high risk patients and their care teams, or develop processes for local care coordinators to work with a central complex care management program for these patients<br>b. Implement processes for timely bi-directional communication and referral to specialty care, (including mental health and substance use disorder services), acute care, social services and community based services | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Demonstrate evidence-based preventive and chronic disease management | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Improve staff engagement by:<br>a. Implementing a model for team-based care in which staff performs to the best of their abilities and credentials.<br>b. Providing ongoing staff training on the team-based care model to ensure effective and efficient provision of services (e.g., group visits, medication reconciliation, motivational interviewing, cognitive behavioral therapy and Medication- Assistance Treatment (MAT)). | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Engage patients using care plans, and self-management education, and through involvement in the design and implementation of this project. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Improve the accuracy and completeness of race, ethnicity, and language (REAL), and sexual orientation and gender identity (SO/GI) data, and use that data to identify and reduce disparities in one or more Primary Care Redesign project metrics by: a. Adding granular REAL and SO/GI data to demographic data collection processes and training front-line/registration staff to gather complete and accurate REAL/SO/GI data b. Developing capacity to track and report REAL/SO/GI data, and data field completeness c. Implementing and/or refining processes for ongoing validation of REAL/SO/GI data d. Developing capacity to stratify performance metrics by REAL/SO/GI data and use stratified performance data to identify disparities for targeted interventions e. Developing capacity to plan and implement disparity reduction interventions with input from patients and community stakeholders f. Developing dashboards to share stratified performance measures with front-line staff, providers, and senior leadership. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| To address quality and safety of patient care, implement a system for continual performance | Yes No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | | Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |

6) If you are participating in other activities related to Project 1.2 that do not fit into the above core components, please briefly describe these activities here.

7) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a. The project has expanded to additional clinics
   b. The project has expanded to additional departments
   c. The project has different scope (please specify: _____)
   d. The project has different/new goals (please specify: _____)
   e. The project includes different/new populations (please specify: _____)
   f. The project uses different measures/metrics (please specify: _____)
   g. Components of this project were not ongoing prior to PRIME
   h. Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 1.2: Ambulatory Care Redesign: Primary Care. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

## Assessment and Planning

8) If you conducted a gap analysis for this project, please indicate if it was system wide or in specific settings. (select all that apply)
   a. System wide
   b. On-campus hospital outpatient clinics
   c. Off-campus outpatient/primary care clinics
   d. Did not conduct a gap analysis
   e. Other (please specify: _____)

   i) [If you did not conduct a gap analyses] Please indicate the reason why you did not conduct a gap analysis. (select all that apply)
      (1) Had recently completed or regularly complete such analyses
      (2) Had adequate information on gaps in primary care
      (3) Did not consider it necessary
      (4) Other reason (please specify: _____)

9) Do any of the following parts of your organization have PCMH designation? (select all that apply)
    a. On-campus hospital outpatient clinics (number: _____)
    b. Off-campus outpatient clinics (number: _____)
    c. No PCMH designation
    d. Other (please specify: _____)
    a) [If yes] Please indicate the associated PCMH accreditation organization:
        i. NCQA (latest recognition year:_____)
        ii. The Joint Commission (latest recognition year:_____)
        iii. URAC (latest recognition year:_____)
        iv. AAAHC (latest recognition year:_____)
        v. Other (latest recognition year:_____)

10) Please indicate if you have these personnel, and the frequency you train and monitor these staff in any of the processes and protocols.

| | Do you utilize these personnel? | Training about processes and protocols | Monitoring about processes and protocols |
|---|---|---|---|
| Care coordinators | Yes<br>No | Yes, quarterly or more often<br>Yes, annually or semi-annually<br>At point of hire<br>No<br>Other (please specify:<br>_____) | Yes, quarterly or more often<br>Yes, annually or semi-annually<br>No<br>Other (please specify:<br>_____) |
| Case managers | Yes<br>No | Yes, quarterly or more often<br>Yes, annually or semi-annually<br>At point of hire<br>No<br>Other (please specify:<br>_____) | Yes, quarterly or more often<br>Yes, annually or semi-annually<br>No<br>Other (please specify:<br>_____) |

11) Of the QI projects that you have completed related to Project 1.2 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
| | |

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |

## Implementation

12) Please indicate if you hired or reassigned front line staff for coordination of non-clinical services.
    a. Yes
    b. No
        i. [If yes] Please indicate the type and number of staff who were hired and trained for coordination of non-clinical services.

| Provider type | Action | Number of staff | Comment |
|---|---|---|---|
| Medical assistants | Hired<br>Reassigned<br>No action |  |  |
| Community health workers | Hired<br>Reassigned<br>No action |  |  |
| Promotoras | Hired<br>Reassigned<br>No action |  |  |
| Health navigators | Hired<br>Reassigned<br>No action |  |  |
| Other non-licensed individuals (please specify: _____) | Hired<br>Reassigned<br>No action |  |  |

13) Please indicate if you stratify patients for population management by condition or risk status.

|  |  | Comment |
|---|---|---|
| By risk status | Yes/no |  |
| By medical condition | Yes/no |  |
| Asthma | Yes/no |  |
| Diabetes | Yes/no |  |
| Congestive heart failure | Yes/no |  |

| | | Comment |
|---|---|---|
| COPD | Yes/no | |
| Depression | Yes/no | |
| Other (please specify: _____) | Yes/no | |
| By substance use | Yes/no | |
| By mental health status | Yes/no | |

14) Please indicate the frequency at which any of the following personnel are at primary care sites and their locations. Please indicate if you train and monitor these staff in any of the processes and protocols.

| | Frequency at Primary Care Sites | Location |
|---|---|---|
| Care coordinators | All the time | On campus clinics |
| | 3-4 days per week | Off campus clinics |
| | 1-2 days per week | Other (please specify: _____) |
| | Never | N/A |
| Case managers | All the time | On campus clinics |
| | 3-4 days per week | Off campus clinics |
| | 1-2 days per week | Other (please specify: _____) |
| | Never | N/A |

15) Please indicate how disease management services are delivered. (select all that apply)
   a. Incorporated in the activities of the medical team and delivered by team members
   b. Delivered by a centralized group within the organization
   c. Delivered by a contracted external organization
   d. Other (please specify: _____)

16) Please indicate if your disease management services are delivered through the following approaches. (select all that apply)
   a. Home visits
   b. Telephone calls
   c. Group visits
   d. Nurse advice line

    e. Peer educator visits

    f. Mailing informational materials

    g. Other (please specify: _____)


17) Please indicate if you use a specific team-based care delivery model for delivery of primary care.

1) Yes, AHRQ's TeamSTEPPS for Primary Care

2) Yes, Safety Net Medical Home Initiative

3) No

4) Other (please specify model: _____)


18) Please indicate the modes of team-based care engagement for the provider care team. (select all that apply)

1. Provide training on goals and objectives

2. Coaching teams on role delegation

3. Communication and interaction

4. Scheduled time for daily huddles

5. Scheduled time for regular team meetings

6. Assure adequate clinical and administrative staffing for organizing teams

7. Provide QI support for improving workflow for teams

8. No modes of team-based care engagement


19) How often do patients that are primarily managed by primary care providers receive individualized treatment/care (ITP) plans?

a. Always

b. Usually

c. Sometimes

d. Rarely

e. Never


    i. [If always to sometimes] How often do ITP include patient driven self-management goals?

        (1) Always

        (2) Usually

        (3) Sometimes

        (4) Rarely

        (5) Never


    ii. [If always to sometimes] How often the primary care providers review ITP goals with patients at each visit?

(1) Always
(2) Usually
(3) Sometimes
(4) Rarely
(5) Never

iii.  [If always to sometimes] Is this ITP shared with the patient in electronic or paper form? (select one)
    a)  Electronic and paper
    b)  Electronic only
    c)  Paper only
    d)  Not shared

## Resources for Planning and Implementing

20) Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

21) Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

22) Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | 18) IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>19) Variation in documentation within system <u>by providers and staff</u> (such as documenting data differently)<br>20) Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>21) Requires manual tracking or chart review<br>22) Other (please specify:_____) | 1. EHR/IT Standardization/expansion across system<br>2. Implement standardized processes and policies for tracking/ documentation by providers and staff<br>3. Implement standardized tools/screening<br>4. Develop/clarify operational definitions/systems<br>5. Provider and staff training/increased capacity<br>6. Planning/process development from management or QI<br>7. Not yet resolved<br>8. Other (please specify:_____) | |
| Achieving the targeted metrics | 1. Already performing at a high level (difficult to improve further)<br>2. Inadequate availability of services/limited access and capacity to serve patients<br>3. Processes not established system-wide<br>4. Inadequate follow-up processes to document patient outcomes | 1. Enhance outreach/capacity to follow up with patients<br>2. Implement Provider and staff training/increased capacity<br>3. Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc)<br>4. Established/standardized processes across system | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | 5. Silo-ed departments/difficulty collaborating<br>6. Small denominator or numerator (causing an unstable rate)<br>7. Staff turn-over<br>8. Other (please specify: _____) | 5. Established meetings across teams<br>6. Not yet resolved<br>7. Other (please specify: _____) | |

Please consider project planning and selection questions broadly, across the entire project.

Project Planning and Selection

(1) Did you participate in Project 1.3: Ambulatory Care Redesign: Specialty Care?

    a. Yes

    b. No

[If no, did not implement Project 1.3]

(2) If no, please identify the reasons for not implementing this project. (select all that apply)

    a. Lack of resources/ funding /staffing

    b. Lack of health information technology

    c. Already performed well in this area

    d. Not identified as a problem/not examined

    e. Not aligned with organizational goals

    f. Low priority

    g. Other (please specify: _____)

[If yes, implemented Project 1.3]

(3) If this project is not required for your organization, what were the motivators for choosing this project? (select all that apply)

    a. Synergy with existing projects (continuation or expansion of existing efforts)

    b. Consistency with organizational goals

    c. Availability of champions and opinion leaders

    d. Ease of implementation (availability of data, concordance with existing processes of care)

    e. Low resource requirements (lowest cost, least time/staff needed to implement)

    f. Project is required (Designated Public Hospital)

    g. Other (please specify: _____)

(4) If this project was required for your organization, please indicate which of the following apply to your organization. (select all that apply)

    a. Project has synergy with existing projects (continuation or expansion of existing efforts)

    b. Project is consistent with organizational goals

c.  Champions and opinion leaders are available
d.  Implementation is relatively easy (availability of data, concordance with existing processes of care)
e.  Project has low resource requirements (lowest cost, least time/staff needed to implement)
f.  Project is not required (District and Municipal Hospital)
g.  Other (please specify: _____)

(5) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Develop a specialty care program that is broadly applied to the entire population of service. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Conduct a gap analysis to assess need for specialty care including mental health and SUD services (analysis to include factors impacting ability to access specialty care), and the current and ideal state capacity to meet that need. Benchmark to other CA Public Health Care systems.<br>a. For ideal state analysis, include potential impact of increased primary care capacity to manage higher acuity conditions either independently, or in collaboration with, specialty care, so as to reduce the need for in-person specialty care encounters. (e.g., insulin titration, IBS management, joint injections, cognitive behavioral therapy (CBT) or Medication Assisted Treatment (MAT)). | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Engage primary care providers and local public health departments in development and implementation of specialty care model<br>a. Implement processes for primary care: specialty care co-management of patient care<br>b. Establish processes to enable timely follow up for specialty expertise requests<br>c. Develop closed loop processes to ensure all requests are addressed and if in person visits are performed, that the outcome is communicated back to the PCP. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Clinical teams engage in team- and evidence-based care | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Increase staff engagement by:<br>a. Implementing a model for team-based care in which staff performs to the best of their abilities and credentials.<br>b. Providing ongoing staff training on care model | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Develop and implement standardized workflows for diversified care delivery strategies (e.g. shared medical visits, ancillary led services, population management, telemedicine services) to expand access and improve cost efficiency | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Adopt and follow treatment protocols mutually agreed upon across the delivery system | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement technology-enabled data systems to support pre-visit planning, point of care delivery, population management activities and care coordination/transitions of care. Timely, relevant and actionable data is used to support patient engagement, PCP collaboration, and drive clinical, operational and strategic decisions including continuous QI activities.<br>a. Implement EHR technology that meets meaningful use standards (MU) | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Patients have care plans and are engaged in their care. Patients with | Yes No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| chronic disease (including MH/SUD conditions) managed by specialty care have documented patient-driven, self-management goals reviewed at each visit | | Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Improve medication adherence | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement population management strategies for patients in need of preventive services, with chronic conditions, or with recurring long term surveillance needs | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement or expand use of telehealth based on DPH/DMPH capacity to address patient and PCP barriers to accessing specialty expertise. Implement a telehealth platform with communication modalities that connect | Yes No | Ongoing prior to PRIME Planned, but not yet implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| between specialty care and primary care (e.g., eConsult/eReferral) | | Not planned prior to PRIME Not selected and not implemented | |
| Demonstrate engagement of patients in the design and implementation of the project | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Test use of novel performance metrics for redesigned specialty care models | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| | | Not selected and not implemented | |

(6) If you are participating in other activities related to Project 1.3 that do not fit into the above core components, please briefly describe these activities here.

(7) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)

   a. The project has expanded to additional clinics
   b. The project has expanded to additional departments
   c. The project has different scope (please specify: _____)
   d. The project has different/new goals (please specify: _____)
   e. The project includes different/new populations (please specify: _____)
   f. The project uses different measures/metrics (please specify: _____)
   g. Components of this project were not ongoing prior to PRIME
   h. Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 1.3: Ambulatory Care Redesign: Specialty Care. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

## Assessment and Planning

(8) Please indicate if your organization conducted a gap analyses to assess the need for specialty care under PRIME.

a. Yes
b. No

i. [If yes] Please indicate the specialty services examined in the gap analysis.

| Specialty services examined | Conducted gap analyses | Comment |
|---|---|---|
| Medical specialties (please specify: _____) | Yes<br>No | |
| Mental health | Yes<br>No | |
| Substance use | Yes<br>No | |
| Dental care | Yes<br>No | |

ii. [If no] If you did not conduct a gap analyses, please indicate the reason. (select all that apply)

1) Had recently completed or regularly complete such analyses
2) Had adequate information on gaps in specialty care
3) Did not consider it necessary
4) Other reason (please specify: _____)

(9) Please indicate if you use a specific team-based care delivery model for delivery of specialty care.
   a. Yes (please specify model: _____)
   b. No

(10)    Of the QI projects that you have completed related to Project 1.3 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
| | |
| | |
| | |
| | |
| | |

(11)     Please indicate if you have initiated any training for primary care providers (PCPs) to expand expertise in the following specialty areas or services that may be typically delivered by specialists under PRIME. (select all that apply)
   a.  Endocrinology, e.g. insulin titration
   b.  Gastroenterology, e.g. IBS management
   c.  Orthopedics, e.g. joint injections
   d.  Mental health, e.g. cognitive behavioral therapy (CBT)
   e.  Substance use, e.g. Medication Assisted Treatment
   f.  No training initiated
   g.  Other (please specify: _____)

(12)     What other services do you provide to PCPs for successful treatment of higher acuity/complex patients? (select all that apply)
   a.  Decision support tools
   b.  Joint case conferencing with specialists
   c.  Real time electronic/phone specialist consultations
   d.  Additional clinical support staff/multi-specialty care teams
   e.  No other services provided
   f.  Other (please specify: _____)

      i.  [If no] Please identify the reason for not initiating such programs. (select all that apply)
         1.  Already had implemented such programs
         2.  Did not have the time and resources needed to implement such programs
         3.  PCPs were unwilling to take on further responsibilities
         4.  Other (please specify: _____)

(13)     Please indicate up to five developed or adopted specialty-specific treatment protocols before or during PRIME.

| Protocols | When adopted or developed? | Comment |
|---|---|---|
| Specialty: _____ | Prior to PRIME<br>During PRIME<br>Neither | |

| Protocols | When adopted or developed? | Comment |
|---|---|---|
| Specialty: _____ | Prior to PRIME<br>During PRIME<br>Neither | |
| Specialty: _____ | Prior to PRIME<br>During PRIME<br>Neither | |
| Specialty: _____ | Prior to PRIME<br>During PRIME<br>Neither | |
| Specialty: _____ | Prior to PRIME<br>During PRIME<br>Neither | |

## Integration with Primary Care

(14)   Please indicate if any specialists participate in management of patients with primary care teams and frequency of this participation.

| Provider type | Frequency of involvement | Comment |
|---|---|---|
| Medical specialists | Regularly<br>Only when needed<br>Never | |
| Mental health providers | Regularly<br>Only when needed<br>Never | |
| Substance use providers | Regularly<br>Only when needed<br>Never | |

(15)   Please identify the modes of participation of medical specialist in primary care patient management.

| Mode | Frequency | Comment |
|---|---|---|
| Email | Frequently<br>Sometimes<br>Rarely<br>Never | |
| Phone call | Frequently | |

| Mode | Frequency | Comment |
|---|---|---|
|  | Sometimes<br>Rarely<br>Never |  |
| Case conference | Frequently<br>Sometimes<br>Rarely<br>Never |  |

(16) How often do primary care physicians receive feedback from specialists on the outcomes of the specialty visit?

1) Always
2) Usually
3) Sometimes
4) Rarely
5) Never

a) [If always to sometimes] Please indicate how this feedback is provided (select all that apply).
   (1) Directly available in electronic medical record and a message sent to PCP
   (2) Email
   (3) Fax
   (4) Other (please specify: _____)

## Implementation

(17) Please indicate the modes of team-based care engagement for the provider care team. (select all that apply)
   i. Provide training on goals and objectives
   ii. Coaching teams on role delegation
   iii. Communication, and interaction
   iv. Scheduled time for daily huddles
   v. Scheduled time for regular team meetings
   vi. Assure adequate clinical and administrative staffing for organizing teams
   vii. Provide QI support for improving workflow for teams
   viii. No modes of team-based care engagement
   ix. Other (please specify: _____)

(18)    What strategies have you employed under PRIME to expand access to specialty care and improve cost efficiency? (select all that apply)

a) Shared medical visits
b) Population management
c) Telephone visits
d) Email visits
e) No strategies employed under PRIME
f) Other (please specify:_____)

(19)    How often do patients that are primarily managed by medical specialists receive individualized treatment/care plans?

a) Always
b) Usually
c) Sometimes
d) Rarely
e) Never

  i.   [If always to sometimes] How often do treatment plans include patient driven self-management goals?
     a) Always
     b) Usually
     c) Sometimes
     d) Rarely
     e) Never

  ii.  [If always to sometimes] How often the specialists review treatment goals with patients at each visit?
     (1) Always
     (2) Usually
     (3) Sometimes
     (4) Rarely
     (5) Never

(20)    How often do patients that are visiting medical specialists for consultation receive individualized treatment/care plans?
     (1) Always
     (2) Usually
     (3) Sometimes
     (4) Rarely

(5) Never

(21)      How often do patients that visit mental health or substance use providers for consultation receive individualized treatment/care plans to receive individualized treatment/care plans, what is the frequency?

a) Always
b) Usually
c) Sometimes
d) Rarely
e) Never

(22)      What strategies do specialists use to improve medication adherence? (select all that apply)

a) Provide tools, such as pill-boxes, paper-based schedules, etc.
b) Use technology assisted tools, such as apps on phones
c) Calls to patients to remind/refresh instructions on medication use
d) No strategies used
e) Other (please specify: _____)

(23)      What strategies do specialty teams use to manage patient care for patients that are primarily managed by medical specialties? (select all that apply)

a) Email/mail/text/phone reminders for preventive services (e.g., flu shots, mammograms)
b) Disease management (e.g., one-on-one phone calls visits, group classes on self-care)
c) No strategies used
d) Other (please specify: _____)

## Resources for Planning and Implementing

(24) Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

1. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

|  | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | 29) IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>30) Variation in documentation within system by providers and staff (such as documenting data differently)<br>31) Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>32) Requires manual tracking or chart review<br>33) Other (please specify:_____) | 1. EHR/IT Standardization/expansion across system<br>2. Implement standardized processes and policies for tracking/ documentation by providers and staff<br>3. Implement standardized tools/screening<br>4. Develop/clarify operational definitions/systems<br>5. Provider and staff training/increased capacity<br>6. Planning/process development from management or QI<br>7. Not yet resolved<br>8. Other (please specify:_____) |  |
| Achieving the targeted metrics | 1. Already performing at a high level (difficult to improve further)<br>2. Inadequate availability of services/limited access and capacity to serve patients<br>3. Processes not established system-wide<br>4. Inadequate follow-up processes to document patient outcomes | 1. Enhance outreach/capacity to follow up with patients<br>2. Implement Provider and staff training/increased capacity<br>3. Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc) |  |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | 5. Silo-ed departments/difficulty collaborating<br>6. Small denominator or numerator (causing an unstable rate)<br>7. Staff turn-over<br>8. Other (please specify: _____) | 4. Established/standardized processes across system<br>5. Established meetings across teams<br>6. Not yet resolved<br>7. Other (please specify: _____) | |

## Project 1.4: Patient Safety in the Ambulatory Setting

Please consider project planning and selection questions broadly, across the entire project.

### Project Planning and Selection

  i. Did you participate in Project 1.4: Patient Safety in the Ambulatory Setting?
- a. Yes
- b. No

[If no, did not implement Project 1.4]

  ii. If no, please identify the reasons for not implementing this project. (select all that apply)
- a. Lack of resources/funding /staffing
- b. Lack of health information technology
- c. Already performed well in this area
- d. Not identified as a problem/not examined
- e. Not aligned with organizational goals
- f. Low priority
- g. Other (please specify: _____)

[If yes, implemented Project 1.4]

  iii. If yes, what were the motivators for choosing this project? (select all that apply)
- a. Synergy with existing projects (continuation or expansion of existing efforts)
- b. Consistency with organizational goals
- c. Availability of champions and opinion leaders
- d. Ease of implementation (availability of data, concordance with existing processes of care)
- e. Low resource requirements (lowest cost, least time/staff needed to implement)
- f. Other (please specify: _____)

iv. Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Perform a baseline studies to examine the current workflows for abnormal results follow-up and monitoring of individuals on persistent medications. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a data-driven system for rapid cycle improvement and performance feedback based on the baseline study that effectively addresses all identified gaps in care and which targets clinically significant improvement in care. The improvement and performance feedback system should include patients, front line staff from testing disciplines (such as, but not limited to, radiology and laboratory medicine) and ordering disciplines (such as primary care) and senior leadership. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Develop a standardized workflow so that: a. Documentation in the medical record that the targeted test results were reviewed by the ordering clinician; | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| i. Use the American College of Radiology's Actionable Findings Workgroup33 for guidance on mammography results notification.<br>b. Evidence that every abnormal result had appropriate and timely follow-up; and<br>c. Documentation that all related treatment and other appropriate services were provided in a timely fashion as well as clinical outcomes documented. | | Not selected and not implemented | |
| In support of the standard protocols referenced in #2:<br>a. Create and disseminate guidelines for critical abnormal result levels<br>b. Creation of protocol for provider notification, then patient notification<br>c. Script notification to assure patient returns for follow up<br>d. Create follow-up protocols for difficult to reach patients | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement technology-enabled data systems to support the improvement and performance feedback system as well as engage patients and support care teams with patient identification, pre-visit planning, point of care delivery, and population/panel management activities. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |

v. If you are participating in other activities related to Project 1.4 that do not fit into the above core components, please briefly describe these activities here.

vi. If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)

a. The project has expanded to additional clinics
b. The project has expanded to additional departments
c. The project has different scope (please specify: _____)
d. The project has different/new goals (please specify: _____)
e. The project includes different/new populations (please specify: _____)
f. The project uses different measures/metrics (please specify: _____)
g. Components of this project were not ongoing prior to PRIME
h. Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 1.4: Patient Safety in the Ambulatory Setting. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

vii. Please indicate if you performed baseline studies to examine the workflows for abnormal results monitoring and follow-up for Project 1.4.

o No, baseline data already existed and was actively used by our system
o No, baseline data already existed but was not used
o No, baseline studies were not performed
o Yes, we collected baseline data specifically for PRIME

viii. Please provide an example of studies previously done or conducted under PRIME for assessing workflows.

| Study related to: | Study conducted: | Description of study and associated data: |
|---|---|---|
| Abnormal results follow-up | Before PRIME | |

| Study related to: | Study conducted: | Description of study and associated data: |
|---|---|---|
| | During PRIME | |
| | No study conducted | |
| Patients on persistent medications | Before PRIME | |
| | During PRIME | |
| | No study conducted | |

ix. Please indicate the gaps identified in the target population and within disease conditions, around abnormal results follow-up and patients on persistent medications.

| | Abnormal results follow-up | List populations | Patients on persistent medications | List populations | Comment |
|---|---|---|---|---|---|
| Gaps in target population | Yes<br>No | | Yes<br>No | | |
| Gaps in disease conditions | Yes<br>No | | Yes<br>No | | |

x. Of the QI projects that you have completed related to Project 1.4 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
| | |
| | |
| | |
| | |
| | |

xi. Please indicate if you consistently do any of the following activities.

| | Abnormal test results | Patients on persistent medications | Comment |
|---|---|---|---|
| Documentation that the medical record was reviewed for abnormal test results or adverse outcomes of medications | Yes<br>No | Yes<br>No | |
| Evidence that patients were informed of abnormal result or adverse outcomes in a timely fashion and recalled for follow-up | Yes<br>No | Yes<br>No | |
| Documentation of treatment and other services provided following abnormal results or adverse outcomes | Yes<br>No | Yes<br>No | |
| Provide regular feedback to providers on adherence to documentation of monitoring and follow-up | Yes<br>No | Yes<br>No | |

xii.  Please indicate whether any of the following activities are completed by your organization to develop standardized protocols.

| Elements | | Comment |
|---|---|---|
| Created and disseminated guidelines for critical abnormal result levels | Prior to PRIME<br>During PRIME<br>Planned during PRIME<br>Not planned | |
| Created protocols for provider notification | Prior to PRIME<br>During PRIME<br>Planned during PRIME<br>Not planned | |
| Created protocols, including script for patient notification and to assure patient return for follow-up | Prior to PRIME<br>During PRIME<br>Planned during PRIME<br>Not planned | |
| Created specific follow-up protocols for difficult to reach patients | Prior to PRIME<br>During PRIME<br>Planned during PRIME<br>Not planned | |
| Other (please specify: _____) | Prior to PRIME<br>During PRIME<br>Planned during PRIME | |

| Elements | | Comment |
|---|---|---|
| | Not planned | |

      xiii.  Do you have a definition of timeliness (length of time) for follow up of abnormal tests?

a.  Yes

b.  No

[If yes] Please specify the time to notify patient: _____

Please specify the time to follow-up visit: _____

      xiv.  Do you have a definition of timeliness (length of time) for follow up of adverse outcomes

a.  Yes

b.  No

[If yes] Please specify the time to notify patient: _____

Please specify the time to follow-up visit: _____

## Resources for Planning and Implementing

1. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

2. Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

3. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | 1. IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>2. Variation in documentation within system by providers and staff (such as documenting data differently)<br>3. Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>4. Requires manual tracking or chart review<br>5. Other (please specify:_____) | 1. EHR/IT Standardization/expansion across system<br>2. Implement standardized processes and policies for tracking/ documentation by providers and staff<br>3. Implement standardized tools/screening<br>4. Develop/clarify operational definitions/systems<br>5. Provider and staff training/increased capacity<br>6. Planning/process development from management or QI<br>7. Not yet resolved<br>8. Other (please specify:_____) | |
| Achieving the targeted metrics | 1. Already performing at a high level (difficult to improve further)<br>2. Inadequate availability of services/limited access and capacity to serve patients<br>3. Processes not established system-wide<br>4. Inadequate follow-up processes to document patient outcomes | 1. Enhance outreach/capacity to follow up with patients<br>2. Implement Provider and staff training/increased capacity<br>3. Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc) | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | 5. Silo-ed departments/difficulty collaborating<br>6. Small denominator or numerator (causing an unstable rate)<br>7. Staff turn-over<br>8. Other (please specify: _____) | 4. Established/standardized processes across system<br>5. Established meetings across teams<br>6. Not yet resolved<br>7. Other (please specify: _____) | |

## Project 1.5: Million Hearts Initiative

Please consider project planning and selection questions broadly, across the entire project.

### Project Planning and Selection

1) Did you participate in Project 1.5: Million Hearts Initiative?
    a) Yes
    b) No

[If no, did not implement Project 1.5]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
    a) Lack of resources/ funding /staffing
    b) Lack of health information technology
    c) Already performed well in this area
    d) Not identified as a problem/not examined
    e) Not aligned with organizational goals
    f) Low priority
    g) Other (please specify: _____)

[If yes, implemented Project 1.5]

3) If yes, what were the motivators for choosing this project? (select all that apply)
    a) Synergy with existing projects (continuation or expansion of existing efforts)
    b) Consistency with organizational goals
    c) Availability of champions and opinion leaders
    d) Ease of implementation (availability of data, concordance with existing processes of care)
    e) Low resource requirements (lowest cost, least time/staff needed to implement)
    f) Other (please specify: _____)

4) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|---|
| Collect or use preexisting baseline data on receipt and use of targeted preventive services, including any associated disparities related to race, ethnicity or language need. See figures 1 and 2 for related data among the Medi-Cal population. | Yes | No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement processes to provide recommended clinical preventive services in line with national standards, including but not limited to the US Preventive Services Task Force (USPSTF) A and B Recommendations. | Yes | No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Improve access to quality care and decrease disparities in the delivery of preventive services. | Yes | No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Employ local, state and national resources, and methodologies for improving receipt of targeted preventive services, reducing associated disparities, and improving population health. | Yes | No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Adopt and use certified electronic health record systems, including clinical decision supports and registry functionality to support provision of targeted preventive services. Use panel/population | Yes | No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| management approaches (e.g., in-reach, outreach) to reduce gaps in receipt of care. | | | |
| Based on patient need, identify community resources for patients to receive or enhance targeted services and create linkages with and connect/refer patients to community preventive resources, including those that address the social determinants of health, as appropriate. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Encourage, foster, empower, and demonstrate patient engagement in the design and implementation of programs. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |

5) If you are participating in other activities related to Project 1.5 that do not fit into the above core components, please briefly describe these activities here.

6) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 1.5: Million Hearts Initiative. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

7) Please indicate if you initiated collection of baseline data to measure receipt and use of targeted preventative services related to the Million Hearts Initiative under PRIME.
   a) No, baseline data already existed and was actively used by our system
   b) No, baseline data already existed but was not used
   c) No, baseline studies were not performed
   d) Yes, we collected baseline data specifically for PRIME
   e) Other (please specify: _____)

8) Please indicate if you identified disparities in care delivery amongst the populations at higher risk for heart disease and stroke.

| Disparities | Services | Comment |
|---|---|---|
| Race/ethnicity | Hospitalizations | |
| | Readmissions | |
| | Outpatient visits | |
| | Medications | |

| Disparities | Services | Comment |
|---|---|---|
|  | ED visits |  |
|  | Severity or complexity of condition |  |
|  | No data collected |  |
| Language | Hospitalizations |  |
|  | Readmissions |  |
|  | Outpatient visits |  |
|  | Medications |  |
|  | ED visits |  |
|  | Severity or complexity of condition |  |
|  | No data collected |  |
| SO/GI | Hospitalizations |  |
|  | Readmissions |  |
|  | Outpatient visits |  |
|  | Medications |  |
|  | ED visits |  |
|  | Severity or complexity of condition |  |
|  | No data collected |  |

9) Please indicate if resources from any of the following organizations were used to improve receipt of preventative services. (select all that apply)
   i. Substance Abuse and Mental Health Service Administration
   ii. American Medical Association Toolkit
   iii. Center for Disease Control Tobacco Cessation Resources
   iv. The American Heart Association Resources
   v. USPSTF Recommendations
   vi. Did not reference outside resources for this purpose
   vii. Other (please specify: _____)

10) Of the QI projects that you have completed related to Project 1.5 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |

11) Please indicate if you link patients with any of the following community based resources. If these services are offered internally, please denote in the comments.

|  | Link patients ? | Informal support groups | Educational or self-management classes | Exercise classes or activities | Cooking classes | Comment |
|---|---|---|---|---|---|---|
| Tobacco | Yes No |  |  |  |  |  |
| Hypertension | Yes No |  |  |  |  |  |
| High cholesterol | Yes No |  |  |  |  |  |
| Heart disease | Yes No |  |  |  |  |  |
| Stroke | Yes No |  |  |  |  |  |

12) Please indicate your organization's approach to monitoring blood pressure of patients identified to be at risk for hypertension. (select all that apply)
   a. Measurement at each visit
   b. Measurement in between visits in the office
   c. Measurement at home and reporting to the provider
   d. None of these
   e. Other (please specify: _____)

13) Please indicate your organization's approach for assessing patients' eligibility for and management of low dose aspirin therapy. (select all that apply)
   a) Assessed for risk of coronary event
   b) Assessed for bleeding risks associated with aspirin therapy
   c) Is monitored for adherence to aspirin therapy
   d) None of these
   e) Other (please specify: _____)

## Resources for Planning and Implementing

14) Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

15) Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

16) Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | 1. IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>2. Variation in documentation within system <u>by providers and staff</u> (such as documenting data differently)<br>3. Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>4. Requires manual tracking or chart review<br>5. Other (please specify: _____ ) | 1. EHR/IT Standardization/expansion across system<br>2. Implement standardized processes and policies for tracking/ documentation by providers and staff<br>3. Implement standardized tools/screening<br>4. Develop/clarify operational definitions/systems<br>5. Provider and staff training/increased capacity<br>6. Planning/process development from management or QI<br>7. Not yet resolved<br>8. Other (please specify:_____ ) | |
| Achieving the targeted metrics | 1. Already performing at a high level (difficult to improve further)<br>2. Inadequate availability of services/limited access and capacity to serve patients<br>3. Processes not established system-wide<br>4. Inadequate follow-up processes to document patient outcomes<br>5. Silo-ed departments/difficulty collaborating | 1. Enhance outreach/capacity to follow up with patients<br>2. Implement Provider and staff training/increased capacity<br>3. Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc) | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | 6. Small denominator or numerator (causing an unstable rate)<br>7. Staff turn-over<br>8. Other (please specify: _____) | 4. Established/standardized processes across system<br>5. Established meetings across teams<br>6. Not yet resolved<br>7. Other (please specify: _____) | |

Please consider project planning and selection questions broadly, across the entire project.

Project Planning and Selection

1) Did you participate in Project 1.6: Cancer Screening and Follow-up?
   a) Yes
   b) No

[If no, did not implement Project 1.6]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/ funding /staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 1.6]

3) If yes, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts)
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)
   f) Other (please specify: _____)

Project 1.6: Cancer Screening and Follow-up

4) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Develop a multi-disciplinary cross-participating PRIME entity task force to identify principle- based expected practices for screening and follow-up for the targeted services including, but not limited to: a. Standard approach to screening and follow-up within each DPH/DMPH b. Screening: i. Enterprise-wide standard approach to screening (e.g., ages, frequency, diagnostic tool) c. Follow-up for abnormal screening exams: i. Clinical risk-stratified screening process (e.g., family history, red flags) ii. Timeliness (specific time benchmark for time from abnormal screening exam to diagnostic exam) | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Demonstrate patient engagement in the design and implementation of programs | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Collect or use preexisting baseline data on receipt and use of targeted preventive services, including | Yes No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| any associated disparities related to race, ethnicity or language need. | | Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement processes to provide recommended clinical preventive services in line with national standards, including but not limited to USPSTF A and B Recommendations. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Improve access to quality care and decrease disparities in the delivery of preventive services. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Employ local, state and national resources, and methodologies for improving receipt of targeted preventive services, reducing associated disparities, and improving population health. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Adopt and use certified electronic health record systems, including clinical decision supports and registry functionality to support provision of | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| targeted preventive services. Use panel/population management approaches (e.g., in-reach, outreach) to reduce gaps in receipt of care. | | Not planned prior to PRIME Not selected and not implemented | |
| Based on patient need, identify community resources for patients to receive or enhance targeted services and create linkages with and connect/refer patients to community preventive resources, including those that address the social determinants of health, as appropriate | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

5) If you are participating in other activities related to Project 1.6 that do not fit into the above core components, please briefly describe these activities here.
6) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 1.6: Cancer Screening and Follow-up. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

7) Please indicate if you initiated collection of baseline data to measure receipt and use of targeted preventative services related to cancer screening and follow-up under PRIME.
   a) No, baseline data already existed and was actively used by our system
   b) No, baseline data already existed but was not used
   c) No, baseline data was not collected
   d) Yes, we collected baseline data specifically for PRIME

8) Please identify which data was previously available or collected under PRIME for assessing patients at risk for cancer.

| Data related to: | Data availability: | Comment |
|---|---|---|
| Breast cancer | Before PRIME | |
| | During PRIME | |
| | No data collected | |
| Cervical cancer | Before PRIME | |
| | During PRIME | |
| | No data collected | |

| Data related to: | Data availability: | Comment |
|---|---|---|
| Colorectal cancer | Before PRIME | |
| | During PRIME | |
| | No data collected | |

9) Please indicate if you identified disparities in care delivery amongst the populations at higher risk for cancer (select all that apply)

| Disparities | Services | Comment |
|---|---|---|
| Race/ethnicity | Hospitalizations | |
| | Readmissions | |
| | Outpatient visits | |
| | Medications | |
| | ED visits | |
| | Severity or complexity of condition | |
| | No data collected | |
| Language | Hospitalizations | |
| | Readmissions | |
| | Outpatient visits | |
| | Medications | |
| | ED visits | |
| | Severity or complexity of condition | |
| | No data collected | |
| SO/GI | Hospitalizations | |
| | Readmissions | |
| | Outpatient visits | |
| | Medications | |
| | ED visits | |
| | Severity or complexity of condition | |
| | No data collected | |

10) Of the QI projects that you have completed related to Project 1.6 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
| | |

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |

11) Please indicate disciplines that participated in the task force to identify principle based expected practices for cancer screening and follow-up.

|  | Involved in task force | Comment |
|---|---|---|
| Primary care providers | Yes No |  |
| Medical support staff | Yes No |  |
| Occupational and/or physical therapist | Yes No |  |
| Behavioral health specialist | Yes No |  |
| Pharmacist | Yes No |  |
| Neurologist | Yes No |  |
| Anesthesiology/pain management provider | Yes No |  |
| Home health care worker | Yes No |  |
| Social worker | Yes No |  |
| Other (please specify: _____) | Yes No |  |

    a. Please identify the practices that resulted from participation in the task force detailed above.

| Cancer type | Developed a standard approach to screening? | Developed a standard approach to follow-up? | Comment |
|---|---|---|---|
| Breast cancer | Yes<br>No | Yes<br>No | |
| Cervical cancer | Yes<br>No | Yes<br>No | |
| Colorectal cancer | Yes<br>No | Yes<br>No | |

b. Please identify the elements that constitute your system's enterprise-wide standard approach to screening, as a result of participation in the task force detailed above.

| | Age | Frequency | Diagnostic tool | Other (please specify) | Comment |
|---|---|---|---|---|---|
| Breast cancer | | | | | |
| Cervical cancer | | | | | |
| Colorectal cancer | | | | | |

12) Please indicate if resources from any of the following organizations were used to improve receipt of preventative services.
   a) American Cancer Society Guidelines
   b) National Cancer Institute Resources
   c) USPSTF Recommendations
   d) Did not reference outside resources for this purpose
   e) Other (please specify: _____ )

13) Please indicate if you link patients with any of the following community based resources. If these services are offered internally, please denote in the comments.

| | Link patients? | Informal support groups | Educational or self-management classes | Exercise classes or activities | Comment |
|---|---|---|---|---|---|
| Breast cancer | Yes<br>No | | | | |

| | Link patients? | Informal support groups | Educational or self-management classes | Exercise classes or activities | Comment |
|---|---|---|---|---|---|
| Cervical cancer | Yes No | | | | |
| Colorectal cancer | Yes No | | | | |

## Resources for Planning and Implementing

16) Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

17) Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

18) Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | 1. IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>2. Variation in documentation within system by providers and staff (such as documenting data differently)<br>3. Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>4. Requires manual tracking or chart review<br>5. Other (please specify:_____) | 1. EHR/IT Standardization/expansion across system<br>2. Implement standardized processes and policies for tracking/ documentation by providers and staff<br>3. Implement standardized tools/screening<br>4. Develop/clarify operational definitions/systems<br>5. Provider and staff training/increased capacity<br>6. Planning/process development from management or QI<br>7. Not yet resolved<br>8. Other (please specify:_____) | |
| Achieving the targeted metrics | 1. Already performing at a high level (difficult to improve further)<br>2. Inadequate availability of services/limited access and capacity to serve patients<br>3. Processes not established system-wide<br>4. Inadequate follow-up processes to document patient outcomes | 1. Enhance outreach/capacity to follow up with patients<br>2. Implement Provider and staff training/increased capacity<br>3. Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc) | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | 5. Silo-ed departments/difficulty collaborating<br>6. Small denominator or numerator (causing an unstable rate)<br>7. Staff turn-over<br>8. Other (please specify: _____) | 4. Established/standardized processes across system<br>5. Established meetings across teams<br>6. Not yet resolved<br>7. Other (please specify: _____) | |

## Project 1.7 Obesity Prevention and Healthier Foods Initiative

Please consider project planning and selection questions broadly, across the entire project.

