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Project 1.1: Patient Centered Medical Home

Project Goal

The goal of projects under this heading is to expand or enhance the delivery of care provided through the Patient-Centered Medical Home (PCMH) model. The PCMH provides a primary care "home base" for patients. Under this model, patients are assigned a health care team who tailors services to a patient's unique health care needs, effectively coordinates the patient's care across inpatient and outpatient settings, and proactively provides preventive, primary, routine and chronic care. Federal, state, and DSTI hospitals share goals to promote more patient-centered care focused on wellness and coordinated care. In addition, the PCMH model is viewed as a foundation for the ability to accept alternative payment models under payment reform. "PCMHs can be seen as the hub of the integrated care system"[18], and "the medical home model supports fundamental changes in primary care service delivery and payment reforms, with the goal of improving health care quality."[19]

PCMH development is a multi-year transformational effort and is viewed as a foundational way to deliver care aligned with payment reform models and the Triple Aim goals of better health, better patient experience of care, and ultimately better cost-effectiveness.[20] [21] By providing the right care at the right time and in the right setting, over time, patients may see their health improve, rely less on costly ED visits, incur fewer avoidable hospital stays, and report greater patient satisfaction.

These projects all are focused on the concepts of the PCMH model; yet, they take different shapes for different providers. Safety net hospitals' approaches may vary based on the composition of and relationships between providers in the health care delivery system, or they may be tailored to specific patient populations such as those with chronic diseases. Hospitals may pursue a continuum of projects including PCMH readiness preparations, the establishment or expansion of medical homes which may include gap analyses and eventual application for PCMH recognition to a nationally recognized organization such as NCQA, or clinical collaboration by a hospital system toward referral and care coordination systems with an affiliated PCMH, as well as educating various constituent groups within hospitals and primary care practices about the essential elements of the NCQA medical home standards. The development of primary care readiness for implementing patient-centered medical home delivery models may happen within a safety net hospital, or with a hospital in collaboration with affiliated or non-affiliated primary care physician practices.

[18] "Stage Demonstration to Integrate Care for Dual Eligible Individuals." *Commonwealth of Massachusetts Executive Office of Health and Human Services, Office of Medicaid. Proposal to the Center for Medicare and Medicaid Innovation.* (Dec. 2011) page 7.

[19] "Overview of PCMHI." *Commonwealth of Massachusetts Executive Office of Health and Human Services, Office of Medicaid. Massachusetts Patient Centered Medical Home Initiative.* 2012. Available at ,http://www.mass.gov/eohhs/gov/commissions-and-initiatives/healthcare-reform/pcmhi/

[20] Cosway R et al., "Analysis of Community Care of North Carolina Cost Savings." *Milliman, Inc.* 2011.

[21] Grumbach K and Grundy P.. "Outcomes of Implementing Patient Centered Medical Home Interventions: A Review of the Evidence from Prospective Evaluation Studies in the United States." *Patient-Centered Primary Care Collaborative* Nov. 2010.