### Project Planning and Selection

1) Did you participate in Project 1.7: Obesity Prevention and Healthier Foods Initiative?
    a) Yes
    b) No

[If no, did not implement Project 1.7]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
    a) Lack of resources/ funding /staffing
    b) Lack of health information technology
    c) Already performed well in this area
    d) Not identified as a problem/not examined
    e) Not aligned with organizational goals
    f) Low priority
    g) Other (please specify: _____)

[If yes, implemented Project 1.7]

3) If yes, what were the motivators for choosing this project? (select all that apply)
    a) Synergy with existing projects (continuation or expansion of existing efforts)
    b) Consistency with organizational goals
    c) Availability of champions and opinion leaders
    d) Ease of implementation (availability of data, concordance with existing processes of care)
    e) Low resource requirements (lowest cost, least time/staff needed to implement)
    f) Other (please specify: _____)

4) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Collect or use preexisting baseline data on receipt and use of targeted preventive services, including any associated disparities related to race, ethnicity or language need. See figures 1 and 2 for related data among the Medi-Cal population. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement processes to provide recommended clinical preventive services in line with national standards, including but not limited to the US Preventive Services Task Force (USPSTF) A and B Recommendations. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Improve access to quality care and decrease disparities in the delivery of preventive services. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Employ local, state and national resources, and methodologies for improving receipt of targeted preventive services, reducing associated disparities, and improving population health. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| | | Not selected and not implemented | |
| Adopt and use certified electronic health record systems, including clinical decision supports and registry functionality to support provision of targeted preventive services. Use panel/population management approaches (e.g., in-reach, outreach) to reduce gaps in receipt of care. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Based on patient need, identify community resources for patients to receive or enhance targeted services and create linkages with and connect/refer patients to community preventive resources, including those that address the social determinants of health, as appropriate. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Encourage, foster, empower, and demonstrate patient engagement in the design and implementation of programs. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Prepare for and implement the Partnership for a Healthier America's Hospital Healthier Food Initiative | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |

5) If you are participating in other activities related to Project 1.7 that do not fit into the above core components, please briefly describe these activities here.
6) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 1.7: Obesity Prevention and Healthier Foods Initiative. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

7) Please indicate if you initiated collection of baseline data to measure receipt and use of targeted preventative services related to the Obesity Prevention and Healthier Foods Initiative under PRIME.
   a) No, baseline data already existed and was actively used by our system
   b) No, baseline data already existed but was not used
   c) No, baseline data was not collected
   d) Yes, we collected baseline data specifically for PRIME

1) Please identify and describe the data previously available or collected under PRIME for assessing patients with high BMI and/or BMI above the obesity threshold.

| Data related to: | Data availability: | Description of data used: |
|---|---|---|
| Obesity | Before PRIME | |
| | During PRIME | |
| | No data collected | |
| Health behaviors (please specify in comments) | Before PRIME | |
| | During PRIME | |

| Data related to: | Data availability: | Description of data used: |
|---|---|---|
|  | No data collected |  |

2) Please indicate if you identified disparities in care delivery amongst the populations with high BMI and/or BMI above the obesity threshold (select all that apply).

| Disparities | Services | Comment |
|---|---|---|
| Race/ethnicity | Hospitalizations |  |
|  | Readmissions |  |
|  | Outpatient visits |  |
|  | Medications |  |
|  | ED visits |  |
|  | Severity or complexity of condition |  |
|  | No data collected |  |
| Language | Hospitalizations |  |
|  | Readmissions |  |
|  | Outpatient visits |  |
|  | Medications |  |
|  | ED visits |  |
|  | Severity or complexity of condition |  |
|  | No data collected |  |
| SO/GI | Hospitalizations |  |
|  | Readmissions |  |
|  | Outpatient visits |  |
|  | Medications |  |
|  | ED visits |  |
|  | Severity or complexity of condition |  |
|  | No data collected |  |

3) Please indicate if resources from any of the following organizations were used to improve receipt of preventative services.
   a) Center for Disease Control Resources
   b) Weight of the Nation
   c) Association of State and Territorial Health Officials
   d) USPSTF Recommendations

e)  Did not reference outside resources for this purpose

f)  Other (please specify: _____)

4)  Please indicate how you prepared for implementing the Partnership for a Healthier America's Hospital Healthier Food Initiative.

|  | | Comment |
|---|---|---|
| Engaged stakeholders and partners | Yes | |
| | No | |
| Formed a team specifically for this initiative | Yes | |
| | No | |
| Conducted a policy and environment assessment | Yes | |
| | No | |
| Developed implementation and maintenance plans | Yes | |
| | No | |
| Evaluated impact of efforts | Yes | |
| | No | |

5)  Of the QI projects that you have completed related to Project 1.7 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
| | |
| | |
| | |
| | |
| | |

6)  Please indicate if you link patients with any of the following community based resources. If these services are offered internally, please denote in the comments.

| | Link patients? | Informal support groups | Educational or self-management classes | Exercise classes or activities | Cooking classes | Comment |
|---|---|---|---|---|---|---|
| Adult obesity | Yes | | | | | |
| | No | | | | | |
| Childhood obesity | Yes | | | | | |
| | No | | | | | |

7) Please indicate areas that were a focus for your organization in implementing the Partnership for a Healthier America's Hospital Healthier Food Initiative.

|  |  | Comment |
|---|---|---|
| Water promotion | Yes | |
| | No | |
| Labeling/materials | Yes | |
| | No | |
| Healthier options for vending machines | Yes | |
| | No | |
| Healthier options for cafeteria meals | Yes | |
| | No | |
| Other (please specify: _____) | Yes | |
| | No | |

## Resources for Planning and Implementing

1. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | **Rating 1-10 (Very low-Very high)** | **Comment** |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

2.  Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

3. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | 18) IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>19) Variation in documentation within system <u>by providers and staff</u> (such as documenting data differently)<br>20) Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>21) Requires manual tracking or chart review<br>22) Other (please specify: _____ ) | 1. EHR/IT Standardization/expansion across system<br>2. Implement standardized processes and policies for tracking/ documentation by providers and staff<br>3. Implement standardized tools/screening<br>4. Develop/clarify operational definitions/systems<br>5. Provider and staff training/increased capacity<br>6. Planning/process development from management or QI<br>7. Not yet resolved<br>8. Other (please specify:_____ ) | |
| Achieving the targeted metrics | 1. Already performing at a high level (difficult to improve further)<br>2. Inadequate availability of services/limited access and capacity to serve patients<br>3. Processes not established system-wide<br>4. Inadequate follow-up processes to document patient outcomes<br>5. Silo-ed departments/difficulty collaborating | 1. Enhance outreach/capacity to follow up with patients<br>2. Implement Provider and staff training/increased capacity<br>3. Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc) | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | 6. Small denominator or numerator (causing an unstable rate)<br>7. Staff turn-over<br>8. Other (please specify: _____) | 4. Established/standardized processes across system<br>5. Established meetings across teams<br>6. Not yet resolved<br>7. Other (please specify: _____) | |

## Domain 2: Targeted High Risk or High Cost Populations

The following sections of the survey are structured so that your team is only asked to complete questions for the projects that your entity has selected to implement. Therefore the first 3-4 questions of each section are designed to collect selection information from all the entities. Project specific questions will only be asked if you are implementing the project. Not all project-specific questions may be relevant to your entity's implementation; please denote N/A in those cases.

### Project 2.1 Improvements in Perinatal Care

Please consider project planning and selection questions broadly, across the entire project.

### Project Planning and Selection

1) Did you participate in Project 2.1: Improvements in Perinatal Care?
   a) Yes
   b) No

[If no, did not implement Project 2.1]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/ funding /staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 2.1]

3) If this project is not required for your organization, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts)
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)
   f) Project is required (Designated Public Hospital)
   g) Other (please specify: _____)

4) If this project was required for your organization, please indicate which of the following apply to your organization. (select all that apply)
   a) Project has synergy with existing projects (continuation or expansion of existing efforts)

b) Project is consistent with organizational goals
c) Champions and opinion leaders are available
d) Implementation is relatively easy (availability of data, concordance with existing processes of care)
e) Project has low resource requirements (lowest cost, least time/staff needed to implement)
f) Project is not required (District and Municipal Hospital
g) Other (please specify: _____)

5) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| DPHs/DMPHs engagement in best practice learning collaborative to decrease maternal morbidity and mortality related to obstetrical hemorrhage (CMQCC/PSF/HQI combined effort). | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Achieve baby-friendly hospital designation through supporting exclusive breastfeeding prenatally, after delivery, and for 6 months after delivery and using lactation consultants after delivery. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Encourage best practice and facilitate provider education to improve cesarean section rates, and decrease inequities among cesarean section rates. Participate, as appropriate, in statewide QI initiatives for first-birth low-risk cesarean births. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Coordinate care for women in the post-partum period with co-morbid conditions including diabetes and hypertension | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| | | Not selected and not implemented | |

6) If you are participating in other activities related to Project 2.1 that do not fit into the above core components, please briefly describe these activities here.

7) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 2.1: Improvements in Perinatal Care. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

## Assessment and Planning

8) Please indicate your status in becoming a baby-friendly designated hospital.
   1) Achieved prior to PRIME
   2) Achieved prior to PRIME; becoming re-certified through PRIME
   3) Achieved in PRIME; started prior to PRIME
   4) Achieved in PRIME; started and implemented through PRIME
   5) Not yet achieved; started and implementing through PRIME
   6) Not planned through PRIME

9) [If you are implementing during PRIME] What broad categories of strategies are being used to achieve Baby Friendly Hospital designation? If you have achieved this status prior to PRIME, are you including any of these strategies under PRIME? (select all that apply)
   1) Identify champion(s)
   2) Establish collaborative teams
   3) Organizational culture already encourages breast feeding
   4) Assess preference/characteristics of patient population
   5) Hire new staff (e.g. lactation consultant, mid-wife, etc.)

6) Baby Friendly Hospital designation not planned through PRIME
7) Other (please specify: _____ )

10) Which of the following required elements of achieving Baby Friendly Hospital designation are you implementing under PRIME? Please rate how challenging implementation of each element is.

| Baby friendly Elements | Implementing? | How challenging? | Comment |
|---|---|---|---|
| Have a written breastfeeding policy that is routinely communicated to all health care staff. | Yes<br>No | 1. No challenges<br>2. Few challenges<br>3. Some challenges<br>4. Many challenges<br>Not implementing | |
| Train all health care staff in the skills necessary to implement this policy. | Yes<br>No | 1. No challenges<br>2. Few challenges<br>3. Some challenges<br>4. Many challenges<br>Not implementing | |
| Inform all pregnant women about the benefits and management of breastfeeding. | Yes<br>No | 1. No challenges<br>2. Few challenges<br>3. Some challenges<br>4. Many challenges<br>Not implementing | |

| Baby friendly Elements | Implementing? | How challenging? | Comment |
|---|---|---|---|
| Help mothers initiate breastfeeding within one hour of birth. | Yes No | 1. No challenges 2. Few challenges 3. Some challenges 4. Many challenges Not implementing | |
| Show mothers how to breastfeed and how to maintain lactation, even if they are separated from their infants. | Yes No | 1. No challenges 2. Few challenges 3. Some challenges 4. Many challenges Not implementing | |
| Give infants no food or drink other than breast-milk, unless medically indicated. | Yes No | 1. No challenges 2. Few challenges 3. Some challenges 4. Many challenges Not implementing | |
| Allow mothers and infants to remain together 24 hours a day. | Yes No | 1. No challenges 2. Few challenges 3. Some challenges | |

| Baby friendly Elements | Implementing? | How challenging? | Comment |
|---|---|---|---|
| | | 4. Many challenges <br> Not implementing | |
| Encourage breastfeeding on demand. | Yes <br> No | 1. No challenges <br> 2. Few challenges <br> 3. Some challenges <br> 4. Many challenges <br> Not implementing | |
| Give no pacifiers or artificial nipples to breastfeeding infants. | Yes <br> No | 1. No challenges <br> 2. Few challenges <br> 3. Some challenges <br> 4. Many challenges | |
| Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or birth center. | Yes <br> No | 1. No challenges <br> 2. Few challenges <br> 3. Some challenges <br> 4. Many challenges | |

11) Of the QI projects that you have completed related to Project 2.1 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
| | |
| | |

| Description of test of change (PDSA) | Goals of PDSA |
| --- | --- |
| | |
| | |
| | |

12) Which elements are a part of your approach to coordinating care for women with co-morbid conditions in the post-partum period under PRIME? (select all that apply)
   a) Identifier in EHR/registries/dashboards
   b) Standardized protocol for scheduling follow up visits
   c) Referral to community organizations and programs
   d) Other (please specify: _____)
        a) Comment: _____

## Resources for Planning and Implementing

1. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

2. Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

3. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | 17)  IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>18)  Variation in documentation within system by providers and staff (such as documenting data differently)<br>19)  Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>20)  Requires manual tracking or chart review<br>21)  Other (please specify: _____) | 1. EHR/IT Standardization/expansion across system<br>2. Implement standardized processes and policies for tracking/ documentation by providers and staff<br>3. Implement standardized tools/screening<br>4. Develop/clarify operational definitions/systems<br>5. Provider and staff training/increased capacity<br>6. Planning/process development from management or QI<br>7. Not yet resolved<br>8. Other (please specify:_____) | |
| Achieving the targeted metrics | 1. Already performing at a high level (difficult to improve further)<br>2. Inadequate availability of services/limited access and capacity to serve patients<br>3. Processes not established system-wide<br>4. Inadequate follow-up processes to document patient outcomes<br>5. Silo-ed departments/difficulty collaborating | 1. Enhance outreach/capacity to follow up with patients<br>2. Implement Provider and staff training/increased capacity<br>3. Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc) | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | 6. Small denominator or numerator (causing an unstable rate)<br>7. Staff turn-over<br>8. Other (please specify: _____) | 4. Established/standardized processes across system<br>5. Established meetings across teams<br>6. Not yet resolved<br>7. Other (please specify: _____) | |

Please consider project planning and selection questions broadly, across the entire project.

Project Planning and Selection

1) Did you participate in Project 2.2: Care Transitions: Integration of Post-Acute Care?
   a) Yes
   b) No

[If no, did not implement Project 2.2]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/ funding /staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 2.2]

3) If this project is not required for your organization, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts) (select all that apply).
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)
   f) Project is required (Designated Public Hospital)
   g) Other (please specify: _____)

4) If this project was required for your organization, please indicate which of the following apply to your organization. (select all that apply)
   a) Project has synergy with existing projects (continuation or expansion of existing efforts)
   b) Project is consistent with organizational goals
   c) Champions and opinion leaders are available
   d) Implementation is relatively easy (availability of data, concordance with existing processes of care)

e) Project has low resource requirements (lowest cost, least time/staff needed to implement)
f) Project is not required (District and Municipal Hospital)
g) Other (please specify: _____)

5) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Develop a care transitions program or expand a care transitions program to additional settings (e.g., emergency department), or to additional populations, using or adapting at least one nationally recognized care transitions program methodology. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Establish or expand on a system to track and report readmission rates, timeliness of discharge summaries, and other transition processes, and investigate system-specific root causes /risk factors for readmission, using quantitative and qualitative information to identify the key causes of readmissions, including physical, behavioral and social factors | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Develop and implement a process, including utilization of data and information technology, to reliably identify hospitalized patients at high-risk for readmission. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Develop standardized workflows for inpatient discharge care:<br>a. Optimize hospital discharge planning and medication management for all hospitalized patients.<br>b. Implement structure for obtaining best possible medication history and for assessing medication reconciliation accuracy.<br>c. Develop and use standardized process for transitioning patients to sub-acute and long term care facilities<br>d. Provide tiered multi-disciplinary interventions according to level of risk<br>i. Involve mental health, substance use, pharmacy and palliative care when possible<br>ii. Involve trained, enhanced IHSS workers when possible<br>iii. Develop standardized protocols for referral to and coordination with community behavioral health and social services (e.g., visiting nurses, home care services, housing, food, clothing and social support). Identify and train personnel to function as care navigators for carrying out these functions. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Inpatient and Outpatient teams will collaboratively develop standardized transition workflows: | Yes<br>No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| a. Develop mechanisms to support patients in establishing primary care for those without prior primary care affiliation<br>b. Develop process for warm hand-off from hospital to outpatient provider, including assignment of responsibility for follow-up of labs or studies still pending at the time of discharge. | | Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop standardized workflows for post-discharge (outpatient) care:<br>a. Deliver timely access to primary and/or specialty care following a hospitalization<br>b. Standardize post-hospital visits and include outpatient medication reconciliation. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Support patients and family caregivers in becoming more comfortable, competent and confident in self-management skills required after an acute hospitalization by providing:<br>a. Engagement of patients in the care planning process<br>b. Pre-discharge patient and caregiver education and coaching<br>c. Written transition care plan for patient and caregiver | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| d. Timely communication and coordination with receiving practitioner<br>e. Community-based support for the patient and caregiver post hospitalization focusing on self-care requirements and follow-up care with primary and specialty care providers. | | | |
| Engage with local health plans to develop transition of care protocols that ensure: coordination of care across physical health, substance use disorder and mental health spectrum will be supported, identification of and follow-up engagement with PCP is established, covered services including DME will be readily available; and a payment strategy for the transition of care services is in place. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Demonstrate engagement of patients in the design and implementation of the project. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Increase multidisciplinary team engagement by: | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| a. Implementing a model for team-based care in which staff performs to the best of their abilities and credentials<br>b. Providing ongoing staff training on care model. | | Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement a system for continual performance feedback and rapid cycle improvement that uses standard process improvement methodology and that includes patients, front line staff and senior leadership. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |

6) If you are participating in other activities related to Project 2.2 that do not fit into the above core components, please briefly describe these activities here.

7) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 2.2: Care Transitions Integration of Post-Acute Care. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

## Assessment

1. What models of nationally recognized care transition have you adopted for this project? (select all that apply)
   a) Care Transitions Intervention (CTI)
   b) Transitional Care Model (TCM)
   c) Better Outcomes for Older Adults through Safe Transitions (BOOST)
   d) The Bridge Model Guided Care
   e) Geriatric Resources for Assessment and Care of Elders (GRACE)
   f) Project RED (Re-Engineered Discharge)
   g) Did not reference models for this project
   h) Other (please specify: _____)

2. Please identify the tools or approaches used to identify hospitalized patients at risk of readmissions (select all that apply).
   a) EMR-based risk assessment tools (e.g., Rothman Index, LACE Index) (please specify: _____)
   b) Risk assessment tools used by hospital clinical or other staff (e.g., HOSPITAL score) (please specify: _____)

c) Do not use a tool

d) Other approach (please specify: _____)

3. Of the QI projects that you have completed related to Project 2.2 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

### Planning

4. Have you developed standardized protocols for referral to and coordination with community behavioral health and social services (e.g., visiting nurses, home care services, housing, food, clothing and social support)?
   a) Yes, developed before PRIME
   b) Yes, developed as part of PRIME implementation
   c) No, planned as part of PRIME
   d) No, not planned
      i. Comment: _____

5. Do you identify and train personnel to function as care navigators for carrying out referrals to and coordination with behavioral health and social services?
   a) Yes, identified and trained before PRIME
   b) Yes, identified and trained as part of PRIME implementation
   c) No, planned as part of PRIME
   d) No, not planned
      i. Comment: _____

6. Have you developed standardized transition workflows for establishing a primary care home for patients without a usual source of care?
   a) Yes, developed before PRIME
   b) Yes, developed as part of PRIME implementation
   c) No, planned as part of PRIME
   d) No, not planned
      i. Comment: _____

7. Do you have standardized workflows to ensure the following activities occur for hospitalized patients?

| Activity | Standardized workflows? | Comment |
|---|---|---|
| Discharge planning | Yes<br>No | |
| Medication management including medication history and reconciliation | Yes<br>No | |
| Standardized processes for transitioning patients to subacute and long term care settings | Yes<br>No | |
| Tiered multi-disciplinary interventions according to level of risk | Yes<br>No | |

8. Have you developed a process for warm hand-off from the hospitals to outpatient providers?
    a) Yes, developed before PRIME
    b) Yes, developed as part of PRIME implementation
    c) No, planned through PRIME
    d) No, not planned
        i. Please indicate if the warm hand-off includes assignment of responsibilities for follow-up lab or other pending studies at discharge.
            1. Yes
            2. No

9. Please indicate the elements included in your protocol with a local health plan on care transitions. (select all that apply)
    a) Transitions to primary and specialty care providers
    b) Transitions to mental health care providers
    c) Transitions to substance use service providers
    d) Provision and availability of DMEs
    e) Payment for care transition services
    f) No protocol with a local health plan on care transitions
    g) Other (please specify: _____)

10. Please identify activities that you perform to monitor care transitions and indicate the frequency.

| Activity | | Frequency | Comment |
|---|---|---|---|
| Regular tracking and reporting of readmission rates | Yes<br>No | Annually | |
| | | Quarterly | |
| | | Monthly | |
| | | Weekly | |
| | | Other (please specify: _____) | |
| | | Never | |
| Regular tracking and reporting and timeliness of discharges | Yes<br>No | Annually | |
| | | Quarterly | |
| | | Monthly | |
| | | Weekly | |
| | | Other (please specify: _____) | |
| | | Never | |
| Investigate root causes or risk factors for readmission including physical, behavioral, and social risk factors | Yes<br>No | Annually | |
| | | Quarterly | |
| | | Monthly | |
| | | Weekly | |
| | | Other (please specify: _____) | |
| | | Never | |

11. Please indicate which providers are involved in discharge planning (select all that apply).
    a) Mental health
    b) Substance use
    c) Pharmacy
    d) Palliative care
    e) Trained, enhanced IHSS workers (please specify: _____)
    f) None of these

12. How often do you help patients without a usual source of care establish a primary care home?
    a) Always
    b) Sometimes
    c) Rarely
    d) Never

13. How often does warm hand-off to outpatient providers occurs upon discharge?
    a) Always
    b) Most of the time
    c) Some of the time
    d) Rarely
    e) Never

14. Please indicate if you have standardized workflows for insuring the following, regarding delivery of outpatient care post-discharge.

| | Do you monitor the frequency of? | Frequency | Comment |
|---|---|---|---|
| Timely access to primary and/or specialty care | Yes<br>No | All of the time<br>Most of the time<br>Some of the time<br>Rarely<br>Never | |
| Post-hospital visits and outpatient medication reconciliation | Yes<br>No | All of the time<br>Most of the time<br>Some of the time<br>Rarely<br>Never | |

15. Please indicate if you provide any of the following services to patients and family care givers.

| Activity | Frequency | Comment |
|---|---|---|
| Engage patients in the care planning process | All of the time | |
| | Most of the time | |
| | Some of the time | |
| | Rarely | |
| | Never | |
| Pre-discharge patient and caregiver education and coaching | All of the time | |
| | Most of the time | |
| | Some of the time | |
| | Rarely | |
| | Never | |
| Written transition care plan for patient and caregiver | All of the time | |
| | Most of the time | |

| Activity | Frequency | Comment |
|---|---|---|
|  | Some of the time |  |
|  | Rarely |  |
|  | Never |  |
| Timely communication and coordination with receiving practitioner | All of the time |  |
|  | Most of the time |  |
|  | Some of the time |  |
|  | Rarely |  |
|  | Never |  |
| Community-based support for the patient and caregiver focusing on self-care requirements and follow-up care | All of the time |  |
|  | Most of the time |  |
|  | Some of the time |  |
|  | Rarely |  |
|  | Never |  |

## Resources for Planning and Implementing

1. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

2. Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

3. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | **Challenges** | **Solutions** | **Comment** |
|---|---|---|---|
| Obtaining data | 24) IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>25) Variation in documentation within system <u>by providers and staff </u>(such as documenting data differently)<br>26) Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>27) Requires manual tracking or chart review<br>28) Other (please specify: _____) | 1. EHR/IT Standardization/expansion across system<br>2. Implement standardized processes and policies for tracking/ documentation by providers and staff<br>3. Implement standardized tools/screening<br>4. Develop/clarify operational definitions/systems<br>5. Provider and staff training/increased capacity<br>6. Planning/process development from management or QI<br>7. Not yet resolved<br>8. Other (please specify:_____) | |
| Achieving the targeted metrics | 1. Already performing at a high level (difficult to improve further)<br>2. Inadequate availability of services/limited access and capacity to serve patients<br>3. Processes not established system-wide<br>4. Inadequate follow-up processes to document patient outcomes<br>5. Silo-ed departments/difficulty collaborating | 1. Enhance outreach/capacity to follow up with patients<br>2. Implement Provider and staff training/increased capacity<br>3. Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc) | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | 6. Small denominator or numerator (causing an unstable rate)<br>7. Staff turn-over<br>8. Other (please specify: _____) | 4. Established/standardized processes across system<br>5. Established meetings across teams<br>6. Not yet resolved<br>7. Other (please specify: _____) | |

## Project 2.3: Care Management for High-Risk Medical Populations

Please consider project planning and selection questions broadly, across the entire project.

### Project Planning and Selection

1) Did you participate in Project 2.3: Care Management for High-Risk Medical Populations?
   a) Yes
   b) No

[If no, did not implement Project 2.3]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/funding /staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 2.3]

3) If this project is not required for your organization, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts)
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)
   f) Project is required (Designated Public Hospital)
   g) Other (please specify: _____)

4) If this project was required for your organization, please indicate which of the following apply to your organization. (select all that apply)
   a) Project has synergy with existing projects (continuation or expansion of existing efforts)
   b) Project is consistent with organizational goals
   c) Champions and opinion leaders are available

d) Implementation is relatively easy (availability of data, concordance with existing processes of care)
e) Project has low resource requirements (lowest cost, least time/staff needed to implement)
f) Project is not required (District and Municipal Hospital)
g) Other (please specify: _____)

5) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Develop a complex care management program at one site or with one defined cohort, or expand an existing program from a pilot site to all sites or to additional high-risk groups and demonstrate engagement of patients in the design and implementation of the project. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Utilize at least one nationally recognized complex care management program methodology. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Identify target population(s) and develop program inclusion criteria based on quantitative and qualitative data (e.g., acute care utilization, lack of primary care utilization, number of high-risk medical mental or SUD conditions, polypharmacy, primary care input, functional status, patient activation, social support or other factors). Include | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| patient factors associated with a higher probability of being impacted by complex care management | | | |
| Conduct a qualitative assessment of high-risk, high-utilizing patients. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Establish data analytics systems using clinical (e.g., EHR, registries), utilization and other available data (e.g., financial, health plan, zip codes), to enable identification of high- risk/rising risk patients for targeted complex care management interventions, including ability to stratify impact by race, ethnicity and language. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop a multi-disciplinary care team, to which each participant is assigned, that is tailored to the target population and whose interventions are tiered according to patient level of risk. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Ensure that the complex care management team has ongoing training, coaching, and monitoring | Yes<br>No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| towards effective team functioning and care management skill sets. | | Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement evidence-based practice guidelines to address risk factor reduction (smoking cessation/immunization/substance abuse identification and referral to treatment/depression and other behavioral health screening/etc.) as well as to ensure appropriate management of chronic diseases.<br>a. Use standardized patient assessment and evaluation tools (may be developed locally, or adopted/adapted from nationally recognized sources)<br>b. Use educational materials that are consistent with cultural, linguistic and health literacy needs of the target population. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Ensure systems and culturally appropriate team members (e.g. community health worker, health navigator or promotoras) are in place to support system navigation and provide patient linkage to appropriate physical health, mental health, SUD and social services. Ensure follow-up and retention | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| in care to those services, which are under DPH/DMPH authority, and promote adherence to medications. | | | |
| Implement technology-enabled data systems to support patients and care teams throughout the care management program including patient identification, pre-visit planning, point-of-care delivery, care plan development and population/panel management activities. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a data-driven system for rapid cycle improvement and performance feedback to address quality and safety of patient care, which includes patients, front line staff and senior leadership. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

6) If you are participating in other activities related to Project 2.3 that do not fit into the above core components, please briefly describe these activities here.
7) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 2.3: Care Management for High Risk Medical Populations. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.


## Assessment and Planning

8) Which of the following complex care management models have you adopted for this project?
   a) Embedded care manager model (i.e. care managers are assigned to dedicated sites)
   b) Centrally located care management (i.e. care managers are at a central site)
   c) "Brick and mortar" clinic (an "intensivist" becomes the primary care provider)
   d) Did not reference models for this project
   e) Other (please specify: _____)
      i. Please provide the name of a nationally recognized model you have adopted: _____

9) Which of the following criteria do you use to identify target population for complex care management? (select all that apply)
   a) Emergency department visits or hospitalizations
   b) Lack of primary care utilization
   c) Number of high risk medical conditions
   d) Presence of mental health conditions

e) Presence of substance use disorders
f) Polypharmacy
g) Functional status
h) Primary care qualitative assessment and referral
i) Lack of social support
j) Other (please specify: _____ )

10) Which of the following data sources and/or analytic methods do you use to target complex patients for care management intervention? (select all that apply)
a) Disease registries
b) Other EMR functions/templates
c) Patient encounters within the organization
d) Patient encounters broadly including health plan data
e) Financial data
f) Geographic assessment of areas with high risk patients
g) Stratification of targeted patients by race/ethnicity or language
h) Other (please specify: _____ )

11) Please identify if you train, coach, or monitor the care team to insure the team has the necessary management skill set for management of complex patients and functions well.

| | Frequency | Comment |
|---|---|---|
| Teams members are trained | Yes, annually | |
| | Yes, other frequency (please specify: _____) | |
| | Yes, only once | |
| | No | |
| Team members are coached | Yes, annually | |
| | Yes, other frequency (please specify: _____) | |
| | Yes, only once | |
| | No | |
| Team members are monitored for performance | Yes, annually | |
| | Yes, other frequency (please specify: _____) | |

| | Frequency | Comment |
|---|---|---|
| | Yes, only once | |
| | No | |
| Team members receive feedback on performance | Yes, annually | |
| | Yes, other frequency (please specify: _____) | |
| | Yes, only once | |
| | No | |

12) Of the QI projects that you have completed related to Project 2.3 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
| | |
| | |
| | |
| | |
| | |

### Implementation

8) Please indicate the type of individuals included on the multi-disciplinary care teams centered around the needs of complex patients.

| Provider | Involvement | Comment |
|---|---|---|
| Primary care provider | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |
| Intensivist | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |
| Clinical support staff (e.g., nurse, LVN, medical assistant) | Always | |
| | Most of the time | |

| Provider | Involvement | Comment |
|---|---|---|
| | Sometimes | |
| | Rarely | |
| | Never | |
| Care coordinator | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |
| Case manager | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |
| Nutritionist | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |
| Mental health professional | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |
| Substance use service provider | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |
| Patient navigator, promotoras, or similar | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |

13) Please indicate if you have implemented any of the following processes to manage the care of complex patients (select all that apply).
   a) Use evidence based practice guidelines to reduce risk factors (check all that apply)
      i. Smoking cessation
      ii. Immunization
      iii. Substance abuse screening
      iv. Substance abuse service referral
      v. Mental health screening
      vi. Mental health referral
      vii. Other (please specify: _____)
   b) Use standardize patient assessment and evaluation tools
   c) Use educational materials consistent with cultural, linguistic, or health literacy level of patients
   d) Other method to manage the care of complex patients (please specify: _____)

14) Please indicate the activities conducted by patient navigators or promotoras, as well as the frequency.

|  | Involvement | Comment |
|---|---|---|
| Help retain patients in care | Always |  |
|  | Most of the time |  |
|  | Sometimes |  |
|  | Rarely |  |
|  | Never |  |
| Promote adherence to medications | Always |  |
|  | Most of the time |  |
|  | Sometimes |  |
|  | Rarely |  |
|  | Never |  |
| Accompany patients to appointments | Always |  |
|  | Most of the time |  |
|  | Sometimes |  |
|  | Rarely |  |
|  | Never |  |

|  | Involvement | Comment |
|---|---|---|
| Help patients with paperwork | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |
| Help patients with transportation | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |
| Help patients with translation | Always | |
| | Most of the time | |
| | Sometimes | |
| | Rarely | |
| | Never | |

## Resources for Planning and Implementing

1. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

2. Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

3. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

|  | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>Variation in documentation within system by providers and staff (such as documenting data differently)<br>Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>Requires manual tracking or chart review<br>Other (please specify: _____) | EHR/IT Standardization/expansion across system<br>Implement standardized processes and policies for tracking/ documentation by providers and staff<br>Implement standardized tools/screening<br>Develop/clarify operational definitions/systems<br>Provider and staff training/increased capacity<br>Planning/process development from management or QI<br>Not yet resolved<br>Other (please specify:_____) |  |
| Achieving the targeted metrics | Already performing at a high level (difficult to improve further)<br>Inadequate availability of services/limited access and capacity to serve patients<br>Processes not established system-wide<br>Inadequate follow-up processes to document patient outcomes<br>Silo-ed departments/difficulty collaborating | Enhance outreach/capacity to follow up with patients<br>Implement Provider and staff training/increased capacity<br>Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc)<br>Established/standardized processes across system |  |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | Small denominator or numerator (causing an unstable rate)<br>Staff turn-over<br>Other (please specify: _____) | Established meetings across teams<br>Not yet resolved<br>Other (please specify: _____) | |

Projects 2.4 and 2.5 will not be assessed in the questionnaire.

## Project 2.6: Chronic Non-Malignant Pain Management

Please consider project planning and selection questions broadly, across the entire project.

### Project Planning and Selection

1) Did you participate in Project 2.6: Chronic Non-Malignant Pain Management?
   a) Yes
   b) No

[If no, did not implement Project 2.6]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/ funding /staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 2.6]

3) If yes, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts)
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)
   f) Other (please specify: _____)

1) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Develop an enterprise-wide Chronic Non-Malignant Pain management strategy. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Demonstrate engagement of patients in the design and implementation of the project. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement or adapt a state or nationally recognized methodology for the assessment and management of chronic pain. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement protocols for primary care management of patients with chronic pain including:<br>a. A standard standardized Pain Care Agreement<br>b. Standard work and policies to support safe prescribing practices | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| c. Comprehensive pain history including psycho/social evaluation, functional evaluations, care plan, pain medication risk/benefit informed consents, ongoing monitoring of plan/outcomes (e.g., use of standardized monitoring template for follow-up visits for CNP), aberrant behavior screening and management protocols<br>d. Guidelines regarding maximum acceptable dosing. | | Not selected and not implemented | |
| Provide culturally, linguistically and literacy level-appropriate patient education on the pathology of chronic pain, rationale for rehabilitation and expected goals of treatment. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Coordinate a chronic pain care team that minimally consists of a physician champion and medical support staff. Suggestions for care clinicians from other disciplines include occupational and physical therapy, behavioral health, pharmacy, substance use disorder specialists, neurology, occupational medicine, anesthesiology/pain management, home care, social work, and physical medicine and rehabilitation. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement technology-enabled data systems to support pre-visit planning, point of care delivery, | Yes<br>No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| and team based population/panel management and care coordination. | | Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Determine population ICD-9/ICD-10 codes for data collection that is unique to patients with chronic pain on opioids and develop a registry for pain assessments, care agreements, medication refill standing orders and urine toxicology screening. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Utilize provider activity report card to provide feedback to providers on how their chronic pain management practice compares to peers and benchmarks. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Establish a policy for monitoring and maintaining opioid agreements for prescription refills with other clinics, pharmacies, dentists and specialists. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Develop a process for scheduling pain focused follow-up patient visits to ensure that patients receive refills in a timely manner while also receiving recommended monitoring for signs of diversion or misuse. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Develop staff and clinician training regarding the organization's process for managing patients with chronic non-malignant pain. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Train providers to identify signs of prescription opioid use disorders and provide treatment options for patients diagnosed with opioid use disorders, including suboxone treatment, referral to methadone maintenance, referral to inpatient and outpatient substance use disorder treatment facilities, and referral to needle exchanges. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Develop and implement protocols for prescribing naloxone to patients receiving opioids for chronic pain. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Identify standardized multidimensional pain assessment, functional assessment, psychological assessment, and opioid assessment tools that meet the needs of the care clinicians and are appropriate for the patient populations. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. Timely, relevant and actionable data is used to support patient engagement, and drive clinical, operational and strategic decisions including continuous QI activities. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

4) If you are participating in other activities related to Project 2.6 that do not fit into the above core components, please briefly describe these activities here.
5) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)


## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 2.6: Chronic Non-Malignant Pain Management. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

9) Please indicate the settings in which this project is implemented (select all that apply).
   a) System wide
   b) Inpatient
   c) Emergency department
   d) On campus outpatient departments
   e) Off campus clinics and practices
   f) Other (please specify: _____)


10) Please indicate if you used the methodology from any of the following nationally recognized pain management models. (select all that apply)
   a) Institute for Clinical Systems Improvement
   b) Medical Board of California Guidelines for prescribing controlled substances for pain
   c) The American Pain Society
   d) The American Society of Anesthesiologists
   e) Did not reference models for this project
   f) Other (please specify: _____)

11) Please indicate if you have implemented any of the following protocols for primary care management of patients with chronic pain, whether they were implemented before or during PRIME, and change in approach if implemented during PRIME.

| Protocol | When implemented? | Comment |
|---|---|---|
| A standardized Pain Care Agreement with the patient | Before PRIME<br>During PRIME (expanded system wide)<br>During PRIME (modified and improved)<br>During PRIME (increased monitoring and accountability)<br>Planned but not yet implemented<br>Not planned | |
| Standard policies to support safe prescribing practices | Before PRIME<br>During PRIME (expanded system wide)<br>During PRIME (modified and improved)<br>During PRIME (increased monitoring and accountability)<br>Planned but not yet implemented<br>Not planned | |
| Standard protocols on collecting comprehensive pain history including psycho/social evaluation, functional evaluations, care plan, pain medication risk/benefit informed consents, ongoing monitoring of plan/outcomes (e.g., use of standardized monitoring template for follow-up visits for CNP), aberrant behavior screening and management protocols | Before PRIME<br>During PRIME (expanded system wide)<br>During PRIME (modified and improved)<br>During PRIME (increased monitoring and accountability)<br>Planned but not yet implemented<br>Not planned | |
| Guidelines regarding maximum acceptable dosing | Before PRIME | |

| Protocol | When implemented? | Comment |
|---|---|---|
| | During PRIME (expanded system wide) During PRIME (modified and improved) During PRIME (increased monitoring and accountability) Planned but not yet implemented Not planned | |

12) Please indicate if you do any of the following to train staff and providers to diagnose and treat opioid use disorder. (select all that apply)
   a) Formal provider education
   b) Distribution of guidelines
   c) Formal referrals protocols to pain and addiction specialists
   d) Provision of tele-conference consultations with pain and addiction specialists
   e) Understanding of technology/IT systems to track opioid prescriptions
   f) No provider training provided
   g) Other (please specify: _____)

7) Please identify if providers are trained to identify signs of prescription opioid use disorders.

| Provider type | | | Comment |
|---|---|---|---|
| Primary care provider | Yes No | Trained before PRIME Trained during PRIME Training planned during PRIME No training planned | |
| Specialist | Yes No | Trained before PRIME Trained during PRIME Training planned during PRIME No training planned | |
| Dentist | Yes No | Trained before PRIME Trained during PRIME Training planned during PRIME No training planned | |

8) Please identify which of the following assessment tools you have selected for use by clinicians in your organization.

| Tool | | Comment |
|---|---|---|
| Brief Pain Inventory (BPI) | Yes<br>No | |
| Physical functional ability questionnaire (FAQ5) | Yes<br>No | |
| Oswestry Low Back Disability Index | Yes<br>No | |
| PHQ-9 | Yes<br>No | |
| GAD 7 | Yes<br>No | |
| CAGE/CAGE-AID | Yes<br>No | |
| Webster's opioid risk tool (ORT) | Yes<br>No | |
| DIRE tool | Yes<br>No | |
| Screener and Opioid Assessment for Patients in Pain (SOAPP or SOAPP-R) | Yes<br>No | |
| Current Opioid Misuse Measure (COMMTM) | Yes<br>No | |
| Prescription Drug Use Questionnaire (PDUQ) | Yes<br>No | |
| Screen Tool for Addiction Risk (STAR) | Yes<br>No | |
| Screen Instrument for Substance Abuse Potential (SISAP) | Yes<br>No | |
| Pain Medicine Questionnaire (PMQ) | Yes<br>No | |
| Audit-C Screening | Yes<br>No | |
| Other (please specify: _____) | Yes<br>No | |

13) Of the QI projects that you have completed related to Project 2.6 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

14) Please indicate what information is included in your pain management registry and when this was implemented.

|  | Time period | Comment |
|---|---|---|
| Pain assessments | Before PRIME<br>During PRIME<br>Planned<br>Not planned |  |
| Care agreements | Before PRIME<br>During PRIME<br>Planned<br>Not planned |  |
| Medication refill standing orders | Before PRIME<br>During PRIME<br>Planned<br>Not planned |  |
| Urine toxicology screenings | Before PRIME<br>During PRIME<br>Planned<br>Not planned |  |

15) Please indicate if you have established policies for monitoring prescription refills for the following providers, and if you train and/or monitor adherence.

| Provider | Established policies? | Action | Comment |
|---|---|---|---|
| Physicians | Yes<br>No | Train<br>Monitor Adherence |  |

| Provider | Established policies? | Action | Comment |
|---|---|---|---|
| | | Other (please specify: _____) No action | |
| Pharmacies | Yes No | Train Monitor Adherence Other (please specify: _____) No action | |
| Dentists | Yes No | Train Monitor Adherence Other (please specify: _____) No action | |
| Specialists | Yes No | Train Monitor Adherence Other (please specify: _____) No action | |

16) Have you developed a process for scheduling pain focused follow-up visits to ensure that patients receive refills in a timely manner?
   a) Yes, developed before PRIME
   b) Yes, developed as part of PRIME implementation
   c) No, planned through PRIME
   d) No, not planned
      i) Comment: _____

17) Please indicate which of the following patient education materials you provide on the pathology of chronic pain and expected goals of treatment and how these tools were modified to be culturally, linguistically, and literacy level-appropriate.

| Education Materials | | Modified to address culturally diverse populations | Modified in multiple languages | Modified to fit patients' literacy levels | Comment |
|---|---|---|---|---|---|
| Patient education brochure | Yes No | | | | |

| Education Materials | | Modified to address culturally diverse populations | Modified in multiple languages | Modified to fit patients' literacy levels | Comment |
|---|---|---|---|---|---|
| Patient education videos | Yes No | | | | |
| Other (please specify: _____) | Yes No | | | | |

18) If you have created chronic pain care teams, please denote types of team members involved.

| Type of team members | Involved in care team | Comment |
|---|---|---|
| Primary care provider | Yes/no | |
| Medical support staff | Yes/no | |
| Occupational and/or physical therapist | Yes/no | |
| Behavioral health specialist | Yes/no | |
| Pharmacist | Yes/no | |
| Substance abuse disorder specialist | Yes/no | |
| Neurologist | Yes/no | |
| Anesthesiology/pain management provider | Yes/no | |
| Home health care worker | Yes/no | |
| Social worker | Yes/no | |
| Other (please specify: _____) | Yes/no | |

19) Please indicate the ICD-9/ICD-10 codes used to identify patients who meet the criteria of having chronic pain or are prescribed opioids (such as the codes used for measure 2.6.3). Please select all that apply and add your specifications:
   a) Chronic Pain
      i) [Please specify]: R52.1, R52.2, G89.21, G89.22, G89.28, G89.29, G89.4 Z79.891)
   b) Prescribed Opioids
      i) [Please specify]: ICD-10 code: Z79.891
   c) Do not use IDC-9/10 codes to identify these patients
   d) Other (please specify: _____)

20) Please indicate how you monitor patients for signs of diversion or misuse (select all that apply).

a) Use of prescription monitoring programs to detect physician or pharmacy shopping
b) Use of physician-patient contracts concerning opioid treatment
c) Urine drug toxicology screening
d) Provisions for safe disposal of unused opioids
e) Referrals to pain and addiction specialists
f) No protocols for monitoring patients for signs of diversion or misuse
g) Other (please specify: _____)

21) Please identify the common referrals for treatment options.

| Treatment options | Common provider referral? | Comment |
|---|---|---|
| Suboxone treatment | Yes<br>No | |
| Referral to methadone maintenance | Yes<br>No | |
| Referral to inpatient and outpatient substance use disorder treatment facilities | Yes<br>No | |
| Referral to needle exchanges | Yes<br>No | |

## Resources for Planning and Implementing

1. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

2. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | IT infrastructure/EHR lacks data query, tracking, or reporting functions<br><br>Variation in documentation within system by providers and staff (such as documenting data differently)<br><br>Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br><br>Requires manual tracking or chart review<br><br>Other (please specify: _____) | EHR/IT Standardization/expansion across system<br><br>Implement standardized processes and policies for tracking/ documentation by providers and staff<br><br>Implement standardized tools/screening<br><br>Develop/clarify operational definitions/systems<br><br>Provider and staff training/increased capacity<br><br>Planning/process development from management or QI<br><br>Not yet resolved<br><br>Other (please specify:_____) | |
| Achieving the targeted metrics | Already performing at a high level (difficult to improve further)<br><br>Inadequate availability of services/limited access and capacity to serve patients<br><br>Processes not established system-wide | Enhance outreach/capacity to follow up with patients<br><br>Implement Provider and staff training/increased capacity<br><br>Expanded services/availability (new MOUs/contracts, added facilities, new | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | Inadequate follow-up processes to document patient outcomes<br><br>Silo-ed departments/difficulty collaborating<br><br>Small denominator or numerator (causing an unstable rate)<br><br>Staff turn-over<br><br>Other (please specify: _____) | partnerships, added phone or e-visits, etc)<br><br>Established/standardized processes across system<br><br>Established meetings across teams<br><br>Not yet resolved<br><br>Other (please specify: _____) | |

## Project 2.7: Comprehensive Advanced Illness Planning and Care

Please consider project planning and selection questions broadly, across the entire project.