Potential Project Elements *DSTI hospitals undertaking this project may select from among the following project elements:*
A. Develop and implement action plans to eliminate gaps in the development of various aspects of PCMH standards. B. Utilize a gap analysis to assess and/or measure hospital-affiliated and/or hospital-employed PCPs' NCQA PCMH readiness. C. Conduct feasibility studies to determine necessary steps to achieve NCQA PCMH status (e.g., Level 1, 2, or 3) with hospital-affiliated and/or employed-PCPs. D. Conduct educational sessions for primary care physician practice offices, hospital boards of directors, medical staff and senior leadership on the elements of PCMH, its rationale and vision. E. Collaborate with an affiliated Patient-Centered Medical Home to integrate care management and coordination for shared, high-risk patients. F. Improve data exchange between hospitals and affiliated medical home sites. G. Develop best practices plan to eliminate gaps in the readiness assessment. H. Restructure staffing into multidisciplinary care teams that manage a panel of patients where providers and staff operate at the top of their license. I. Establish or expand patient-centered medical homes. J. Apply for Patient-Centered Medical Home recognition by a nationally recognized organization such as NCQA. K. Empanel patients who would most benefit from medical homes (as specified in hospital-specific plans) L. Actively manage medical home patient panels.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Identify physician champion at hospital and affiliated practices to educate and lead PCMH initiative.	• Document of physician champions	• Internal hospital records/documentation
2. Educate stakeholders including patients, hospital and affiliated practices' leadership, primary care offices, and staff members on the elements of PCMH rationale and vision.	• Document attendance of attending education program on the elements PCMH rationale and vision or • Education materials developed and distributed on benefits of PCMH	• Internal hospital records/documentation of attendance and educational content • Internal hospital records/documentation of distribution of educational materials
3. Establish a PCMH working group and design a tool to assess readiness gaps.	• Document creation of work group • Document development of tool	• Internal hospital records/documentation & meeting minutes • NCQA requirements
4. Conduct a gap analysis against PCMH criteria from a nationally recognized	• Documentation of a completed, gap analysis required.	➢ Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
agency (e.g., NCQA).	• In addition to completed gap analysis, other metrics may include: ➢ Documentation of completed action plan for each primary care site. ➢ Documentation of action efforts towards PCMH accreditation ➢ Identification of internal/external resources to be allocated to each site to begin implementation of plan. ➢ Documentation of work plan to complete gap assessment against NCQA medical home recognition criteria	
5. Prioritize PCMH readiness gaps identified in gap analysis.	• Develop action plan to address gap	• Documentation of completed action plan
6. Implement findings of gap analysis and components of action plan.	• Documentation that findings have been implemented	• Internal hospital records/documentation
7. Establish criteria for medical home assignment and empanelment, including for the targeted patient population	• Establish criteria for medical home assignment	• Document submission of empanelment criteria
8. Develop reports for panel size per provider/care team.	• Report developed for panel size per provider/care team	• Document submission of panel productivity
9. Identify sites to transform into PCMHs.	• Identify at least X number of additional primary care sites for PCMH transformation	• Documentation of the selection of X number of primary care sites

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
10. Develop approach and toolkit to assist primary care practices with patient engagement in Practice Improvement.	• Documentation of patient engagement approach and toolkit to assist practices to identify and engage patients effective in practice improvement activities	• Copy of framework and toolkit from hospital records.
11. Establish a joint team of Hospital and PCMH Practice representatives to analyze gaps and determine priorities for the integration of care management and coordination for target patient population [e.g., diabetes (DM), congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD)].	• Documentation of regular meetings and communications of the Joint Hospital/PCMH Team	• Joint team minutes
12. Identify areas of improvement in Hospital/PCMH practice linkages related to NCQA requirements for PCMHs.	• Report on at least X[22] factors for improvement related to the identification of individual patients and care management plans that will be jointly addressed by the Hospital and PCMH Practice	• Gap analysis based on 2011 NCQA PCMH Documentation tracking tool
13. Identify existing clinical and demographic data on target patient population(s) targeted for PCMH Practice.	• Report of clinical data elements that currently exist at each institution for the target patient population	• Electronic medical record databases for each institution and joint team meeting minutes
14. Establish a hospital/ PCMH practice agreement outlining data elements to be tracked for target patient population.	• Report of clinical data elements that currently exist at each institution and data elements that need to be developed for the targeted conditions as agreed upon by parties from both institutions	• Electronic medical record database and joint team meeting minutes

[22] Throughout this document, where "X" appears in relation to project measures and metrics, each hospital electing the measure or metric will specify the appropriate number or percentage within its hospital specific plan. As each hospital has a unique starting place for DSTI projects, the master DSTI plan provides flexibility for each hospital to determine an appropriate level of improvement relative to its own baseline.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
15. Develop a Joint Hospital and PCMH Practice comprehensive plan for care management and coordination including data items to be tracked, clinical roles and agreements, and care management processes among relevant providers in the area.	Select all metrics**:** • Report identifying the roles and community organizations needed to integrate care related to the factors. • Documented agreements between health and health-related entities in the community and the Hospital and PCMH Practice • Map Care Management Processes for Hospital/PCMH Practice patients with targeted chronic conditions • Develop baseline on the percentage of shared patients who have had documented care management/ coordination interventions from hospitals and PCMH practices relating to the selected factors agreed to in the first year (e.g., sharing of treatment plans and other medical interventions, disease specific education administered, medication reconciliation, and psychosocial, economic, environmental, and cultural factors that create barriers to care).	Summaries of consultation between the joint team and professionals from other community agencies. • Reports on shared patients with referrals made to a certified educator for a specific chronic disease • Agreements with health-related entities • Joint Team report • Hospital and PCMH Practice electronic databases
16. Perform evaluation of implementation plan for care management and coordination.	• Development of evaluation report	• Minutes of Hospital/PCMH Practice executive meetings to review progress on DSTI initiatives
17. Establish baseline data for preventive health measures in participating primary care practices.	• Baseline rate for influenza vaccination	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
18. Establish baseline data of hospital and PCMH shared hospitalized patients with a chronic disease who receive a referral to an educator for their chronic condition.	• Baseline measure of hospital and PCMH shared hospitalized patients with a chronic disease who receive a referral to an educator for their chronic condition	• Internal hospital records/documentation
19. Establish a Quality Committee for Primary Care Practice.	• Documentation of QI committee minutes that reviews Quality Dashboard performance	• Hospital Committee minutes

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
1. Implement action plan(s) to eliminate gaps in PCMH readiness identified by a nationally recognized entity (e.g., NCQA).	• X percent of plan implemented to address a PCMH readiness standard defined by a nationally recognized entity (e.g., NCQA)	• Internal hospital records/documentation
2. Apply for PCMH recognition for selected number of primary care sites (e.g., NCQA accreditation).	• Apply for medical home recognition from NCQA for X number of primary care sites	• Documentation of application to nationally recognized agency
3. Address action plan items for seeking Higher Level NCQA PCMH Certification.	• Initiate and improve referral tracking • Establish and document patient self-care and patient education in EMR	• Internal hospital records/documentation
4. Achieve medical home recognition for selected number of primary care sites from a nationally accredited agency (e.g., NCQA).	• Achieve medical home recognition for X number of primary care sites from NCQA	• Documentation of NCQA accreditation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
5. Develop patient empanelment to medical home care teams and/or care teams managing panels of patients for targeted number of patients.	• Submission of team structure and team panel size for X number of patients	• Hospital documentation of submission of care team structure for X number of patients
6. Engage patients in practice improvement at increasing number of primary care sites.	• X number of primary care sites have patients engaged in practice improvement activities. X number increase in number of primary care sites with patients engaged in practice improvement activities	• Documentation of defined number sites have patients engaged through minutes of practice improvement activities
7. Implement a joint plan for efficient care management and coordination and tracking care.	• Reports of key measures of care management and coordination of patients with targeted chronic conditions (e.g., DM, CHF, and COPD). Key measures will include the annual percentage of patients with these conditions that have documented interventions relating to care management and coordination across multiple institutions	• Hospital and PCMH Practice Reporting Tools
8. Increase number or percent of target patient population with a chronic condition who receive a referral to a certified educator for their chronic condition following hospital discharge to home.	• Percentage increase in target patient population with a chronic condition who receive a referral to a certified educator for their chronic condition following hospital discharge to home	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
9. Identify system-wide opportunities for PCMH readiness steps and gap closure and increase number of gaps closed over the demonstration years.	• Report on gap closure for key system-wide PCMH readiness steps • Documentation of number of gaps closed • Document X increase in number of system-wide PCMH readiness gaps closed	• Hospital documentation of progress on key PCMH readiness system-wide gap closure elements
10. Work to improve baseline performance and data capture of 1 preventive health measure in selected primary care sites.	• Influenza vaccination rate for population	• Internal hospital records/documentation
11. Expand performance improvement program to 1 cancer screening measure; ongoing performance improvement in prior year selected measure.	• Improve by X % Influenza Vaccination in participating Primary Care Practices from baseline measure • Measure baseline rate of Cervical Cancer Screening in participating primary care practices	• Internal hospital records/documentation