### Project Planning and Selection

2) Did you participate in Project 2.7: Integration of Physical and Behavioral Health?
   a) Yes
   b) No

[If no, did not implement Project 2.7]

3) If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/ funding /staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 2.7]

4) If yes, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts)
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)
   f) Other (please specify: _____)

5) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Establish or expand both ambulatory and inpatient palliative care programs that provide:<br>a. Total, active and individualized patient care, including comprehensive assessment, inter-professional care planning and care delivery<br>b. Support for the family<br>c. Interdisciplinary teamwork<br>d. Effective communication (culturally and linguistically appropriate)<br>e. Effective coordination<br>f. Attention to quality of life and reduction of symptom burden<br>g. Engagement of patients and families in the design and implementation of the program. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop criteria for program inclusion based on quantitative and qualitative data:<br>a. Establish data analytics systems to capture program inclusion criteria data elements. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement, expand, or link with, a Primary Palliative Care training program for front- line clinicians to receive basic PC training, including | Yes<br>No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Advanced Care Planning, as well as supervision from specialty PC clinicians. a. Assure key palliative care competencies for primary care providers by mandating a minimum of 8 hours of training for front line clinicians in communication skills and symptom management | | Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Develop comprehensive advance care planning processes and improve implementation of advance care planning with advanced illness patients. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Establish care goals consistent with patient and family preferences, and develop protocols for management/control of pain and other symptoms in patients with advanced illness, including a holistic approach that includes spiritual and emotional needs. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Improve completion of POLST with eligible patients and participate in the state-wide POLST registry. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Provide access to clinical psychologist on the Palliative care team to address psychological | Yes No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| needs of patient and the family members during the advanced illness and provide grief counseling and support to the family after death of their loved ones. | | Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Enable concurrent access to hospice and curative-intent treatment, including coordination between the providing services. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Develop partnerships with community and provider resources including Hospice to bring the palliative care supports and services into the practice, including linkage with PC training program. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| For advanced illness patients transitioning between primary care, hospital, skilled nursing facilities (SNFs), and/or home-based environments, ensure that the advance care plan is clearly documented in the medical record and transmitted in a timely manner to the receiving facilities and care partners who do not have access to the health system's medical record. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Engage staff in trainings to increase role-appropriate competence in palliative care skills, with an emphasis on communication skills. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

6) If you are participating in other activities related to Project 2.7 that do not fit into the above core components, please briefly describe these activities here.
7) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 2.7: Comprehensive Advanced Illness Planning and Care. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

8) Please indicate if you have developed criteria for inclusion of patients in advanced illness planning and care and have established data analytics systems to capture relevant information.

| Criteria | When implemented? | Comment |
|---|---|---|
| Qualitative inclusion criteria | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |
| Quantitative inclusion criteria | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |
| Data analytics include dashboards | Before PRIME<br>During PRIME<br>Planned, but not yet implemented | |

| Criteria | When implemented? | Comment |
|---|---|---|
| | Not planned | |

9) Please identify elements of your Primary Palliative Care training program for front-line clinicians.

| | Element? | Comment |
|---|---|---|
| Training on Advanced Care Planning | Yes<br>No | |
| Supervision from specialty palliative care clinicians | Yes<br>No | |
| Training for front line clinicians in communication skills | Yes<br>No | |
| Training for front line clinicians in symptom management | Yes<br>No | |

      a) Which of the following elements were part of your comprehensive advance care planning processes developed during PRIME? (select all that apply)

          a. Palliative care service offered at time of diagnosis of advanced illness

          b. Enhancing patient and family understanding about their illness and end-of-life issues (e.g. exploring alternative plans of care)

          c. Educating patients on and completing advance directives that align with their values and preferences

          d. Improving patient and family satisfaction with end-of-life experience

          e. Ensuring outcomes match patient preferences

          f. Other (please describe: _____)

        i. How did you improve implementation of advanced care planning with advanced illness patients during PRIME? (select all that apply)

          1. Offer advance care planning at point of diagnosis of advanced illness

          2. Actively encourage providers to start advance care planning discussions instead of relying on patients or family members to initiate

          3. Encourage providers to have a discussion that is patient-centered (i.e. have patients discuss their illness beliefs along the 5 dimensions of identity, cause, time line, consequences, and cure/control)

          4. Train providers on being sensitive to personal factors (i.e. disease,

gender, age, and social and cultural contexts)
5. Other (please describe: _____)

b) Which of the following were prioritized as part of the comprehensive advanced illness planning and care within your system?
  a. Care goals consistent with patient and family preferences
  b. Develop protocols for management/control of pain and other symptoms in patients with advanced illness
  c. Taking a holistic approach that includes spiritual and emotional needs
  d. Other (please describe: _____)
  i. Please describe how you established care goals consistent with patient and family preferences. If not applicable, please enter N/A.

c) Please indicate if advanced illness care plan is available and accessible to SNF and hospice providers.

| Facility | | Comment |
|---|---|---|
| Skilled Nursing Facility | Has EMR access | |
| | Received by email | |
| | Receives by fax | |
| | Not accessible | |
| Hospice | Has EMR access | |
| | Received by email | |
| | Receives by fax | |
| | Not accessible | |

d) Of the QI projects that you have completed related to Project 2.7 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
| | |
| | |
| | |
| | |
| | |

1) Please indicate if you have established the following:
  a. Ambulatory care program under PRIME
  b. Inpatient palliative care program under PRIME

     c.  Both ambulatory care and inpatient palliative care programs under PRIME

     d.  Neither

2) Please indicate if you have implemented any of the following when establishing ambulatory and inpatient palliative care programs under PRIME.

| | | Comment |
|---|---|---|
| Individualized and comprehensive patient assessments | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |
| Inter-professional care planning | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |
| Inter-professional care delivery | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |
| Support for the family | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |
| Interdisciplinary teamwork | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |
| Effective communication (culturally and linguistically appropriate) | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |
| Effective coordination | Before PRIME<br>During PRIME | |

| | | Comment |
|---|---|---|
| | Planned, but not yet implemented<br>Not planned | |
| Attention to quality of life and reduction of symptom burden | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |
| Engagement of patients and families in the design and implementation of the program | Before PRIME<br>During PRIME<br>Planned, but not yet implemented<br>Not planned | |

14) Do you participate in the state-wide POLST (Physician Orders for Life-Sustaining Treatment) registry?
   a) Yes, implemented prior to PRIME
   b) Yes, participate as a result of PRIME
   c) Yes, expanded system-wide or improved through PRIME (please specify: _____)
   d) No, but planned participation
   e) No, do not participate
      i. Please indicate the date of first participation: _____

15) Please indicate if you have created palliative care teams in the following locations:
   a) Inpatient
   b) Outpatient
   c) Both inpatient and outpatient

16) If you have created palliative care teams, please denote types of team members involved.

| | Involved in care team | Comment |
|---|---|---|
| Family members | Yes<br>No | |
| Palliative doctor | Yes<br>No | |
| Relevant specialists | Yes | |

| | Involved in care team | Comment |
|---|---|---|
| | No | |
| Social worker | Yes | |
| | No | |
| Pharmacist | Yes | |
| | No | |
| Chaplain or other religious/spiritual leader | Yes | |
| | No | |
| Physical therapist | Yes | |
| | No | |
| Dietician | Yes | |
| | No | |
| Social services | Yes | |
| | No | |
| Psychologist | Yes | |
| | No | |

17) Please identify the types of organizations you have partnered with to bring palliative care supports and services into the practice (select all that apply).
   a) Palliative care training programs
   b) Hospice
   c) Social service
   d) Housing
   e) Food
   f) Church
   g) Do not partner with support programs and services
   h) Other (please specify: _____)

## Resources for Planning and Implementing

1. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: | | |

2. Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

3. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>Variation in documentation within system by providers and staff (such as documenting data differently)<br>Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>Requires manual tracking or chart review<br>Other (please specify: _____) | EHR/IT Standardization/expansion across system<br>Implement standardized processes and policies for tracking/ documentation by providers and staff<br>Implement standardized tools/screening<br>Develop/clarify operational definitions/systems<br>Provider and staff training/increased capacity<br>Planning/process development from management or QI<br>Not yet resolved<br>Other (please specify:_____) | |
| Achieving the targeted metrics | Already performing at a high level (difficult to improve further)<br>Inadequate availability of services/limited access and capacity to serve patients<br>Processes not established system-wide<br>Inadequate follow-up processes to document patient outcomes<br>Silo-ed departments/difficulty collaborating | Enhance outreach/capacity to follow up with patients<br>Implement Provider and staff training/increased capacity<br>Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc)<br>Established/standardized processes across system | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | Small denominator or numerator (causing an unstable rate)<br>Staff turn-over<br>Other (please specify: _____ ) | Established meetings across teams<br>Not yet resolved<br>Other (please specify: _____ ) | |

## Domain 3: Resource Utilization Efficiency

The following sections of the survey are structured so that your team is only asked to complete questions for the projects that your entity has selected to implement. Therefore the first 3-4 questions of each section are designed to collect selection information from all the entities.

Project specific questions will only be asked if you are implementing the project. Not all project-specific questions may be relevant to your entity's implementation; please denote N/A in those cases.

## Project 3.1: Antibiotic Stewardship

### Project Planning and Selection

1) Did you participate in Project 3.1: Antibiotic Stewardship?
   a) Yes
   b) No

[If no, did not implement Project 3.1]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/ funding /staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 3.1]

3) If yes, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts)
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)
   f) Other (please specify: _____)

4) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Utilize state and/or national resources to develop and implement an antibiotic stewardship program, such as the California Antimicrobial Stewardship Program. Initiative, or the IHI-CDC 2012 Update "Antibiotic Stewardship Driver Diagram and Change Package"<br>a. Demonstrate engagement of patients in the design and implementation of the project. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop antimicrobial stewardship policies and procedures. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Participate in a learning collaborative or other program to share learnings, such as the "Spotlight on Antimicrobial Stewardship" programs offered by the California Antimicrobial Stewardship Program Initiative. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Create standardized protocols for ordering and obtaining cultures and other diagnostic tests prior to initiating antibiotics. | Yes<br>No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| | | Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop a method for informing clinicians about unnecessary combinations of antibiotics. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Based on published evidence, reduce total antimicrobial Days of Therapy (DOT) by providing standards and algorithms for recommended agents by disease type, focusing on short course regimens (e.g., 3-5 days of therapy for uncomplicated cystitis, 7 days for uncomplicated pyelonephritis, 5-7 days for uncomplicated non-diabetic cellulitis, 5 day therapy for community acquired pneumonia (CAP), 7-8 days for therapy for VAP or hospital acquired pneumonia). | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop evidence-based CPOE algorithms and associated clinician training, to support antibiotic stewardship choices during order entry. These could include approaches such as guidelines for duration of antibiotics, within drug class auto- | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| switching for specific antibiotics and doses, or restriction of specific antibiotics at the point of ordering (e.g., broad spectrum agents). | | Not selected and not implemented | |
| Implement stewardship rounds focusing on high yield drugs to promote de-escalation after the drugs are started, such as regular antibiotic rounds in the ICU. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Improve diagnostic and de-escalation processes to reduce unnecessary antibiotic use based upon length of therapy or antibiotic spectrum, such as: a. Procalcitonin as an antibiotic decision aid b. Timely step-down to oral antibiotic therapy to support early discharge from the hospital for acute infections c. Use of oral antibiotics for osteomyelitis to reduce prolonged IV exposures. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Evaluate the use of new diagnostic technologies for rapid delineation between viral and bacterial causes of common infections. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Adopt the recently described "public commitment" strategy in outpatient clinics to encourage providers not to prescribe antibiotics for URIs | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Publish organization-wide provider level antibiotic prescribing dashboards with comparison to peers and benchmarks. Contribute system level data for a similar dashboard across all public health care systems. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement a system a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |

5) If you are participating in other activities related to Project 3.1 that do not fit into the above core components, please briefly describe these activities here.
6) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 3.1: Antibiotic Stewardship. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

7) Which model or models did your organization use as a foundation for your antibiotic stewardship program? (select all that apply)
   a) California Antimicrobial Stewardship Program
   b) CDC Antibiotic Stewardship Driver Diagram Change Package
   c) Developed a model in-house (please specify: _____)
   d) Did not reference models for this project
   e) Other (please specify: _____)

8) Please indicate if you have established policies for antimicrobial stewardship for the following providers, and if you train and/or monitor adherence.

| Provider | Established policies? | Train? | Monitor adherence? | Comment |
|---|---|---|---|---|
| Physicians | Yes<br>No | Yes<br>No | Yes<br>No | |
| Pharmacies | Yes<br>No | Yes<br>No | Yes<br>No | |
| Specialists | Yes<br>No | Yes<br>No | Yes<br>No | |

9) Please indicate which departments and facilities the antimicrobial policies and procedures apply (select all that apply).
   a) System-wide
   b) Hospital
   c) Emergency department
   d) On campus clinic
   e) Off campus clinic
   f) Other (please specify: _____)

10) Please identify the methods used to highlight unnecessary combinations of antibiotics to your clinicians (select all that apply).
    a) CPOE/EHR notifications
    b) Secure mail messages
    c) Print-out notifications
    d) No methods used
    e) Other (please specify: _____)

11) Please indicate if the "Public Commitment" strategy to avoid prescription of antibiotics for URIs is implemented in the following settings (select all that apply).
    a) System-wide
    b) Hospital
    c) Emergency department
    d) On campus clinic
    e) Off campus clinic
    f) Did not implement a "Public Commitment" strategy

12) Of the QI projects that you have completed related to Project 3.1 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

13) Please indicate the staff and providers invited to antibiotic stewardship rounds (select all that apply).
- Physician champion
- Medical support staff

- Behavioral health specialist
- Pharmacist
- Substance abuse disorder specialist
- Neurologist
- Occupational medicine
- Anesthesiology/pain management
- Do not conduct antibiotic stewardship rounds

## Resources for Planning and Implementing

14) Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| Category | Rating 1-10 (Very low- Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

15) Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

16) Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| Category | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>Variation in documentation within system by providers and staff (such as documenting data differently)<br>Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>Requires manual tracking or chart review<br>Other (please specify: _____) | EHR/IT Standardization/expansion across system<br>Implement standardized processes and policies for tracking/ documentation by providers and staff<br>Implement standardized tools/screening<br>Develop/clarify operational definitions/systems<br>Provider and staff training/increased capacity<br>Planning/process development from management or QI<br>Not yet resolved<br>Other (please specify:_____) | |
| Achieving the targeted metrics | Already performing at a high level (difficult to improve further)<br>Inadequate availability of services/limited access and capacity to serve patients<br>Processes not established system-wide<br>Inadequate follow-up processes to document patient outcomes<br>Silo-ed departments/difficulty collaborating | Enhance outreach/capacity to follow up with patients<br>Implement Provider and staff training/increased capacity<br>Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc)<br>Established/standardized processes across system | |

| Category | Challenges | Solutions | Comment |
|---|---|---|---|
|  | Small denominator or numerator (causing an unstable rate)<br>Staff turn-over<br>Other (please specify: _____) | Established meetings across teams<br>Not yet resolved<br>Other (please specify: _____) |  |

## Project 3.2: Resource Stewardship: High-Cost Imaging

### Project Planning and Selection

1) Did you participate in Project 3.2: Resource Stewardship: High-Cost Imaging?
    a) Yes
    b) No

[If no, did not implement Project 3.2]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
    a) Lack of resources/ funding /staffing
    b) Lack of health information technology
    c) Already performed well in this area
    d) Not identified as a problem/not examined
    e) Not aligned with organizational goals
    f) Low priority
    g) Other (please specify: _____)

[If yes, implemented Project 3.2]

3) If this project is not required for your organization, what were the motivators for choosing this project? (select all that apply)
    a) Synergy with existing projects (continuation or expansion of existing efforts)
    b) Consistency with organizational goals
    c) Availability of champions and opinion leaders
    d) Ease of implementation (availability of data, concordance with existing processes of care)
    e) Low resource requirements (lowest cost, least time/staff needed to implement)
    f) Other (please specify: _____)

4) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Implement an imaging management program, demonstrating engagement of patients in the design and implementation of components of the project. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Program should include identification of top imaging tests whose necessity should be assessed for possible overuse. Criteria for assessment could include:<br>a. Frequency and cost of inappropriate/unnecessary imaging<br>i. Appropriate Use: Beginning with state or nationally recognized models or guidelines (e.g., American College of Radiology Appropriateness Criteria, American College of Cardiology Appropriate Use Criteria) and incorporating pertinent local factors, programs will set out definitions for appropriateness<br>ii. Cost: Programs will identify imaging studies associated with high costs due to high cost per study or high volume across the system | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| b. Unwarranted practice variation within the participating DPHs/DMPHs<br>c. Data completeness and ability to report the extent of a-c, building data capacity where needed<br>d. Whether there are established, tested and available evidence-based clinical pathways to guide cost-effective imaging choices. | | | |
| Establish standards of care regarding use of imaging, including:<br>a. Costs are high and evidence for clinical effectiveness is highly variable or low.<br>b. The imaging service is overused compared to evidence-based appropriateness criteria.<br>c. Lack of evidence of additional value (benefits to cost) compared to other imaging options available to answer the clinical question. | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Incorporate cost information into decision making processes:<br>a. Develop recommendations as guidelines for provider-patient shared decision conversations in determining an appropriate treatment plan.<br>b. Implementation of decision support, evidence-based guidelines and medical criteria to recommend best course of action | Yes<br>No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Provide staff training on project components including implementation of recommendations, and | Yes<br>No | Ongoing prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| methods for engaging patients in shared decision making as regards to appropriate use of imaging. | | Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement a system for continual rapid cycle improvement and performance feedback that includes patients, front line staff and senior leadership. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented Not planned prior to PRIME<br>Not selected and not implemented | |

5) If you are participating in other activities related to Project 3.2 that do not fit into the above core components, please briefly describe these activities here.

9) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 3.2: Resource Stewardship: High-Cost Imaging. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

10) Which state or nationally-recognized model or models did your organization select as a guideline for your program? (select all that apply)
    a. American College of Radiology Appropriateness Criteria
    b. American College of Cardiology Appropriate Use Criteria
    c. Did not reference models for this project
    d. Other (please specify:_____)

11) Please indicate the procedures your imaging management program designated for monitoring due to high cost or high volume (select all that apply).
    1. MRI
    2. CT
    3. Nuclear imaging
    4. PET
    5. Other high cost examinations (please specify: _____)

12) Did you compare your organization with other organizations to assess and develop strategies for effective therapies involving high-cost imaging? (select all that apply)
    10. Yes, with other PRIME hospitals
    11. Yes, with other California hospitals

12. Yes, with national hospitals
13. No, did not compare with other organizations
14. Other (please specify: _____)

13) Of the QI projects that you have completed related to Project 3.2 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

14) Please indicate if you use any of the following to establish which procedures are high cost imaging (select all that apply).
   a) Comparing costs (high) and evidence for clinical effectiveness (highly variable or low)
   b) The imaging service is overused compared to evidence-based appropriateness criteria
   c) Lack of evidence of additional value (benefits to cost) compared to other imaging options available to answer the clinical question.
   d) Other (please specify: _____)

15) Please indicate if you provide any of the following decision support tools (select all that apply).
   a) Cost information to providers for provider-patient conversation around treatment options
   b) Evidence-based guidelines for selection of imaging studies
   c) Decision support tools for selection of imaging studies
   d) Did not provide any decision support
   e) Other decision support (please specify: _____)

## Resources for Planning and Implementing

1. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____) | | |

2. Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____
Name: _____; Collaborative main goals: _____
Name: _____; Collaborative main goals: _____
Name: _____; Collaborative main goals: _____
Name: _____; Collaborative main goals: _____

## Challenges and Solutions

3. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>Variation in documentation within system by providers and staff (such as documenting data differently)<br>Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>Requires manual tracking or chart review<br>Other (please specify: _____) | EHR/IT Standardization/expansion across system<br>Implement standardized processes and policies for tracking/ documentation by providers and staff<br>Implement standardized tools/screening<br>Develop/clarify operational definitions/systems<br>Provider and staff training/increased capacity<br>Planning/process development from management or QI<br>Not yet resolved<br>Other (please specify:_____) | |
| Achieving the targeted metrics | Already performing at a high level (difficult to improve further)<br>Inadequate availability of services/limited access and capacity to serve patients<br>Processes not established system-wide<br>Inadequate follow-up processes to document patient outcomes<br>Silo-ed departments/difficulty collaborating | Enhance outreach/capacity to follow up with patients<br>Implement Provider and staff training/increased capacity<br>Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc)<br>Established/standardized processes across system | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| | Small denominator or numerator (causing an unstable rate)<br>Staff turn-over<br>Other (please specify: _____) | Established meetings across teams<br>Not yet resolved<br>Other (please specify: _____) | |

## Project 3.3: Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals

### Project Planning and Selection

1) Did you participate in Project 3.3: Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals?
   a) Yes
   b) No

[If no, did not implement Project 3.3]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/ funding /staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 3.3]

3) If yes, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts)
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)
   f) Other (please specify: _____)

4) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Implement or expand a high-cost pharmaceuticals management program. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a multidisciplinary pharmaceuticals stewardship team. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Develop a data analytics process to identify the participating PRIME entity highest cost pharmaceuticals (high-cost medications or moderate-cost meds with high prescribing volume). Identify high-cost medications whose efficacy is significantly greater than available lower cost medications. a. Using purchase price data, Identify the Top 20 medications and medication classes, focusing on the following: Analgesics, Anesthetics, Anticoagulants, Anti-Neoplastics, Diabetes, | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Hepatitis C, Immunoglobulins, Mental Health (Anti-Depressants/Sedatives/ Anti-Psychotics), Respiratory (COPD/Asthma), Rheumatoid Arthritis<br>i. Exclude Anti-Infectives and Blood Products (addressed in separate PRIME Projects) | | | |
| Develop processes for evaluating impact of high-cost, high-efficacy drugs, particularly drugs to treat conditions (e.g., HCV) or to address circumstances (e.g., oral anticoagulants for patients without transportation for blood checks) more prevalent in safety net populations:<br>a. Consider criteria that include ability of identified medications to improve patient health, improve patient function and reduce use of health care services. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop processes to impact prescribing by providers by establishing standards of care regarding prescribing of high cost pharmaceuticals, including:<br>a. Use of decision support/CPOE, evidence-based guidelines and medical criteria to support established standards<br>b. Develop processes to improve the appropriate setting for medication delivery including, transitioning pharmaceutical treatment to the outpatient setting wherever possible | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| c. Promote standards for generic prescribing<br>d. Promote standards for utilizing therapeutic interchange. | | | |
| Improve the process for proper billing of medications, through clinician education and decision support processes. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop formulary alignment with local health plans. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership rapid cycle improvement using standard process improvement methodology. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop organization-wide provider level dashboards to track prescribing patterns for targeted high cost pharmaceuticals. Dashboard to include comparisons to peers and benchmarks. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Contribute system level data for a similar dashboard across all public health care systems. | | Not selected and not implemented | |
| Develop processes for working with providers with prescribing patterns outside established standards, to identify and reduce barriers to meeting prescribing standards:<br>a. Develop guidelines and provide staff training on methods for engaging patients in shared decision making for developing treatment plans within the context of the established standards. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Maximize access to 340b pricing:<br>a. Share templates for contracting with external pharmacies<br>b. To improve program integrity, share tools for monitoring of 340b contract compliance | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |

5) If you are participating in other activities related to Project 3.3 that do not fit into the above core components, please briefly describe these activities here.
6) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 3.3: Resource Stewardship: Therapies Involving High-Cost Pharmaceuticals. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

7) Please indicate the types of providers involved in the pharmaceutical stewardship team.

|  | Involved in stewardship team? | Comment |
|---|---|---|
| Physician champion | Yes<br>No |  |
| Medical support staff | Yes<br>No |  |
| Behavioral health specialist | Yes<br>No |  |
| Pharmacist | Yes<br>No |  |
| Substance abuse disorder specialist | Yes<br>No |  |
| Neurologist | Yes |  |

| | Involved in stewardship team? | Comment |
|---|---|---|
| | No | |
| Occupational medicine | Yes<br>No | |
| Anesthesiology/pain management | Yes<br>No | |

8) Please indicate which of the following classes of pharmaceuticals are targeted for this project (select all that apply).
   a) Generic drugs with significant increase in costs
   b) Brand name drugs for rare conditions
   c) Brand name or generic drugs requiring lifetime use
   d) All biologic drugs
   e) All specialty drugs
   f) Drugs with high cost or high volume and low efficacy
   g) Other (please specify: _____)

9) Please identify the top five pharmaceuticals targeted by your organization under this project:
   1.
   2.
   3.
   4.
   5.

10) Please indicate which of the following your organization used to examine efficacy and utility of the pharmaceuticals selected for this project.
   a) Published QALY impact estimates
   b) Improvements in health
   c) Improvements in function
   d) Reduction in future use of health care
   e) None of these
   f) Other (please specify: _____)

11) Of the QI projects that you have completed related to Project 3.3 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

12) Please indicate if you used any of the following strategies to change practice patterns of providers outside established standards. (select all that apply)
   a) Provide mentoring
   b) Provide additional training on guidelines
   c) Provide more frequent feedback
   d) Provide financial incentives for adherence
   e) Provide financial disincentives for lack of adherence
   f) Do not have strategies to change practice patterns
   g) Other (please specify: _____)

13) If your organization used a third party 340b compliance tool developed by a third party, please indicate the tool name and developer.

## Resources for Planning and Implementing

1. Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement | | |
| Resources (e.g., personnel, cost, time) to implement | | |
| Staff training | | |
| Personnel reorganization | | |
| Reorganization of care processes | | |
| Revision, redesign, or modification of project plans from their original form prior to PRIME | | |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) | | |
| Effort due to unanticipated changes in metrics | | |
| Overall level of difficulty in implementation | | |
| Other (please specify: _____ ) | | |

2. Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

3. Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| Category | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>Variation in documentation within system by providers and staff (such as documenting data differently)<br>Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>Requires manual tracking or chart review<br>Other (please specify: _____) | EHR/IT Standardization/expansion across system<br>Implement standardized processes and policies for tracking/ documentation by providers and staff<br>Implement standardized tools/screening<br>Develop/clarify operational definitions/systems<br>Provider and staff training/increased capacity<br>Planning/process development from management or QI<br>Not yet resolved<br>Other (please specify:_____) | |
| Achieving the targeted metrics | Already performing at a high level (difficult to improve further)<br>Inadequate availability of services/limited access and capacity to serve patients<br>Processes not established system-wide<br>Inadequate follow-up processes to document patient outcomes<br>Silo-ed departments/difficulty collaborating | Enhance outreach/capacity to follow up with patients<br>Implement Provider and staff training/increased capacity<br>Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc)<br>Established/standardized processes across system | |

| Category | Challenges | Solutions | Comment |
|---|---|---|---|
| | Small denominator or numerator (causing an unstable rate)<br>Staff turn-over<br>Other (please specify: _____) | Established meetings across teams<br>Not yet resolved<br>Other (please specify: _____) | |

## Project 3.4: Resource Stewardship: Blood Products

### Project Planning and Selection

1) Did you participate in Project 3.4: Resource Stewardship: Blood Products?
   a) Yes
   b) No

[If no, did not implement Project 3.4]

2) If no, please identify the reasons for not implementing this project. (select all that apply)
   a) Lack of resources/ funding /staffing
   b) Lack of health information technology
   c) Already performed well in this area
   d) Not identified as a problem/not examined
   e) Not aligned with organizational goals
   f) Low priority
   g) Other (please specify: _____)

[If yes, implemented Project 3.4]

3) If yes, what were the motivators for choosing this project? (select all that apply)
   a) Synergy with existing projects (continuation or expansion of existing efforts)
   b) Consistency with organizational goals
   c) Availability of champions and opinion leaders
   d) Ease of implementation (availability of data, concordance with existing processes of care)
   e) Low resource requirements (lowest cost, least time/staff needed to implement)
   f) Other (please specify: _____)

4) Please indicate if these core components were selected for PRIME and whether they were implemented prior to PRIME, planned in the absence of PRIME, or not planned prior to PRIME. If only parts of the core component apply, please specify in the comments.

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Implement or expand a patient blood products management (PBM) program. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Implement or expand a Transfusion Committee consisting of key stakeholder physicians and medical support services, and hospital administration. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Utilize at least one nationally recognized patient blood management program methodology (e.g., The Joint Commission, AABB) | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |
| Develop processes for evaluating impact of blood product use including appropriateness of use, adequacy of documentation, safety implications, cost, and departmental budget. Develop a data analytics process to track these and other program metrics. | Yes<br>No | Ongoing prior to PRIME<br>Planned, but not yet implemented<br>Not planned prior to PRIME<br>Not selected and not implemented | |

| Core Components | Is this selected? | Before the start of PRIME, what was the status? | Comment |
|---|---|---|---|
| Establish standards of care regarding use of blood products, including: a. Use of decision support/CPOE, evidence based guidelines and medical criteria to support and/or establish standards. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Implement a system for continual performance feedback and rapid cycle improvement that includes patients, front line staff and senior leadership. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Develop organization-wide dashboards to track provider level blood use patterns. Dashboard to include comparisons to peers and benchmarks. Contribute system level data for a similar dashboard across all public health care systems. | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |
| Participate in the testing of novel metrics for PBM programs | Yes No | Ongoing prior to PRIME Planned, but not yet implemented Not planned prior to PRIME Not selected and not implemented | |

5) If you are participating in other activities related to Project 3.4 that do not fit into the above core components, please briefly describe these activities here.
6) If you indicated that components of this project were "ongoing prior to PRIME", please identify and describe how you have modified or expanded your activities under PRIME. (select all that apply)
   a) The project has expanded to additional clinics
   b) The project has expanded to additional departments
   c) The project has different scope (please specify: _____)
   d) The project has different/new goals (please specify: _____)
   e) The project includes different/new populations (please specify: _____)
   f) The project uses different measures/metrics (please specify: _____)
   g) Components of this project were not ongoing prior to PRIME
   h) Other (please specify: _____)

## Project Implementation

These questions are about implementation of the core components (as outlined in Attachment Q) for Project 3.4: Resource Stewardship: Blood Products. Please answer each question in relation to PRIME instead of what your organization might have been doing prior to PRIME, unless specifically requested to do so. It is not expected that all components have been fully implemented and questions should be answered in regards to the PRIME activities currently underway by your entity.

7) Which state or nationally-recognized methodologies did your organization select as a guideline for your program? (select all that apply)
   a. American Association of Blood Banks (AABB)
   b. The Joint Commission
   c. Did not reference models for this project
   d. Other (please specify:_____)

8) Please indicate if any of the following are elements in your evaluation of the impact of blood product use. (select all that apply)
1) Appropriateness of use
2) Adequacy of documentation
3) Safety implications
4) Cost considerations
5) Departmental budget
6) None of these
7) Other (please specify:_____)

9) Do your standards of care regarding use of blood products involve any of the following? (select all that apply)
   a) Decision support tools based on evidence-based guidelines
   b) Computerized physician order entry (CPOE)
   c) No decision support tools in standards of care
   d) Other (please specify:_____)

10) Of the QI projects that you have completed related to Project 3.4 in PRIME, please indicate up to five projects that were most effective in achieving change. Include a brief description of the goals. If not applicable, please enter N/A.

| Description of test of change (PDSA) | Goals of PDSA |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Resources for Planning and Implementing

11) Please score your effort in implementing this project from low (1) to high (10) along the following criteria. If not applicable, please enter N/A in the comments. Please consider resources for planning and implementation broadly, across the entire project.

| Category | Rating 1-10 (Very low-Very high) | Comment |
|---|---|---|
| Effort to implement |  |  |
| Resources (e.g., personnel, cost, time) to implement |  |  |
| Staff training |  |  |
| Personnel reorganization |  |  |
| Reorganization of care processes |  |  |
| Revision, redesign, or modification of project plans from their original form prior to PRIME |  |  |
| Effort to engage internal stakeholders (e.g., identify and select a champion, obtain buy-in from opinion leaders, front line staff, and others, collaborate on implementation) |  |  |
| Effort due to unanticipated changes in metrics |  |  |
| Overall level of difficulty in implementation |  |  |
| Other (please specify: _____) |  |  |

12) Please identify and provide a brief description of specific learning collaborative(s) you participated in during PRIME related to any of the core components of this project (outside of those hosted by DHCS, Harbage Consulting, SNI/CAPH, or DHLF).

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

Name: _____; Collaborative main goals: _____

## Challenges and Solutions

13) Please identify the top two challenges encountered at your entity (most challenging to second most challenging) and the solutions employed in implementing the core components in this project.

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Obtaining data | IT infrastructure/EHR lacks data query, tracking, or reporting functions<br>Variation in documentation within system by providers and staff (such as documenting data differently)<br>Variation in system due to multiple EHRs/IT systems (e.g. data reside in different systems)<br>Requires manual tracking or chart review<br>Other (please specify: _____) | EHR/IT Standardization/expansion across system<br>Implement standardized processes and policies for tracking/ documentation by providers and staff<br>Implement standardized tools/screening<br>Develop/clarify operational definitions/systems<br>Provider and staff training/increased capacity<br>Planning/process development from management or QI<br>Not yet resolved<br>Other (please specify:_____) | |

| | Challenges | Solutions | Comment |
|---|---|---|---|
| Achieving the targeted metrics | Already performing at a high level (difficult to improve further)<br>Inadequate availability of services/limited access and capacity to serve patients<br>Processes not established system-wide<br>Inadequate follow-up processes to document patient outcomes<br>Silo-ed departments/difficulty collaborating<br>Small denominator or numerator (causing an unstable rate)<br>Staff turn-over<br>Other (please specify: _____) | Enhance outreach/capacity to follow up with patients<br>Implement Provider and staff training/increased capacity<br>Expanded services/availability (new MOUs/contracts, added facilities, new partnerships, added phone or e-visits, etc)<br>Established/standardized processes across system<br>Established meetings across teams<br>Not yet resolved<br>Other (please specify: _____) | |

## PRIME Follow-up Survey (Administered Jan to May 2019):

### Introduction and Instructions

This brief follow-up questionnaire is designed to gather additional information for the PRIME evaluation, including behavioral health integration.

### Organization Background

- Please indicate your entity's name.

- Please indicate your entity's type:

    - Designated Public Hospital (DPH) system
    - District/Municipal Public Hospital (DMPH)
    - DMPH that is also a Critical Access Hospital (CAH)

- PRIME Eligible Population (Overall, not for each metric)
    - How many people are in the PRIME eligible population due to their managed care assignment? Not applicable for DMPHs; only applies to DPHs for Population #2.
    - How many people are in the PRIME eligible population due to their utilization? [DPHs Population #1; DMPHs entire PRIME Eligible Population (individuals with at least two encounters) as specified in PRIME reporting manual]

- o DPHs: how many people are in both groups?

DPHs: Please indicate mutually exclusive groups if feasible. For example, 4A: Population #2 (N=100,000) + 4B: Population#1 (N=150,000) + 4C: populations #1 and #2 (N=50,000). This sums to the total number of people (example N= 300,000). The total was reported in your DY13YE report to DHCS, so we are not repeating it here. If mutually exclusive groups are not feasible to calculate, please report what you can and and we will contact you if we have any questions.

## Primary and Specialty Care
The following questions help us understand the size and scope of your primary and specialty care system.

Most organizations will not have providers/clinics that are not part of PRIME. However, if your organization has any primary care or specialty care providers or clinics that are not part of PRIME (e.g. 1206b clinics that provide primary care, but the patients are not included in the PRIME denominator) please include those clinics/providers for the questions that specify "Total ___ owned or operated by the entity." Later in the survey there will be a separate section asking questions specifically for clinics/providers who are not in PRIME. Please contact us if you are not sure how to respond.

- How many primary care clinics does your entity have? If greater than 20, you can provide an estimate.
    - o Total primary care clinics owned or operated by the entity:
    - o Primary care clinics that are not part of your organization, but are partners for PRIME implementation (including their patients' visits for eligibility in the denominator). Please indicate number and briefly describe. Do not include those listed for Q5C.
    - o Primary care clinics that are not part of your organization, but are partners solely for data sharing, indicate number and describe briefly (i.e. data sharing for calculating PRIME metrics, but visits not counted toward denominator). Do not include those listed for Q5B.

- Primary Care Team:
    DPH: PRIME metrics specify a variety of primary care services for inclusion in the denominator. Please indicate if your organization has the following and includes them for the denominator (primary care team).
    DMPH: Although the PRIME denominator doesn't require services with the primary care team, please check if your organization has these types of providers/services.
    - a) Family Medicine

b) Internal Medicine
c) Pediatrics
d) Primary care in a specialty clinic (e.g., HIV)
e) Eligible non-traditional service types described in the Global Payment Program (for PRIME, encounters not limited to uninsured individuals.)
f) Other (please specify)

- How many primary care providers does your entity have? We define a primary care provider as a practitioner (including physicians, nurse practitioners, and physician assistants) whose primary role is to provide primary care services. If greater than 50, you can provide an estimate.
  o Total primary care providers that are part of the entity:

- How many specialty care clinics does your entity have? If greater than 20, you can provide an estimate.
  o Total specialty care clinics that are owned or operated by the entity (include any that are colocated with primary care):
  o Specialty care clinics that are not part of your organization, but are partners for PRIME implementation:

- How many specialty care providers (including physicians, nurse practitioners, physicians assistants, MFTs/LCSWs, etc.) are involved in care for PRIME-eligible patients? If greater than 50, you can provide an estimate.

## Colocation of Behavioral Health Providers within Primary Care Settings

We are interested in the level of colocated behavioral health providers in primary care clinics before PRIME and now. Colocation includes having a behavioral health provider physically, on-site within the same clinical space as primary care providers either full-time, partial-time, or part-time. Their role can include treating primary care patients, serving as a care manager, and serving as a resource to primary care providers.

In the next questions, we will ask about the number of total primary care clinics within your entity that have behavioral health providers working within the clinic (colocated) and within the same building but in another clinic space (close proximity). Please do not include clinics that provide behavioral health services solely through telehealth (telehealth capacity was ascertained in the previous survey).

Please report the number of primary care clinics falling under each category (1) at the start of PRIME (this refers to when your organization started) and (2) currently. If you do not have primary care clinics with colocated behavioral health providers, please list "0".

Most organizations will not have providers/clinics that are not part of PRIME. However, if your organization has any primary care or specialty care providers or clinics that are not part of PRIME (e.g. 1206b clinics that provide primary care, but the patients are not included in the PRIME denominator) please include those clinics/providers for the questions that specify "Total ___ owned or operated by the entity." Later in the survey there will be a separate section asking questions specifically for clinics/providers who are not in PRIME. Please contact us if you are not sure how to respond.

- Primary care clinics with colocated behavioral health (BH) providers are defined as: Clinics in which behavioral health providers physically work within the same clinic space as primary care providers, either in designated or shared clinical rooms.

  How many primary care clinics did/do you have in which behavioral health providers are colocated?
  a. Total clinics with colocated BH providers – At the start of PRIME:
  b. Total clinics with coloated BH providers – currently:

- What is the total staffing level of colocated behavioral health providers (i.e., behavioral health providers that are situated within primary care clinics) within your entity? Include FTEs that are directly employed and who are employed through contracts or agreements with another organization to provide colocated BH services. Please list the total FTE of behavioral health providers (BHPs) colocated within primary care clinics across the system. For example, if 2 full-time psychologists split their time across 10 primary care clinics, the total FTE of psychologists would be 2.0. If 4 primary care clinics each have a 0.25 FTE peer navigator, the total FTE of peer providers would be 1.0. Do not include providers who are not colocated, as this was covered in the prior survey and in the following question; do not include behavioral health providers who provide services solely via telehealth.

| *Colocated* Behavioral Health Provider | Total FTE of colocated BHPs |
|---|---|
| Psychiatrist | |
| Psychologist | |
| Clinical Social Worker or Marriage and Family Therapist | |
| Peer provider/Navigator/Promotora/Community Health Workers | |
| If other behavioral health providers are employed, please specify here. Otherwise please type 'NA', | |

- Primary care clinics with close proximity to behavioral health providers are defined as: Primary care clinics in which behavioral health providers are situated within a nearby office in the same building, but not within the same clinic space as primary care providers.

How many primary care clinics did/do you have in which behavioral health providers are inc lose proximity? (Do not include clinics that were already counted as colocated above.)

| Number | At the start of PRIME | Currently |
|---|---|---|
| Total clinics with close proximity | | |

- Does your organization have any primary care or specialty care providers or clinics that are not part of PRIME? E.g. 1206b clinics that provide primary care, but the patients are not included in the PRIME denominator.

  -If you answer "yes" then we will ask you about those providers, clinics, or sites separately.

  -Most organizations will not have this structure (answer "no").

  o Yes, we have providers/clinics that are not part of PRIME

  o No, all of our providers/clinics are included in PRIME

## Clinics that are not in PRIME

This page is designed to collect additional information about any clinics/providers that are part of your organization, but not counted in PRIME metrics or that are not implementing PRIME projects.

- If you have sites that are providing primary care services that are not reported for PRIME metrics, please explain (e.g., there are 1206b clinics that provide primary care, but are not included in PRIME).

- Of the total primary care clinics owned or operated by the entity (from Q5), how many primary care clinics are not participating in PRIME?

- Of the total primary care providers (from Q7), how many primary care providers are not engaged in PRIME? We define a primary care provider as a practitioner (including physicians, nurse practitioners, and physician assistants) whose primary role is to provide primary care services.

- Of the total specialty care clinics (from Q8), how many specialty care clinics are not participating in PRIME?

- Of the specialty care providers (from Q9) how many specialty care providers (including physicians, nurse practitioners, physicians assistants, MFTs/LCSWs, etc.) are not participating in PRIME?

- Primary care clinics with colocated behavioral health (BH) providers are defined as: Clinics in which behavioral health providers physically work within the same clinic space as primary care providers, either in designated or shared clinical rooms.

  Of the primary care clinics in which behavioral health providers are colocated (from Q10), how many clinics not participating in PRIME have colocated BH providers?

  | Number | At the start of PRIME | Currently |
  | --- | --- | --- |
  | Total clinics with colocated BH providers | | |

- Primary care clinics with close proximity to behavioral health providers are defined as:

  Primary care clinics in which behavioral health providers are situated within a nearby office in the same building, but not within the same clinic space as primary care providers.(Do not include clinics that were already counted as co-located above.)

  Of the primary care clinics with behavioral health providers in close proximity (Q12), how many clinics not participating in PRIME have BH providers in close proximity?

  | Number | At the start of PRIME | Currently |
  | --- | --- | --- |
  | Total clinics with BH providers in close proximity | | |

## Project 1.1: Integration of Behavioral Health and Primary Care

- We ask this question so that only entities that are conducting 1.1 will be asked to complete the following section. If your organization is not implementing 1.1 then the survey will skip to the end.

  Did you participate in Project 1.1: Integration of Behavioral Health and Primary Care?
  - Yes
  - No

- Please select how strongly you agree or disagree with the following statements regarding implementation of behavioral health integration within your entity, before and during PRIME.

  Behavioral health integration is...
  - Strongly disagree

- o Somewhat disagree
- o Neither agree or disagree
- o Somewhat agree
- o Strongly agree

| Category | Before PRIME | Currently |
|---|---|---|
| ...integrated into the organization's strategic mission. | | |
| ...a high priority to senior leadership (e.g., Director, CEO, COO) among competing projects. | | |
| ...a high priority to clinical leadership (e.g., CMO, Medical Directors) among competing projects. | | |
| ...backed by sufficient financial resources to ensure successful implementation. | | |
| ...supported by an adequate level of leadership time. | | |
| ...supported by an adequate level of clinical staff time. | | |
| ...supported by an adequate level of administrative staff time. | | |

Comments:

- Which of the following constitute your organization's top 2 goals for behavioral health integration?
  While we understand your entity may be pursuing many of the following goals, we would like to understand what the top priorities have been in implementing behavioral health integration within your entity.
  Please select 1 goal for Highest Priority and 1 goal for Second Highest Priority

| Highest Priority | Second Highest Priority |
|---|---|
| ☐ Colocation of behavioral health providers within all primary care sites | ☐ Colocation of behavioral health providers within all primary care sites |
| ☐ Systematic screening of patients for depression | ☐ Systematic screening of patients for depression |
| ☐ Systematic screening of patients for substance abuse | ☐ Systematic screening of patients for substance abuse |
| ☐ Standardized referral processes between primary care and behavioral health | ☐ Standardized referral processes between primary care and behavioral health |
| ☐ Standardized use of SBIRT | ☐ Standardized use of SBIRT |
| ☐ Other, please specify: | ☐ Other, please specify: |

Comments:

- (For each condition below) How often did/do you screen patients without a previous diagnosis for this condition in primary care settings across your organization?

| Condition | Before PRIME |
|---|---|
| Depression | ☐ Systematically |
|  | ☐ Most of the time |
|  | ☐ On a case-by-case basis |
|  | ☐ Never |
| Alcohol Abuse | ☐ Systematically |
|  | ☐ Most of the time |
|  | ☐ On a case-by-case basis |
|  | ☐ Never |
| Drug Abuse | ☐ Systematically |
|  | ☐ Most of the time |
|  | ☐ On a case-by-case basis |
|  | ☐ Never |
| Anxiety Disorders | ☐ Systematically |
|  | ☐ Most of the time |
|  | ☐ On a case-by-case basis |
|  | ☐ Never |
| Tobacco Use | ☐ Systematically |
|  | ☐ Most of the time |
|  | ☐ On a case-by-case basis |
|  | ☐ Never |

If your entity screens for behavioral health conditions not listed above, please list the condition and frequency of screening before PRIME and currently:

- Who is primarily responsible for screening patients for behavioral health issues under your current screening protocols? Select all that apply.
  1. Front desk clerk or receptionist
  2. Medical assistant
  3. Primary care provider (e.g., physician, nurse practitioner, physician's assistant, or registered nurse)
  4. Licensed clinical social worker (LCSW) or marriage and family therapist (MFT)
  5. Psychologist
  6. Psychiatrist
  7. N/A, not currently screening for behavioral health issues
  8. Other, please specify:

- What tool(s) are you using to screen patients for depression in primary care settings? (Select all that apply.)
  a. PHQ-2
  b. PHQ-9
  c. CES-D
  d. Beck Depression Inventory
  e. Not screening for depression
  f. Self-developed tool or Other, please specify:

- For patients newly identified as having depression, please describe your current workflow(s) for initiating treatment.

- What tool are you using to screen patients for alcohol abuse in primary care settings? (Select all that apply.)
  a. AUDIT
  b. AUDIT-C
  c. CAGE
  d. MAST
  e. Not screening for alcohol abuse
  f. Self-developed tool or Other, please specify:

- What tool are you using to screen patients for drug abuse in primary care settings? (Select all that apply.)
  a. DAST
  b. DAST-10

      c. ASSIST
      d. Not screening for drug abuse
      e. Self-developed tool or Other, please specify:

- For patients newly identified as having a substance abuse problem, please describe your current workflow(s) for initiating treatment.

- What tool are you using to screen patients for anxiety disorders in primary care settings? (Select all that apply.)
      a. GAD-7
      b. ASQ-15
      c. Beck Anxiety Inventory
      d. PHQ-4
      e. PC-PTSD
      f. Not screening for anxiety disorders
      g. Self-developed tool or Other, please specify:

- We define a behavioral health care/case manager as an individual whose role includes but is not limited to: supporting providers in coordinating treatment, facilitating communication between providers, providing brief counseling, facilitating follow-up for patients with behavioral health conditions, and monitoring patient progress. Individuals in this role could be embedded within care teams or centrally located.

    Is there a behavioral health care/case manager who manages care for patients with behavioral health issues?
      a. Yes, centrally-located only
      b. Yes, embedded within care teams only
      c. Yes, both centrally-located and embedded within care teams
      d. No

- If yes, what type of provider serves as the care manager for patients with behavioral health issues? (Select all that apply.)
      a. LCSW or MFT
      b. Peer provider/Navigator/Promotora/Community Health Worker
      c. Psychologist
      d. Psychiatrist
      e. Other, please specify:

This document contains the standardized questions for the interviews. These were accompanied by a hospital-specific set of questions pertaining to their 5-year plan, survey responses, and reports submitted to DHCS.

**Exhibit 361: Key Informant Interview- Standardized Questions**

INTRODUCTION

*First I want to ask for permission to record this interview to help us with accuracy. We will not share the recording with anyone outside of the UCLA team.*
*- Brief overview of the goals that we hope to accomplish with this call.*
*- Gain a better understanding of your implementation effort in general.*
*- Overall impact of the PRIME program on your organization as well as challenges and lessons learned from planning and implementing the projects*
*- General questions about the implementation of the projects for each domain. - clarifying and follow up questions to your questionnaire responses-*
*- Does anyone have any questions before we begin?*
ROLES: Ask each PRIME team member to introduce themselves and briefly describe their role and involvement with PRIME (e.g., strategy v. on the ground implementation, only working with specific projects, etc.)

GENERAL IMPACT OF PRIME

SCOPE:

- Aim during PRIME?
- Demands of PRIME affected your other process and/or quality improvement activities? [Probe: PRIME activities fit in with quality agenda?]
- Perception of the impact of PRIME on quality of care, population health, and efficiency?

SYNERGY:

- Describe your reasons for selecting this mix of projects? Synergies between them?
- Why did you select the optional projects?
- Projects fit in the larger context of change in your delivery system?
- Any other major waiver programs in California? Other projects that have pay for performance?
- External factors impeding or enhancing PRIME?

EFFORT:

- Balance reaching metric targets vs core components?
- Can you discuss how you developed provider/staff buy in and addressed improvement fatigue? Have you seen an impact on provider productivity or perceptions due to PRIME?

## UNDERSTANDING THEIR PROGRAM

[ASK CLARIFYING QUESTIONS FROM INTERIM SURVEY]

- Are the same projects implemented in each of the hospitals (or even outpatient clinics) in the system? Has this changed over time?
- *If not,* how did you determine which projects are implemented at which hospitals or clinics?
- [Prioritize 1.1-1.3 for DPHs] Are there systems/ processes/ technologies you had in place *before* PRIME that you believe has most significantly impacted your progress in these projects?
- Most <u>important impact of PRIME</u> on your organization?
- Impact of PRIME resources on the implementation of these projects in your organization (funds, TA, etc)?
- [GET EXAMPLES] specific activities you are doing now in PRIME that would not have been possible before? Elaborate on the impact (or significance) of these PRIME projects on health care delivery in your organization?

## CLOSE-OUT

1. Any recommendations that would make this program more successful?
2. Suggestions on what metrics can be used to better reflect the impact of PRIME?
3. Important components or concepts of your PRIME program that you feel we haven't covered yet?

## Appendix D. Detailed Quantitative (Difference-in-Difference) Data and Methodology

This appendix describes the data sources and methodology used to assess changes in trends before and during PRIME implementation between PRIME and a similar sample of Medi-Cal patients who received care elsewhere.

## Data Sources

UCLA used data from the administrative Medi-Cal monthly enrollment and claims and from confidential patient discharge data (PDD) maintained by the California Office of Statewide Health Planning and Development (OSHPD). Medi-Cal data included 3 years of baseline data, including the first baseline year of PRIME, from July 2013 through June 2016, and two years of PRIME implementation (DY 12 to DY 13 state fiscal years, July 2016 through June 2018). (Please note that DMPHs implemented PRIME interventions on a one-year delay compared to DPHs.) OSHPD PDD included the same timeframe of July 2014 to June 2018. UCLA also used the Hospital Annual Utilization Data and Financial Data from OSHPD from 2013 to 2016 to identify comparison hospitals.

## Comparison Sample Selection Methodology

Selection of the Medi-Cal PRIME and comparison samples was conducted in 3 stages including identifying hospitals with most similar characteristics to DPHs, DMPH non-CAHs, and DMPH CAHs; followed by attribution of patients to PRIME and comparison hospitals. OSHPD PRIME and comparison hospital discharge sample selection followed the same methodology as that used in the first stage of Medi-Cal sample selection.

### 1: Identifying Comparison Hospitals

UCLA identified comparison hospitals using OSHPD annual utilization and financial data. UCLA used a mixture of exact matching and distance matching methods to identify the same number of comparison hospitals in each category of PRIME hospitals using license status, operation status, license category, principle server type, case mix, number of licensed general acute care beds, ratio of outpatient visits to number of hospitalizations, log of outpatient visits and teaching hospitals vs. non-teaching hospitals. For more detail, see

Appendix E: Selection of Comparison Hospitals. The exact matching was done using license category and principle service type indicators, and the remaining variables were used measuring Gower's distance between a given DPH or DMPH hospital and its eligible pool of other hospitals. The characteristics of PRIME and comparison hospitals using this methodology are displayed in Exhibit 362 and show similarities in a selected number of characteristics. The list of PRIME and comparison hospitals is located in Exhibit 372, Exhibit 373, and Exhibit 374.

**Exhibit 362: Selected Characteristics of PRIME and Comparison Hospitals, by PRIME Hospital Type**

| Characteristic | Data Type | Hospital Type | Comparison Hospitals |
|---|---|---|---|
| | | DPHs (N=26) | Comparison Hospitals (N=26) |
| Case Mix | Mean | 1.38 | 1.38 |
| | Variance | (0.32) | (0.36) |
| Log of Outpatient Visits | Mean | 12.74 | 12.06 |
| | Variance | (0.87) | (0.87) |
| Number of GAC Beds | Mean | 286.0 | 281.8 |
| | Variance | (175.1) | (224.2) |
| Ratio of Outpatient Visits to Inpatient Visits | Mean | 28.35 | 23.00 |
| | Variance | (14.50) | (18.52) |
| | | DMPHs (N=22) | Comparison Hospitals (N=22) |
| Case Mix | Mean | 1.18 | 1.22 |
| | Variance | (0.21) | (0.25) |
| Log of Outpatient Visits | Mean | 11.61 | 11.57 |
| | Variance | (0.75) | (0.70) |
| Number of GAC Beds | Mean | 178.05 | 171.32 |
| | Variance | (136.4) | (137.08) |
| Ratio of Outpatient Visits to Inpatient Visits | Mean | 25.46 | 22.19 |
| | Variance | (18.93) | (15.21) |

| | | CAHs (N=17) | Comparison Hospitals (N=16)* |
|---|---|---|---|
| Case Mix | Mean | 0.99 | 1.00 |
| | Variance | (0.10) | (0.14) |
| Log of Outpatient Visits | Mean | 10.38 | 10.6 |
| | Variance | (0.60) | (0.94) |
| Number of Non-Pediatric Beds | Mean | 20.18 | 31.3 |
| | Variance | (11.14) | (16.5) |
| Ratio of Outpatient Visits to Inpatient Visits | Mean | 101.23 | 119.01 |
| | Variance | (70.06) | (139.09) |

Notes: DPH: designated public hospital, DMPH: district and municipal public hospital, CAH: critical access hospital. GAC: General Acute Care. * In California, there are a total of 33 CAHs, due to Tehachapi Valley Healthcare District converting to private ownership before PRIME was implemented, leaving 16 comparison hospitals for matching. UCLA used the most recent Case Mix Index file at the time of analysis (1996-2016).

## 2: Obtaining Medi-Cal Patient Level Data

After selecting the comparison hospitals, UCLA obtained patient-level data and attributed Medi-Cal patients to PRIME and comparison hospitals using the Medi-Cal enrollment and claims data.

UCLA requested PRIME entities to supply their billing NPIs, including outpatient affiliates and outpatient clinics that provided care to PRIME patients. Due to time and resource limitations, UCLA did not request NPIs for comparison hospitals directly but selected them from the publicly available NPI database and the DHCS managed care provider database. This approach potentially limited the number of comparison Medi-Cal patients captured. However, this impact may have also been further limited as a large number of Medi-Cal patients receive care from DPHs and DMPHs. UCLA used the list of National Provider Identifiers (NPIs) for both PRIME and comparison hospitals to request all claims with these billing NPIs for any Medi-Cal enrollee who had received any service from these hospitals between July 1, 2013 and June 30, 2018. DHCS provided UCLA with a preliminary master list of Medi-Cal patients. Using this criteria for identification of the preliminary sample led to the capture of over 2.4 million Medi-Cal enrollees.

The baseline period included July 2014 to June 2016, with the latter fiscal year overlapping with the first six months of PRIME implementation. The inclusion of DY 11 in the baseline period was because there were data limitations in DY 9 Medi-Cal data during that year. Furthermore, DPHs were also reporting DY 11 as the baseline for their performance metrics, and the majority of DMPHs had not begun implementation or reporting of metrics in this year. Subsequently, the PRIME implementation period used in the difference-in-difference (DD) analyses included DY 12 and DY 13. Although DMPHs were not required to report data for DY 12, they had selected and worked on PRIME projects, such as Infrastructure Building Milestones. Data for DY 14 were incomplete at the time of preparation of this report.

### 3: Identifying PRIME and Comparison Medi-Cal Patients

Applying the PRIME criteria for attribution of patients in the Special Terms and Conditions (STC) Attachment Q (e.g. 2 or more visits, with DPH visits being to the primary care team) to this dataset showed that there was one patient receiving care from a comparison hospital for every 10 patients who received care from PRIME hospitals.

Given this extreme imbalance in the data, UCLA changed the original plan for patient attribution. Therefore, UCLA selected the comparison patients from any non-PRIME hospital in the data. Exhibit 363 shows the criteria for attribution of Medi-Cal enrollees in the preliminary sample to PRIME and comparison groups. Since patients who had 2+ visits to the primary care provider fit the criteria for attribution to both DPHs and DMPHs and their comparison groups, a hierarchical approach was taken to create mutually exclusive categories (explained in Step 4).

**Exhibit 363: Attribution of Medi-Cal Enrollees to PRIME and Comparison Groups**

| PRIME | Comparison |
|---|---|
| DPH patients in a program year were Medi-Cal patients who had at least two primary care visits to a PRIME DPH, where the first primary care visit took place in the first 6 months of the program year. | DPH comparison patients in a program year were Medi-Cal patients who had at least two primary care visits to a non-PRIME hospital, where the first primary care visit took place in the first 6 months of the program year. |
| DMPH patients in a program year were Medi-Cal patients who had at least two visits (not limited to primary care visits) to a PRIME DMPH in the program year. | DMPH comparison patients in a program year were Medi-Cal patients who had at least two visits to a non-PRIME hospital in the program year. |

Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.

*4: Attributing Medi-Cal Patients to DPHs and DMPHs and the Comparison Groups*

The next step was to create mutually exclusive categories by attribution of unique patients to DPHs, DMPHs, and a respective comparison group. UCLA imposed the following hierarchy in identifying a patient within each program year:

1. Any patient who had received services from DPHs were attributed to DPHs;
2. The remaining patients were attributed to DMPHs if they received services from DMPHs;
3. The remaining patients were attributed to the DPH comparison patient group if they received services from DPH comparison hospitals;
4. The remaining patients were attributed to the DMPH comparison patient group if they received services from DMPH comparison hospitals;
5. The remaining patients did not fit the attribution criteria for any of the 4 groups above and were excluded from further analysis.

This hierarchy avoided overlap between patients who would have been a patient for DPHs and DMPHs in a given year, as patients could have received primary care at a DPH and used other services from a DMPH. Similarly, a patient could have been attributed to the DPH comparison group if that individual had two or more primary care visits in that hospital, as well as other visits to a DMPH comparison hospital. After applying these methods, about 820,000 were identified as PRIME patients and another 1.1 million were identified as comparison patients and the rest of about 1.2 million patients were excluded from any further analysis.

UCLA further restricted the sample to patients who were attributed to a DPH, DMPH, or the respective control groups in both DY 12 and DY 13. Exhibit 364 displays the overlap between DPH and DMPH Medi-Cal patients in DY 12 and DY 13. The final analytic sample included 131,049 (DPH) and 111,208 (DMPH) unique Medi-Cal enrollees who had two or more primary care visits to a DPH or two or more visits to a DMPH in both DY 12 and DY 13. This restriction further reduced the contamination between samples and a more rigorous assessment of the impact of PRIME. Patients who did not meet these criteria were excluded from further analyses.

**Exhibit 364: Medi-Cal PRIME Sample Size Breakdown**

| Year | Type | DY 13 | | | |
|---|---|---|---|---|---|
| | | DPH Patient | DMPH Patient | Not Attributed to PRIME in DY 13 | **Total** |

| | | | | | |
|---|---|---|---|---|---|
| **DY 12** | DPH Patient | 131,049 | 2,713 | 151,663 | 285,425 |
| | DMPH Patient | 2,682 | 111,208 | 140,323 | 254,213 |
| | Not Attributed to PRIME in DY 12 | 152,519 | 128,424 | 0 | 280,943 |
| | **Total** | 286,250 | 242,345 | 291,986 | 820,581 |

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital. The light blue shaded boxes comprise the Final Analytic Sample in the following tables.*

The same criteria were applied to selection of the comparison groups (Exhibit 365). The DPH comparison sample included 197,112 Medi-Cal enrollees. The DMPH comparison sample included 340,201 Medi-Cal enrollees. For analyses of metrics that reflected individual-level changes, such as increased rates of breast and cervical cancer screening, each sample was further restricted to those who were observed for a minimum of two months in the baseline (DY 10 and DY 11) and post periods (DY 12 and DY 13). This criteria restricted the DPH sample to 95,164 and the DMPH sample to 71,715.

To analyze each metric, the sample was further restricted to the appropriate denominator identified in the PRIME Reporting Manual DY 13YE unless otherwise noted. For analyses of metrics that reflected change in specific events (e.g., readmissions) or procedures (e.g., Cesarean section), the DPH and DMPH samples were only restricted to the appropriate denominator identified in the PRIME Reporting Manual DY 13YE unless otherwise noted. The same methodology was applied to identify the DPH and DMPH comparison analytic samples.

**Exhibit 365: Final Analytic Sample Sizes for DD Analyses of Trends for Medi-Cal PRIME and Comparison Patients**

| Sample | DPH Patients | DPH Comparison Patients | DMPH Patients | DMPH Comparison Patients |
|---|---|---|---|---|
| **Final Analytic Sample** | 131,049 | 197,112 | 111,208 | 340,201 |
| **Individual-Level Analytic Sample** | 95,164 | 157,294 | 71,715 | 251,390 |

## Sensitivity Testing of a Less Restrictive Sample

UCLA examined the impact of a less restrictive sampling methodology by requiring two or more primary care visits to a DPH or two or more visits to a DMPH in either DY 12 or DY 13. This method led to a 3-fold increase in the DPH and a two-fold or greater increase in the DMPH sample. The more restrictive samples differed in age, race/ethnicity, and English speakers compared to the less restrictive samples (Exhibit 366). In addition, the more restrictive samples had a higher burden of disease (Exhibit 367) and higher level of utilization (Exhibit 368) than the less restrictive samples. The less restricted sample was not matched to a comparison sample. UCLA chose the more restrictive samples in order to control for the longer time period of exposure to PRIME interventions and match at individual level more feasibly.

**Exhibit 366: Sociodemographic Characteristics of PRIME Medi-Cal Samples**

| Category | PRIME Overall Analytic Sample | Restricted Sample: DPH in DY 12 and DY 13 | Less Restricted Sample: DPH in DY 12 or DY 13 | Restricted Sample: DMPH in DY 12 and DY 13 | Less Restricted Sample: DMPH in DY 12 or DY 13 |
|---|---|---|---|---|---|
| N | 820,581 | 131,049 | 309,577 | 111,208 | 268,747 |
| Age | | | | | |
| 0-18 | 26.4% | 22.6% | 27.2% | 25.9% | 27.5% |
| 19-35 | 24.1% | 15.4% | 23.7% | 22.5% | 29.4% |
| 36-50 | 17.7% | 18.5% | 17.3% | 18.2% | 17.7% |
| 51-64 | 22.0% | 32.8% | 23.0% | 21.0% | 16.1% |
| 65+ | 9.8% | 10.8% | 8.8% | 12.4% | 9.3% |
| Race/Ethnicity | | | | | |

| Category | PRIME Overall Analytic Sample | Restricted Sample: DPH in DY 12 and DY 13 | Less Restricted Sample: DPH in DY 12 or DY 13 | Restricted Sample: DMPH in DY 12 and DY 13 | Less Restricted Sample: DMPH in DY 12 or DY 13 |
|---|---|---|---|---|---|
| White | 23.1% | 19.8% | 19.2% | 29.6% | 26.6% |
| Latino | 46.0% | 40.8% | 43.4% | 51.1% | 49.5% |
| African American | 8.1% | 10.2% | 10.3% | 4.5% | 6.2% |
| Asian American and Pacific Islander | 10.0% | 15.4% | 13.3% | 4.6% | 5.7% |
| Native American/Alaska Native | 0.6% | 0.4% | 0.4% | 0.9% | 0.8% |
| Other | 6.0% | 6.4% | 6.7% | 2.9% | 4.3% |
| Unknown | 6.8% | 7.0% | 6.7% | 6.4% | 7.0% |
| Gender | | | | | |
| Female | 58.6% | 58.6% | 56.5% | 62.9% | 59.0% |
| Male | 41.4% | 41.4% | 43.5% | 37.1% | 41.0% |
| Language | | | | | |
| English | 63.2% | 59.1% | 61.7% | 64.4% | 66.4% |
| Spanish | 30.2% | 30.1% | 29.7% | 32.2% | 29.8% |
| Chinese | 1.3% | 2.3% | 2.0% | 0.3% | 0.5% |
| Vietnamese | 0.9% | 1.8% | 1.3% | 0.2% | 0.2% |
| Other[1] | 3.1% | 4.9% | 4.1% | 1.3% | 1.9% |
| Unknown | 1.3% | 1.7% | 1.1% | 1.7% | 1.2% |

*Source: UCLA analysis of Medi-Cal data, January to August 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital. [1]: Other languages include American Sign Language, Japanese, Korean, Tagalog, Cambodian, Armenian, Ilocano, Mien, Hmong, Lao, Turkish, Hebrew, French, Polish, Russian, Portuguese, Italian, Arabic, Samoan, Thai, Farsi, and other non-English languages.*

**Exhibit 367: Behavioral and Physical Health Conditions of PRIME Medi-Cal Samples in Demonstration Year (DY) 13**

| | PRIME Overall Analytic Sample | Restricted Sample: DPH in DY 12 and DY 13 | Less Restricted Sample: DPH in DY 12 or DY 13 | Restricted Sample: DMPH in DY 12 and DY 13 | Less Restricted Sample: DMPH in DY 12 or DY 13 |
|---|---|---|---|---|---|
| **Behavioral Health** | | | | | |
| Anxiety | 10.7% | 11.6% | 8.8% | 14.8% | 10.5% |
| Depression | 9.6% | 11.8% | 8.4% | 11.8% | 8.7% |
| Serious Mental Illness (SMI) | 7.2% | 7.9% | 6.1% | 9.3% | 7.2% |
| Substance Use Disorder | 10.1% | 10.4% | 9.8% | 10.8% | 9.8% |
| Alcohol Use Disorder | 6.3% | 6.5% | 5.6% | 6.3% | 6.9% |
| **Physical Health** | | | | | |
| Hypertension | 24.3% | 33.7% | 22.4% | 28.3% | 19.3% |
| Diabetes | 16.1% | 23.5% | 14.9% | 18.3% | 12.3% |
| Hyperlipidemia | 11.1% | 15.0% | 9.9% | 13.4% | 9.1% |
| Obesity | 10.0% | 12.3% | 9.5% | 11.0% | 8.7% |
| Asthma | 8.3% | 9.9% | 7.0% | 10.9% | 7.7% |
| Chronic Obstructive Pulmonary Disease | 6.1% | 6.8% | 4.6% | 9.3% | 5.8% |
| Stroke | 2.5% | 2.8% | 2.4% | 3.0% | 2.2% |
| **Severity** | | | | | |
| Average CDPS Risk Score | 0.9 | 1.2 | 0.9 | 1.0 | 0.8 |

*Source: UCLA analysis of Medi-Cal data, January to August 2019.*

*Notes: SMI = serious mental illness, which included schizophrenia, bipolar disorder, and recurrent depression. CDPS: Chronic Illness and Disability Payment System, measuring the diversity of diagnoses and burden of illness and used here as an indicator of severity. DPH: designated public hospital, DMPH: district and municipal public hospital.*

**Exhibit 368: Medical Enrollment Duration and Service Utilization of PRIME Medi-Cal Samples in Demonstration Year (DY) 13**

| Category | PRIME Overall Analytic Sample | Restricted Sample: DPH in DY 12 and DY 13 | Less Restricted Sample: DPH in DY 12 or DY 13 | Restricted Sample: DMPH in DY 12 and DY 13 | Less Restricted Sample: DMPH in DY 12 or DY 13 |
|---|---|---|---|---|---|
| Medi-Cal Enrollment | | | | | |
| Average Number of Months in Medi-Cal | 7.1 | 9.0 | 6.8 | 7.9 | 6.1 |
| Evaluation and Management (E&M) Visits | | | | | |
| Ever had an E&M Visit | 80% | 97% | 83% | 81% | 67% |
| E&M Visits per 1,000 Member Months | 599 | 782 | 603 | 613 | 484 |
| Mental Health Services (MHS) | | | | | |
| Ever Received MHS | 8% | 11% | 9% | 8% | 7% |
| MHS per 1,000 Member Months | 41 | 51 | 40 | 39 | 36 |
| Emergency Room (ER) Visits | | | | | |
| Ever Had an ER Visit | 45% | 42% | 40% | 51% | 50% |
| ER Visits per 1,000 Member Months | 191 | 127 | 155 | 222 | 255 |
| Inpatient Admissions (IP) | | | | | |
| Ever Had an IP Admission | 18% | 16% | 18% | 19% | 18% |
| IP Admissions per 1,000 Member Months | 46 | 34 | 47 | 42 | 53 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

## Construction of Process and Outcome Metrics

Using the final restricted samples, UCLA followed the PRIME Reporting Manual DY 13YE in constructing the process and outcome metrics required from PRIME hospitals. UCLA carefully examined these specifications to determine which metrics could be replicated in Medi-Cal data and created those metrics. During PRIME, metric specifications frequently changed for each reporting period to improve measurement accuracy and address various unforeseen challenges. UCLA used the PRIME Reporting Manual DY 13YE to construct these metrics, which led to differences between these metric values and those reported by PRIME hospitals. This methodology was consistently applied to both PRIME and comparison samples and therefore was not expected to limit the reliability and validity of the analyses.

UCLA further created alternative metrics to DHCS specified metrics that could not be constructed due to limitations of using claims data. UCLA also created a few additional metrics related to some projects which were not required as performance metrics from PRIME hospitals but were conceptualized as informative intermediate outcomes of potential changes in patterns of delivery of care. These alternative and additional metrics, the rationale for their creation, and the numerator and denominators used are indicated in Exhibit 369.

**Exhibit 369: Additional Process and Outcome Metrics for Assessing Impact of PRIME**

| Related Project | Metric Name | Process vs. Outcome | Achievement Measured by Increase or Decrease | Definition | Concept |
|---|---|---|---|---|---|
| 1.2 | **Primary Care Visits per 1,000 Member Months** | Outcome | Increase | For a particular measurement period, the total number of primary care visits normalized by the total number of Medi-Cal enrolled member months, multiplying the result by 1,000. | Change in patterns of primary care delivery. |
| 1.2 | **Primary Care Follow-Up Visits for Diabetes Diagnosis** | Outcome | Increase | **Numerator:** All patients with a primary care visit with a diagnosis of diabetes, as defined by AHRQ PQI, in the given measurement period. **Denominator:** All patients who were diagnosed with diabetes at least once during the baseline period of DY 10 or DY 11. | Alternative Metric for 1.2.4.d: NQF 0059: Comprehensive Diabetes Care. Metric 1.2.4.d could not be calculated because of sparse reporting of CPT Category II codes for HbA1c testing. |
| 1.2 | **Primary Care Follow-Up Visits for Hypertension Diagnosis** | Outcome | Increase | **Numerator:** All patients with a primary care visit with a diagnosis of hypertension, as defined by AHRQ PQI, in the given measurement period. **Denominator:** All patients who were diagnosed with hypertension at least once during | Alternative Metric for 1.2.5.b: NQF 0018: Controlling High Blood Pressure. Metric 1.2.5.b could not be calculated because of sparse reporting of CPT Category II codes for |

| Related Project | Metric Name | Process vs. Outcome | Achievement Measured by Increase or Decrease | Definition | Concept |
|---|---|---|---|---|---|
| | | | | the baseline period of DY 10 or DY 11. | blood pressure monitoring results. |
| 1.3 | **Specialty Care Visits per 1,000 Member Months** | Outcome | Increase | For a particular measurement period, the total number of specialty care visits normalized by the total number of Medi-Cal enrolled member months, multiplying the result by 1,000. | Change in patterns of specialty care delivery. |
| 1.6 | **Annual Human Papillomavirus Screening Rates** | Process | Increase | **Numerator:** All female patients, aged 24-64, who have had any screening for HPV, in the given measurement period. Refer to HEDIS value set "HPV Tests" for specific procedure codes. **Denominator:** All female patients aged 24-64 who have visited the health system in the given measurement period. | Change in patterns of annual cervical cancer screening utilization. A limitation is that annual screening methods are not clinically recommended. |
| 1.6 | **Annual Pap Screening Rates** | Process | Increase | **Numerator:** All female patients, aged 24-64, who have had a Pap test, in the given measurement period. Refer to HEDIS value set "Cervical Cytology" for specific procedure codes. | Change in patterns of annual cervical cancer screening utilization. A limitation is that annual screening methods are |

| Related Project | Metric Name | Process vs. Outcome | Achievement Measured by Increase or Decrease | Definition | Concept |
|---|---|---|---|---|---|
| | | | | **Denominator:** All female patients aged 24-64 who have visited the health system in the given measurement period. | not clinically recommended. |
| 2.1 | **Cesarean Section** | Outcome | Decrease | **Numerator:** Patients with cesarean births **Denominator:** All patients delivered of a live term singleton newborn in vertex presentation | Alternative Metric 2.1.5 in DY 13 restricted the denominator to nulliparous patients, but this specification could not be identified in Medi-Cal claims. |
| 2.2 | **Outpatient Follow-up Visits after an Inpatient Admission within 30 days** | Outcome | Increase | **Numerator:** All patients who had at least one inpatient stay with an outpatient follow-up visit within 30 days of discharge. **Denominator:** All patients who had at least one inpatient stay, in the given measurement period. | Change in patterns of follow-up care after hospitalization. |
| 2.2 | **Outpatient Follow-Up Visits after an Inpatient Admission within 7 Days** | Outcome | Increase | **Numerator:** All patients who had at least one inpatient stay with an outpatient follow-up visit within 7 days of discharge. **Denominator:** All patients who | Change in patterns of follow-up care after hospitalization. |

| Related Project | Metric Name | Process vs. Outcome | Achievement Measured by Increase or Decrease | Definition | Concept |
|---|---|---|---|---|---|
| | | | | had at least one inpatient stay, in the given measurement period. | |
| 3.2 | **Inappropriate Imaging Studies for Low Back Pain** | Process | Decrease | **Numerator:** All patients aged 18 years or older who met the DY 14 denominator specification and who received an imaging study (plain x-ray, MRI, CT scan) during the measurement period and had no documentation in the medical record of clinical red flags as defined in Appropriate for Imaging group. **Denominator:** All patients aged 18 years or older, who had an outpatient or ED encounter with a principal diagnosis of low back pain during the measurement period and who received an imaging study (plain x-ray, MRI, CT scan), in the given measurement period. | New Metric 3.2.4 in DY 14 replaced Metric 3.2.4 reported in DY 11 to DY 13. Previous versions were being phased out as they did not directly compare appropriate to inappropriate imaging rates. The new metric denominator was restricted to patients with low back pain AND received an imaging study and allowed for direct comparison of appropriate to inappropriate imaging trends. |

*Note: Specifications were based on PRIME Metrics Specs, DY 13 YE and DY 14 YE when possible.*

## PRIME Metric Feasibility Analysis

Among the PRIME metrics from the DY 13 manual, 10 metrics were deemed feasible to use for difference-in-difference analysis (Exhibit 370). One of the feasible metrics occurs in two projects (All-Cause Readmission); Metric 2.2.1 was chosen over Metric 1.3.2 because more hospitals participated in Project 2.2. The reasons why some metrics were not feasible was due to one or more of the following issues: (1) the metric required additional data from electronic health records (EHR), (2) the metric included codes that were seriously underreported in Medi-Cal claims, or (3) the metric restricted the eligible population to a sample size that was not sufficient for analysis. Other metrics require further assessment to ensure validity. Color-coding in the table indicates which metrics belongs in each project; bold font indicates that the project is feasible.

**Exhibit 370: PRIME Metric Feasibility Analysis using Claims Data**

| Metric | Full Name | Feasibility in Claims | Notes |
|---|---|---|---|
| 1.1.1.a | Alcohol and Drug Misuse (SBIRT) | No | SBIRT codes are seriously underreported in claims |
| 1.1.2 | Care coordinator assignment | No | Removed in DY 13 |
| 1.1.3.d | NQF 0059: Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%) | No | HbA1c test value set codes are seriously underreported in claims |
| 1.1.4 | NQF 0710: Depression Remission at 12 Months [grouped with 1.1.7] | No | Replaced by Metric 1.1.7 in DY 13 |
| 1.1.5.f | Screening for Clinical Depression and follow-up | No | Clinical depression screening codes are seriously underreported in claims |
| 1.1.6.t | Tobacco Assessment and Counseling | No | Tobacco screening and cessation intervention codes are seriously underreported in claims |
| 1.1.7 | Depression Remission or Response for Adolescents and Adults (DRR) [grouped with 1.1.4] | No | No appropriate CPT/HCPCS procedure codes for PHQ-9 scores |
| 1.2.1.a | Alcohol and Drug Misuse (SBIRT) | No | SBIRT codes are seriously underreported in claims |
| 1.2.2 | NQF 0005 CG-CAHPS: Provider Rating | No | No value sets or codes were included in this metric |

| Metric | Full Name | Feasibility in Claims | Notes |
|---|---|---|---|
| 1.2.3.c | NQF 0034: Colorectal Cancer Screening | TBD | Certain screenings require over three additional years prior to the measurement period |
| 1.2.4.d | NQF 0059: Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%) | No | HbA1c test value set codes are seriously underreported in claims |
| 1.2.5.b | NQF 0018: Controlling Blood Pressure | No | No EMR data to determine specific blood pressure readings |
| 1.2.6 | Documented REAL and/or SOGI disparity reduction plan | No | Removed in DY 13 |
| 1.2.7.i | NQF 0068 Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic | No | Aspirin and antiplatelet therapy codes are seriously underreported in claims |
| 1.2.8 | AHRQ PQI #90 | **Yes** | **Feasible metric** |
| 1.2.9 | Primary Care Redesign metrics stratified by REAL categories and SOGI | No | Removed in DY 13 |
| 1.2.10 | REAL and/or SO/GI disparity reduction | No | SO/GI information is not provided in claims |
| 1.2.11 | REAL data completeness | No | Separate information on detailed race and ethnicity is not provided in claims |
| 1.2.12.f | Screening for Clinical Depression and follow-up | No | Clinical depression screen codes are seriously underreported in claims |
| 1.2.13 | SO/GI data completeness | No | SO/GI information is not provided in claims |
| 1.2.14.t | Tobacco Assessment and Counseling | No | Tobacco screening and cessation intervention codes are seriously underreported in claims |
| 1.3.1 | Closing the referral loop: receipt of specialist report (CMS504) | No | No indicator of specialty care referrals is available in claims |
| 1.3.2 | DHCS All-Cause Readmissions – Statewide Collaborative QIP measure | **Yes** | **Feasible metric** |

| Metric | Full Name | Feasibility in Claims | Notes |
|---|---|---|---|
| 1.3.3 | NQF # 0041 Influenza Immunization | TBD | Unclear whether influenza immunization codes are well-reported in claims |
| 1.3.4 | Post Procedure ED visits | **Yes** | **Feasible metric** |
| 1.3.5 | Request for Specialty Care Turnaround Rate | No | No appropriate data for specialty care requests in claims |
| 1.3.6 | Specialty Care Touches: Specialty expertise requests managed via non-face to face specialty encounters | No | No appropriate data for specialty care requests in claims |
| 1.3.7 | Tobacco Assessment and Counseling | No | Tobacco screening and cessation intervention codes are seriously underreported in claims |
| 1.4.1 | Abnormal Results Follow-up | No | No appropriate data for abnormal lab test results in claims |
| 1.4.2 | Annual Monitoring for Patients on Persistent Medications | TBD | Requires further assessment |
| 1.4.3 | INR Monitoring for Individuals on Warfarin | TBD | Requires further assessment |
| 1.5.1.b | Controlling Blood Pressure | No | No medical record data to determine specific blood pressure readings |
| 1.5.2.i | Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic | No | Aspirin and antiplatelet therapy codes are seriously underreported in claims |
| 1.5.3 | QPP # 317 Preventative Care and Screening: Screening for High Blood Pressure and Follow-Up Documented | No | Blood pressure reading and follow-up codes are seriously underreported in claims |
| 1.5.4.t | Tobacco Assessment and Counseling | No | Tobacco screening and cessation intervention codes are seriously underreported in claims |
| 1.6.1 | BIRADS to Biopsy | No | No appropriate codes for BIRADS assessment categories in claims |
| 1.6.2 | Breast Cancer Screening | **Yes** | **Feasible metric** |

| Metric | Full Name | Feasibility in Claims | Notes |
|---|---|---|---|
| 1.6.3 | Cervical Cancer Screening | **Yes** | **Feasible metric** |
| 1.6.4.c | Colorectal Cancer Screening | TBD | Certain screenings require over three additional years prior to the measurement period |
| 1.6.5 | Receipt of appropriate follow-up for abnormal CRC screening | No | No appropriate codes for positive FIT/FOBT results in claims |
| 1.7.1 | BMI Screening and Follow-up | No | No appropriate codes for documentation of BMI follow-up plan in claims |
| 1.7.2 | Partnership for a Healthier America's Hospital Health Food Initiative external food service verification | No | Metric achievement is based on reporting certain criteria, not using patient-level claims |
| 1.7.3 | Weight Assessment & Counseling for Nutrition and Physical Activity for Children & Adolescents | No | Denominator is too small for stable statistical analysis |
| 2.1.1 | Baby Friendly Hospital designation | No | Metric achievement is based on reporting certain criteria, not using patient-level claims |
| 2.1.2 | Exclusive Breast Milk Feeding (PC-05) | No | No appropriate codes for breast milk feeding in claims |
| 2.1.3 | OB Hemorrhage: Massive Transfusion | No | No appropriate data for PRBC units in claims |
| 2.1.4 | OB Hemorrhage: Total Products Transfused | No | No appropriate data for PRBC units in claims |
| 2.1.5 | PC-02 Cesarean Section | **Yes** | **Feasible metric** |
| 2.1.6 | NQF 1517: Prenatal Care | **Yes** | **Feasible metric** |
| 2.1.6 | NQF 1517: Postpartum Care | TBD | Requires further assessment (because newborns may share maternal Medi-Cal ID in claims) |
| 2.1.7 | Severe Maternal Morbidity (SMM) per 100 women with obstetric hemorrhage | TBD | Requires further assessment (limited hemorrhage measurement in claims) |

| Metric | Full Name | Feasibility in Claims | Notes |
|---|---|---|---|
| 2.1.8 | Unexpected Newborn Complications | TBD | Requires further assessment (because newborns may share maternal Medi-Cal ID in claims); this metric will not become P4P |
| 2.1.9 | National Obstetric Patient Safety Bundle | No | Metric achievement is based on reporting certain criteria, not using patient-level claims |
| 2.2.1 | DHCS All-Cause Readmissions – Statewide Collaborative QIP measure | **Yes** | **Feasible metric** |
| 2.2.2 | H-CAHPS: Care Transition Metrics | No | No value sets or codes were included in this metric; data not available in claims |
| 2.2.3 | NQF 0097: Medication Reconciliation – 30 days | No | Cannot link medication reconciliation to inpatient discharges in claims |
| 2.2.4 | Reconciled Medication List Received by Discharged Patients | No | No medical record/EHR data |
| 2.2.5 | Timely Transmission of Transition Record | No | No medical record/EHR data |
| 2.3.1 | Care coordinator assignment | No | Removed in DY 13 |
| 2.3.2 | NQF 0097: Medication Reconciliation – 30 days | No | Cannot link medication reconciliation to inpatient discharges in claims |
| 2.3.3 | Prevention Quality Overall Composite #90 | See note | Feasible metric, refer to Metric 1.2.8 |
| 2.3.4 | Timely Transmission of Transition Record | No | No medical record/EHR data |
| 2.4.1 | Adolescent Well-Care Visits | No | Foster care population is not stable for a large enough sample size in claims |
| 2.4.2 | Developmental Screening in the First Three Years of Life | No | Foster care population is not stable for a large enough sample size in claims |
| 2.4.3 | Documentation of Current Medications in the Medical Record (0-18 yo) | No | Foster care population is not stable for a large enough sample size in claims |

| Metric | Full Name | Feasibility in Claims | Notes |
|---|---|---|---|
| 2.4.4 | Screening for Clinical Depression and Follow-up | No | Foster care population is not stable for a large enough sample size in claims |
| 2.4.5 | Tobacco Assessment and Counseling (13 yo and older) | No | Foster care population is not stable for a large enough sample size in claims |
| 2.4.6 | Well Child Visits - First 15 months of life | No | Removed in DY 13 |
| 2.4.7 | Well Child Visits - Third, Fourth, Fifth, and Sixth Years of life | No | Foster care population is not stable for a large enough sample size in claims |
| 2.4.8 | Comprehensive Medical Evaluation Following Foster Youth Placement in Foster Care | No | Foster care population is not stable for a large enough sample size in claims |
| 2.5.1 | Alcohol and Drug Misuse (SBIRT) | No | No reliable denominator construction for incarcerated individuals in claims |
| 2.5.2 | Controlling Blood Pressure | No | No reliable denominator construction for incarcerated individuals in claims |
| 2.5.3 | AHRQ PQI #90 | No | No reliable denominator construction for incarcerated individuals in claims |
| 2.5.4 | Screening for Clinical Depression and follow-up | No | No reliable denominator construction for incarcerated individuals in claims |
| 2.5.5 | Tobacco Assessment and Counseling | No | No reliable denominator construction for incarcerated individuals in claims |
| 2.6.1 | Alcohol and Drug Misuse (SBIRT) | No | SBIRT codes are seriously underreported in claims |
| 2.6.2 | Assessment and management of chronic pain | TBD | Requires further assessment |
| 2.6.3 | Patients with chronic pain on long term opioid therapy checked in PDMPs | No | No medical record/EHR data for Prescription Drug Monitoring Program (PDMP) notation |
| 2.6.4 | Screening for Clinical Depression and follow-up | No | Clinical depression screen codes are seriously underreported in claims |

| Metric | Full Name | Feasibility in Claims | Notes |
|---|---|---|---|
| 2.6.5 | Treatment of Chronic Non-Malignant Pain with Multi-Modal Therapy | TBD | Requires further assessment (some elements are not in claims) |
| 2.7.1 | NQF 0326: Care Plan | No | Care plan codes are seriously underreported in claims |
| 2.7.2 | Ambulatory Palliative Team Established | No | No value sets or codes were included in this metric |
| 2.7.3 | MWM#8 - Treatment Preferences (Inpatient) | No | No appropriate codes for patient treatment preferences in claims |
| 2.7.4 | MWM#8 - Treatment Preferences (Outpatient) | No | No appropriate codes for patient treatment preferences in claims |
| 2.7.5 | Palliative care service offered at time of diagnosis of advanced illness | No | No medical record/EHR data for referrals |
| 2.7.6 | Proportion admitted to hospice for less than 3 days | No | Patients admitted to hospice are not stable for a large enough sample size in claims |
| 3.1.1 | NQF 0058: Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis | **Yes** | **Feasible metric** |
| 3.1.2 | Avoidance of antibiotic treatment in adults with low colony urinary cultures | No | Removed in DY 12 |
| 3.1.3 | NQF 2720: National Healthcare Safety Network Antimicrobial Use Measure | No | Antimicrobial use is seriously underreported per inpatient day in claims |
| 3.1.4 | Peri-operative Prophylactic Antibiotics Administered After Surgical Closure | No | No data for clean surgical cases or surgical end times in claims |
| 3.1.5 | Reduction in Hospital Acquired Clostridium Difficile Infections | No | No data for Clostridium difficile Infection (CDI) Laboratory-identified events (LabID events) |
| 3.2.1 | Imaging for Routine Headaches (Choosing Wisely) | **Yes** | **Feasible metric** |
| 3.2.2 | Inappropriate Pulmonary CT Imaging for Patients at Low Risk for Pulmonary Embolism | No | No appropriate codes for positive lab test results in claims |

| Metric | Full Name | Feasibility in Claims | Notes |
|--------|-----------|----------------------|-------|
| 3.2.3 | Use of Imaging Studies for Low Back Pain | See note | Feasible metric, refer to Metric 3.2.4 |
| 3.2.4 | Use of Imaging Studies for Low Back Pain (red flags, no time limit) | **Yes** | **Feasible metric** |
| 3.3.1 | Adherence to Medications | No | No data for Proportion of Days Covered (PDC) in claims |
| 3.3.2 | Documentation of Current Medications in the Medical Record [grouped with 3.3.4] | No | Removed in DY 12 |
| 3.3.3 | High-cost pharmaceuticals ordering protocols | No | No data for ordering protocol information in claims |
| 3.3.4 | Documentation of Current Medications in the Medical Record [grouped with 3.3.2] | No | No medical record/EHR data for medication reconciliation |
| 3.4.1 | ePBM-01 Pre-op Anemia Screening, Selected Elective Surgical Patients | No | No appropriate codes for hemoglobin laboratory tests and elective surgical procedures |
| 3.4.2 | ePBM-02 Pre-op Hemoglobin Level, Selected Elective Surgical Patients | No | No appropriate codes for hemoglobin laboratory tests and elective surgical procedures |
| 3.4.3 | ePBM-03 Pre-op Type and Crossmatch, Type and Screen, Selected elective Surgical Patients | No | No appropriate codes for pre-op type/screens/crossmatches and elective surgical procedures |
| 3.4.4 | ePBM-04 Initial Transfusion Threshold | No | No appropriate codes for hemoglobin laboratory tests |
| 3.4.5 | ePBM-05 Outcome of Patient Blood Management, Selected Elective Surgical Patients | No | No appropriate codes for hemoglobin laboratory tests and elective surgical procedures |

Difference-in-Difference (DD) Analysis

*Analyses of Medi-Cal Data*

Propensity Score Matching of PRIME and Comparison Samples

The selection methodology for PRIME and comparison hospitals alleviated some of the inherent differences between the two samples. To further reduce selection bias and achieve a balanced sample between PRIME and comparison groups, UCLA used the propensity score matching method. This included developing a logistic regression model to estimate the probability ($\text{pr}\_trt$) of receiving care at PRIME hospitals as a function of gender, age (continuous), race/ethnicity, primary language, months of Medi-Cal enrollment, number of emergency department (ED) visits in DY 10 and DY 11, number of evaluation and management (E&M) visits in DY 10 and DY 11, log transformed facility size and facility-level average number of ED and E&M and a diagnosis of diabetes, asthma, depression, hypertension, chronic obstructive pulmonary disease (COPD), and severity ([Chronic Illness and Disability Payment System (CDPS)](#) scores). Using the predicted probabilities from this model, a weighted average treatment effect weights (ATE) for PRIME and comparison samples was created.

$$ATE_{trt} = 1/pt_{trt}$$
$$ATE_{ctrl} = 1/(1 - pr_{trt})$$

These were subsequently used as probability weights and a control variable in the following regression models.