Project 1.2: Integrate Physical Health and Behavioral Health

Project Goal

The goal of projects under this heading is to integrate care delivery models for physical health and behavioral health (BH). This is an especially crucial effort for Medicaid and other populations that have co-occurring chronic health and mental health conditions. Treatments for patients that present with mental health and/or substance abuse concerns are integrated with physical health by focusing on patient-centeredness, and implementing process improvements to further align organizational resources to provide appropriate treatment in the appropriate setting at the appropriate time. This project contemplates that hospitals can design behavioral health-physical health innovations in the acute hospital (emergency and inpatient setting) or in the primary care setting.

According to a recent study released by the Robert Wood Johnson Foundation, only 33% of patients with BH conditions (24% of the adult population) receive adequate treatment.[23] Patients with BH issues experience higher risk of mortality and poor health outcomes, largely due to a lack of preventive health services and poorly controlled co-morbid medical disease. These patients often have complex medical and social issues such as multiple chronic health conditions, low income, housing insecurity, social isolation, and social dis-coordination that severely impact their health and social functioning.

Caring for this population requires a comprehensive, whole person approach within an integrated system prepared to care for the medical, BH, and social conditions faced by safety net patient populations. Milestones include utilizing evidence-based practices to inform the development of guidelines for managing patients with mental health and substance abuse concerns.[24] One effective evidence-based strategy that has been shown to improve Triple Aim outcomes in patients with depression, the most prevalent BH disorder, is the DIAMOND/IMPACT model of care, which may serve as a reference for hospitals in developing their physical health and behavioral health integrated, collaborative care models. Among the key elements of these care models: screening for high prevalence mental health conditions, co-location of BH clinicians into primary care settings, collaborative meetings held by primary care and BH team members to discuss cases, training of primary care and BH staff on effective screening and collaborative care, the presence of tracking systems and registries to support effective monitoring of patients, the "Stepped Care" approach for appropriate level of treatment, care management for the highest risk patients with mental health and substance abuse disorders, and relapse prevention, among others.[25]

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[23] Druss BG, Reisinger Walker E., "Mental Disorders and Medical Co-Morbidity." *Robert Wood Johnson Foundation, The Synthesis Project:* Issue 21 (2011).

[24] Knesper, D.J., "Continuity of care for suicide prevention and research: suicide attempts and suicide deaths subsequent to discharge from the emergency department or psychiatric inpatient unit." *American Association of Suiciology and Suicide Prevention Resource Center*. 2010.
"Emergency Severity Index, Version IX: Implementation Handbook." *Agency for Health Care Research and Quality*. 2012, Available at https://www.ahrq.gov.
"Medical evaluation of psychiatric patients,." *Emergency Nurses Association.* 2010. Available at https://www.ena.org.
"Substance abuse (alcohol and drug) in the emergency care setting,." *Emergency Nurses Association.* 2010. Available at https://www.ena.org.

[25] Katon W., MD. "The Diamond Model." (based on Katon's Collaborative Care Model for depression) and

Project Goal
Over time, projects have the potential to yield improvements in the level of care integration and coordination for patients with co-occurring medical and mental health conditions and ultimately better health and better patient experience of care.

Potential Project Elements *DSTI hospitals undertaking this project may select from among the following project elements:*
A. Better identify patients needing behavioral health care. B. Conduct an analysis of the system's behavioral health population. C. Improve coordination and referral patterns between primary care and behavioral health. D. Train primary care providers in behavioral health care. E. Develop and implement an integrated, collaborative care model to integrate primary care and behavioral health at primary care sites with co-located behavioral health services. F. Develop and implement plans to integrate physical and behavioral health care for patients with behavioral health and substance abuse issues in the Emergency Department (ED). G. Implement physical-behavioral health integration pilots. H. Implement integrated care models and assess outcomes of the model. I. Link patients with serious mental illnesses to a medical home or another care management program. J. Measure patient satisfaction levels of Mental Health/Substance Abuse (MH/SA) Emergency Department patients.

Key Process Measures
DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Conduct an analysis of the behavioral health population at the hospital.	• Baseline analysis of behavioral health patient population, which may include patient demographics, utilization of emergency room and inpatient services, most common sites of mental health care, most prevalent diagnoses, co-morbidities	• Internal hospital records/documentation

Unutzer J.,MD. "IMPACT Study." (as well as numerous other controlled trials). *Institute for Clinical Systems Improvement and Minnesota Family Health Services*. Presentation to the Institute for HealthCare Improvement Annual Forum, Dec. 2010.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
2. Develop an integrated, collaborative care model for behavioral health patients at primary care sites with co-located behavioral health services using the Stepped model and the Diamond/Impact model as a framework.	• Submission of document describing the integrated care model for behavioral health patients at primary care sites with co-located behavioral health services	• Internal hospital records/documentation
3. Develop recommendations for measures to be used across hospital's primary care sites toward behavioral health integration in primary care, such as screening for high prevalence conditions such as depression or substance abuse disorder.	• Submission of recommended measures to track behavioral health integration in primary care	• Internal hospital records/documentation, such as minutes for ambulatory department or mental health department
4. Establish baseline for adult diabetes depression screening in primary care-behavioral health integration pilot site(s).	• Establish baseline rates for percent of patients 18-75 years of age with diabetes (type 1 or type 2) who were screened for depression using PHQ-2 or other approved screening instruments during the measurement period at implemented pilot site(s) (NQF 0575)	• Internal hospital records/documentation
5. Receive approval from Department of Public Health to operate remodeled hospital emergency department behavioral health "Psych Pods."	• Approval from DPH	• DPH letter
6. Develop guidelines for management of the behavioral health patients in the hospital ED.	• Signed approval of guidelines by hospital officials	• Documentation of guidelines approval

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
7. Engage vendor to identify actionable process improvements in treating MH/SA patients in the hospital ED and to collect qualitative data on delivery of care for behavioral health patients.	• Signed letter of agreement with vendor • Vendor report on clinical and administrative interviews	• Copy of letter of agreement • Vendor report
8. Analyze vendor's Final Report detailing actionable recommendations to measurably improve hospital ED process with MH/SA patients.	• Final report	• Final report
9. Develop joint plan to optimize performance processes to integrate behavioral health and physical health between acute care hospital and behavioral health hospital.	• Joint plan	• Documentation of plan
10. Develop guidelines for management of Clinical Assessment Center "secured assessment area" at the hospital.	• Approval of CAC Secured Assessment Area guidelines	• Documentation of guidelines approval
11. Develop plan to expand hospital's Clinical Assessment Center hours to 24/7 by a certain date.	• Plan to expand hospital hours to 24/7	• Documentation of plan
12. Develop plan to deploy a "psychiatric provider of the day" to the hospital ED.	• Plan to deploy psychiatric provider to hospital ED	• Documentation of plan
13. Designate a "psychiatric provider of the day" to be deployed at the hospital ED.	• Provider work schedule	• Documentation of provider work schedule
14. ED-based Screening, Brief Intervention and Referral to Treatment "SBIRT" social workers re-assigned to MSW case manager clinical supervision.	• New SBIRT Position Description	• Documentation of new SBIRT position description

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
15. Develop MH/SA Patient Registry for patients who visit the hospital ED.	• MH/SA Patient Registry	• Documentation of MH/SA patient registry
16. Determine baseline satisfaction levels for at least X number or percent of MH/SA ED patients and all appropriate ED clinical staff.	• Completed surveys	• Documentation of completed surveys
17. Document baseline ED performance on cost and quality measures related to MH/SA patients.	• Vendor report on hospital ED performance	• Documentation of vendor's report
18. Establish baseline for the percentage of Emergency Department "High-End" Utilizers assessed for MH/SA issues.	• Percentage of Emergency Department "High-End" Utilizers assessed for MH/SA issues	• Documentation of ED "High-End" Utilizers assessed for MH/SA issues
19. Identify specific data elements for MH/SA Patient Registry.	• Data elements for MH/SA Patient Registry	• Documentation of data elements for MH/SA patient registry