Difference-in-Difference (DD) Modeling

The DD modeling approach was used to assess changes in metrics before and during PRIME and in contrast to the comparison sample. A model was developed for each metric. The models were developed separately for DPHs and DMPHs and each metric. The models were generally specified as follows:

$$y_{it} = \alpha + \lambda\, Intervention + \gamma \sum_{t=2015}^{2017} Year_t + \beta \sum_{t=2016}^{2017} Intervention * Year_t + \theta X_i + \quad (1)$$

For these regression models, $X_i$ included gender, age (continuous), race/ethnicity, primary language, months of Medi-Cal enrollment, baseline year CDPS scores, log transformed facility size, square root transformed facility-level E&M, and propensity weights. Here, we took the square root of facility-level E&M to help the models converge. In a linear model, $\beta$ would represent policy effects. Since we are using non-linear models in this report, we predicted margins for the two groups and then calculated difference-in-difference estimates.

UCLA used logistic regression models for binary metrics (e.g., 1.6.2: Breast Cancer Screening, 2.1.6: Prenatal Care) and a count model with Poisson distribution for count metrics (e.g., Primary Care Visits per 1,000 Members, Specialty Care Visits per 1,000 Members). The exposure option within a Generalized Linear Model (GLM) was used to

adjust for different number of months of Medi-Cal enrollment and the subsequent different lengths of exposure to PRIME. All analyses of individual-level metrics were analyzed based on Medi-Cal member months.

Using the restricted Medi-Cal samples, UCLA required Medi-Cal enrollees to be continuously enrolled for at least two months in every year. This approach allowed assessment of the same group of patients longitudinally and led to more reliable DD estimates. This requirement was only applied to analyses of individual-level data. For event-level analyses, the propensity score matching was done by year.

### Analyses of OSHPD Data

The DD analyses from OSHPD data were conducted using hospital discharges from DPHs, DMPHs, and their relative comparison hospitals as described in the section, "Identifying Comparison Hospitals," above. The construction of metrics using OSHPD discharges followed the PRIME Reporting Manual DY 13YE similar to the process followed for Medi-Cal data. These metrics only included those that were outcomes of hospitalizations that could be created using discharge data.

Three binary outcome measures were analyzed using logit models with clustered robust standard errors for DPHs vs. their comparison hospitals and DMPHs vs. their comparison hospitals. The covariates included a patient's gender, age (continuous) race/ethnicity, the Elixhauser comorbidity index, major diagnostic category, chronic conditions including congestive heart failure (CHF), COPD, depression, hypertension, diabetes, and obesity. OSHPD data did not provide information on primary care utilization at the individual level, so UCLA did not use propensity score matching variables for E&M visits and CDPS scores. Since OSHPD included patients from payment systems besides Medi-Cal, other control variables used were insurance type and an indicator variable if a hospital was a teaching hospital. The model used was similar to the equation above, and the same post-estimation method was used. The DD analysis was also done, stratified by insurance type, to demonstrate the DD analyses for the Medi-Cal discharges.

### Data and Methodology Limitations

The DD analyses were inherently limited by fundamental differences in characteristics of DPHs and DMPHs from private hospitals in California that were selected as comparison hospitals.

### Medi-Cal Limitations

The metrics created for the DD analyses were based on administrative Medi-Cal data and lacked electronic chart and other medical records available to hospitals when reporting on performance metrics. Other unobserved variations in how hospitals constructed metrics may have also been present. Furthermore, UCLA constructed an

analytic sample that was restricted to a subset of all PRIME patients and all analyses were adjusted for confounding factors. Therefore, the DD results are not directly comparable to hospital reported performance metrics.

The construction of the comparison group was dependent on selection of comparison hospitals (1: Identifying Comparison Hospitals), which limited the pool of patients to comparison hospitals rather than all hospitals in California. Therefore, the pool available for selection of comparison patients excluded patients of hospitals not included as comparison hospitals who may have been more similar to PRIME patients. This limitation might have introduced some bias in the DD results, but the existence of this bias and its amount could not be directly assessed with the current data.

Medi-Cal data included 3 years of baseline data, including the first baseline year of PRIME, from July 2013 through June 2016, and two years of PRIME implementation (DY 12 to DY 13 state fiscal years, July 2016 through June 2018). The inclusion of DY 11 (January 2016 to June 2016) in the baseline period was because there were data limitations in the Medi-Cal data prior to July 2014, when Medi-Cal managed care data were sparse and potentially inaccurate. The accuracy of managed care data has significantly improved in 2015 and later years due to DHCS's efforts.

### OSHPD Limitations
The DD analyses of OSHPD data was limited to discharges and these discharges could not be limited to PRIME patients who had 2 or more visits (with the visits to the primary care team for DPHs, as outlined in Exhibit 363), as was done for the analyses of Medi-Cal data. Therefore, the OSPHD DD results are not directly comparable to those of Medi-Cal DD results. The DD results of discharges using OSHPD data provided an overall comparison between PRIME hospitals and their comparison hospitals.
In addition, discharge data lacked extensive detail on health, outpatient service use, and length of Medi-Cal enrollment. Available data were limited to demographics, diagnoses, and inpatient utilization indicators. While DD analyses of OSHPD data included matching for hospital characteristics, the samples were not matched via propensity scores. Furthermore, future analyses may treat hospitals as fixed effects to account for unobserved factors at the discharge and hospital level.

## Appendix E: Selection of Comparison Hospitals

As was briefly described in 1: Identifying Comparison Hospitals, the first step of the process involved selecting hospitals with similar characteristics to PRIME hospitals in order to create a comparison group of patients who had similar characteristics as PRIME patients.

## Methods for Identifying Comparison Hospitals with Similar Characteristics to PRIME Hospitals

PRIME participating hospitals are divided into 3 categories: Designated Public Hospitals (DPH), District and Municipal Public Hospitals (DMPH), and Critical Access Hospitals (CAH). The latter are a subset of DMPHs, but differ on several important characteristics. CAHs are defined as "hospitals with a maximum of 25 beds that are located in a rural area over 35 miles from another hospital. A rural hospital that is 15 miles from another hospital in mountainous terrain (or areas with only secondary roads) may also qualify as a CAH" (CHA). The final analysis will not be at the level of individual hospital, rather the PRIME and match hospitals are compared by group (DPH, DMPH, and CAH).

DPHs, DMPHs, and CAHs differ significantly in multiple characteristics from each other and from private hospitals. PRIME hospitals are either public hospitals or municipal hospitals; most public hospitals are participating in PRIME, so the comparison hospitals are predominately privately owned and operated. The most significant difference is payer mix, particularly in Medicaid and uninsured patients served, and revenues received. Other important variations include size, case mix, teaching status, and primary and specialty care capacity. These differences highlight the challenges of identifying comparable private hospitals for the purposes of PRIME evaluation. Acknowledging these caveats, UCLA selected the most similar hospitals in order to assess the impact of PRIME.

Please refer to Detailed Methods for Selecting Similar Hospitals for additional information. Hospitals may stop PRIME participation, close, or merge, so the matching method may need to be updated for the PRIME final report to reflect these changes.

## Data Sources

UCLA used California Office of Statewide Health Planning and Development (OSHPD) hospital data with detailed information on all California licensed hospitals. Hospital Annual Utilization Data and Financial Data from 2015 to 2016 were used to select comparison hospitals and to exclude hospitals closed between 2015 and 2016 from matching process. Financial data include information about clinics operating under the license of a hospital. OSHPD data may include data from the level of the facility or the parent. This is specified where applicable.

## Characteristics for Identifying Similar Hospitals in OSHPD Data

The following characteristics were used to identify statistically similar hospitals to PRIME hospitals.

**License Status:** indicates status of facility's license on December 31 of each year from 2013 to 2016 and defined as open, closed or suspended. Only open facilities were included in the pool for selection of comparison hospitals.

**Operation Status:** indicates whether or not the hospital was in operation at any time from January 1 through December 31. The match was restricted to hospitals were in operation from 2015 to 2016.

**License Category**: defined as General Acute Care, Acute Psychiatric, Psychiatric Health Facility, or Chemical Dependency Recovery Hospital. The hospital's license category is automatically completed by OSHPD based on data from CDPH, Licensing and Certification Division. Only general acute care hospitals were included in the selection pool: *TYPE_LIC=="General Acute Care" (Utilization Data).*

**Principal Service Type**: indicates general medical/surgical, physical rehabilitation, long-term care (LTC), orthopedic or pediatric orthopedic, psychiatric, developmentally disabled, chemical dependency (alcohol/drug), pediatric, or other service types. Hospitals were instructed by OSHPD to select the category that best describes the type of service provided to the majority of the hospital's patients by the percentage of patient (census) days. Only general medical/surgical hospitals, LTC hospital and other hospitals were included in the selection pool.

1) Designated Public Hospital (DPH): Of individual hospitals in DPHs, 24 are General Medical/Surgical hospitals and 2 are LTC hospitals.
2) District and Municipal Hospital (DMPH non-CAH): All 22 are categorized as General Medical/Surgical hospitals and have been matched to the same type.
3) Critical Access Hospitals (CAH): The CAHs include two facilities with a principal service type that is LTC and one that is "Other." Since there are not an adequate number of CAH control hospitals, this group was not statistically matched and all remaining non-PRIME CAHs are in the comparison group.

**Case Mix:** defined as a measure of the relative cost or resources needed to treat the hospital's mix of patients. OSHPD created the measure using Medicare Severity-Diagnosis Related Groups (MS-DRG) and their associated weights to indicate the mixture of patient types and complexity of care. It is based on patient discharge data. Notice that not all the hospitals report patient discharge information directly to OSHPD. When it happens, UCLA uses the information of the parent hospital. *Note*: UCLA used the most recent file at the time of analysis (1996-2016).

**Licensed General Acute Care Beds**: a measure of the size of the institution. There are nine bed designations within the General Acute Care Classification Medical/Surgical, Perinatal, Pediatric, Intensive Care, Coronary Care, Acute Respiratory Care, Burn, Intensive Care Newborn Nursery, or Rehabilitation Care. The number of licensed bed days is automatically calculated by OSHPD using data from CDPH, Licensing and Certification Division.

**Ratio of Outpatient Visits to Number of Hospitalizations**: a measure of the volume of outpatient services provided. UCLA created this measure using two OSHPD variables: Outpatient Visits Total and Discharges Total.

**Log of Outpatient Visits**: a measure of the size of the institution. UCLA calculated this measure using outpatient visits from the financial data file.

**Teaching Hospital vs. Non-Teaching Hospital**: an indicator variable of a general feature of the hospital indicating if the hospital is served as teaching hospital for medical students. It reflects the type of patients served, the type of physicians, and level of facilities. The Keck Hospital at USC was assigned as a teaching hospital by UCLA, since it was missing teaching status. OSHPD assigns this status based primarily on AMA's Graduate Medical Education Directory.

**Notes:** Two strategies were used to address missing data. Missing values at the individual hospital were replaced by the corresponding parent-level information if available. When data was missing both individual and parent level data, the specific observations were omitted in the subsequent analyses.

UCLA derived two metrics using underline outpatient visits—OSHPD defines this as a patient who appears in the hospital for ambulatory services or is referred to the hospital for ancillary services. Included are outpatient Emergency Room Visits, outpatient Clinic Visits, Referred (ancillary service) Visits, Home Health Care Visits, and day care days, where the outpatient is treated and released on the same day. Also included are outpatient chemical dependency visits, hospice outpatient visits, and adult day health care visits.

**Parent Corporation**: denotes a corporation that owns a number of facilities and holds the license to operate this facility. Instructions for what type of facility reports independently versus under the license of another entity are specified in the OSHPD instructions. Nine of the DPH hospitals rely on the same parent data, such as case-mix, OPvIP, LogOP, GAC Beds, Dist Tot, Vist Tot. They are reporting their own numbers for Non-ped and ICU-pct.

## Detailed Methods for Selecting Similar Hospitals with OSHPD Data

Private, academic or community hospitals do not have similar payer mixes or patient populations to participating public health care system in PRIME as payer mix plays a crucial role in how hospitals are organized and deliver care. DPHs and DMPHs include primary and specialty care clinics that are structured as systems, while most private hospitals rely primarily on external contracts for primary and sometimes specialty care. Given the variation in Medicaid, uninsured, and private insurance caseload between participating public hospitals and other institutions, a sample of hospitals that is truly comparable to the DPHs and DMPHs involved in PRIME is intrinsically not available even when controlling for academic status, rural/urban location, surrounding demographics, and capacity. Additionally, private hospitals generally have a different payer mix than public hospitals. Nevertheless, for the purpose of evaluating PRIME, UCLA selected the hospitals most similar to DPHs and DMPHs based on the characteristics described in the previous section and the comparison hospitals will be used as control group in future analyses using Medicaid claims data.

UCLA used a mixture of exact matching method and distance matching method to identify hospitals similar to the PRIME hospitals. Before statistical matching, UCLA extracted all CAHs hospitals from the eligible pool. There were not a sufficient number of critical access hospitals to conduct a statistical match, so they were matched to the remaining CAHs (Exhibit 371).

OSHPD Hospital Annual Utilization Data and Financial Data from 2015 to 2016 were used to select comparison hospitals and to exclude hospitals closed between 2015 and 2016 from matching process. UCLA confirmed the hospital was open during the relevant baseline period, excluding (Lic_status="closed").

- The first step was to create the eligible pool of similar hospitals for each DPH and DMPH by exact matching on license category and principal service type – measures describing broad categories. The exact matching on these measures guaranteed a great deal of similarity on these categories. The principle service type of hospitals that are not General Med/Surg are listed below,

- The next step was to apply distance matching using the other variables. Because of the intrinsic difference between DPHs and DMPHs, the distance matching is done on DPHs and DMPHs separately. Gower's distance measure was then calculated for each pair between a DPH hospital and each member in its eligible pool of similar hospitals based on the remaining continuous measures, including case mix, log of outpatient visits, number of licensed general acute care beds, and ratio of outpatient visits to inpatient visits. The hospitals in the eligible pool with the highest matching scores based on Gower's distance were chosen as the matching hospitals to the corresponding DPH hospitals. After first round matching on DPHs, UCLA repeated the same step for DMPHs.

- The match was exact on all categorical measures except teaching/non-teaching. Among the "matching" non-DPH hospitals, further adjustment was made to match PRIME teaching hospitals with non-PRIME teaching hospitals when possible. Some DPHs had more than one match, allowing the teaching hospitals to be included.

The mean and variance of the continuous measures in DPHs and DMPHs as well as comparison hospitals is in the prior Appendix (Exhibit 362). The results indicated that the largest discrepancy was in the ratio of outpatient visit to number of hospitalizations, an indication of intrinsic difference between PRIME and possible control hospitals.

**Exhibit 371: PRIME Hospital Matching Process**
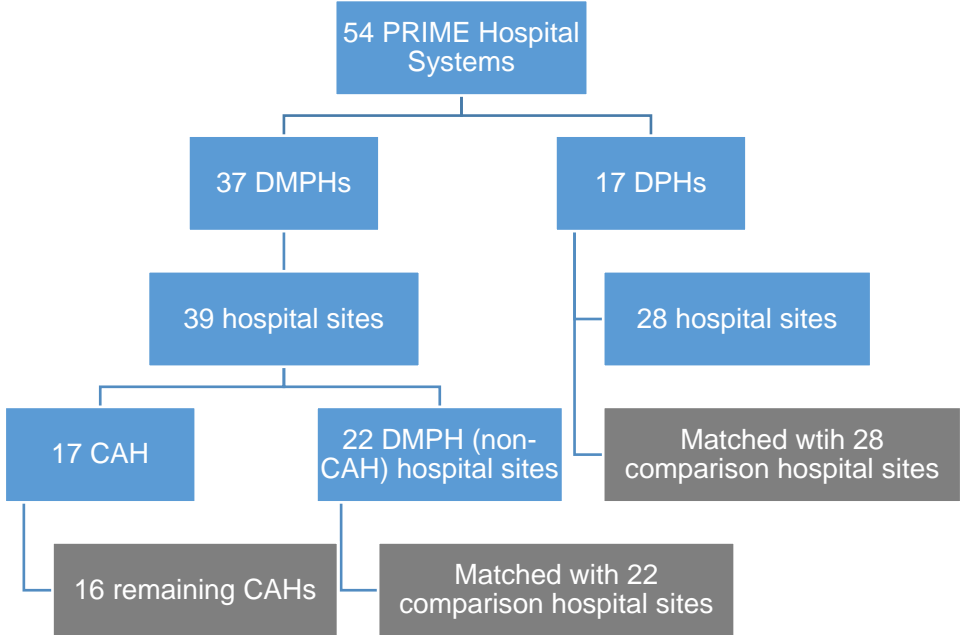


*Notes: Since hospital systems may have multiple sites, the match was done at the level of hospital sites that had similar characteristics. The match was conducted before some entities halted PRIME participation; these numbers reflect the hospitals that planned implementation of PRIME. DPH: designated public hospital, DMPH: district and municipal public hospital. In the participating hospital systems, patient discharge data for Palomar were captured in their respective DMPH; Palomar has 3 participating hospitals, this left a total of 22 DMPH hospitals for the analytical matching task (CAHs excluded). DPH had a total of 26 DPH hospitals for matching, where each item is the additional number of hospitals. In 17 participating (DPH) Systems, Outpatient Visits Total and Discharges Total data were captured in their respective organization level DPHs. Patient discharge data for Alameda County Medical Center - Fairmont Campus, Ventura County Medical Center – Santa Paula Hospital, UCSF at Mount Zion and Mission Bay, and UCSD at La Jolla were captured in their respective organization level DPHs.*

**Exhibit 372: DPH PRIME Hospitals and Matched Hospitals**

| DPH Hospitals | DPH Matched Hospitals |
|---|---|
| LAC/RANCHO LOS AMIGOS NATIONAL REHAB CENTER | ORANGE COUNTY GLOBAL MEDICAL CENTER |
| UCSD-La Jolla, John M/Sally B Thornton Hosp AND Sulp | COMMUNITY HOSPITAL OF THE MONTEREY PENINSULA |
| NATIVIDAD MEDICAL CENTER | FEATHER RIVER HOSPITAL |
| VENTURA COUNTY MEDICAL CENTER - SANTA PAULA HOSPITAL | PETALUMA VALLEY HOSPITAL |
| SANTA MONICA - UCLA MEDICAL CENTER AND ORTHOPAEDIC | UKIAH VALLEY MEDICAL CENTER |
| ALAMEDA HOSPITAL | MERCY HOSPITAL - BAKERSFIELD |
| UCSF MEDICAL CENTER AT MISSION BAY | CHINESE HOSPITAL |
| | SAN JOAQUIN COMMUNITY HOSPITAL |
| CONTRA COSTA REGIONAL MEDICAL CENTER | MERCY MEDICAL CENTER - MERCED |
| VENTURA COUNTY MEDICAL CENTER | SANTA ROSA MEMORIAL HOSPITAL-MONTGOMERY |
| SAN LEANDRO HOSPITAL | KAISER FOUNDATION HOSPITAL - FREMONT |
| SAN MATEO MEDICAL CENTER | SHARP CHULA VISTA MEDICAL CENTER |
| SAN JOAQUIN GENERAL HOSPITAL | |
| FAIRMONT HOSPITAL | MARSHALL MEDICAL CENTER |
| RIVERSIDE COUNTY REGIONAL MEDICAL CENTER | NORTH BAY MEDICAL CENTER |
| | SAN ANTONIO REGIONAL HOSPITAL |
| UNIVERSITY OF CALIFORNIA IRVINE MEDICAL CENTER | BARTON MEMORIAL HOSPITAL |
| HIGHLAND HOSPITAL | LONG BEACH MEMORIAL MEDICAL CENTER |
| SANTA CLARA VALLEY MEDICAL CENTER | KAISER FOUNDATION HOSPITAL - LOS ANGELES |
| UCSF MEDICAL CENTER | KAISER FOUNDATION HOSPITAL - SANTA ROSA |
| SAN FRANCISCO GENERAL HOSPITAL | |
| UCSF MEDICAL CENTER AT MOUNT ZION | STANFORD HEALTH CARE |
| | KECK HOSPITAL OF USC |
| LAC/HARBOR-UCLA MEDICAL CENTER | CALIFORNIA PACIFIC MED CTR-PACIFIC CAMPUS |
| KERN MEDICAL CENTER | |
| UNIVERSITY OF CALIF-SAN DIEGO MEDICAL CENTER | COMMUNITY REGIONAL MEDICAL CENTER-FRESNO |
| RONALD REAGAN UCLA MEDICAL CENTER | KAISER FOUNDATION HOSPITAL - SAN FRANCISCO |
| | WHITE MEMORIAL MEDICAL CENTER |

| DPH Hospitals | DPH Matched Hospitals |
|---|---|
| ARROWHEAD REGIONAL MEDICAL CENTER<br>LAC+USC MEDICAL CENTER<br>LOS ANGELES COUNTY OLIVE VIEW-UCLA MEDICAL CENTER<br>UNIVERSITY OF CALIFORNIA DAVIS MEDICAL CENTER | SCRIPPS MERCY HOSPITAL<br>CEDARS SINAI MEDICAL CENTER<br>LOMA LINDA UNIVERSITY MEDICAL CENTER |

**Exhibit 373: Non-CAH DMPH PRIME Hospitals and Matched Hospitals**

| Non-CAH DMPH Hospitals | Non-CAH DMPH Matched Hospitals |
|---|---|
| PIONEERS MEMORIAL HEALTHCARE DISTRICT<br>KAWEAH DELTA MEDICAL CENTER<br>PALOMAR MEDICAL CENTER<br>PALOMAR HEALTH DOWNTOWN CAMPUS<br>COALINGA REGIONAL MEDICAL CENTER*<br>OAK VALLEY HOSPITAL DISTRICT<br>TULARE REGIONAL MEDICAL CENTER*<br>TRI-CITY MEDICAL CENTER<br>POMERADO HOSPITAL<br>HAZEL HAWKINS MEMORIAL HOSPITAL<br>MARIN GENERAL HOSPITAL<br>EL CAMINO HOSPITAL<br>SIERRA VIEW MEDICAL CENTER<br>SONOMA WEST MEDICAL CENTER<br>LOMPOC VALLEY MEDICAL CENTER<br>SONOMA VALLEY HOSPITAL<br>WASHINGTON HOSPITAL - FREMONT<br>SAN GORGONIO MEMORIAL HOSPITAL | BARSTOW COMMUNITY HOSPITAL<br>COLUSA REGIONAL MEDICAL CENTER<br>COMMUNITY HOSPITAL OF HUNTINGTON PARK<br>DELANO REGIONAL MEDICAL CENTER<br>DOCTORS HOSPITAL OF MANTECA<br>GEORGE L MEE MEMORIAL HOSPITAL<br>HOAG MEMORIAL HOSPITAL PRESBYTERIAN<br>KAISER FOUNDATION HOSPITAL - BALDWIN PARK<br>KAISER FOUNDATION HOSPITAL - ORANGE COUNTY - ANAHEIM<br>KAISER FOUNDATION HOSPITAL - REHABILITATION CENTER V<br>MADERA COMMUNITY HOSPITAL<br>MERCY SAN JUAN HOSPITAL<br>MISSION HOSPITAL REGIONAL MEDICAL CENTER<br>QUEEN OF THE VALLEY MEDICAL CENTER<br>SIERRA NEVADA MEMORIAL HOSPITAL<br>ST. BERNARDINE MEDICAL CENTER<br>ST. JOHNS REGIONAL MEDICAL CENTER<br>ST. LOUISE REGIONAL HOSPITAL<br>ST. MARY MEDICAL CENTER - LONG BEACH<br>SUTTER COAST HOSPITAL<br>SUTTER DAVIS HOSPITAL<br>USC VERDUGO HILLS HOSPITAL |

| Non-CAH DMPH Hospitals | Non-CAH DMPH Matched Hospitals |
|---|---|
| EL CENTRO REGIONAL MEDICAL CENTER<br>PALO VERDE HOSPITAL<br>ANTELOPE VALLEY HOSPITAL<br>SALINAS VALLEY MEMORIAL HOSPITAL | |

*Closed during PRIME implementation.*

**Exhibit 374: CAH-DMPH PRIME Hospitals and Matched Hospitals**

| CAH-DMPH Hospitals | CAH- DMPH Matched Hospitals |
|---|---|
| JEROLD PHELPS COMMUNITY HOSPITAL<br>NORTHERN INYO HOSPITAL<br>SOUTHERN INYO HOSPITAL<br>KERN VALLEY HEALTHCARE DISTRICT<br>JOHN C FREMONT HEALTHCARE DISTRICT<br>MENDOCINO COAST DISTRICT HOSPITAL<br>MODOC MEDICAL CENTER<br>MAMMOTH HOSPITAL<br>TAHOE FOREST HOSPITAL<br>EASTERN PLUMAS HOSPITAL-PORTOLA CAMPUS<br>PLUMAS DISTRICT HOSPITAL<br>SENECA DISTRICT HOSPITAL<br>BEAR VALLEY COMMUNITY HOSPITAL<br>MOUNTAINS COMMUNITY HOSPITAL<br>MAYERS MEMORIAL HOSPITAL<br>HEALDSBURG DISTRICT HOSPITAL<br>TRINITY HOSPITAL<br>TEHACHAPI HOSPITAL* | ORCHARD HOSPITAL<br>MARK TWAIN MEDICAL CENTER<br>GLENN MEDICAL CENTER<br>REDWOOD MEMORIAL HOSPITAL<br>RIDGECREST REGIONAL HOSPITAL<br>ST. HELENA HOSPITAL - CLEARLAKE<br>SUTTER LAKESIDE HOSPITAL<br>BANNER LASSEN MEDICAL CENTER<br>CATALINA ISLAND MEDICAL CENTER<br>SURPRISE VALLEY COMMUNITY HOSPITAL<br>COLORADO RIVER MEDICAL CENTER<br>SANTA YNEZ VALLEY COTTAGE HOSPITAL<br>MERCY MEDICAL CENTER MT. SHASTA<br>FAIRCHILD MEDICAL CENTER<br>OJAI VALLEY COMMUNITY HOSPITAL<br>FRANK R. HOWARD MEMORIAL HOSPITAL |

Notes: *Tehachapi closed before PRIME implementation.*

*Since there were not a sufficient number of CAH hospitals to do a statistical match, the CAH hospitals that were not part of PRIME were the comparison group.*

**Exhibit 375: Notes about Specific Hospitals**

| Hospital Type | Hospital Name | Hospital Information |
|---|---|---|
| DPH | Fairmont Hospital | Principal Service Type not General Med/Surg = Long-Term Care (SN/IC) |
| DPH | Laguna Honda Hospital And Rehabilitation Center | Principal Service Type not General Med/Surg = Long-Term Care (SN/IC) |
| DMPH | Coalinga Regional Medical Center | Discontinued PRIME participation. |
| DMPH | Tulare Regional Medical Center | Discontinued PRIME participation. |
| CAH | Jerold Phelps Community Hospital | Principal Service Type not General Med/Surg= Other |
| CAH | Tehachapi Valley Health District Hospital (now Adventist Health Tehachapi Valley) | Discontinued PRIME participation. Active in OSHPD data, but missing case mix and financial data. |
| CAH | Kern Valley Healthcare District | Principal Service Type not General Med/Surg = Long-Term Care (SN/IC) |
| CAH | Southern Inyo Hospital | Principal Service Type not General Med/Surg = Long-Term Care (SN/IC) |
| CAH Match | Adventist Health Howard Memorial Willits Hospital, Inc. (Frank R. Howard Memorial Hospital) | Frank R. Howard Memorial Hospital was listed as closed in 2015 OSHPD data (Lic_status="closed"). UCLA added it into the match pool based on additional information indicating the hospital is operating under a new name and ownership. |
| CAH Match | Surprise Valley Community Hospital | Principal Service Type not General Med/Surg =Other |

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital. Some DPHs had more than one match. Cedars Sinai Medical Center was manually added to the DPH pool to help balance the number of teaching hospitals; Enloe Medical Center was manually excluded.*

## Appendix F: Difference-in-Difference

Summary of Difference-in-Difference Analysis Mapped To Evaluation Questions

The PRIME Evaluation Deisgn is available at
https://www.dhcs.ca.gov/provgovpart/Documents/PRIMEFinalEvalDesign.pdf.

**Exhibit 376: Summary of Difference-in-Difference Estimates, by Demonstration Goal and Measure**

| Associated Projects | Measure | DPHs | DMPHs |
|---|---|---|---|
| **Increase provision of patient-centered, data-driven, team-based care** | | | |
| Project 1.2 Ambulatory Care Redesign: Primary Care | Primary Care Follow-Up Rates for Diabetes | 8.37*a | 0.15 |
| Project 1.2 Ambulatory Care Redesign: Primary Care | Primary Care Follow-Up Rates for Hypertension | 6.29*a | 1.56*a |
| Project 1.2 Ambulatory Care Redesign: Primary Care | Primary Care Visits per 1,000 Medi-Cal Enrollees | 58.33*a | 75.33*a |
| Project 1.3 Ambulatory Care Redesign: Specialty Care | Specialty Care Visits per 1,000 Medi-Cal Enrollees | 163.84 | 147.9*a |
| Project 1.3 Ambulatory Care Redesign: Specialty Care | 1.3.4 – Post Procedure Emergency Room Visits/Admissions | 1.89*b | 1.94 |
| **Improve provision of point-of-care services, complex care management, population health management, and culturally-competent care** | | | |
| Project 1.6 Cancer Screening and Follow-up | 1.6.2 – Breast Cancer Screening | 5.53*a | -4.94*b |
| Project 1.6 Cancer Screening and Follow-Up | 1.6.3 – Cervical Cancer Screening | 3.10*a | -3.01*b |
| Project 1.6 Cancer Screening and Follow-Up | Annual Human Papillomavirus Screening Rates | 4.00*a | 2.19*a |
| Project 1.6 Cancer Screening and Follow-Up | Annual Pap Screening Rates | 4.28*a | -0.52 |
| Project 2.1 Improved Perinatal Care | 2.1.5 – Cesarean Section | 1.33*a | -2.60 |
| Project 2.1 Improved Perinatal Care | 2.1.6 – Prenatal Care | 7.12*a | -0.54 |

| Associated Projects | Measure | DPHs | DMPHs |
|---|---|---|---|
| Project 2.2 Care Transitions: Integration of Post-Acute Care | Outpatient Follow-Up Visit Rates within 30 Days | 5.04*[a] | 1.87*[a] |
| Project 2.2 Care Transitions: Integration of Post-Acute Care | Outpatient Follow-Up Visit Rates within Seven Days | 5.84*[a] | 2.52*[a] |
| Project 3.1 Antibiotic Stewardship | 3.1.1 – Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis | 0.84 | 5.52*[a] |
| Project 3.2 Resource Stewardship: High Cost Imaging | 3.2.1 – Headache Imaging | -1.39 | 2.30 |
| Project 3.2 Resource Stewardship: High Cost Imaging | 3.2.4 – Inappropriate Low Back Pain Imaging | -3.94*[a] | -10.85*[a] |
| **Improve population health and patient experience in Medi-Cal** | | | |
| Project 1.2 Ambulatory Care Redesign: Primary Care | 1.2.8 – Prevention Quality Indicators (Medi-Cal) | 0.73*[b] | 1.00*[b] |
| Project 2.2 Care Transitions: Integration of Post-Acute Care | 2.2.1 – All-Cause Readmissions | 0.07 | 1.87*[b] |
| **Demonstration goals not assessed by DD measures:** | | | |
| Integrate physical and behavioral health and coordinate care for vulnerable populations; Transition public hospitals to value-based payments | | | |

Notes: "*[a]" and blue-shaded cells indicate PRIME hospitals experienced better outcomes than comparison hospitals, showing that the difference-in-difference (DID) value is significant between the PRIME and comparison hospitals in the intended direction. "*[b]" and magenta-shaded cells indicate PRIME hospitals experienced worse outcomes than comparison hospitals, showing that the DID value is significant between the PRIME and comparison hospitals in the unintended direction. Values for rate measures are percentage points. For the measures Primary Care and Specialty Care Visits per 1,000 Medi-Cal Enrollees, values are the difference in visits per 1,000 Medi-Cal Enrollees. The measure and values for Prevention Quality Indicators are inconsistent between the appendix and main report. Metric 1.3.2 measures all-cause readmissions, but the sample size for DMPHs was not large enough; only two DMPHs chose to participate in this metric. Metric 2.2.1 also measures all-cause readmissions but includes all hospitals that participated in Metric 1.3.2 and has higher DMPH participation for a sufficient sample size. Therefore, DID analysis calculations used data from Metric 2.2.1 instead of Metric 1.3.2.

Detailed Results of the Difference in Difference Analysis

**Exhibit 377: Difference-in-Difference Analyses of Domain 1 Measures between PRIME Medi-Cal Samples**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| 1.2.8 – PQI | | | | | | | |
| DPH PRIME | 77,251 | 3.13% | 3.02% | 3.74% | 3.85% | 0.72%* | 0.73%* |
| DPH Comparison | 118,821 | 2.67% | 2.59% | 2.82% | 2.42% | -0.01% | |
| DMPH PRIME | 15,489 | 2.21% | 2.19% | 3.02% | 3.16% | 0.89%* | 1.00%* |
| DMPH Comparison | 188,638 | 2.37% | 2.36% | 2.35% | 2.16% | -0.11%* | |
| 1.3.4 – Post Procedure Emergency Room Visits/Admissions | | | | | | | |
| DPH PRIME | 9,087 | 8.07% | 11.08% | 11.21% | 11.49% | 1.77%* | 1.89%* |
| DPH Comparison | 12,589 | 7.88% | 10.76% | 9.47% | 8.95% | -0.12% | |
| DMPH PRIME | 794 | 10.20% | 12.85% | 14.88% | 12.33% | 2.08% | 1.94% |
| DMPH Comparison | 16,411 | 6.94% | 8.81% | 8.40% | 7.63% | 0.14% | |
| 1.6.2 – Breast Cancer Screening | | | | | | | |
| DPH PRIME | 7,900 | 46.22% | 60.82% | 69.27% | 74.14% | 18.19%* | 5.53%* |
| DPH Comparison | 30,362 | 43.75% | 58.68% | 63.71% | 64.03% | 12.65%* | |
| DMPH PRIME | 1,576 | 32.03% | 44.40% | 43.81% | 44.26% | 5.82%* | -4.94%* |
| DMPH Comparison | 44,589 | 40.13% | 52.93% | 57.37% | 57.22% | 10.76%* | |
| 1.6.3 – Cervical Cancer Screening | | | | | | | |

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| DPH PRIME | 11,362 | 21.86% | 35.81% | 48.14% | 52.04% | 21.25%* | 3.10%* |
| DPH Comparison | 54,237 | 33.53% | 49.98% | 58.64% | 61.19% | 18.16%* | |
| DMPH PRIME | 2,725 | 28.31% | 43.57% | 49.50% | 50.46% | 14.04%* | -3.01%* |
| DMPH Comparison | 80,629 | 31.94% | 47.74% | 55.67% | 58.11% | 17.05%* | |
| Primary Care Visits per 1,000 Medi-Cal Enrollees | | | | | | | |
| DPH PRIME | 95,164 | 254.46 | 340.63 | 401.90 | 816.35 | 311.58* | 58.33 |
| DPH Comparison | 157,294 | 416.40 | 575.30 | 769.58 | 728.62 | 253.25* | |
| DMPH PRIME | 10,350 | 386.41 | 376.89 | 424.47 | 421.04 | 41.11* | 75.33* |
| DMPH Comparison | 251,390 | 446.92 | 437.63 | 429.61 | 386.49 | -34.22* | |
| Primary Care Follow-Up Rates for Diabetes^ | | | | | | | |
| DPH PRIME | 9,468 | 18.69% | 20.75% | 27.29% | 32.67% | 10.26%* | 8.37%* |
| DPH Comparison | 16,999 | 21.47% | 23.81% | 25.45% | 23.59% | 1.89%* | |
| DMPH PRIME | 6,760 | 9.92% | 10.65% | 12.43% | 13.43% | 2.65%* | 0.15% |
| DMPH Comparison | 26,161 | 19.43% | 20.74% | 23.26% | 21.90% | 2.50%* | |
| Primary Care Follow-Up Rates for Hypertension^ | | | | | | | |
| DPH PRIME | 20,014 | 19.95% | 19.74% | 23.38% | 26.66% | 5.17%* | 6.29%* |
| DPH Comparison | 31,346 | 27.31% | 27.16% | 27.06% | 25.18% | -1.12%* | |
| DMPH PRIME | 14,229 | 14.89% | 13.35% | 14.74% | 15.27% | 0.89%* | 1.56%* |
| DMPH Comparison | 49,239 | 25.70% | 23.52% | 24.51% | 23.36% | -0.68%* | |
| Specialty Care Visits per | | | | | | | |

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| **1,000 Medi-Cal Enrollees** | | | | | | | |
| DPH PRIME | 95,164 | 257.90 | 281.89 | 264.00 | 298.70 | 11.45 | 163.84 |
| DPH Comparison | 157,294 | 604.27 | 644.34 | 476.17 | 467.67 | -152.38 | |
| DMPH PRIME | 10,350 | 773.59 | 704.26 | 835.79 | 853.68 | 105.81* | 147.90* |
| DMPH Comparison | 251,390 | 420.10 | 380.04 | 362.78 | 353.18 | -42.09* | |
| **Annual Human Papillomavirus Screening Rates[+]** | | | | | | | |
| DPH PRIME | 12,441 | 3.01% | 5.06% | 14.74% | 11.97% | 9.32%* | 4.00%* |
| DPH Comparison | 59,948 | 5.69% | 9.35% | 12.77% | 12.91% | 5.32%* | |
| DMPH PRIME | 3,099 | 2.61% | 4.84% | 9.71% | 13.05% | 7.66%* | 2.19%* |
| DMPH Comparison | 88,366 | 4.79% | 8.68% | 11.97% | 12.43% | 5.47%* | |
| **Annual Pap Screening Rates[+]** | | | | | | | |
| DPH PRIME | 12,441 | 14.16% | 16.21% | 23.22% | 16.76% | 4.80%* | 4.28%* |
| DPH Comparison | 59,948 | 21.15% | 23.86% | 24.59% | 21.46% | 0.52%* | |
| DMPH PRIME | 3,099 | 17.84% | 19.81% | 19.05% | 19.47% | 0.44% | -0.52% |
| DMPH Comparison | 88,366 | 20.37% | 22.46% | 23.75% | 20.99% | 0.96%* | |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*
*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. \* Denotes* p *< 0.05 for difference-in-difference analysis. + Denotes innovative and surrogate metric for Project 1.6, which determine specific screening test rates on an annual basis in contrast to a look-back period specified by the PRIME Reporting Manual DY 13YE for Metric 1.6.3. ^ Denotes innovative and surrogate metric for Project 1.2.*

**Exhibit 378: Difference-in-Difference Analyses of Domain 2 Measures between PRIME Medi-Cal Samples**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| **2.1.5 – Cesarean Section** | | | | | | | |
| DPH PRIME | 3,396 | 14.46% | 23.17% | 14.86% | 8.42% | -7.17%* | 1.33% |
| DPH Comparison | 7,803 | 16.63% | 25.95% | 16.57% | 9.02% | -8.50%* | |
| DMPH PRIME | 2,748 | 16.71% | 28.02% | 14.85% | 9.29% | -10.29%* | -2.60% |
| DMPH Comparison | 14,055 | 14.69% | 25.28% | 15.10% | 9.47% | -7.70%* | |
| **2.1.6 – Prenatal Care** | | | | | | | |
| DPH PRIME | 2,044 | 15.22% | 25.17% | 32.46% | 35.15% | 13.61%* | 7.12%* |
| DPH Comparison | 4,934 | 11.63% | 19.29% | 22.82% | 21.09% | 6.50%* | |
| DMPH PRIME | 1,992 | 9.21% | 14.66% | 22.18% | 12.21% | 5.26% | -0.54% |
| DMPH Comparison | 9,863 | 12.20% | 19.04% | 20.84% | 22.01% | 5.80%* | |
| **2.2.1 – Readmissions** | | | | | | | |
| DPH PRIME | 46,007 | 11.40% | 13.16% | 14.25% | 15.20% | 2.45%* | 0.07% |
| DPH Comparison | 55,056 | 10.53% | 12.25% | 14.55% | 12.97% | 2.37%* | |
| DMPH PRIME | 20,211 | 8.43% | 10.14% | 12.60% | 13.43% | 3.73%* | 1.87%* |
| DMPH Comparison | 82,268 | 9.86% | 11.78% | 12.74% | 12.62% | 1.86%* | |
| **Outpatient Follow-Up Visit Rates within 30 Days[+]** | | | | | | | |
| DPH PRIME | 63,496 | 76.12% | 80.82% | 87.95% | 87.41% | 9.21%* | 5.04%* |
| DPH Comparison | 84,964 | 76.86% | 81.48% | 84.79% | 81.91% | 4.17%* | |
| DMPH PRIME | 49,974 | 69.40% | 72.61% | 75.47% | 77.99% | 5.72%* | 1.87%* |
| DMPH Comparison | 137,109 | 70.84% | 74.13% | 76.51% | 76.16% | 3.85%* | |
| **Outpatient Follow-Up Visit Rates within Seven Days[+]** | | | | | | | |

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| DPH PRIME | 63,496 | 48.88% | 53.41% | 59.70% | 60.91% | 9.16%* | 5.84%* |
| DPH Comparison | 84,964 | 48.75% | 53.39% | 55.53% | 53.24% | 3.31%* | |
| DMPH PRIME | 49,974 | 43.41% | 46.22% | 48.74% | 52.81% | 5.96%* | 2.52%* |
| DMPH Comparison | 137,109 | 43.76% | 46.69% | 48.16% | 49.18% | 3.45%* | |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. * Denotes p < 0.05 for difference-in-difference analysis, + Denotes innovative and surrogate metric for Project 2.2*

**Exhibit 379: Difference-in-Difference Analyses of Domain 3 Measures between PRIME Medi-Cal Samples**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| 3.1.1 – Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis | | | | | | | |
| DPH PRIME | 4,247 | 51.79% | 49.37% | 49.41% | 62.47% | 5.36%* | 0.84% |
| DPH Comparison | 20,356 | 49.79% | 47.14% | 50.88% | 55.10% | 4.52%* | |
| DMPH PRIME | 5,830 | 50.95% | 49.30% | 56.91% | 64.79% | 10.72%* | 5.52%* |
| DMPH Comparison | 28,451 | 50.17% | 48.14% | 52.20% | 56.52% | 5.20%* | |
| 3.2.1 – Headache Imaging | | | | | | | |
| DPH PRIME | 11,369 | 36.32% | 26.16% | 11.46% | 9.80% | -20.61%* | -1.39% |
| DPH Comparison | 33,825 | 35.72% | 25.69% | 12.02% | 10.96% | -19.22%* | |

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from Pre (DY 10 and DY 11) to Post (DY 12 and DY 13) | Difference in Differences |
|---|---|---|---|---|---|---|---|
| DMPH PRIME | 11,184 | 36.94% | 26.28% | 13.71% | 15.95% | -16.77%* | 2.30% |
| DMPH Comparison | 48,959 | 35.88% | 25.84% | 11.92% | 11.67% | -19.07%* | |
| 3.2.4 – Inappropriate Low Back Pain Imaging | | | | | | | |
| DPH PRIME | 12,365 | 45.39% | 44.99% | 41.81% | 39.17% | -4.70%* | -3.94%* |
| DPH Comparison | 46,056 | 41.12% | 39.63% | 40.55% | 38.68% | -0.76% | |
| DMPH PRIME | 12,327 | 43.76% | 44.40% | 34.28% | 30.77% | -11.55%* | -10.85%* |
| DMPH Comparison | 63,233 | 41.65% | 41.79% | 41.98% | 40.07% | -0.70% | |

Source: UCLA analysis of Medi-Cal data, July to August 2019.

Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.

## OSHPD Mortality Rates

The evaluation included analysis of other measures that were not targeted and were unlikely to be impacted by any of the PRIME interventions to act as a comparison test. These included mortality rates due to sepsis, stroke, and surgical site infections. Among the discharges analyzed at PRIME entities and those at the comparison hospitals, there was no significant change between the rates calculated the period before and after project implementation, except for a decrease in the mortality rate due to sepsis among patients at both DPH (-1.76%) and DMPH PRIME entities (-2.52%); (Exhibit 380). The difference in difference (DD) analysis of the California hospital discharges from OSHPD data showed that no measures had a significant DD value between PRIME and control comparison hospital performance.

**Exhibit 380: OSHPD Difference-in-Difference Analyses (All Insurance Types)**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from pre to post | Difference in differences |
|---|---|---|---|---|---|---|---|
| Mortality Rates of Sepsis | | | | | | | |
| DPH treatment | 24,757 | 10.08% | 9.18% | 7.61% | 8.14% | -1.76%* | -1.43% |
| DPH control | 32,845 | 11.00% | 9.29% | 9.76% | 9.87% | -0.33% | |
| DMPH treatment | 11,206 | 11.80% | 11.92% | 9.54% | 9.15% | -2.52%* | -1.45% |
| DMPH control | 19,190 | 7.61% | 8.01% | 7.33% | 6.15% | -1.07% | |
| Mortality Rates of Stroke | | | | | | | |
| DPH treatment | 21,347 | 4.12% | 4.17% | 4.29% | 4.70% | 0.36% | 0.15% |
| DPH control | 31,333 | 4.68% | 4.42% | 4.92% | 4.59% | 0.21% | |
| DMPH treatment | 13,161 | 3.50% | 3.78% | 3.37% | 3.55% | -0.18% | 0.19% |
| DMPH control | 17,172 | 3.47% | 3.53% | 2.93% | 3.32% | -0.37% | |
| Mortality Rates of Surgical Site Infections | | | | | | | |
| DPH treatment | 140,830 | 1.24% | 1.21% | 1.31% | 1.31% | 0.09% | 0.02% |
| DPH control | 202,133 | 1.17% | 1.11% | 1.24% | 1.16% | 0.06% | |
| DMPH treatment | 84,589 | 0.93% | 0.96% | 0.90% | 1.01% | 0.01% | -0.08% |
| DMPH control | 90,981 | 1.04% | 1.03% | 1.13% | 1.12% | 0.09% | |

**Exhibit 381: OSHPD Difference-in-Difference Analyses (Medi-Cal Insurance)**

| Hospital Type | N | DY 10 | DY 11 | DY 12 | DY 13 | Change from pre to post | Difference in differences |
|---|---|---|---|---|---|---|---|
| Mortality Rates of Sepsis | | | | | | | |
| DPH treatment | 9,479 | 10.27% | 8.74% | 7.74% | 7.27% | -2.00%* | -0.03% |
| DPH control | 6,410 | 11.21% | 9.71% | 9.42% | 7.54% | -1.98%* | |
| DMPH treatment | 2,327 | 9.60% | 10.72% | 9.93% | 9.56% | -0.42% | -0.12% |
| DMPH control | 3,860 | 6.21% | 7.24% | 8.15% | 4.71% | -0.30% | |
| Mortality Rates of Stroke | | | | | | | |
| DPH treatment | 63,021 | 1.04% | 0.87% | 1.08% | 1.00% | 0.08% | 0.09% |
| DPH control | 48,371 | 0.82% | 0.62% | 0.85% | 0.59% | 0.00% | |
| DMPH treatment | 27,902 | 0.37% | 0.35% | 0.42% | 0.47% | 0.08% | -0.10% |
| DMPH control | 28,368 | 0.47% | 0.36% | 0.66% | 0.54% | 0.18%* | |
| Mortality Rates of Surgical Site Infections | | | | | | | |
| DPH treatment | 7,510 | 3.82% | 3.35% | 3.72% | 4.31% | 0.43% | 0.56% |
| DPH control | 5,669 | 5.64% | 4.79% | 4.66% | 5.51% | -0.13% | |
| DMPH treatment | 2,206 | 3.44% | 4.81% | 4.01% | 4.55% | 0.16% | 0.15% |
| DMPH control | 2,753 | 3.78% | 4.45% | 4.01% | 4.23% | 0.01% | |

Description of Patients in Each Group for the Difference in Difference Analysis

The following section presents demographic data for the PRIME patients and comparison patients for each measure; this information is presented for the overall sample in Exhibit 347 and Exhibit 348. Dash (--) formatting cells denotes that there was a small cell and the row has been redacted. This is most common among the DMPH and DMPH comparison groups for language-speaking All Chinese, Vietnamese, and Other. Other languages include American Sign Language, Japanese, Korean, Tagalog, Cambodian, Armenian, Ilocano, Mien, Hmong, Lao, Turkish, Hebrew, French, Polish, Russian, Portuguese, Italian, Arabic, Samoan, Thai, Farsi, and other non-English languages.

*The following exhibits correspond to the DD analysis for metrics in Exhibit 350: Difference-in-Difference Analyses of Domain 1 Process Measures between PRIME Medi-Cal Samples*

**Exhibit 382: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 350: Difference-in-Difference Analyses of Domain 1 Process Measures between PRIME Medi-Cal Samples**

| 1.6.2 – Breast Cancer Screening | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| N | 7,900 | 30,362 | 38,262 | 1,576 | 44,589 | 46,165 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Breast cancer screening** | | | | | | |
| No | 42.45 | 37.39 | 41.29 | 48.09 | 58.87 | 51.11 |
| Yes | 57.55 | 62.61 | 58.71 | 51.91 | 41.13 | 48.89 |
| **Race/ethnicity** | | | | | | |
| White | 22.53 | 19.86 | 21.91 | 23.92 | 48.45 | 30.80 |
| Black | 12.32 | 12.42 | 12.34 | 12.55 | 1.77 | 9.52 |
| Hispanic | 34.97 | 34.72 | 34.91 | 35.02 | 33.67 | 34.64 |
| API | 16.51 | 18.72 | 17.02 | 14.83 | 2.81 | 11.46 |
| Other | 13.68 | 14.29 | 13.82 | 13.69 | 13.29 | 13.58 |
| **Language Speaking** | | | | | | |

| 1.6.2 – Breast Cancer Screening | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| All Chinese | 3.71 | 4.33 | 3.86 | -- | -- | -- |
| English | 54.42 | 54.97 | 54.54 | 55.17 | 69.85 | 59.29 |
| Other | 6.83 | 6.90 | 6.85 | -- | -- | -- |
| Spanish | 29.17 | 30.19 | 29.41 | 29.04 | 26.80 | 28.41 |
| Unknown | 2.64 | 2.41 | 2.58 | 2.75 | 3.26 | 2.89 |
| Vietnamese | 3.23 | 1.20 | 2.76 | -- | -- | -- |
| Age | 60 | 60 | 60 | 60 | 60 | 60 |
| Baseline CDPS score | 1.44 | 1.33 | 1.41 | 1.41 | 1.48 | 1.43 |
| Months of enrollment | 9.9 | 9.9 | 9.9 | 9.5 | 9.8 | 9.6 |

Source: UCLA analysis of Medi-Cal data, July to August 2019.
Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.

**Exhibit 383: Number and Description of Patients in Each Group for the metrics presented in Exhibit 350: Difference-in-Difference Analyses of Domain 1 Process Measures between PRIME Medi-Cal Samples**

| 1.6.3 – Cervical Cancer Screening | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| N | 11,362 | 54,237 | 54,237 | 2,725 | 80,629 | 83,354 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Cervical cancer screening** | | | | | | |
| No | 49.17 | 60.54 | 51.50 | 51.64 | 57.04 | 53.15 |
| Yes | 50.83 | 39.46 | 48.50 | 48.36 | 42.96 | 46.85 |
| **Race/ethnicity** | | | | | | |
| White | 24.00 | 22.09 | 23.61 | 24.90 | 51.87 | 32.43 |
| Black | 14.91 | 15.22 | 14.98 | 15.14 | 1.94 | 11.46 |
| Hispanic | 38.21 | 35.58 | 37.67 | 38.61 | 33.84 | 37.28 |

| 1.6.3 – Cervical Cancer Screening | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| API | 11.63 | 14.35 | 12.19 | 10.30 | 2.45 | 8.10 |
| Other | 11.24 | 12.76 | 11.56 | 11.05 | 9.90 | 10.73 |
| **Language Speaking** | | | | | | |
| All Chinese | 1.83 | 1.87 | 1.84 | -- | -- | -- |
| English | 68.71 | 66.66 | 68.29 | 70.68 | 81.88 | 73.81 |
| Other | 3.76 | 4.71 | 3.95 | -- | -- | -- |
| Spanish | 22.05 | 24.21 | 22.49 | 21.12 | 16.59 | 19.85 |
| Unknown | 1.63 | 1.63 | 1.63 | 1.54 | 1.34 | 1.48 |
| Vietnamese | 2.02 | 0.93 | 1.79 | -- | -- | -- |
| **Age** | 46 | 47 | 46 | 45 | 44 | 45 |
| **Baseline CDPS score** | 1.22 | 1.19 | 1.21 | 1.16 | 1.19 | 1.17 |
| **Months of enrollment** | 9.4 | 9.5 | 9.4 | 8.9 | 9.3 | 9.0 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.*

**Exhibit 384: Number and Description of Patients in Each Group for the metrics presented in Exhibit 350: Difference-in-Difference Analyses of Domain 1 Process Measures between PRIME Medi-Cal Samples**

| Annual Human Papillomavirus Screening Rates+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| N | 12,441 | 59,948 | 72,389 | 3,099 | 88,366 | 91,465 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **HPV screening** | | | | | | |
| No | 89.82 | 91.30 | 90.13 | 90.53 | 92.45 | 91.07 |
| Yes | 10.18 | 8.70 | 9.87 | 9.47 | 7.55 | 8.93 |
| **Race/ethnicity** | | | | | | |

| Annual Human Papillomavirus Screening Rates+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| White | 24.34 | 22.29 | 23.92 | 25.24 | 52.85 | 33.01 |
| Black | 14.95 | 15.14 | 14.99 | 15.12 | 2.18 | 11.48 |
| Hispanic | 38.24 | 36.06 | 37.79 | 38.61 | 32.03 | 36.76 |
| API | 11.23 | 13.81 | 11.76 | 9.94 | 2.57 | 7.87 |
| Other | 11.25 | 12.69 | 11.55 | 11.08 | 10.37 | 10.88 |
| Language Speaking | | | | | | |
| All Chinese | 1.75 | 1.77 | 1.75 | -- | -- | -- |
| English | 68.71 | 66.70 | 68.29 | 70.63 | 82.62 | 74.01 |
| Other | 3.65 | 4.50 | 3.83 | -- | -- | -- |
| Spanish | 22.39 | 24.55 | 22.84 | 21.41 | 15.73 | 19.81 |
| Unknown | 1.61 | 1.61 | 1.61 | 1.53 | 1.48 | 1.52 |
| Vietnamese | 1.89 | 0.86 | 1.67 | -- | -- | -- |
| Age | 46 | 47 | 46 | 45 | 45 | 45 |
| Baseline CDPS score | 1.26 | 1.21 | 1.25 | 1.20 | 1.24 | 1.21 |
| Months of enrollment | 9.4 | 9.6 | 9.5 | 9.0 | 9.3 | 9.1 |

Source: UCLA analysis of Medi-Cal data, July to August 2019.

Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. * Denotes p < 0.05 for difference-in-difference analysis. + Denotes innovative and surrogate metric for Project 1.6, which determine specific screening test rates on an annual basis in contrast to a look-back period specified by the PRIME Reporting Manual DY 13YE for Metric 1.6.3. Values for rate measures are percentage points.

**Exhibit 385: Number and Description of Patients in Each Group for the metrics presented in Exhibit 350: Difference-in-Difference Analyses of Domain 1 Process Measures between PRIME Medi-Cal Samples**

| Annual PAP Screening Rates+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| N | 12,441 | 59,948 | 72,389 | 3,099 | 88,366 | 91,465 |

| Annual PAP Screening Rates+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **PAP test** | | | | | | |
| **No** | 77.24 | 82.41 | 78.30 | 78.11 | 80.96 | 78.91 |
| **Yes** | 22.76 | 17.59 | 21.70 | 21.89 | 19.04 | 21.09 |
| **Race/ethnicity** | | | | | | |
| **White** | 24.34 | 22.29 | 23.92 | 25.24 | 52.85 | 33.01 |
| **Black** | 14.95 | 15.14 | 14.99 | 15.12 | 2.18 | 11.48 |
| **Hispanic** | 38.24 | 36.06 | 37.79 | 38.61 | 32.03 | 36.76 |
| **API** | 11.23 | 13.81 | 11.76 | 9.94 | 2.57 | 7.87 |
| **Other** | 11.25 | 12.69 | 11.55 | 11.08 | 10.37 | 10.88 |
| **Language Speaking** | | | | | | |
| **All Chinese** | 1.75 | 1.77 | 1.75 | -- | -- | -- |
| **English** | 68.71 | 66.70 | 68.29 | 70.63 | 82.62 | 74.01 |
| **Other** | 3.65 | 4.50 | 3.83 | -- | -- | -- |
| **Spanish** | 22.39 | 24.55 | 22.84 | 21.41 | 15.73 | 19.81 |
| **Unknown** | 1.61 | 1.61 | 1.61 | 1.53 | 1.48 | 1.52 |
| **Vietnamese** | 1.89 | 0.86 | 1.67 | -- | -- | -- |
| **Age** | 46 | 47 | 46 | 45 | 45 | 45 |
| **Baseline CDPS score** | 1.26 | 1.21 | 1.25 | 1.20 | 1.24 | 1.21 |
| **Months of enrollment** | 9.4 | 9.6 | 9.5 | 9.0 | 9.3 | 9.1 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. * Denotes $p < 0.05$ for difference-in-difference analysis. + Denotes innovative and surrogate metric for Project 1.6, which determine specific screening test rates on an annual basis in contrast to a look-back period specified by the PRIME Reporting Manual DY 13YE for Metric 1.6.3. Values for rate measures are percentage points.*

*The following exhibits correspond to the DD analysis for metrics in Exhibit 351: Difference-in-Difference Analyses of Domain 1 Outcome Measures between PRIME Medi-Cal Samples*

**Exhibit 386: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 351 Difference-in-Difference Analyses of Domain 1 Outcome Measures between PRIME Medi-Cal Samples**

| 1.2.8 PQI | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
|  | 77,251 | 118,821 | 196,072 | 15,489 | 188,638 | 204,127 |
|  | % Col | % Col | % Col | % Col | % Col | % Col |
| **PQI** | | | | | | |
| **No** | 97.37 | 96.57 | 97.07 | 97.69 | 97.35 | 97.60 |
| **Yes** | 2.63 | 3.43 | 2.93 | 2.31 | 2.65 | 2.40 |
| **Female** | | | | | | |
| **Male** | 35.62 | 38.43 | 36.68 | 34.25 | 31.67 | 33.56 |
| **Female** | 64.38 | 61.57 | 63.32 | 65.75 | 68.33 | 66.44 |
| **Race/ethnicity** | | | | | | |
| **White** | 25.12 | 22.59 | 24.16 | 25.58 | 39.75 | 29.36 |
| **Black** | 12.87 | 13.06 | 12.94 | 13.36 | 4.29 | 10.94 |
| **Hispanic** | 35.30 | 36.77 | 35.86 | 36.51 | 41.44 | 37.82 |
| **API** | 13.59 | 15.15 | 14.18 | 12.08 | 4.36 | 10.02 |
|  | | | | | | |
| **Other** | 13.12 | 12.42 | 12.86 | 12.48 | 10.16 | 11.86 |
| **Language Speaking** | | | | | | |
| **All Chinese** | 2.92 | 2.50 | 2.76 | 2.76 | 0.15 | 2.06 |
| **English** | 65.07 | 63.57 | 64.50 | 65.61 | 71.15 | 67.09 |
| **Other** | 5.55 | 5.11 | 5.38 | 5.29 | 0.70 | 4.07 |
| **Spanish** | 21.82 | 24.22 | 22.73 | 21.86 | 23.70 | 22.36 |
| **Unknown** | 2.51 | 2.55 | 2.52 | 2.48 | 4.26 | 2.95 |
| **Vietnamese** | 2.14 | 2.04 | 2.10 | 2.00 | 0.04 | 1.47 |

| 1.2.8 PQI | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| **Age** | 51 | 51 | 51 | 50 | 48 | 50 |
| **Baseline CDPS score** | 1.55 | 1.60 | 1.57 | 1.40 | 1.30 | 1.38 |
| **Months of enrollment** | 9.4 | 9.7 | 9.5 | 9.0 | 9.0 | 9.0 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.*

**Exhibit 387: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 351 Difference-in-Difference Analyses of Domain 1 Outcome Measures between PRIME Medi-Cal Samples**

| 1.3.4 – Post Procedure Emergency Room Visits/Admissions | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 9,087 | 12,589 | 21,676 | 794 | 16,411 | 17,205 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Post Procedure ED Visits (Admissions)** | | | | | | |
| **0** | 90.73 | 89.54 | 90.31 | 92.05 | 87.44 | 90.77 |
| **1** | 9.27 | 10.46 | 9.69 | 7.95 | 12.56 | 9.23 |
| **Female** | | | | | | |
| **Male** | 39.94 | 42.38 | 40.80 | 39.37 | 35.79 | 38.37 |
| **Female** | 60.06 | 57.62 | 59.20 | 60.63 | 64.21 | 61.63 |
| **Race/ethnicity** | | | | | | |
| **White** | 32.16 | 30.39 | 31.54 | 34.03 | 47.89 | 37.87 |
| **Black** | 9.71 | 10.46 | 9.97 | 10.30 | 6.18 | 9.16 |
| **Hispanic** | 31.41 | 32.93 | 31.95 | 30.70 | 26.71 | 29.59 |
| **API** | 10.84 | 11.98 | 11.24 | 10.37 | 5.25 | 8.95 |
| **Other** | 15.88 | 14.24 | 15.30 | 14.60 | 13.97 | 14.43 |
| **Language Speaking** | | | | | | |
| **All Chinese** | 1.77 | 2.06 | 1.88 | -- | -- | -- |

| 1.3.4 – Post Procedure Emergency Room Visits/Admissions | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| English | 65.18 | 65.03 | 65.13 | 65.05 | 70.76 | 66.64 |
| Other | 7.66 | 5.49 | 6.90 | -- | -- | -- |
| Spanish | 21.91 | 22.80 | 22.22 | 21.11 | 23.83 | 21.86 |
| Unknown | 2.03 | 2.79 | 2.30 | 2.70 | 4.13 | 3.09 |
| Vietnamese | 1.45 | 1.82 | 1.58 | -- | -- | -- |
| Age | 56 | 55 | 55 | 56 | 55 | 56 |
| Baseline CDPS score | 2.70 | 2.89 | 2.77 | 2.58 | 2.56 | 2.57 |
| Months of enrollment | 10.7 | 10.9 | 10.8 | 10.6 | 10.8 | 10.7 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.*

**Exhibit 388: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 351 Difference-in-Difference Analyses of Domain 1 Outcome Measures between PRIME Medi-Cal Samples**

| Primary Care Follow-Up Rates for Diabetes+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 9,468 | 16,999 | 26,467 | 6,760 | 26,161 | 32,921 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **PCP diabetes** | | | | | | |
| 0 | 76.42 | 75.15 | 75.97 | 78.67 | 88.39 | 82.40 |
| 1 | 23.58 | 24.85 | 24.03 | 21.33 | 11.61 | 17.60 |
| **Female** | | | | | | |
| Male | 38.54 | 41.33 | 39.53 | 37.98 | 37.33 | 37.73 |
| Female | 61.46 | 58.67 | 60.47 | 62.02 | 62.67 | 62.27 |
| **Race/ethnicity** | | | | | | |
| White | 21.21 | 18.40 | 20.22 | 24.80 | 37.72 | 29.76 |
| Black | 13.52 | 14.46 | 13.85 | 11.64 | 7.00 | 9.86 |

| Primary Care Follow-Up Rates for Diabetes+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| Hispanic | 37.40 | 39.28 | 38.07 | 38.78 | 35.78 | 37.63 |
| API | 14.61 | 15.26 | 14.84 | 12.00 | 6.35 | 9.83 |
| Other | 13.25 | 12.60 | 13.02 | 12.77 | 13.15 | 12.92 |
| Language Speaking | | | | | | |
| All Chinese | 2.63 | 2.40 | 2.55 | 2.04 | 0.51 | 1.45 |
| English | 60.00 | 59.34 | 59.77 | 60.71 | 69.30 | 64.01 |
| Other | 6.59 | 5.56 | 6.22 | 6.50 | 3.07 | 5.19 |
| Spanish | 25.45 | 27.91 | 26.32 | 26.00 | 22.84 | 24.79 |
| Unknown | 2.98 | 2.76 | 2.90 | 2.75 | 3.86 | 3.17 |
| Vietnamese | 2.35 | 2.03 | 2.24 | 2.00 | 0.42 | 1.39 |
| | | | | | | |
| Age | 54.91 | 55.13 | 54.99 | 55.0 | 53.8 | 54.5 |
| Baseline CDPS score | 1.86 | 1.95 | 1.89 | 1.75 | 1.83 | 1.78 |
| Months of enrollment | 9.83 | 10.13 | 9.93 | 9.5 | 9.5 | 9.5 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.*
*+ Denotes innovative and surrogate metric for Project 1.2. Values for rate measures are percentage points. For the measures Primary Care and Specialty Care Visits per 1,000 Medi-Cal Enrollees, values are visits per 1,000 Medi-Cal Enrollees.*

**Exhibit 389: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 351 Difference-in-Difference Analyses of Domain 1 Outcome Measures between PRIME Medi-Cal Samples**

| Primary Care Follow- Up Rates for Hypertension+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 20,014 | 31,346 | 51,360 | 14,229 | 49,239 | 63,468 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| PCP hypertension | | | | | | |

| Primary Care Follow- Up Rates for Hypertension+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| 0 | 73.32 | 77.57 | 74.87 | 75.73 | 85.44 | 79.61 |
| 1 | 26.68 | 22.43 | 25.13 | 24.27 | 14.56 | 20.39 |
| Female | | | | | | |
| Male | 40.24 | 42.94 | 41.23 | 39.45 | 39.33 | 39.40 |
| Female | 59.76 | 57.06 | 58.77 | 60.55 | 60.67 | 60.60 |
| Race/ethnicity | | | | | | |
| White | 24.04 | 21.54 | 23.13 | 27.91 | 39.98 | 32.73 |
| Black | 13.89 | 14.29 | 14.04 | 12.94 | 7.79 | 10.88 |
| Hispanic | 33.19 | 35.74 | 34.12 | 34.59 | 31.76 | 33.46 |
| API | 15.31 | 15.71 | 15.46 | 11.76 | 6.81 | 9.78 |
| Other | 13.56 | 12.72 | 13.25 | 12.80 | 13.67 | 13.15 |
| Language Speaking | | | | | | |
| All Chinese | 3.41 | 2.88 | 3.21 | 2.55 | 0.70 | 1.81 |
| English | 61.18 | 60.48 | 60.92 | 62.92 | 70.89 | 66.10 |
| Other | 6.96 | 6.15 | 6.67 | 6.15 | 2.86 | 4.84 |
| Spanish | 22.84 | 25.11 | 23.67 | 23.55 | 20.72 | 22.42 |
| Unknown | 3.10 | 3.21 | 3.14 | 2.78 | 4.39 | 3.42 |
| Vietnamese | 2.51 | 2.18 | 2.39 | 2.05 | 0.44 | 1.41 |
| | | | | | | |
| Age | 56.76 | 56.37 | 56.62 | | | |
| Baseline CDPS score | 1.78 | 1.84 | 1.80 | 1.78 | 1.84 | 1.80 |
| Months of enrollment | 9.77 | 10.12 | 9.90 | 9.77 | 10.12 | 9.90 |

Source: UCLA analysis of Medi-Cal data, July to August 2019.

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital. + Denotes innovative and surrogate metric for Project 1.2. Values for rate measures are percentage points. For the measures Primary Care and Specialty Care Visits per 1,000 Medi-Cal Enrollees, values are visits per 1,000 Medi-Cal Enrollees.*

**Exhibit 390: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 351 Difference-in-Difference Analyses of Domain 1 Outcome Measures between PRIME Medi-Cal Samples**

| Primary Care Visits per 1,000 Medi-Cal Enrollees | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 95,164 | 157,294 | 252,458 | 10,350 | 251,390 | 261,740 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Female** | | | | | | |
| **Male** | 38.83 | 40.80 | 39.55 | 38.62 | 37.01 | 38.47 |
| **Female** | 61.17 | 59.20 | 60.45 | 61.38 | 62.99 | 61.53 |
| **Race/ethnicity** | | | | | | |
| **White** | 22.65 | 20.23 | 21.75 | 22.64 | 31.90 | 23.49 |
| **Black** | 11.38 | 11.61 | 11.46 | 12.09 | 3.44 | 11.29 |
| **Hispanic** | 40.79 | 41.75 | 41.14 | 41.80 | 47.76 | 42.35 |
| **API** | 11.78 | 13.45 | 12.40 | 10.72 | 5.63 | 10.25 |
| **Other** | 13.40 | 12.97 | 13.25 | 12.75 | 11.29 | 12.61 |
| **Language Speaking** | | | | | | |
| **All Chinese** | 2.50 | 2.13 | 2.36 | -- | -- | -- |
| **English** | 63.05 | 60.18 | 61.99 | 64.22 | 70.33 | 64.78 |
| **Other** | 4.74 | 4.53 | 4.66 | 4.44 | 0.57 | 4.08 |
| **Spanish** | 25.86 | 29.23 | 27.10 | 25.30 | 24.78 | 25.25 |
| **Unknown** | 2.02 | 2.13 | 2.06 | 1.93 | 4.20 | 2.14 |
| **Vietnamese** | 1.84 | 1.80 | 1.83 | -- | -- | -- |
| **Primary Care Visits** | **0.69** | **0.71** | **0.70** | 0.68 | 0.67 | 0.68 |
| **Age** | **41.74** | 43.15 | 42.26 | 39.51 | 37.54 | 39.33 |

| Primary Care Visits per 1,000 Medi-Cal Enrollees | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| Baseline CDPS score | **1.54** | 1.59 | 1.56 | 1.39 | 1.41 | 1.39 |
| Months of enrollment | 8.9 | 9.3 | 9.01 | 8.35 | 8.47 | 8.36 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.*

*[+] Denotes innovative and surrogate metric for Project 1.2. Values for rate measures are percentage points. For the measures Primary Care and Specialty Care Visits per 1,000 Medi-Cal Enrollees, values are visits per 1,000 Medi-Cal Enrollees.*

**Exhibit 391: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 351 Difference-in-Difference Analyses of Domain 1 Outcome Measures between PRIME Medi-Cal Samples**

| Specialty Care Visits per 1,000 Medi-Cal Enrollees | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| N | 95,164 | 157,294 | 252,458 | 10,350 | 251,390 | 261,740 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| Female | | | | | | |
| Male | 38.83 | 40.80 | 38.47 | 38.62 | 37.01 | 38.47 |
| Female | 61.17 | 59.20 | 61.53 | 61.38 | 62.99 | 61.53 |
| Race/ethnicity | | | | | | |
| White | 22.65 | 20.23 | 23.49 | 22.64 | 31.90 | 23.49 |
| Black | 11.38 | 11.61 | 11.29 | 12.09 | 3.44 | 11.29 |
| Hispanic | 40.79 | 41.75 | 42.35 | 41.80 | 47.76 | 42.35 |
| API | 11.78 | 13.45 | 10.25 | 10.72 | 5.63 | 10.25 |
| Other | 13.40 | 12.97 | 12.61 | 12.75 | 11.29 | 12.61 |
| Language Speaking | | | | | | |

| Specialty Care Visits per 1,000 Medi-Cal Enrollees | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| All Chinese | 2.50 | 2.13 | 2.16 | 2.38 | 0.03 | 2.16 |
| English | 63.05 | 60.18 | 64.78 | 64.22 | 70.33 | 64.78 |
| Other | 4.74 | 4.53 | 4.08 | 4.44 | 0.57 | 4.08 |
| Spanish | 25.86 | 29.23 | 25.25 | 25.30 | 24.78 | 25.25 |
| Unknown | 2.02 | 2.13 | 2.14 | 1.93 | 4.20 | 2.14 |
| Vietnamese | 1.84 | 1.80 | 1.59 | 1.74 | 0.09 | 1.59 |
| Specialty Care Visits | 0.6445 | 0.6314 | 0.6339 | 0.6762 | 0.6378 | 0.6339 |
| Age | 42 | 43 | 39 | 40 | 38 | 39 |
| Baseline CDPS score | 1.54 | 1.59 | 1.38 | 1.38 | 1.41 | 1.39 |
| Months of enrollment | 8.9 | 9.3 | 8.4 | 8.3 | 8.5 | 8.4 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.*
*[+] Denotes innovative and surrogate metric for Project 1.2. Values for rate measures are percentage points. For the measures Primary Care and Specialty Care Visits per 1,000 Medi-Cal Enrollees, values are visits per 1,000 Medi-Cal Enrollees.*

*The following exhibits correspond to the DD analysis for metrics in Exhibit 353: Difference-in-Difference Analyses of Domain 2 Process Measures between PRIME Medi-Cal Samples*

**Exhibit 392: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 353: Difference-in-Difference Analyses of Domain 2 Process Measures between PRIME Medi-Cal Samples**

| 2.1.6 Prenatal Care | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 2,044 | 4,934 | 6,978 | 1,992 | 9,863 | 11,855 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Prenatal Care** | | | | | | |
| **No** | 82.64 | 74.97 | 80.13 | 82.73 | 87.45 | 84.54 |
| **Yes** | 17.36 | 25.03 | 19.87 | 17.27 | 12.55 | 15.46 |
| **Race/ethnicity** | | | | | | |
| **White** | 18.32 | 13.73 | 16.82 | 20.38 | 31.30 | 24.57 |
| **Black** | 13.03 | 12.49 | 12.85 | 13.07 | 6.79 | 10.66 |
| **Hispanic** | 51.12 | 54.22 | 52.14 | 49.03 | 44.68 | 47.36 |
| **API** | 8.59 | 9.73 | 8.96 | 8.02 | 6.73 | 7.53 |
| **Other** | 8.94 | 9.83 | 9.23 | 9.51 | 10.50 | 9.89 |
| **Language Speaking** | | | | | | |
| **All Chinese** | 0.63 | 0.37 | 0.55 | -- | -- | -- |
| **English** | 77.32 | 73.01 | 75.91 | 80.35 | 82.98 | 81.36 |
| **Other** | 2.01 | 3.56 | 2.52 | 1.51 | 1.21 | 1.39 |
| **Spanish** | 19.35 | 22.37 | 20.34 | 17.12 | 15.39 | 16.46 |
| **Unknown** | 0.05 | 0.11 | 0.07 | -- | -- | -- |
| **Vietnamese** | 0.63 | 0.58 | 0.61 | -- | -- | -- |
| **Age** | **28** | **28** | **28** | **27** | **27** | **27** |
| **Baseline CDPS score** | **0.87** | 0.84 | 0.86 | 0.85 | 0.84 | 0.85 |
| **Months of enrollment** | **8.0** | 8.2 | 8.1 | 7.6 | 7.7 | 7.6 |

Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.

*The following exhibits correspond to the DD analysis for metrics in Exhibit 354: Difference-in-Difference Analyses of Domain 2 Outcome Measures between PRIME Medi-Cal Samples*

**Exhibit 393: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 354: Difference-in-Difference Analyses of Domain 2 Outcome Measures between PRIME Medi-Cal Samples**

| 2.1.5 Cesarean Section | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 3,396 | 7,803 | 11,199 | 2,748 | 14,055 | 16,803 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Cesarean Section** | | | | | | |
| **No** | 81.55 | 84.18 | 82.43 | 82.47 | 79.16 | 81.27 |
| **Yes** | 18.45 | 15.82 | 17.57 | 17.53 | 20.84 | 18.73 |
| **Race/ethnicity** | | | | | | |
| **White** | 18.71 | 14.19 | 17.20 | 20.72 | 31.66 | 24.69 |
| **Black** | 13.07 | 12.86 | 13.00 | 12.62 | 7.52 | 10.77 |
| **Hispanic** | 50.73 | 52.17 | 51.21 | 49.52 | 44.58 | 47.73 |
| **API** | 8.31 | 10.91 | 9.18 | 7.80 | 6.02 | 7.15 |
| **Other** | 9.18 | 9.86 | 9.41 | 9.34 | 10.22 | 9.66 |
| **Language Speaking** | | | | | | |
| **All Chinese** | 0.76 | 0.56 | 0.70 | -- | -- | -- |
| **English** | 78.13 | 72.81 | 76.36 | 79.91 | 82.90 | 80.99 |
| **Other** | 2.10 | 3.61 | 2.60 | 1.55 | 1.03 | 1.36 |
| **Spanish** | 18.27 | 22.41 | 19.65 | 17.36 | 15.54 | 16.70 |
| **Unknown** | 0.09 | 0.00 | 0.06 | -- | -- | -- |

| 2.1.5 Cesarean Section | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| Vietnamese | 0.64 | 0.60 | 0.63 | -- | -- | -- |
| Age | 27 | 28 | 27 | 27 | 27 | 27 |
| Baseline CDPS score | 0.90 | 0.85 | 0.88 | 0.86 | 0.87 | 0.87 |
| Months of enrollment | 9.0 | 9.1 | 9.0 | 8.6 | 8.6 | 8.6 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.*

**Exhibit 394: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 354: Difference-in-Difference Analyses of Domain 2 Outcome Measures between PRIME Medi-Cal Samples**

| 2.2.1 –All-Cause Readmissions | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
|  | 46,007 | 55,056 | 101,063 | 20,211 | 82,268 | 102,479 |
|  | % Col | % Col | % Col | % Col | % Col | % Col |
| **Readmission** | | | | | | |
| 0 | 87.42 | 86.42 | 87.01 | 88.26 | 89.04 | 88.57 |
| 1 | 12.58 | 13.58 | 12.99 | 11.74 | 10.96 | 11.43 |
| **Female** | | | | | | |
| Male | 44.10 | 48.63 | 45.98 | 44.35 | 39.43 | 42.39 |
| Female | 55.90 | 51.37 | 54.02 | 55.65 | 60.57 | 57.61 |
| **Race/ethnicity** | | | | | | |
| White | 29.13 | 25.18 | 27.48 | 32.20 | 44.11 | 36.96 |
| Black | 14.69 | 15.95 | 15.21 | 14.38 | 10.00 | 12.63 |
| Hispanic | 32.56 | 35.23 | 33.67 | 31.78 | 27.43 | 30.04 |
| API | 10.22 | 11.22 | 10.64 | 8.45 | 5.59 | 7.31 |
| Other | 13.41 | 12.42 | 13.00 | 13.19 | 12.87 | 13.06 |

| 2.2.1 –All-Cause Readmissions | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| **Language Speaking** | | | | | | |
| **All Chinese** | 1.35 | 1.32 | 1.34 | 1.05 | 0.14 | 0.69 |
| **English** | 69.92 | 68.04 | 69.14 | 73.13 | 79.39 | 75.64 |
| **Other** | 5.09 | 4.10 | 4.68 | 4.49 | 2.34 | 3.64 |
| **Spanish** | 19.59 | 22.50 | 20.80 | 17.45 | 14.72 | 16.36 |
| **Unknown** | 2.67 | 2.61 | 2.65 | 2.55 | 3.17 | 2.80 |
| **Vietnamese** | 1.37 | 1.43 | 1.40 | 1.32 | 0.23 | 0.88 |
| | | | | | | |
| **Age** | 53 | 52 | 53 | 52 | 52 | 52 |
| **Baseline CDPS score** | 2.93 | 2.97 | 2.94 | 2.66 | 2.59 | 2.63 |
| **Months of enrollment** | 10.5 | 10.6 | 10.5 | 10.0 | 10.0 | 10.0 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.*

*Exhibit 395: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 354: Difference-in-Difference Analyses of Domain 2 Outcome Measures between PRIME Medi-Cal Samples*

| Outpatient follow-up visit within 30 days post-IP+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 63,496 | 84,964 | 148,460 | 49,974 | 137,109 | 187,083 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Within 30 days IP** | | | | | | |
| **0** | 18.87 | 16.80 | 18.05 | 25.70 | 26.16 | 25.89 |
| **1** | 81.13 | 83.20 | 81.95 | 74.30 | 73.84 | 74.11 |
| **Female** | | | | | | |

| Outpatient follow-up visit within 30 days post-IP+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| Male | 41.00 | 45.56 | 42.79 | 39.17 | 34.70 | 37.27 |
| Female | 59.00 | 54.44 | 57.21 | 60.83 | 65.30 | 62.73 |
| Race/ethnicity | | | | | | |
| White | 28.16 | 23.06 | 26.15 | 31.68 | 40.36 | 35.36 |
| Black | 13.54 | 14.96 | 14.10 | 12.52 | 8.49 | 10.81 |
| Hispanic | 34.51 | 38.00 | 35.88 | 34.95 | 32.34 | 33.84 |
| API | 9.46 | 10.65 | 9.93 | 7.89 | 5.65 | 6.94 |
| Other | 14.33 | 13.33 | 13.94 | 12.95 | 13.17 | 13.04 |
| Language Speaking | | | | | | |
| All Chinese | 1.29 | 1.48 | 1.36 | 1.13 | 0.40 | 0.82 |
| English | 70.70 | 66.76 | 69.15 | 73.08 | 77.54 | 74.97 |
| Other | 4.60 | 3.97 | 4.35 | 3.87 | 2.08 | 3.11 |
| Spanish | 19.88 | 24.36 | 21.64 | 18.76 | 16.85 | 17.95 |
| Unknown | 2.36 | 2.17 | 2.28 | 2.16 | 2.87 | 2.46 |
| Vietnamese | 1.18 | 1.26 | 1.21 | 1.01 | 0.25 | 0.69 |
| | | | | | | |
| Age | 46 | 46 | 46 | 46 | 46 | 46 |
| Baseline CDPS score | 2.77 | 2.87 | 2.81 | 2.38 | 2.28 | 2.34 |
| Months of enrollment | 10.2 | 10.4 | 10.3 | 9.7 | 9.7 | 9.7 |

*Exhibit 396: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 354: Difference-in-Difference Analyses of Domain 2 Outcome Measures between PRIME Medi-Cal Samples*

| Outpatient follow-up visit within 7 days post-IP+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 63,496 | 84,964 | 148,460 | 49,974 | 137,109 | 187,083 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Within 7 days IP** | | | | | | |
| 0 | 47.38 | 44.16 | 46.11 | 53.16 | 52.24 | 52.77 |
| 1 | 52.62 | 55.84 | 53.89 | 46.84 | 47.76 | 47.23 |
| **Female** | | | | | | |
| **Male** | 41.00 | 45.56 | 42.79 | 39.17 | 34.70 | 37.27 |
| **Female** | 59.00 | 54.44 | 57.21 | 60.83 | 65.30 | 62.73 |
| **Race/ethnicity** | | | | | | |
| **White** | 28.16 | 23.06 | 26.15 | 31.68 | 40.36 | 35.36 |
| **Black** | 13.54 | 14.96 | 14.10 | 12.52 | 8.49 | 10.81 |
| **Hispanic** | 34.51 | 38.00 | 35.88 | 34.95 | 32.34 | 33.84 |
| **API** | 9.46 | 10.65 | 9.93 | 7.89 | 5.65 | 6.94 |
| **Other** | 14.33 | 13.33 | 13.94 | 12.95 | 13.17 | 13.04 |
| **Language Speaking** | | | | | | |
| **All Chinese** | 1.29 | 1.48 | 1.36 | 1.13 | 0.40 | 0.82 |
| **English** | 70.70 | 66.76 | 69.15 | 73.08 | 77.54 | 74.97 |
| **Other** | 4.60 | 3.97 | 4.35 | 3.87 | 2.08 | 3.11 |

| Outpatient follow-up visit within 7 days post-IP+ | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| Spanish | 19.88 | 24.36 | 21.64 | 18.76 | 16.85 | 17.95 |
| Unknown | 2.36 | 2.17 | 2.28 | 2.16 | 2.87 | 2.46 |
| Vietnamese | 1.18 | 1.26 | 1.21 | 1.01 | 0.25 | 0.69 |
| | | | | | | |
| Age | 46 | 46 | 46 | 46 | 46 | 46 |
| Baseline CDPS score | 2.77 | 2.87 | 2.81 | 2.38 | 2.28 | 2.34 |
| Months of enrollment | 10.2 | 10.4 | 10.3 | 9.7 | 9.7 | 9.7 |

Source: UCLA analysis of Medi-Cal data, July to August 2019.

Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.+Denotes surrogate metric for Project 2.2

*The following exhibits correspond to the DD analysis for metrics in Exhibit 356: Difference-in-Difference Analyses of Domain 3 Process Measures between PRIME Medi-Cal Samples*

**Exhibit 397: Number and Description of Patients in Each Group for the Metrics Presented in** Exhibit 356: **Difference-in-Difference Analyses of Domain 3 Process Measures between PRIME Medi-Cal Samples**

| 3.1.1: Avoidance of Antibiotic Treatment with Acute Bronchitis | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 4,247 | 20,356 | 24,603 | 5,830 | 28,451 | 34,281 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| Antibiotic Treatment with Acute Bronchitis | | | | | | |

| 3.1.1: Avoidance of Antibiotic Treatment with Acute Bronchitis | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| No | 49.40 | 48.10 | 49.13 | 48.49 | 47.11 | 48.01 |
| Yes | 50.60 | 51.90 | 50.87 | 51.51 | 52.89 | 51.99 |
| Female | | | | | | |
| Male | 28.24 | 32.23 | 29.05 | 29.21 | 25.81 | 28.03 |
| Female | 71.76 | 67.77 | 70.95 | 70.79 | 74.19 | 71.97 |
| Race/ethnicity | | | | | | |
| White | 28.03 | 27.92 | 28.01 | 30.74 | 44.37 | 35.46 |
| Black | 16.28 | 16.50 | 16.33 | 15.43 | 10.49 | 13.72 |
| Hispanic | 34.26 | 34.12 | 34.23 | 34.10 | 29.07 | 32.36 |
| API | 10.02 | 9.50 | 9.91 | 8.47 | 4.08 | 6.95 |
| Other | 11.41 | 11.95 | 11.52 | 11.26 | 11.98 | 11.51 |
| Language Speaking | | | | | | |
| All Chinese | 0.95 | 0.88 | 0.93 | -- | -- | -- |
| English | 73.96 | 75.20 | 74.22 | 76.29 | 84.33 | 79.07 |
| Other | 3.15 | 2.35 | 2.99 | 2.64 | 1.05 | 2.09 |
| Spanish | 17.34 | 18.09 | 17.50 | 16.35 | 12.10 | 14.88 |
| Unknown | 2.11 | 2.47 | 2.19 | 1.93 | 2.43 | 2.11 |
| Vietnamese | 2.48 | 1.02 | 2.18 | -- | -- | -- |
| | | | | | | |
| Age | 46 | 47 | 46 | 45 | 44 | 45 |
| Baseline CDPS score | 1.58 | 1.90 | 1.64 | 1.51 | 1.55 | 1.53 |
| Months of enrollment | 10 | 10 | 10 | 10 | 10 | 10 |

Source: UCLA analysis of Medi-Cal data, July to August 2019.
Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.

**Exhibit 398: Number and Description of Patients in Each Group for the Metrics Presented in** Exhibit 356: **Difference-in-Difference Analyses of Domain 3 Process Measures between PRIME Medi-Cal Samples**

| 3.2.1–Headache Imaging | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 11,369 | 33,825 | 45,194 | 11,184 | 48,959 | 60,143 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Headache imaging** | | | | | | |
| **No** | 74.20 | 71.13 | 73.34 | 73.35 | 69.30 | 71.76 |
| **Yes** | 25.80 | 28.87 | 26.66 | 26.65 | 30.70 | 28.24 |
| **Female** | | | | | | |
| **Male** | 21.50 | 25.48 | 22.62 | 22.60 | 21.83 | 22.30 |
| **Female** | 78.50 | 74.52 | 77.38 | 77.40 | 78.17 | 77.70 |
| **Race/ethnicity** | | | | | | |
| **White** | 27.12 | 23.23 | 26.02 | 28.29 | 39.73 | 32.77 |
| **Black** | 11.96 | 12.29 | 12.05 | 11.59 | 7.10 | 9.83 |
| **Hispanic** | 40.19 | 42.40 | 40.81 | 41.46 | 37.21 | 39.80 |
| **API** | 8.61 | 10.02 | 9.01 | 7.19 | 4.80 | 6.25 |
| **Other** | 12.12 | 12.05 | 12.10 | 11.48 | 11.16 | 11.35 |
| **Language Speaking** | | | | | | |
| **All Chinese** | 1.03 | 0.86 | 0.98 | -- | -- | -- |
| **English** | 69.38 | 65.71 | 68.34 | 70.23 | 75.98 | 72.48 |
| **Other** | 3.67 | 3.86 | 3.73 | -- | -- | -- |
| **Spanish** | 23.04 | 27.16 | 24.20 | 23.14 | 20.16 | 21.97 |
| **Unknown** | 1.45 | 1.49 | 1.46 | 1.29 | 1.87 | 1.52 |
| **Vietnamese** | 1.42 | 0.93 | 1.28 | -- | -- | -- |
| | | | | | | |
| **Age** | **42** | **43** | **42** | **41** | **42** | **41** |
| **Baseline CDPS score** | **1.55** | 1.68 | 1.58 | 1.45 | 1.46 | 1.45 |

| 3.2.1–Headache Imaging | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| **Months of enrollment** | **9.8** | 9.7 | 9.8 | 9.4 | 9.3 | 9.4 |

Source: UCLA analysis of Medi-Cal data, July to August 2019.
Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.

**Exhibit 399: Number and Description of Patients in Each Group for the Metrics Presented in Exhibit 356: Difference-in-Difference Analyses of Domain 3 Process Measures between PRIME Medi-Cal Samples**

| 3.2.4 Inappropriate low back pain imaging | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| | 12,365 | 46,056 | 58,421 | 12,327 | 63,233 | 75,560 |
| | % Col | % Col | % Col | % Col | % Col | % Col |
| **Back pain imaging** | | | | | | |
| **No** | 60.01 | 56.45 | 59.17 | 58.59 | 59.18 | 58.79 |
| **Yes** | 39.99 | 43.55 | 40.83 | 41.41 | 40.82 | 41.21 |
| **Female** | | | | | | |
| **Male** | 32.28 | 32.65 | 32.37 | 33.17 | 30.57 | 32.32 |
| **Female** | 67.72 | 67.35 | 67.63 | 66.83 | 69.43 | 67.68 |
| **Race/ethnicity** | | | | | | |
| **White** | 32.60 | 29.98 | 31.98 | 32.85 | 42.88 | 36.15 |
| **Black** | 16.71 | 16.44 | 16.64 | 15.85 | 9.95 | 13.91 |
| **Hispanic** | 29.86 | 31.02 | 30.13 | 31.98 | 30.62 | 31.53 |
| **API** | 7.61 | 9.90 | 8.15 | 6.52 | 4.37 | 5.81 |
| **Other** | 13.22 | 12.66 | 13.09 | 12.80 | 12.18 | 12.59 |
| **Language Speaking** | | | | | | |
| **All Chinese** | 1.25 | 1.20 | 1.24 | 1.07 | 0.14 | 0.77 |
| **English** | 76.51 | 74.22 | 75.97 | 76.21 | 79.62 | 77.33 |
| **Other** | 4.34 | 4.09 | 4.28 | 4.01 | 2.03 | 3.36 |

| 3.2.4 Inappropriate low back pain imaging | DPH PRIME | DPH Comparison | Total | DMPH PRIME | DMPH Comparison | Total |
|---|---|---|---|---|---|---|
| **Spanish** | 15.13 | 17.23 | 15.63 | 16.24 | 15.88 | 16.12 |
| **Unknown** | 1.67 | 2.34 | 1.83 | 1.60 | 2.09 | 1.76 |
| **Vietnamese** | 1.10 | 0.92 | 1.06 | 0.87 | 0.24 | 0.66 |
| | | | | | | |
| **Age** | 50 | 51 | 50 | 49 | 49 | 49 |
| **Baseline CDPS score** | 1.79 | 1.81 | 1.79 | 1.72 | 1.76 | 1.74 |
| **Months of enrollment** | 10.6 | 10.5 | 10.6 | 10.2 | 10.1 | 10.2 |

*Source: UCLA analysis of Medi-Cal data, July to August 2019.*

*Notes: N: number of total patients analyzed for metric, DPH: designated public hospital, DMPH: district and municipal public hospital.*

# Appendix G. Project-Specific Survey Results

**Exhibit 400: Motivators for Choosing PRIME Projects**

| Project | Hospital Type | Synergy with existing projects | Consistency with organizational goals | Availability of champions and opinion leaders | Ease of implementation | Low resource requirements |
|---|---|---|---|---|---|---|
| Project 1.1 | DPH, n=17* | 88% | 94% | 82% | 12% | 0% |
| | DMPH/CAH, n=5 | 20% | 80% | 40% | 60% | 0% |
| Project 1.2 | DPH, n=17* | 82% | 94% | 76% | 24% | 0% |
| | DMPH/CAH, n=5 | 0% | 60% | 0% | 0% | 0% |
| Project 1.3 | DPH, n=17* | 82% | 94% | 76% | 6% | 0% |
| | DMPH/CAH, n=2 | 100% | 100% | 0% | 0% | 0% |
| Project 1.4 | DPH, n=5 | 80% | 100% | 60% | 0% | 0% |
| | DMPH/CAH, n=6 | 50% | 50% | 50% | 67% | 50% |
| Project 1.5 | DPH, n=7 | 71% | 71% | 57% | 43% | 29% |
| | DMPH/CAH, n=8 | 75% | 88% | 75% | 50% | 25% |
| Project 1.6 | DPH, n=5 | 100% | 100% | 80% | 60% | 20% |
| | DMPH/CAH, n=5 | 40% | 40% | 20% | 80% | 20% |
| Project 1.7 | DPH, n=2 | 100% | 100% | 100% | 0% | 0% |
| | DMPH/CAH, n=8 | 38% | 88% | 50% | 75% | 25% |
| Project 2.1 | DPH, n=16* | 88% | 88% | 81% | 13% | 0% |
| | DMPH/CAH, n=4 | 100% | 100% | 100% | 50% | 0% |
| Project 2.2 | DPH, n=17* | 94% | 94% | 59% | 6% | 0% |
| | DMPH/CAH, n=13 | 46% | 85% | 38% | 15% | 8% |
| Project 2.3 | DPH, n=17* | 82% | 88% | 53% | 12% | 0% |
| | DMPH/CAH, n=9 | 67% | 67% | 22% | 11% | 11% |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Project 2.6** | DPH, n=9 | 100% | 89% | 89% | 33% | 0% |
| | DMPH/CAH, n=5 | 80% | 80% | 40% | 0% | 20% |
| **Project 2.7** | DPH, n=5 | 80% | 100% | 60% | 0% | 0% |
| | DMPH/CAH, n=5 | 50% | 100% | 50% | 0% | 0% |
| **Project 3.1** | DPH, n=5 | 100% | 100% | 80% | 0% | 20% |
| | DMPH/CAH, n=7 | 71% | 86% | 29% | 29% | 14% |
| **Project 3.2** | DPH, n=5 | 80% | 100% | 100% | 0% | 20% |
| | DMPH/CAH, n=3 | 0% | 33% | 0% | 33% | 33% |
| **Project 3.3** | DPH, n=7 | 57% | 100% | 43% | 14% | 14% |
| | DMPH/CAH, n=1 | 0% | 0% | 0% | 0% | 0% |
| **Project 3.4** | DPH, n=2 | 100% | 100% | 50% | 0% | 0% |
| | DMPH/CAH, n=3 | 67% | 67% | 33% | 67% | 100% |

*Source: Interim PRIME survey, data received April to May 2018.*

*\*Note: Although DPHs were required to choose Projects 1.1, 1.2, 1.3, 2.1, 2.2, and 2.3, they were asked to report whether these characteristics applied to those projects. Percentages represent proportion of hospitals of each type (DPH, DMPH/CAH) who noted project participation in interim survey.*

**Exhibit 401: Reasons for Not Choosing Projects**

| Project | Hospital Type | Lack of resources/ funding/ staffing | Lack of health information technology | Already performed well in this area | Not identified as problem/ not examined | Not aligned w/ organizational goals | Low priority |
|---|---|---|---|---|---|---|---|
| Project 1.1 | DPH, n=0 | N/A | N/A | N/A | N/A | N/A | N/A |
| | DMPH/CAH, n=30 | 57% | 3% | 0% | 23% | 7% | 3% |
| Project 1.2 | DPH, n=0 | N/A | N/A | N/A | N/A | N/A | N/A |
| | DMPH/CAH, n=30 | 37% | 0% | 3% | 33% | 10% | 3% |
| Project 1.3 | DPH, n=0 | N/A | N/A | N/A | N/A | N/A | N/A |
| | DMPH/CAH, n=33 | 42% | 6% | 0% | 36% | 9% | 3% |
| Project 1.4 | DPH, n=12 | 8% | 0% | 25% | 25% | 25% | 8% |
| | DMPH/CAH, n=29 | 41% | 10% | 7% | 31% | 7% | 0% |
| Project 1.5 | DPH, n=10 | 20% | 0% | 0% | 30% | 10% | 0% |
| | DMPH/CAH, n=27 | 37% | 7% | 7% | 37% | 4% | 4% |
| Project 1.6 | DPH, n=12 | 8% | 8% | 17% | 42% | 8% | 0% |
| | DMPH/CAH, n=30 | 43% | 7% | 3% | 33% | 13% | 0% |
| Project 1.7 | DPH, n=15 | 13% | 7% | 0% | 40% | 13% | 7% |
| | DMPH/CAH, n=27 | 44% | 4% | 7% | 30% | 4% | 7% |
| Project 2.1 | DPH, n=1* | 0% | 0% | 0% | 0% | 0% | 0% |
| | DMPH/CAH, n=31 | 39% | 3% | 16% | 39% | 6% | 6% |
| Project 2.2 | DPH, n=0 | N/A | N/A | N/A | N/A | N/A | N/A |
| | DMPH/CAH, n=22 | 36% | 5% | 0% | 36% | 5% | 0% |
| Project 2.3 | DPH, n=0 | N/A | N/A | N/A | N/A | N/A | N/A |
| | DMPH/CAH, n=26 | 54% | 8% | 0% | 31% | 4% | 0% |
| Project 2.6 | DPH, n=30 | 25% | 0% | 0% | 38% | 13% | 0% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | DMPH/CAH, n=8 | 50% | 0% | 0% | 30% | 7% | 3% |
| **Project 2.7** | DPH, n=12 | 25% | 0% | 0% | 25% | 8% | 8% |
| | DMPH/CAH, n=27 | 52% | 4% | 0% | 30% | 4% | 11% |
| **Project 3.1** | DPH, n=12 | 0% | 8% | 33% | 25% | 0% | 0% |
| | DMPH/CAH, n=28 | 32% | 4% | 11% | 36% | 4% | 0% |
| **Project 3.2** | DPH, n=12 | 17% | 17% | 0% | 33% | 8% | 8% |
| | DMPH/CAH, n=32 | 41% | 3% | 9% | 44% | 6% | 3% |
| **Project 3.3** | DPH, n=10 | 10% | 0% | 20% | 40% | 0% | 10% |
| | DMPH/CAH, n=34 | 41% | 6% | 6% | 35% | 6% | 0% |
| **Project 3.4** | DPH, n=15 | 20% | 0% | 13% | 33% | 0% | 0% |
| | DMPH/CAH, n=32 | 34% | 0% | 9% | 41% | 0% | 0% |

*Source: Interim PRIME survey, data received April to May 2018.*

*Note: Percentages represent proportion of hospitals of each type (DPH, DMPH/CAH) who noted non-participation in respective projects in interim survey.*

*\*One DPH (San Mateo) noted non-participation in required Project 2.1 due to low denominator.*

## Exhibit 402: Modification or Expansion of Projects

| Project | Hospital Type | Expansion to additional clinics | Expansion to additional departments | Different scope | Different / new goals | Different/ new populations | Different measures / metrics | Entirely new project |
|---|---|---|---|---|---|---|---|---|
| Project 1.1 | DPH, n=17 | 65% | 29% | 35% | 65% | 24% | 53% | 35% |
| | DMPH/CAH, n=5 | 20% | 20% | 20% | 0% | 20% | 0% | 40% |
| Project 1.2 | DPH, n=17 | 65% | 41% | 53% | 47% | 29% | 59% | 24% |
| | DMPH/CAH, n=5 | 20% | 0% | 0% | 0% | 20% | 0% | 20% |
| Project 1.3 | DPH, n=17 | 53% | 41% | 29% | 47% | 29% | 41% | 18% |
| | DMPH/CAH, n=2 | 50% | 50% | 0% | 50% | 0% | 50% | 0% |
| Project 1.4 | DPH, n=5 | 0% | 0% | 40% | 20% | 20% | 20% | 40% |
| | DMPH/CAH, n=6 | 33% | 33% | 17% | 0% | 33% | 17% | 33% |
| Project 1.5 | DPH, n=7 | 43% | 14% | 29% | 57% | 29% | 57% | 14% |
| | DMPH/CAH, n=8 | 25% | 38% | 0% | 25% | 13% | 25% | 0% |
| Project 1.6 | DPH, n=5 | 40% | 20% | 80% | 60% | 20% | 20% | 0% |
| | DMPH/CAH, n=5 | 80% | 60% | 0% | 0% | 20% | 0% | 20% |
| Project 1.7 | DPH, n=2 | 50% | 50% | 0% | 50% | 0% | 0% | 0% |
| | DMPH/CAH, n=8 | 0% | 38% | 25% | 50% | 38% | 13% | 25% |
| Project 2.1 | DPH, n=16 | 25% | 19% | 13% | 38% | 13% | 38% | 25% |
| | DMPH/CAH, n=4 | 0% | 25% | 50% | 25% | 0% | 25% | 50% |
| Project 2.2 | DPH, n=17 | 24% | 35% | 18% | 41% | 24% | 41% | 18% |
| | DMPH/CAH, n=13 | 15% | 46% | 8% | 8% | 23% | 31% | 15% |
| Project 2.3 | DPH, n=17 | 35% | 35% | 35% | 18% | 53% | 35% | 12% |
| | DMPH/CAH, n=9 | 22% | 44% | 11% | 11% | 22% | 0% | 11% |
| | DPH, n=9 | 78% | 56% | 22% | 33% | 11% | 22% | 11% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Project 2.6** | DMPH/CAH, n=5 | 20% | 20% | 40% | 40% | 0% | 20% | 0% |
| **Project 2.7** | DPH, n=5 | 60% | 80% | 20% | 20% | 60% | 80% | 20% |
| | DMPH/CAH, n=5 | 40% | 40% | 20% | 40% | 20% | 40% | 40% |
| **Project 3.1** | DPH, n=5 | 20% | 20% | 20% | 20% | 20% | 60% | 0% |
| | DMPH/CAH, n=7 | 29% | 29% | 14% | 29% | 14% | 0% | 29% |
| **Project 3.2** | DPH, n=5 | 0% | 0% | 20% | 20% | 0% | 20% | 60% |
| | DMPH/CAH, n=3 | 33% | 0% | 0% | 0% | 0% | 0% | 33% |
| **Project 3.3** | DPH, n=7 | 29% | 29% | 43% | 14% | 14% | 43% | 14% |
| | DMPH/CAH, n=1 | 0% | 0% | 100% | 0% | 0% | 0% | 0% |
| **Project 3.4** | DPH, n=2 | 0% | 0% | 0% | 100% | 0% | 100% | 0% |
| | DMPH/CAH, n=3 | 0% | 0% | 33% | 0% | 33% | 33% | 33% |

*Source: Interim PRIME survey, data received April to May 2018.*

*Note: Percentages represent proportion of hospitals of each type (DPH, DMPH/CAH) who noted project participation in interim survey.*

**Exhibit 403: Level of Effort in Implementing PRIME Projects (range 1-10, with higher values indicating higher difficulty)**

| Project | Entity Type | Effort to Implement | Resources to Implement | Staff Training | Personnel Reorganization | Revision or Modification of Project | Effort to Engage Internal Stakeholders | Effort due to unanticipated change in metrics | Overall level of difficulty |
|---|---|---|---|---|---|---|---|---|---|
| Project 1.1 | DPH, n=17 | 8.2 | 8.1 | 7.6 | 4.6 | 4.8 | 7.2 | 6.5 | 6.9 |
| | DMPH, n=2 | 8.5 | 8.0 | 6.0 | 5.5 | 7.0 | 8.0 | 7.0 | 9.0 |
| | CAH, n=3 | 7.7 | 8.0 | 5.7 | 7.7 | 5.3 | 7.3 | 6.0 | 7.3 |
| Project 1.2 | DPH, n=17 | 8.1 | 6.9 | 7.9 | 5.3 | 5.5 | 7.5 | 4.9 | 6.8 |
| | DMPH, n=3 | 8.3 | 8.7 | 7.0 | 6.0 | 6.0 | 8.7 | 7.3 | 9.0 |
| | CAH, n=2 | 10.0 | 7.0 | 6.0 | 7.0 | 5.5 | 8.5 | 2.5 | 9.0 |
| Project 1.3 | DPH, n=17 | 7.3 | 7.2 | 6.6 | 5.2 | 5.5 | 6.8 | 4.9 | 7.0 |
| | DMPH, n=2 | 8.0 | 7.0 | 6.5 | 4.0 | 7.0 | 6.5 | 10.0 | 8.0 |
| Project 1.4 | DPH, n=5 | 5.6 | 6.0 | 4.8 | 3.8 | 4.0 | 3.6 | 4.8 | 5.4 |
| | DMPH, n=4 | 8.0 | 7.8 | 7.8 | 8.3 | 6.5 | 8.0 | 6.0 | 8.0 |
| | CAH, n=2 | 6.5 | 8.5 | 6.5 | 8.5 | 5.5 | 4.0 | 7.5 | 8.0 |
| Project 1.5 | DPH, n=7 | 7.6 | 7.3 | 7.4 | 4.9 | 5.0 | 5.6 | 4.0 | 6.0 |
| | DMPH, n=5 | 6.0 | 4.0 | 5.8 | 2.6 | 3.4 | 6.0 | 4.2 | 5.0 |
| | CAH, n=3 | 9.0 | 9.3 | 9.3 | 6.3 | 8.0 | 7.0 | 10.0 | 9.3 |
| Project 1.6 | DPH, n=5 | 6.6 | 5.4 | 6.2 | 4.0 | 5.8 | 6.2 | 3.6 | 6.0 |
| | DMPH, n=2 | 5.0 | 5.0 | 5.0 | 4.0 | 3.5 | 5.5 | 4.5 | 4.5 |
| | CAH, n=3 | 8.7 | 8.7 | 7.7 | 6.7 | 6.7 | 3.3 | 9.0 | 8.3 |
| Project 1.7 | DPH, n=2 | 5.0 | 3.5 | 5.5 | 5.0 | 1.5 | 3.0 | 2.0 | 4.0 |
| | DMPH, n=7 | 7.7 | 7.7 | 7.3 | 5.4 | 5.7 | 7.0 | 5.0 | 7.4 |
| | CAH, n=1 | 8.0 | 8.0 | 8.0 | 8.0 | 3.0 | 8.0 | 8.0 | 8.0 |
| Project 2.1 | DPH, n=16 | 8.2 | 8.2 | 7.9 | 4.2 | 5.5 | 6.4 | 5.8 | 6.0 |
| | DMPH, n=4 | 9.0 | 8.5 | 8.0 | 5.3 | 4.0 | 9.3 | 6.3 | 7.0 |
| Project 2.2 | DPH, n=17 | 7.9 | 8.1 | 6.6 | 5.1 | 4.8 | 7.2 | 4.1 | 8.2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | DMPH, n=12 | 7.3 | 6.2 | 5.3 | 4.6 | 6.1 | 7.1 | 6.6 | 6.8 |
| | CAH, n=1 | 8.0 | 8.0 | 10.0 | 10.0 | 10.0 | 9.0 | 9.0 | 10.0 |
| Project 2.3 | DPH, n=17 | 7.5 | 7.5 | 6.6 | 5.1 | 4.5 | 6.8 | 4.4 | 6.6 |
| | DMPH, n=9 | 6.2 | 5.7 | 5.8 | 5.1 | 5.7 | 6.3 | 5.8 | 6.3 |
| Project 2.6 | DPH, n=9 | 7.6 | 6.6 | 6.3 | 4.0 | 5.7 | 7.0 | 3.6 | 6.3 |
| | DMPH, n=1 | 8.0 | 8.0 | 8.0 | 6.0 | 6.0 | 9.0 | 8.0 | 7.0 |
| | CAH, n=4 | 8.5 | 7.3 | 7.5 | 7.0 | 8.0 | 8.3 | 6.8 | 7.8 |
| Project 2.7 | DPH, n=5 | 7.6 | 8.2 | 6.6 | 5.6 | 5.8 | 7.0 | 7.4 | 8.0 |
| | DMPH, n=8 | 8.3 | 6.5 | 6.4 | 5.5 | 5.1 | 6.9 | 5.1 | 7.6 |
| Project 3.1 | DPH, n=5 | 6.0 | 5.2 | 3.8 | 2.2 | 3.2 | 4.4 | 3.4 | 4.2 |
| | DMPH, n=6 | 6.7 | 7.3 | 7.2 | 4.3 | 5.7 | 6.0 | 7.2 | 6.2 |
| | CAH, n=1 | 10.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 |
| Project 3.2 | DPH, n=5 | 7.6 | 8.2 | 6.6 | 5.6 | 5.8 | 7.0 | 7.4 | 8.0 |
| | DMPH, n=3 | 10.0 | 7.3 | 9.3 | 6.3 | 5.7 | 10.0 | 10.0 | 6.7 |
| Project 3.3 | DPH, n=7 | 8.4 | 7.6 | 5.6 | 4.7 | 5.7 | 7.1 | 5.4 | 7.7 |
| | DMPH, n=1 | 10.0 | 8.0 | 3.0 | 7.0 | 10.0 | 8.0 | 7.0 | 10.0 |
| Project 3.4 | DPH, n=2 | 6.5 | 6.5 | 5.5 | 2.0 | 2.5 | 9.5 | 1.5 | 8.5 |
| | DMPH, n=3 | 7.0 | 5.7 | 7.3 | 4.7 | 5.0 | 6.7 | 4.7 | 6.0 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

*Notes: Values represent average rating of effort level among hospitals of each type (DPH, DMPH non-CAH, DMPH CAH) who noted project participation in interim survey. Effort ratings were categorized as low (1.0 to 3.9), medium (4.0 to 6.9), and high (7.0 to 10.0).*

**Exhibit 404: Top Data-Related Challenges to Implementing PRIME Projects among Participating Hospitals**

| Project | Ranking | IT infrastructure/ EHR lacks data query, tracking, or reporting functions | Variation in documentation within system by providers and staff | Variation in system due to multiple EHRs/IT systems | Requires manual tracking or chart review |
|---|---|---|---|---|---|
| Project 1.1, n=22 | **Most Challenging** | 55% | 36% | 5% | 5% |
| | 2nd Most Challenging | 23% | 36% | 9% | 18% |
| Project 1.2, n=22 | **Most Challenging** | 50% | 36% | 14% | 5% |
| | 2nd Most Challenging | 32% | 36% | 5% | 14% |
| Project 1.3, n=19 | **Most Challenging** | 53% | 37% | 0% | 5% |
| | 2nd Most Challenging | 21% | 26% | 16% | 26% |
| Project 1.4, n=11 | **Most Challenging** | 73% | 9% | 0% | 18% |
| | 2nd Most Challenging | 0% | 45% | 9% | 36% |
| Project 1.5, n=15 | **Most Challenging** | 67% | 13% | 7% | 13% |
| | 2nd Most Challenging | 20% | 53% | 13% | 13% |
| Project 1.6, n=10 | **Most Challenging** | 40% | 20% | 20% | 10% |
| | 2nd Most Challenging | 10% | 10% | 10% | 40% |
| Project 1.7, n=10 | **Most Challenging** | 40% | 30% | 10% | 20% |
| | 2nd Most Challenging | 20% | 30% | 10% | 30% |
| Project 2.1, n=20 | **Most Challenging** | 40% | 30% | 5% | 15% |
| | 2nd Most Challenging | 5% | 35% | 20% | 30% |
| Project 2.2, n=30 | **Most Challenging** | 53% | 23% | 10% | 20% |
| | 2nd Most Challenging | 13% | 20% | 27% | 23% |
| Project 2.3, n=28 | **Most Challenging** | 64% | 21% | 7% | 0% |
| | 2nd Most Challenging | 7% | 18% | 32% | 18% |
| Project 2.6, n=14 | **Most Challenging** | 57% | 29% | 7% | 7% |

| Project | Ranking | IT infrastructure/ EHR lacks data query, tracking, or reporting functions | Variation in documentation within system by providers and staff | Variation in system due to multiple EHRs/IT systems | Requires manual tracking or chart review |
|---|---|---|---|---|---|
| | 2nd Most Challenging | 14% | 50% | 7% | 29% |
| Project 2.7, n=13 | **Most Challenging** | 54% | 31% | 0% | 23% |
| | 2nd Most Challenging | 0% | 15% | 23% | 46% |
| Project 3.1, n=12 | **Most Challenging** | 83% | 8% | 8% | 0% |
| | 2nd Most Challenging | 0% | 17% | 17% | 50% |
| Project 3.2, n=8 | **Most Challenging** | 25% | 25% | 13% | 38% |
| | 2nd Most Challenging | 0% | 13% | 25% | 25% |
| Project 3.3, n=8 | **Most Challenging** | 50% | 0% | 38% | 0% |
| | 2nd Most Challenging | 13% | 25% | 25% | 25% |
| Project 3.4, n=5 | **Most Challenging** | 20% | 40% | 0% | 20% |
| | 2nd Most Challenging | 60% | 0% | 0% | 0% |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

**Exhibit 405: Top Data-Related Solutions to Implementing PRIME Projects among Participating Hospitals**

| Project | Ranking of Solution | EHR/IT Standardization or expansion across system | Standardized processes for documentation by providers & staff | Implement standardized tools/ screening | Develop/ clarify operational definitions or systems | Provider and staff training/ increased capacity | Planning/ process development from management or QI |
|---|---|---|---|---|---|---|---|
| Project 1.1, n=22 | **Most Successful** | 36% | 32% | 18% | 5% | 5% | 0% |
| | 2nd Most Successful | 5% | 27% | 23% | 0% | 14% | 14% |
| Project 1.2, n=22 | **Most Successful** | 55% | 18% | 23% | 5% | 5% | 5% |
| | 2nd Most Successful | 0% | 27% | 32% | 0% | 9% | 18% |
| Project 1.3, n=19 | **Most Successful** | 47% | 32% | 0% | 5% | 5% | 5% |
| | 2nd Most Successful | 0% | 26% | 26% | 21% | 0% | 26% |
| Project 1.4, n=11 | **Most Successful** | 36% | 27% | 9% | 0% | 0% | 9% |
| | 2nd Most Successful | 0% | 18% | 36% | 0% | 27% | 0% |
| Project 1.5, n=15 | **Most Successful** | 53% | 20% | 0% | 0% | 7% | 0% |
| | 2nd Most Successful | 7% | 13% | 7% | 0% | 20% | 7% |
| Project 1.6, n=10 | **Most Successful** | 20% | 40% | 0% | 10% | 20% | 0% |

| Project | Ranking of Solution | EHR/IT Standardization or expansion across system | Standardized processes for documentation by providers & staff | Implement standardized tools/ screening | Develop/ clarify operational definitions or systems | Provider and staff training/ increased capacity | Planning/ process development from management or QI |
|---|---|---|---|---|---|---|---|
| | 2nd Most Successful | 10% | 10% | 30% | 0% | 30% | 0% |
| Project 1.7, n=10 | **Most Successful** | 40% | 10% | 10% | 0% | 10% | 0% |
| | 2nd Most Successful | 0% | 20% | 10% | 0% | 10% | 30% |
| Project 2.1, n=20 | **Most Successful** | 25% | 20% | 20% | 10% | 5% | 0% |
| | 2nd Most Successful | 0% | 25% | 10% | 30% | 5% | 5% |
| Project 2.2, n=30 | **Most Successful** | 17% | 43% | 13% | 3% | 10% | 0% |
| | 2nd Most Successful | 3% | 27% | 3% | 7% | 7% | 17% |
| Project 2.3, n=28 | **Most Successful** | 46% | 21% | 4% | 0% | 0% | 0% |
| | 2nd Most Successful | 7% | 32% | 7% | 7% | 0% | 7% |
| Project 2.6, n=14 | **Most Successful** | 43% | 36% | 0% | 7% | 0% | 7% |
| | 2nd Most Successful | 14% | 29% | 14% | 7% | 0% | 0% |
| Project 2.7, n=13 | **Most Successful** | 23% | 15% | 23% | 15% | 0% | 8% |

| Project | Ranking of Solution | EHR/IT Standardization or expansion across system | Standardized processes for documentation by providers & staff | Implement standardized tools/ screening | Develop/ clarify operational definitions or systems | Provider and staff training/ increased capacity | Planning/ process development from management or QI |
|---|---|---|---|---|---|---|---|
| | 2nd Most Successful | 0% | 15% | 8% | 8% | 23% | 8% |
| Project 3.1, n=12 | Most Successful | 33% | 17% | 17% | 8% | 8% | 0% |
| | 2nd Most Successful | 8% | 17% | 0% | 0% | 17% | 0% |
| Project 3.2, n=8 | Most Successful | 25% | 25% | 13% | 13% | 13% | 0% |
| | 2nd Most Successful | 0% | 13% | 0% | 0% | 13% | 13% |
| Project 3.3, n=8 | Most Successful | 38% | 13% | 13% | 0% | 0% | 0% |
| | 2nd Most Successful | 0% | 13% | 0% | 13% | 0% | 13% |
| Project 3.4, n=5 | Most Successful | 0% | 60% | 0% | 0% | 20% | 0% |
| | 2nd Most Successful | 0% | 0% | 0% | 20% | 0% | 0% |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

**Exhibit 406: Top Metric-related Challenges to Implementing PRIME Projects among Participating Hospitals**

| Project | Ranking | Already performing at high level | Inadequate availability of services | Processes not established system-wide | Inadequate documentation processes for patient outcomes | Siloed departments/ difficulty collaborating | Small denominator or numerator | Staff turnover |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Project 1.1, n=22 | **Most Challenging** | 5% | 14% | 45% | 18% | 14% | 0% | 14% |
| | 2nd Most Challenging | 0% | 5% | 23% | 32% | 9% | 5% | 5% |
| Project 1.2, n=22 | **Most Challenging** | 5% | 18% | 55% | 27% | 5% | 5% | 5% |
| | 2nd Most Challenging | 14% | 9% | 18% | 18% | 14% | 0% | 5% |
| Project 1.3, n=19 | **Most Challenging** | 0% | 16% | 42% | 11% | 26% | 0% | 0% |
| | 2nd Most Challenging | 0% | 16% | 32% | 11% | 21% | 0% | 11% |
| Project 1.4, n=11 | **Most Challenging** | 9% | 18% | 27% | 18% | 9% | 0% | 0% |
| | 2nd Most Challenging | 9% | 9% | 18% | 0% | 27% | 27% | 9% |
| Project 1.5, n=15 | **Most Challenging** | 13% | 7% | 33% | 27% | 0% | 7% | 7% |
| | 2nd Most Challenging | 7% | 27% | 13% | 20% | 27% | 0% | 7% |
| Project 1.6, n=10 | **Most Challenging** | 10% | 30% | 30% | 10% | 0% | 0% | 10% |
| | 2nd Most Challenging | 0% | 10% | 10% | 30% | 0% | 20% | 20% |

| Project | Ranking | Already performing at high level | Inadequate availability of services | Processes not established system-wide | Inadequate documentation processes for patient outcomes | Siloed departments/ difficulty collaborating | Small denominator or numerator | Staff turnover |
|---------|---------|----------|----------|----------|----------|----------|----------|----------|
| Project 1.7, n=10 | **Most Challenging** | 10% | 10% | 30% | 10% | 0% | 20% | 0% |
| | 2nd Most Challenging | 0% | 20% | 0% | 20% | 30% | 10% | 10% |
| Project 2.1, n=20 | **Most Challenging** | 25% | 15% | 10% | 15% | 15% | 10% | 10% |
| | 2nd Most Challenging | 15% | 20% | 25% | 0% | 0% | 10% | 0% |
| Project 2.2, n=30 | **Most Challenging** | 3% | 37% | 40% | 13% | 0% | 7% | 0% |
| | 2nd Most Challenging | 3% | 10% | 20% | 10% | 33% | 0% | 17% |
| Project 2.3, n=28 | **Most Challenging** | 11% | 29% | 29% | 11% | 4% | 0% | 4% |
| | 2nd Most Challenging | 4% | 14% | 7% | 14% | 32% | 4% | 0% |
| Project 2.6, n=14 | **Most Challenging** | 0% | 29% | 50% | 7% | 0% | 7% | 0% |
| | 2nd Most Challenging | 7% | 14% | 29% | 21% | 21% | 0% | 0% |
| Project 2.7, n=13 | **Most Challenging** | 0% | 38% | 23% | 8% | 15% | 23% | 0% |
| | 2nd Most Challenging | 0% | 0% | 23% | 15% | 0% | 23% | 8% |

| Project | Ranking | Already performing at high level | Inadequate availability of services | Processes not established system-wide | Inadequate documentation processes for patient outcomes | Siloed departments/ difficulty collaborating | Small denominator or numerator | Staff turnover |
|---|---|---|---|---|---|---|---|---|
| Project 3.1, n=12 | **Most Challenging** | 25% | 8% | 42% | 8% | 8% | 0% | 0% |
| | 2nd Most Challenging | 8% | 0% | 17% | 8% | 17% | 8% | 17% |
| Project 3.2, n=8 | **Most Challenging** | 25% | 0% | 25% | 0% | 25% | 0% | 0% |
| | 2nd Most Challenging | 0% | 0% | 25% | 0% | 25% | 0% | 0% |
| Project 3.3, n=8 | **Most Challenging** | 0% | 13% | 50% | 13% | 0% | 0% | 0% |
| | 2nd Most Challenging | 0% | 0% | 0% | 13% | 25% | 25% | 0% |
| Project 3.4, n=5 | **Most Challenging** | 20% | 0% | 0% | 0% | 20% | 20% | 0% |
| | 2nd Most Challenging | 20% | 40% | 0% | 0% | 0% | 40% | 0% |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

**Exhibit 407: Top Metric-related Solutions to Implementing PRIME Projects among Participating Hospitals**

| Project | Ranking of Solution | Enhanced outreach/ capacity to follow up with patients | Implemented provider and staff training/ increased capacity | Expanded services/ availability | Standardized processes across system | Established meetings across teams |
|---|---|---|---|---|---|---|
| Project 1.1, n=22 | Most Successful | 14% | 18% | 9% | 36% | 5% |
| | 2nd Most Successful | 5% | 14% | 0% | 23% | 27% |
| Project 1.2, n=22 | Most Successful | 45% | 14% | 9% | 41% | 9% |
| | 2nd Most Successful | 0% | 23% | 5% | 27% | 14% |
| Project 1.3, n=19 | Most Successful | 11% | 21% | 16% | 37% | 11% |
| | 2nd Most Successful | 11% | 5% | 11% | 26% | 16% |
| Project 1.4, n=11 | Most Successful | 9% | 18% | 0% | 45% | 9% |
| | 2nd Most Successful | 18% | 27% | 18% | 27% | 0% |
| Project 1.5, n=15 | Most Successful | 27% | 33% | 7% | 27% | 0% |
| | 2nd Most Successful | 0% | 27% | 13% | 33% | 13% |
| Project 1.6, n=10 | Most Successful | 60% | 20% | 0% | 20% | 0% |
| | 2nd Most Successful | 10% | 30% | 10% | 30% | 10% |
| Project 1.7, n=10 | Most Successful | 20% | 20% | 30% | 0% | 0% |
| | 2nd Most Successful | 10% | 0% | 20% | 20% | 10% |
| Project 2.1, n=20 | Most Successful | 10% | 25% | 15% | 30% | 15% |
| | 2nd Most Successful | 0% | 15% | 10% | 15% | 30% |
| Project 2.2, n=30 | Most Successful | 17% | 23% | 13% | 33% | 3% |
| | 2nd Most Successful | 3% | 23% | 3% | 13% | 33% |
| Project 2.3, n=28 | Most Successful | 14% | 18% | 21% | 25% | 4% |
| | 2nd Most Successful | 11% | 14% | 14% | 18% | 11% |
| Project 2.6, n=14 | Most Successful | 7% | 57% | 7% | 14% | 0% |
| | 2nd Most Successful | 0% | 14% | 7% | 43% | 14% |
| Project 2.7, n=13 | Most Successful | 8% | 8% | 38% | 31% | 8% |

| Project | Ranking of Solution | Enhanced outreach/ capacity to follow up with patients | Implemented provider and staff training/ increased capacity | Expanded services/ availability | Standardized processes across system | Established meetings across teams |
|---|---|---|---|---|---|---|
| | 2nd Most Successful | 0% | 15% | 15% | 8% | 0% |
| Project 3.1, n=12 | Most Successful | 0% | 50% | 17% | 8% | 8% |
| | 2nd Most Successful | 0% | 17% | 0% | 42% | 17% |
| Project 3.2, n=8 | Most Successful | 0% | 25% | 0% | 38% | 0% |
| | 2nd Most Successful | 0% | 0% | 0% | 38% | 25% |
| Project 3.3, n=8 | Most Successful | 13% | 25% | 0% | 25% | 13% |
| | 2nd Most Successful | 25% | 0% | 13% | 13% | 13% |
| Project 3.4, n=5 | Most Successful | 0% | 20% | 0% | 0% | 20% |
| | 2nd Most Successful | 0% | 20% | 0% | 0% | 0% |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

## Appendix H. Electronic Health Record Functionality in Emergency Department and Hospital Settings

### Exhibit 408: EHR Functionality in Emergency Departments

| Functionality | Implemented Prior to PRIME | Implemented During PRIME | Not Yet Implemented |
|---|---|---|---|
| Clinical results (e.g., laboratory tests) | 48 | 3 | 1 |
| Patient demographics | 48 | 3 | 1 |
| Electronic patient chart | 46 | 3 | 3 |
| Patient information documentation | 46 | 4 | 2 |
| Hospital discharge summary | 45 | 3 | 4 |
| E-prescribing or computerized provider order entry | 43 | 5 | 4 |
| Clinical support tools | 42 | 5 | 5 |
| Pop-up alerts/prompts | 41 | 8 | 3 |
| Real-time data access for frontline staff | 39 | 8 | 5 |
| Appointment scheduling | 28 | 2 | 22 |
| Inter-provider communication tools | 25 | 7 | 20 |
| Electronic registries | 23 | 5 | 24 |
| Electronic referral management | 23 | 6 | 23 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

### Exhibit 409: EHR Functionality in Hospital Settings

| Functionality | Implemented Prior to PRIME | Implemented During PRIME | Not Yet Implemented |
|---|---|---|---|
| Hospital discharge summary | 49 | 2 | 1 |
| Electronic patient chart | 48 | 3 | 1 |
| Clinical results (e.g., laboratory tests) | 48 | 3 | 1 |
| Patient demographics | 48 | 3 | 1 |
| Patient information documentation | 48 | 3 | 1 |
| E-prescribing or computerized provider order entry | 46 | 5 | 1 |
| Clinical support tools | 43 | 4 | 5 |
| Pop-up alerts/prompts | 42 | 7 | 3 |
| Appointment scheduling | 41 | 3 | 8 |
| Real-time data access for frontline staff | 39 | 8 | 5 |
| Inter-provider communication tools | 29 | 6 | 17 |
| Electronic registries | 27 | 7 | 18 |
| Electronic referral management | 27 | 7 | 18 |

*Source: UCLA analysis of the interim survey, data received April to May 2018.*

**PRIME Interim Evaluation**| Appendix H. Electronic Health Record Functionality in Emergency Department and Hospital Settings

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## Appendix I. Self-Reported Metrics Payment Methodology Progression, Achievement Value Methodology, and Results

### Metric Progression

Metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY and they progressively transitioned from P4R to P4P over the five demonstration years of PRIME (Exhibit 410). An asterisk (*) denotes that in DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. (Attachment Q). Hospitals may not have reported data if they were working on Infrastructure Building Milestones or had other constraints on data availability. In general, DMPHs did not report data in DY 11 (Exhibit 24). Blanks after the letter indicate that a project was dropped; blanks before the letter indicate that a project was added.