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
1. Implement collaborative, integrated care model at X number of primary care sites with co-located behavioral health services. Hospital may implement model at increasing number of sites over the demonstration period.	Implement collaborative, integrated care model at X number of primary care sites co-located with behavioral health services as demonstrated by: • Submission of documents demonstrating number of primary care and behavioral health team members trained at primary care site(s) • Submission of meeting dates documenting collaborative meetings to review patient cases between primary care and mental health staff at the	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
	primary care site(s) • Scheduling documentation demonstrating co-location of behavioral health staff at primary care site(s) • Establishing baseline rates for related screening for a behavioral health condition at pilot site(s) such as the use of the following example measure for depression screening: ➢ Percentage of patients 18 years of age or older receiving depression screening through the use of PHQ-2 or other approved screening instruments during the measurement period (NQF 0712)	
2. Assess outcomes of collaborative care model at primary care site with co-located behavioral health services.	• # of consultations or visits for BH conditions completed at primary care site by co-located behavioral health clinicians	• Internal hospital records/documentation
3. Increase the number of collaborative care model elements implemented at primary care-behavioral health integration pilot site(s).	• Increasing # of collaborative care model elements implemented at primary care-behavioral health integration pilot site(s)	• Internal hospital records/documentation, including documentation and data that collaborative care model elements have been implemented, including data on depression screening

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
4. Improve adult diabetes depression screening rates at pilot site(s).	• Document X percentage improvement over established baseline rate for percent of patients 18-75 years of age with diabetes (type 1 or type 2) who were screened for depression using PHQ-2 or other approved screening instruments during the measurement period at implemented pilot site(s) (NQF 0575)	• Internal hospital records/documentation
5. Deploy MH/SA case manager with Master's-level social work training to the hospital ED.	• Placement of Masters level clinician in hospital ED	• Position description
6. Implement patient satisfaction survey to X additional MH/SA ED patients above baseline.	• Completed patient satisfaction survey	• Vendor surveys of hospital ED patients
7. Percentage of Emergency Department "High-End" Utilizers assessed for MH/SA issues.	• X percent increase in percentage of Emergency Department "High-End" Utilizers assessed for MH/SA issues	• Documentation of ED "High-End" Utilizers assessed for MH/SA issues
8. Expand hospital's Clinical Assessment Center (CAC) schedule of operations to 24 hours per day, 7 days per week.	• CAC schedule of operations are 24/7	• CAC schedule of operations

Project 1.3 Further Develop Integrated Care Network for Primary and Specialty Care

Project Goal

This project is oriented to enhancing access and reducing barriers and shortages in primary and specialty care so that the local community has adequate capacity for successful development of a more fully integrated delivery system, and patients have local provider options in place of more costly health care alternatives for physician access (such as emergency rooms or out-migration for care at more costly settings). The existing capacity of primary care physicians in the Commonwealth is insufficient. The 2011Workforce Study by the Massachusetts Medical Society indicated that less than 50% of primary care physicians were accepting new patients.[26] Through greater access and availability of physicians and caregivers within the local community, the local network of caregivers affiliated with the system will be enhanced and advance delivery system development and further integration. Inadequate access to specialty care and primary care has contributed to the limited scope and size of safety net health systems. To achieve success as an integrated network, gaps must be thoroughly assessed and addressed.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Develop a PCP network focused on patient centered medical home (PCMH) delivery models, as a key element of an integrated delivery system.
B. Establish clerkship affiliation agreements and corresponding curricula with medical schools for students interested in primary care and internal medicine.
C. Conduct a gap analysis of the integration of care management and coordination among hospitals and affiliated physician practices.
D. Conduct gap analyses and/or identify primary and specialty services that are lacking in the community in order to meet demand and more fully integrate care at the local level.
E. Conduct interviews of key referral staff and care coordinators of local practices to define the care needs of the community.
F. Develop a multi-year plan and programs to alleviate identified provider shortages and close gaps in the continuum of care.

Key Process Measures

DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	Metric(s)	Data Source(s)
1. Establish committee to support primary care access projects.	• Committee membership list and charge	• Documentation of committee membership list and charge
2. Assess primary and specialty provider care coverage across the continuum. This will assure patient access to PCPs in a timely manner.	• Identify the need for primary and specialty care services using national benchmarks for primary care panels and community size • Conduct interviews of key referral staff and care	• Copy of gap analysis • Report of the access issues faced by underserved population

[26] "Physician Workforce Study." *Massachusetts Medical Society.* (Sep. 2011) p. 73.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
	coordinators with X percent of local primary care practices who rely primarily on the hospital for their patient care needs in order to confirm specialty care access gaps • Development of access protocols • Development of staffing plan for non-PCP providers to facilitate access • Development of a report to assess current ability to measure access and an assessment of reporting methodologies • Complete study on regional PCP supply, demographics, and succession planning	

3. Develop a plan(s) to address identified provider shortages and to close gaps in the continuum of care.	Metrics may include:
	• Based on gap analysis, prepare a multi-year plan to address identified provider shortages and to close gaps in primary and specialty care
	• Develop a recruitment/ retention plan for primary care providers
	• Establish clinical programs with affiliate partners or independently to address 2 specialty care gaps identified and confirmed in the baseline report
	• Develop a plan to expand physical space for primary care and / or specialty care services
	• Develop a plan(s) with the following core elements:
	  • Market based needs assessment
	  • Provider recruitment
		• Plan document
		• Recruitment plan for residency graduates
		• IDX Practice Management
		• Space Assessment

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
	plan to include projected location, ramp up, and support needs • Development of separate midlevel plan to include team based medical care • Space needs and acquisition plan • Development of access protocols • Identify staffing needs of non-PCP providers to facilitate access • Develop a report of current ability to measure access and assessment of new reporting methodologies • Work with the independent local health center and joint residency program leadership to develop a plan to recruit graduates to remain in the area (the plan may include practice placement, real estate consultation, and loan forgiveness)	
4. Assess efficacy of the new clinical programs established in Year 2 (time to first available appointment).	• Assessment of new clinical programs established in Year 2 (time to first available appointment)	• Reports on time to first available appointment Reports on time to first available appointment
5. Identify ongoing barriers to specialty care access for the hospital's populations.	• Prepare report on access to specialty care compared to baseline report to determine improvements and continue to inform the 3-year plan	• Specialty care access report
6. Begin expansion of physical space for primary care and specialty care services.	• Building permit	• Documentation of building permit

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
7. Establish a 4th Year Clerkship for medical students interested in primary care and internal medicine (measures may include establishing affiliation agreements, creating a curriculum, and gaining approval from the medical school).	• Executed affiliation agreement with the medical school • Completion of curriculum approval by the medical school	• Documentation of affiliation agreement • Completion of curriculum • Documentation of medical school approval of the 4th Year Clerkship site
8. Report on the number of 4th-Year Clerkship Students that select hospital as their Clerkship Site.	• 4th-Year Clerkship List of medical school students who select hospital as Clerkship Site	• Documentation of 4th-Year Clerkship List of medical school students who select hospital as Clerkship Site
9. Develop a plan to incorporate outpatient placements to be included as part of the 4th Year Clerkship program.	• Completion of outpatient placement plan	• Documentation of plan
10. Implement same day access plan across X number of PCP practices.	Metrics may include: • Establish baseline number of same day appointments available on average across the system • Establish baseline number of patients seen by non-PCP providers per month • Establish baseline number of express care volume in hospital Emergency Department for PCP practice patients • Develop ability to track 3rd next available appointments	• Internal hospital records/documentation • Practice management system, internal space data
11. Establish baseline for the number of referrals to PCPs for Emergency Department patients that were unable to identify a PCP at time of ED Admission.	• The number of referrals to PCPs for Emergency Department patients that were unable to identify a PCP at time of ED Admission	• Documentation of PCP referrals