**Exhibit 410 Detailed Metric Progression from P4R TO P4P (DY13 YE), Domain 1**

| PRIME ID# | Measure Steward (*Innovative Metric) | NQF# | Metric Title | *DY11 | *DY12 | DY13 |
|---|---|---|---|---|---|---|
| 1.1.1.a | Oregon CCO | N/A | Alcohol and Drug Misuse (SBIRT) | R | R | R |
| 1.1.2 | *Variation Univ of Wash./Coordinated Care Initiative | N/A | Care coordinator assignment | R | R | |
| 1.1.3.d | NCQA | 0059 | Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%) | R | P | P |
| 1.1.4 | MN Community Measurement | 0710 | Depression Remission at 12 Months CMS159v4 | R | R | |
| 1.1.5.f | CMS | 0418 | Screening for Clinical Depression and follow- up | R | R | P |
| 1.1.6.t | AMA-PCPI | 0028 | Tobacco Assessment and Counseling | R | P | P |
| 1.1.7 | NCQA | N/A | Depression Remission or Response for Adolescents and Adults (DRR) | | | R |
| 1.2.1.a | Oregon CCO | N/A | Alcohol and Drug Misuse (SBIRT) | R | R | R |
| 1.2.2 | AHRQ | 0005 | CG-CAHPS: Provider Rating | R | P | P |
| 1.2.3.c | NCQA | 0034 | Colorectal Cancer Screening | R | P | P |

| PRIME ID# | Measure Steward (*Innovative Metric) | NQF# | Metric Title | DY11 | DY12 | DY13 |
|---|---|---|---|---|---|---|
| 1.2.4.d | NCQA | 0059 | Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%) | R | P | P |
| 1.2.5.b | NCQA | 0018 | Controlling Blood Pressure | R | P | P |
| 1.2.6 | *DHCS | N/A | Documented REAL and/or SOGI disparity reduction plan | | R | |
| 1.2.7.i | NCQA | 0068 | Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic | R | P | P |
| 1.2.8 | AHRQ | N/A | Prevention Quality Overall Composite #90 | R | R | R |
| 1.2.9 | *DHCS | N/A | Primary Care Redesign metrics stratified by REAL categories and SOGI | | R | |
| 1.2.10 | *DHCS | N/A | REAL and/or SO/GI disparity reduction | | | P |
| 1.2.11 | CMS | N/A | REAL data completeness | R | P | P |
| 1.2.12.f | CMS | 0418 | Screening for Clinical Depression and follow- up | R | R | P |
| 1.2.13 | CMS | N/A | SO/GI data completeness | | R | P |
| 1.2.14.t | AMA-PCPI | 0028 | Tobacco Assessment and Counseling | R | P | P |
| 1.3.1 | CMS | N/A | Closing the referral loop: receipt of specialist report (CMS504) | R | R | P |
| 1.3.2 | DHCS | N/A | DHCS All-Cause Readmissions – Statewide Collaborative QIP measure (Measure Specs - rationale in Appendix A & B) | R | P | P |
| 1.3.3 | NCQA | 0041 | Influenza Immunization | R | R | P |
| 1.3.4 | *SFHN | N/A | Post procedure ED visits | R | R | R |
| 1.3.5 | *LACDHS, SFHN | N/A | Request for Specialty Care Expertise Turnaround Time | R | R | R |
| 1.3.6 | *LACDHS, UCD | N/A | Specialty Care Touches: Specialty expertise requests managed via non-face to face specialty encounters | R | R | R |
| 1.3.7 | AMA-PCPI | 0028 | Tobacco Assessment and Counseling | R | P | P |

| PRIME ID# | Measure Steward (*Innovative Metric) | NQF# | Metric Title | DY11 | DY12 | DY13 |
|---|---|---|---|---|---|---|
| 1.4.1 | *AHS | N/A | Abnormal Results Follow-up | R | R | R |
| 1.4.2 | NCQA | 2371 | Annual Monitoring for Patients on Persistent Medications | R | P | P |
| 1.4.3 | CMS | Variation on 0555 | INR Monitoring for Individuals on Warfarin | R | R | P |
| 1.5.1.b | NCQA | 0018 | Controlling Blood Pressure | R | P | P |
| 1.5.2.i | NCQA | 0068 | Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic | R | P | P |
| 1.5.3 | CMS | N/A | PQRS # 317 Preventative Care and Screening: Screening for High Blood Pressure and Follow- Up Documented | R | R | P |
| 1.5.4.t | AMA-PCPI | 0028 | Tobacco Assessment and Counseling | R | P | P |
| 1.6.1 | *LACDHS, SFHN | N/A | BIRADS to Biopsy | R | R | R |
| 1.6.2 | NCQA | 2372 | Breast Cancer Screening | R | P | P |
| 1.6.3 | NCQA | 0032 | Cervical Cancer Screening | R | P | P |
| 1.6.4.c | NCQA | 0034 | Colorectal Cancer Screening | R | P | P |
| 1.6.5 | *SFHN | N/A | Receipt of appropriate follow-up for abnormal CRC screening | R | R | R |
| 1.7.1 | CMS | 0421 | BMI Screening and Follow-up | R | P | P |
| 1.7.2 | DHCS | N/A | Partnership for a Healthier America's Hospital Health Food Initiative external food service verification | R | P | P |
| 1.7.3 | NCQA | 0024 | Weight Assessment & Counseling for Nutrition and Physical Activity for Children & Adolescents - BMI | R | P | P |

*Notes: R indicates P4R; P indicates P4P. Blanks after the letter indicate that a project was dropped; blanks before the letter indicate that a project was added.*

**Exhibit 411 Detailed Metric Progression from P4R TO P4P (DY13 YE), Domain 2**

| PRIME ID# | Measure Steward (*Innovative Metric) | NQF# | Metric Title | DY11 | DY12 | DY13 |
|---|---|---|---|---|---|---|
| 2.1.1 | Baby-Friendly USA | N/A | Baby Friendly Hospital designation | R | P | P |
| 2.1.2 | JNC | 0480 | Exclusive Breast Milk Feeding (PC-05) | R | P | P |
| 2.1.3 | CMQCC | N/A | OB Hemorrhage: Massive Transfusion | R | R | R |
| 2.1.4 | CMQCC | N/A | OB Hemorrhage: Total Products Transfused | R | R | R |
| 2.1.5 | JNC | 0471 | PC-02 Cesarean Section | R | P | P |
| 2.1.6 | NCQA | 1517 | Prenatal and Postpartum Care | R | R | P |
| 2.1.7 | CMQCC | N/A | Severe Maternal Morbidity (SMM) per 100 women with obstetric hemorrhage | R | R | R |
| 2.1.8 | CMQCC | 0716 | Unexpected Newborn Complications | R | R | R |
| 2.1.9 | CMQCC | N/A | OB Hemorrhage Safety Bundle | R | P | P |
| 2.2.1 | DHCS | N/A | DHCS All-Cause Readmissions – Statewide Collaborative QIP measure (Measure Specs - rationale in Appendix A & B) | R | P | P |
| 2.2.2 | AHRQ | 0166 | H-CAHPS: Care Transition Metrics | R | P | P |
| 2.2.3 | NCQA | 0097 | Medication Reconciliation - 30 days | R | R | P |
| 2.2.4 | AMA-PCPI | 0646 | Reconciled Medication List Received by Discharged Patients | R | R | P |
| 2.2.5 | AMA-PCPI | 0648 | Timely Transmission of Transition Record | R | R | P |

| PRIME ID# | Measure Steward (*Innovative Metric) | NQF# | Metric Title | DY11 | DY12 | DY13 |
|---|---|---|---|---|---|---|
| 2.3.1 | *Variation of Univ of Wash. Metric | N/A | Care coordinator assignment | R | R | |
| 2.3.2 | NCQA | 0097 | Medication Reconciliation – 30 days | R | R | P |
| 2.3.3 | AHRQ | N/A | Prevention Quality Overall Composite #90 | R | R | R |
| 2.3.4 | AMA-PCPI | 0648 | Timely Transmission of Transition Record | R | R | P |
| 2.4.1 | NCQA | N/A | Adolescent Well-Care Visit | R | P | P |
| 2.4.2 | NCQA | 1448 | Developmental Screening in the First Three Years of Life | R | R | P |
| 2.4.3 | CMS | Variation on 0419 | Documentation of Current Medications in the Medical Record (0-18 yo) | R | R | R |
| 2.4.4 | CMS | 0418 | Screening for Clinical Depression and follow- up | R | R | P |
| 2.4.5 | AMA-PCPI | Variation on 0028 | Tobacco Assessment and Counseling (13 yo and older) | R | R | P |
| 2.4.6 | NCQA | 1392 | Well Child Visits - First 15 months of life | R | R | |
| 2.4.7 | NCQA | 1516 | Well Child Visits - Third, Fourth, Fifth, and Sixth Years of life | R | P | P |
| 2.4.8 | *CCRMC | N/A | Comprehensive Medical Evaluation Following Foster Youth Placement in Foster Care | | | R |
| 2.5.1 | Oregon CCO | N/A | Alcohol and Drug Misuse (SBIRT) | R | R | R |
| 2.5.2 | NCQA | 0018 | Controlling Blood Pressure | R | P | P |
| 2.5.3 | AHRQ | N/A | Prevention Quality Overall Composite #90 | R | R | R |
| 2.5.4 | CMS | 0418 | Screening for Clinical Depression and follow- up | R | R | P |
| 2.5.5 | AMA-PCPI | 0028 | Tobacco Assessment and Counseling | R | P | P |
| 2.6.1 | Oregon CCO | N/A | Alcohol and Drug Misuse (SBIRT) | R | R | R |

| PRIME ID# | Measure Steward (*Innovative Metric) | NQF# | Metric Title | DY11 | DY12 | DY13 |
|---|---|---|---|---|---|---|
| 2.6.2 | AHRQ | N/A | Assessment and management of chronic pain: patients diagnosed with chronic pain who are prescribed an opioid who have an opioid agreement form and an annual urine toxicology screen | R | R | R |
| 2.6.3 | *AHRQ/SFHN, AHS, UCSD | N/A | Patients with chronic pain on long term opioid therapy checked in PDMPs | R | R | R |
| 2.6.4 | CMS | 0418 | Screening for Clinical Depression and follow- up | R | R | P |
| 2.6.5 | *SFHN, AHS, UCSD | N/A | Treatment of Chronic Non-Malignant Pain with Multi-Modal Therapy | R | R | R |
| 2.7.1 | NCQA | 0326 | Advance Care Plan | R | R | P |
| 2.7.2 | *UCSF | N/A | Ambulatory Palliative Team Established | R | P | P |
| 2.7.3 | UNC Chapel Hill | 1641 | MWM#8 - Treatment Preferences (Inpatient) | R | R | P |
| 2.7.4 | *UCSF | N/A | MWM#8 - Treatment Preferences (Outpatient) | R | R | R |
| 2.7.5 | *UCSF | N/A | Palliative care service offered at time of diagnosis of advanced illness | R | R | R |
| 2.7.6 | ASCO | 0216 | Proportion admitted to hospice for less than 3 days | R | R | P |

Notes: R indicates P4R; P indicates P4P. Blanks after the letter indicate that a project was dropped; blanks before the letter indicate that a project was added.

**Exhibit 412 Detailed Metric Progression from P4R TO P4P (DY13 YE), Domain 3**

| PRIME ID# | Measure Steward (*Innovative Metric) | NQF# | Metric Title | DY11 | DY12 | DY13 |
|---|---|---|---|---|---|---|
| **3.1.1** | NCQA | 0058 | Avoidance of antibiotic treatment in adults with acute bronchitis | R | P | P |
| **3.1.2** | *UCD, UCI, UCSD | N/A | Avoidance of Antibiotic Treatment with Low Colony Urinary Cultures | R | | |
| **3.1.3** | CDC | 2720 | National Healthcare Safety Network (NHSN) Antimicrobial Use Measure | R | R | R |
| **3.1.4** | CMS | N/A | Peri-operative Prophylactic Antibiotics Administered after Surgical Closure | R | R | R |
| **3.1.5** | NHSN | N/A | Reduction in Hospital Acquired Clostridium Difficile Infections | R | R | P |
| **3.2.1** | *WHA | N/A | Imaging for Routine Headaches (Choosing Wisely) | R | P | P |
| **3.2.2** | ACEP | 0667 | Appropriate Emergency Department Utilization of CT for Pulmonary Embolism | R | R | P |
| **3.2.3** | NCQA | 0052 | Use of Imaging Studies for Low Back Pain | R | P | P |
| **3.2.4** | *LACDHS | Variation on 0052 | Use of Imaging Studies for Low Back Pain (red flags, no time limit) | R | R | R |

| PRIME ID# | Measure Steward (*Innovative Metric) | NQF# | Metric Title | DY11 | DY12 | DY13 |
|-----------|--------------------------------------|------|--------------|------|------|------|
| 3.3.1 | *AHS | Variation on 2467 | Adherence to Medications | R | R | R |
| 3.3.2 | CMS | 0419 | Documentation of Current Medications in the Medical Record | R | | |
| 3.3.3 | AHS | N/A | High-cost Pharmaceutical Ordering Protocols | R | R | R |
| 3.3.4 | SCVHS | N/A | Documentation of Medication Reconciliation in the Medical Record for Patients on High Cost Pharmaceuticals | | R | R |
| 3.4.1 | AABB/TJC | N/A | ePBM-01 Pre-op Anemia Screening, Selected Elective Surgical Patients | R | R | P |
| 3.4.2 | AABB/TJC | N/A | ePBM-02 Pre-op Hemoglobin Level, Selected Elective Surgical Patients | R | R | R |
| 3.4.3 | AABB/TJC | N/A | ePBM-03 Pre-op Type and Crossmatch, Type and Screen, Selected elective Surgical Patients | R | R | P |
| 3.4.4 | AABB/TJC | N/A | ePBM-04 Initial Transfusion Threshold | R | R | R |
| 3.4.5 | AABB/TJC | N/A | ePBM-05 Outcome of Patient Blood Management, Selected Elective Surgical Patients | R | R | R |

Notes: R indicates P4R; P indicates P4P. Blanks after the letter indicate that a project was dropped; blanks before the letter indicate that a project was added.

## Achievement Value Analysis: Methodology and Metric-Specific Averages, by Hospital Type

During PRIME implementation, hospitals reported on their progress in mid-year and year-end reports, which included a self-reported rate for metrics (achievement rates). DHCS assigned an achievement value (AV) as an indication of the achievement rate progress toward the target. UCLA identified the proportion of metrics achieved per project in each demonstration year by DPHs and DMPHs.As described in the prior section, Metric Progression, metrics were designated as either pay for reporting (P4R) or pay for performance (P4P) in a given DY. In DY 11 and DY 12, P4R or P4P metric status varied depending on whether the hospital was a DPH and DMPH. By DY 13, the P4R or P4P status of metrics was identical whether a hospital was a DPH or DMPH. All metrics that were partially or fully achieved (a value greater than 0) contributed to the achievement calculation. Metrics that had a denominator under 30 were excluded from analysis after the first year the data was reported.

The following steps were used to analyze the AVs:
1. Exclude any rows that indicated the hospitals dropped projects or discontinued PRIME for the specified demonstration year
2. Manually determined and verified the AVs for 1.7.2, 2.1.1, and 2.1.9 based on the PRIME metric manual specifications, due to multiple rows that influence achievement
3. Excluded the Rate 2 rows from Project 3.3
4. Excluded rows that had a denominator less than 30, except for the following metrics, since the denominator is not on a patient population scale: 1.2.6, 1.2.9, 1.7.2, 2.1.1, 2.1.9, and 2.7.2
    a. This was applied for DPHs starting in DY 12 and DMPHs in DY 13, with the exception of Coalinga for Project 1.5 and El Centro in Project 3.2 since these hospitals began implementation in DY 11
    b. Note that because of this, no sufficient overall percentages were available for 3.4.2 in DY 13 (DPH) and 1.6.5 in DY 13 (DMPH).
5. Specific adjustments were made for the DMPHs regarding the following metrics:
    a. 1.5.1.b, 1.5.2, and 1.5.4.t were treated as P4P in DY 12 for a DMPH that reported achievement rates in DY 11
    b. 3.2.1 and 3.2.3 were treated as P4P in DY 12 for a DMPH that reported achievement rates in DY 11

Exhibit 413 and Exhibit 414 show the metric-specific average achievement values, by hospital type. The following information is included in the table: "---" means that all of the metrics within the PRIME project were phased out of P4R for that demonstration year. The Rate #2 values for Project 3.3 were not included, since AVs only applied to Rate #1. If a hospital's denominator for a metric did not have a minimum of 30 patients, the

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metric was excluded from calculations in this exhibit (identified in yellow), except for the metrics that are not based on a patient-level denominator, as described in the prior paragraph. Blanks after the letter indicate that a project was dropped; blanks before the letter indicate that a project was added.

**Exhibit 413: Average Metric-specific achievement values, by year for DPHs**

| Metric | DY 11 | DY 12 | DY 13 | DY 11 | DY 12 | DY 13 | Number of Hospitals with Denominator < 30 |
|---|---|---|---|---|---|---|---|
| 1.1.1.a | 100% | 94% | 100% | R | R | R | |
| 1.1.2 | 100% | 100% | | R | R | Metric dropped | |
| 1.1.3.d | 100% | 94% | 100% | R | P | P | |
| 1.1.4 | 100% | 100% | | R | R | Metric dropped | 1 (DY 12) |
| 1.1.5.f | 100% | 100% | 94% | R | R | P | |
| 1.1.6.t | 100% | 100% | 94% | R | P | P | |
| 1.1.7 | | | 100% | Metric added later | Metric added later | R | 1 (DY 13) |
| 1.2.1.a | 100% | 94% | 100% | R | R | R | |
| 1.2.2 | 100% | 94% | 100% | R | P | P | |
| 1.2.3.c | 100% | 100% | 94% | R | P | P | |
| 1.2.4.d | 100% | 94% | 100% | R | P | P | |
| 1.2.5.b | 100% | 94% | 94% | R | P | P | |
| 1.2.6 | | 100% | | Metric only in DY 12 | R | Metric only in DY 12 | |
| 1.2.7.i | 100% | 88% | 93% | R | P | P | |
| 1.2.8 | 100% | 100% | 100% | R | R | R | |
| 1.2.9 | | 100% | | Metric only in DY 12 | R | Metric only in DY 12 | |
| 1.2.10 | | | 82% | Metric starts DY 13 | Metric starts DY 13 | P | |
| 1.2.11 | 100% | 82% | 97% | R | P | P | |
| 1.2.12.f | 100% | 100% | 94% | R | R | P | |

| Metric | DY 11 | DY 12 | DY 13 | DY 11 | DY 12 | DY 13 | Number of Hospitals with Denominator < 30 |
|---|---|---|---|---|---|---|---|
| 1.2.13 | | 100% | 88% | Metric starts DY 12 | R | P | |
| 1.2.14.t | 100% | 100% | 94% | R | P | P | |
| 1.3.1 | 100% | 100% | 91% | R | R | P | |
| 1.3.2 | 100% | 82% | 59% | R | P | P | |
| 1.3.3 | 100% | 100% | 100% | R | R | P | |
| 1.3.4 | 100% | 100% | 100% | R | R | R | |
| 1.3.5 | 100% | 100% | 100% | R | R | R | |
| 1.3.6 | 100% | 100% | 100% | R | R | R | |
| 1.3.7 | 100% | 100% | 100% | R | P | P | |
| 1.4.1 | 100% | 100% | 100% | R | R | R | |
| 1.4.2 | 100% | 100% | 80% | R | P | P | |
| 1.4.3 | 100% | 100% | 100% | R | R | P | |
| 1.5.1.b | 100% | 100% | 100% | R | P | P | |
| 1.5.2.i | 100% | 86% | 100% | R | P | P | |
| 1.5.3 | 100% | 100% | 100% | R | R | P | |
| 1.5.4.t | 100% | 100% | 100% | R | P | P | |
| 1.6.1 | 100% | 100% | 100% | R | R | R | |
| 1.6.2 | 100% | 100% | 80% | R | P | P | |
| 1.6.3 | 100% | 60% | 80% | R | P | P | |
| 1.6.4.c | 100% | 100% | 80% | R | P | P | |
| 1.6.5 | 100% | 100% | 100% | R | R | R | |
| 1.7.1 | 100% | 100% | 100% | R | P | P | |
| 1.7.2 | 100% | 100% | 100% | R | P | P | |
| 1.7.3 | 100% | 100% | 100% | R | P | P | |
| 2.1.1 | 100% | 100% | 100% | R | P | P | |
| 2.1.2 | 100% | 55% | 66% | R | P | P | |
| 2.1.3 | 100% | 100% | 100% | R | R | R | |
| 2.1.4 | 100% | 100% | 100% | R | R | R | |
| 2.1.5 | 100% | 59% | 69% | R | P | P | |
| 2.1.6 | 100% | 100% | 91% | R | R | P | |
| 2.1.7 | 100% | 100% | 100% | R | R | R | 1 (DY 12) |
| 2.1.8 | 100% | 100% | 100% | R | R | R | |
| 2.1.9 | 100% | 100% | 95% | R | P | P | |
| 2.2.1 | 100% | 85% | 76% | R | P | P | |
| 2.2.2 | 100% | 53% | 41% | R | P | P | |

| Metric | DY 11 | DY 12 | DY 13 | DY 11 | DY 12 | DY 13 | Number of Hospitals with Denominator < 30 |
|--------|-------|-------|-------|-------|-------|-------|-------------------------------------------|
| 2.2.3 | 100% | 100% | 91% | R | R | P | |
| 2.2.4 | 100% | 100% | 94% | R | R | P | |
| 2.2.5 | 100% | 100% | 94% | R | R | P | |
| 2.3.1 | 100% | 100% | | R | R | Metric dropped | |
| 2.3.2 | 100% | 100% | 88% | R | R | P | |
| 2.3.3 | 100% | 100% | 100% | R | R | R | |
| 2.3.4 | 100% | 100% | 88% | R | R | P | |
| 2.4.1 | 100% | 100% | 100% | R | P | P | 1 (DY 12) |
| 2.4.2 | 100% | 100% | 100% | R | R | P | 2 in DY 12; 1 in DY 13 |
| 2.4.3 | 100% | 100% | 100% | R | R | R | |
| 2.4.4 | 100% | 100% | 100% | R | R | P | 1 in DY 12, 1 in DY 13 |
| 2.4.5 | 100% | 100% | 100% | R | R | P | 2 in DY 12, 2 in DY 13 |
| 2.4.6 | 100% | 100% | | R | R | Metric dropped | 2 (DY 12) |
| 2.4.7 | 100% | 100% | 100% | R | P | P | 1 in DY 12, 1 in DY 13 |
| 2.4.8 | | | 100% | Metric added DY 13 | Metric added DY 13 | R | 1 (DY 13) |
| 2.5.1 | 100% | 100% | 100% | R | R | R | |
| 2.5.2 | 100% | 100% | 50% | R | P | P | |
| 2.5.3 | 100% | 100% | 100% | R | R | R | |
| 2.5.4 | 100% | 100% | 100% | R | R | P | |
| 2.5.5 | 100% | 100% | 50% | R | P | P | |
| 2.6.1 | 100% | 100% | 100% | R | R | R | |
| 2.6.2 | 100% | 100% | 100% | R | R | R | 1 in DY 12, 1 in DY 13 |
| 2.6.3 | 100% | 100% | 100% | R | R | R | 1 in DY 12, 1 in DY 13 |
| 2.6.4 | 100% | 100% | 100% | R | R | P | |
| 2.6.5 | 100% | 100% | 100% | R | R | R | |
| 2.7.1 | 100% | 100% | 100% | R | R | P | |
| 2.7.2 | 100% | 100% | 100% | R | P | P | |

| Metric | DY 11 | DY 12 | DY 13 | DY 11 | DY 12 | DY 13 | Number of Hospitals with Denominator < 30 |
|--------|-------|-------|-------|-------|-------|-------|-------------------------------------------|
| 2.7.3 | 100% | 100% | 100% | R | R | P | |
| 2.7.4 | 100% | 100% | 100% | R | R | R | |
| 2.7.5 | 100% | 100% | 100% | R | R | R | |
| 2.7.6 | 100% | 100% | 100% | R | R | P | 1 in DY 12, 1 in DY 13 |
| 3.1.1 | 100% | 100% | 100% | R | P | P | |
| 3.1.2 | 100% | | | R | Metric dropped | Metric dropped | |
| 3.1.3 | 100% | 100% | 100% | R | R | R | |
| 3.1.4 | 100% | 100% | 100% | R | R | R | |
| 3.1.5 | 100% | 100% | 100% | R | R | P | |
| 3.2.1 | 100% | 100% | 80% | R | P | P | |
| 3.2.2 | 100% | 100% | 100% | R | R | P | |
| 3.2.3 | 100% | 100% | 100% | R | P | P | |
| 3.2.4 | 100% | 100% | 100% | R | R | R | |
| 3.3.1 | 100% | 100% | 100% | R | R | R | 1 (DY 12) |
| 3.3.2 | 100% | | | R | Metric dropped | Metric dropped | |
| 3.3.3 | 100% | 100% | 100% | R | R | R | 2 in DY 12, 1 in DY 13 |
| 3.3.4 | | 100% | 100% | | R | R | |
| 3.4.1 | 100% | 100% | 100% | R | R | P | |
| 3.4.2 | 100% | 100% | | R | R | R | 1 in DY 12, 2 in DY 13 (yellow indicates no sufficient overall percentages were available due to denominator <30) |
| 3.4.3 | 100% | 100% | 100% | R | R | P | |
| 3.4.4 | 100% | 100% | 100% | R | R | R | |
| 3.4.5 | 100% | 100% | 100% | R | R | R | 1 (DY 12) |

*Notes: "---" means that all metrics within that PRIME project were phased out of P4R for that demonstration year. The Rate #2 values for Project 3.3 were not included, since AVs only applied to Rate #1. After the first year of reporting, if a hospital's denominator for a metric did not have a minimum of 30 patients, the metric was excluded from calculations in this exhibit. Note that because of this, no sufficient overall percentages were available for 3.4.2 in DY 13 (DPH).*

Most DMPHs did not report metric rates for DY 11, thus achievement values are not shown for DY 11 in Exhibit 414. Exceptions for 100% achievement in DY 12 included the following:
- In Project 1.5, 1 DMPH began reporting metrics in DY 11 and did not achieve a denominator greater than or equal to 30 in DY 12. Another hospital failed to report and did not earn funds on two metrics.
- In Project 2.1, 1 DMPH did not pursue BFUSA Designation.
- In Project 3.1, 1 DMPH did not have a large enough denominator to calculate a metric, so funds were distributed to other metrics.

**Exhibit 414: Metric-specific achievement values, by year for DMPHs**

| Metric | DY 12 | DY 13 | DY 12 | DY 13 | Number of Hospitals with Denominator < 30 |
|---|---|---|---|---|---|
| 1.1.1.a | 100% | 100% | R | R | |
| 1.1.2 | 100% | | R | Metric dropped | |
| 1.1.3.d | 100% | 100% | R | P | |
| 1.1.4 | 100% | | R | Metric dropped | |
| 1.1.5.f | 100% | 80% | R | P | |
| 1.1.6.t | 100% | 100% | R | P | |
| 1.1.7 | | 100% | Metric added DY 12 | R | |
| 1.2.1.a | 100% | 100% | R | R | |
| 1.2.2 | 100% | 67% | R | P | |
| 1.2.3.c | 100% | 83% | R | P | |
| 1.2.4.d | 100% | 67% | R | P | |
| 1.2.5.b | 100% | 50% | R | P | |
| 1.2.6 | 100% | | R | Metric only in DY 12 | |
| 1.2.7.i | 100% | 50% | R | P | 2 (DY 13) |
| 1.2.8 | 100% | 100% | R | R | 1 (DY 13) |

| Metric | DY 12 | DY 13 | DY 12 | DY 13 | Number of Hospitals with Denominator < 30 |
|---|---|---|---|---|---|
| 1.2.9 | 100% | | | R | Metric only in DY 12 | |
| 1.2.10 | | 25% | Metric starts DY 13 | P | 2 (DY 13) |
| 1.2.11 | 100% | 96% | R | P | |
| 1.2.12.f | 100% | 67% | R | P | |
| 1.2.13 | 100% | 100% | R | P | |
| 1.2.14.t | 100% | 83% | R | P | |
| 1.3.1 | 100% | 50% | R | P | |
| 1.3.2 | 100% | 50% | R | P | |
| 1.3.3 | 100% | 50% | R | P | |
| 1.3.4 | 100% | 100% | R | R | |
| 1.3.5 | 100% | 100% | R | R | |
| 1.3.6 | 100% | 100% | R | R | |
| 1.3.7 | 100% | 100% | R | P | |
| 1.4.1 | 100% | 100% | R | R | |
| 1.4.2 | 100% | 60% | R | P | |
| 1.4.3 | 100% | 100% | R | P | 3 (DY 13) |
| 1.5.1.b | 100% | 71% | R, P for 1 DMPH | P | 1 (DY 12) |
| 1.5.2.i | 89% | 100% | R, P for 1 hospital | P | 2 in DY 12, 3 in DY 13 |
| 1.5.3 | 90% | 86% | R | P | 1 (DY 12) |
| 1.5.4.t | 90% | 86% | R, P for 1 DMPH | P | |
| 1.6.1 | 100% | 100% | R | R | 5 (DY 13) |
| 1.6.2 | 100% | 67% | R | P | |
| 1.6.3 | 100% | 50% | R | P | |
| 1.6.4.c | 100% | 79% | R | P | |
| 1.6.5 | 100% | | R | R | 6 (DY 13); yellow indicates in DY 12 no sufficient overall percentages were available due to the denominator <30 |
| 1.7.1 | 100% | 67% | R | P | 1 (DY 13) |
| 1.7.2 | 100% | 96% | R | P | |
| 1.7.3 | 100% | 83% | R | P | 3 (DY 13) |
| 2.1.1 | 75% | 75% | R | P | |

| Metric | DY 12 | DY 13 | DY 12 | DY 13 | Number of Hospitals with Denominator < 30 |
|---|---|---|---|---|---|
| 2.1.2 | 100% | 0% | R | P | |
| 2.1.3 | 100% | 100% | R | R | |
| 2.1.4 | 100% | 100% | R | R | |
| 2.1.5 | 100% | 67% | R | P | 1 (DY 13) |
| 2.1.6 | 100% | 38% | R | P | |
| 2.1.7 | 100% | 100% | R | R | 2 (DY 13) |
| 2.1.8 | 100% | 100% | R | R | |
| 2.1.9 | 100% | 88% | R | P | |
| 2.2.1 | 100% | 85% | R | P | |
| 2.2.2 | 100% | 35% | R | P | |
| 2.2.3 | 100% | 98% | R | P | 1 (DY 13) |
| 2.2.4 | 100% | 92% | R | P | |
| 2.2.5 | 100% | 77% | R | P | |
| 2.3.1 | 100% | | R | Metric dropped | |
| 2.3.2 | 100% | 100% | R | P | 1 (DY 13) |
| 2.3.3 | 100% | 100% | R | R | |
| 2.3.4 | 100% | 78% | R | P | |
| 2.6.1 | 100% | 100% | R | P | |
| 2.6.2 | 100% | 100% | R | P | |
| 2.6.3 | 100% | 100% | R | R | |
| 2.6.4 | 100% | 100% | R | P | |
| 2.6.5 | 100% | 100% | R | P | |
| 2.7.1 | 100% | 83% | R | Metric dropped | 1 (DY 13) |
| 2.7.2 | 100% | 100% | R | P | |
| 2.7.3 | 100% | 100% | R | R | |
| 2.7.4 | 100% | 100% | R | R | 5 (DY 13) |
| 2.7.5 | 100% | 100% | R | P | |
| 2.7.6 | 100% | 40% | R | R | 2 (DY 13) |
| 3.1.1 | 100% | 100% | R | P | 2 (DY 13) |
| 3.1.3 | 100% | 100% | R | P | |
| 3.1.4 | 100% | 100% | R | R | 1 (DY 13) |
| 3.1.5 | 100% | 50% | R | R | 1 in DY 12, 1 in DY 13 |
| 3.2.1 | 100% | 0% | R, P for 1 DMPH | R | |
| 3.2.2 | 100% | 100% | R | P | |
| 3.2.3 | 100% | 67% | R, P for 1 DMPH | R | |

| Metric | DY 12 | DY 13 | DY 12 | DY 13 | Number of Hospitals with Denominator < 30 |
|--------|-------|-------|-------|-------|-------------------------------------------|
| 3.2.4 | 100% | 100% | R | P | |
| 3.3.1 | 100% | 100% | R | P | |
| 3.3.3 | 100% | 100% | R | P | |
| 3.3.4 | 100% | 100% | R | R | |
| 3.4.1 | 100% | 0% | R | R | 1 (DY 13) |
| 3.4.2 | 100% | 100% | R | P | 2 (DY 13) |
| 3.4.3 | 100% | 0% | R | P | 1 (DY 13) |
| 3.4.4 | 100% | 100% | R | Metric dropped | |
| 3.4.5 | 100% | 0% | R | R | 2 (DY 13) |

Notes: "---" means that all metrics within that PRIME project were phased out of P4R for that demonstration year. The Rate #2 values for Project 3.3 were not included, since AVs only applied to Rate #1. After the first year of reporting, if a hospital's denominator for a metric did not have a minimum of 30 patients, the metric was excluded from calculations in this exhibit. Note that because of this, no sufficient overall percentages were available for 1.6.5 in DY 13 (DMPH).

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## PRIME Entities That Did Not Meet the 30 Patient Denominator Volume Criteria

Among all of the hospitals that participated in DY 12, the majority had greater than or equal to 30 patients meeting the project target population requirements. For Domain 1, all but one DPH met the 30 patient volume criteria (Exhibit 415). All but 4 DPHs met the patient threshold in Domain 2, and all but 3 DPHs met the threshold in Domain 3.

Most DMPHs did not begin project implementation in DY 11, so these hospitals were not required to surpass the 30 patient volume threshold in order to achieve the Achievement Values (AV) in DY 12. However, the 1 DMPH that began reporting data for Domain 1 in DY 11 did not meet the minimum 30 patient requirement in DY 12.

One of the reasons why PRIME entities did not meet the 30 patient volume threshold was because of the limited number of individuals that met specific project target or metric population criteria. For example, San Mateo did not have enough foster youth that satisfied the some of the metric eligibility criteria in Project 2.4, such as 2.4.2-Developmental Screening in the First 3 Years of Life (among Foster Children). Hospitals were required by the STCs to drop the project if they did not have over 30 for the full project population.

**Exhibit 415: Number of Hospitals Unable to Meet 30 Person Minimum Requirement for at Least one Metric in Demonstration Year (DY) 12**

| Domain | Hospital Type | DY12 N |
|--------|---------------|--------|
| 1 | DPH | 1 |
| 1 | DMPH* | 1 |
| 2 | DPH | 4 |
| 2 | DMPH* | -- |
| 3 | DPH | 3 |
| 3 | DMPH* | 0 |

*Source: UCLA analysis of the self-reported data, July 2019.Notes: DPH: designated public hospital, DMPH: district and municipal public hospital. *Most DMPHs did not report data in DY 11, so their first year of data in DY 12 did not have the 30 patient criteria. Two DMPHs reported data for DY 11: Domain 1 (Coalinga for 1.5) and Domain 3 (El Centro for 3.2).*

Among all the hospitals that participated in DY 13, all but one DPH for Domain 1 and all but 3 DPHs in Domain 2 and Domain 3 met the 30 patient volume criteria (Exhibit 416). There was an increase between DMPHs that did not meet the threshold between DY 12 and DY 13 because the 30 person requirement did not apply for most DMPHs until DY 13. In DY 13, 13 DMPHs in Domain 1, 8 in Domain 2, and 5 in Domain 3 did not meet the volume criteria.

**Exhibit 416: Number of Hospitals Unable to Meet 30 Person Minimum Requirement for at Least one Metric in Demonstration Year (DY) 13**

| Domain | Hospital Type | DY 13 N |
|--------|---------------|---------|
| 1 | DPH | 1 |
| 1 | DMPH | 13 |
| 2 | DPH | 3 |
| 2 | DMPH | 8 |
| 3 | DPH | 3 |
| 3 | DMPH | 5 |

*Source: UCLA analysis of the self-reported data, July 2019.*

*Notes: DPH: designated public hospital, DMPH: district and municipal public hospital.*

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## Appendix J: Baby Friendly Hospital Status for 2.1

**Exhibit 417: DPH Certified Baby Friendly Before or During PRIME, by Hospital**

| System | Hospital | Date |
|---|---|---|
| Alameda | Highland Hospital | February 2012 |
| Arrowhead | Arrowhead Regional Medical Center | January 2009 |
| Contra Costa | -- | In progress |
| Kern Medical | Kern Medical Center | May 2019 |
| Los Angeles | LAC+USC Medical Center<br>LAC Olive View-UCLA Medical Center<br>Harbor-UCLA Medical Center | April 2012<br>July 2011<br>April 2012 |
| Natividad | Natividad Medical Center | February 2013 |
| Riverside | Riverside University Health System-Medical Center | May 2015 |
| San Francisco | Zuckerberg San Francisco General Hospital<br>Not the rehabilitation hospital | June 2007 |
| San Joaquin | San Joaquin General Hospital | April 2016 |
| Santa Clara | Santa Clara Valley Medical Center | January 2019 |
| San Mateo | N/A- no labor and delivery | N/A |
| UC Davis | -- | In progress |
| UC Irvine | UC Irvine Medical Center | November 2017 |
| UC Los Angeles | Ronald Reagan UCLA Medical Center<br>Santa Monica-UCLA Medical Center and Orthopedic Hospital | January 2017<br>June 2018 |
| UC San Diego | UC San Diego Health Hillcrest-Hillcrest Medical Center<br>UC San Diego LaJolla-Jacobs Medical Center | April 2006<br>Re-Designated April 2018 |
| UC San Francisco | -- | In progress |
| Ventura County | Ventura County Medical Center<br>Ventura County Medical Center Santa Paula Hospital | July 2003<br>July 2003 |

**Exhibit 418: DMPH Certified Baby Friendly Hospital Designation Before or During PRIME, by Hospital**

| System | Hospital | Date |
|---|---|---|
| Antelope Valley | Antelope Valley Hospital | April 2015 |
| El Camino | ECHs Los Gatos location<br>ECH Mountain View | May 2017<br>No |
| Tri-City | Completed the Development Phase (D2) and started the Dissemination Phase (D3) | In progress |
| Washington | Washington Hospital Healthcare System | February 2014 |

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