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
12. Establish baseline to measure time to 3rd next available appointment for specialty and/or primary care.	• Survey of specialty and/or primary care practices to measure baseline time to 3rd next available appointment	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
1. Develop a program to alleviate identified provider shortages and to close gaps in the continuum of care.	• Establish a clinical program (s) with affiliate partners, or independently, to address X number of specialty care gaps identified and confirmed in the baseline report	• Hospital contracts with clinical affiliates or agreements with specialists
2. Implement Year 1 objectives of the multi-year plan.	• Meet recruitment target of X in primary care and specialty care • Establish X additional clinical programs to address gap in specialty care	• Report on Year 1 Plan actions • Documentation of establishment of clinical program
3. Launch 4th Year Clerkship for medical students at the hospital.	• X number of medical students select the hospital as clerkship site	• List of students participating in clerkship program
4. Complete expansion of physical space for primary care and specialty care services.	• Certificate of occupancy	• Documentation of certificate of occupancy
5. Implement PCP recruitment and retention strategy.	• Progress report detailing PCP recruitment and retention strategy	• Documentation of recruitment and retention
6. Increase number of clinical programs to address specialty care gaps.	• X number of additional clinical programs to address specialty care gaps is/are established	• Hospital contracts with clinical affiliates or agreements with specialists

7. Extend "same day" access plan to increase access to PCP and non PCP providers in X number of sites.	• X number of sites implement "same day" access plan • Hours of operations of same day access project • Number of same day visits available across system • Express care volume in hospital Emergency Department for PCP practice patients	• Growth Strategy Plan • Practice management system, internal space data
8. Increase number of PCPs and/or mid-level providers above previous year.	• Total number of PCPs and/or mid-level providers increased over number present from previous year independent of any PCP/mid-level provider who leaves employment of hospital	• IDX Practice Management • Provider Recruitment plan
9. Acquire space for providers based on PCP Access Plan.	• Implement space plan based on PCP space requirements and total number of growth of primary care across the medical group • Documentation of plan with following core elements: 1. Market-based needs assessment 2. Provider recruitment plan to include projected location and support needs 3. Development of separate midlevel plan to include team based medical care 4. Space needs and acquisition plan	• IDX Practice Management • Provider Recruitment plan
10. Assess provider panels as compared to established benchmarks (details will be incorporated into hospital-specific plans).	• Demonstrate ability to report on individual PCP panels relative to established benchmarks to assure providers have appropriate capacity	• IDX Practice Management • Provider Recruitment plan
11. Increase mid-level PCP partnering contract with additional PCP providers as per plan.	• Demonstrate increase in mid-level primary care appointments as compared to prior year by X percent	• IDX Practice Management • Provider Recruitment plan

12. Increase the number of referrals to PCPs for Emergency Department patients that were unable to identify a PCP at time of ED Admission.	• X% increase in the number of referrals to PCPs for Emergency Department patients that were unable to identify a PCP at time of ED Admission	• Documentation of PCP referrals
13. Improve specialty care time to 3rd next available appointment for target patient population.	• X % improvement in measure of time to 3rd next available appointment for specialty care for target patient population	• Internal hospital records/documentation • Report on Year 1 Plan action items

Project 1.4 Establish Health Data Exchange Capability to Facilitate Integrated Patient Care

Project Goal

The goal of these projects is to establish health data exchange capabilities – including systems, processes, and linkages – to exchange patient health data across providers and to facilitate integrated care across multiple providers. The objective is to expand and exceed meaningful use requirements for the exchange of data by aggregating clinical and/or financial data from the hospital and physician offices, allowing participating physicians to access a longitudinal record through a web-based portal or to directly integrate with the physician practice's Electronic Medical Record (EMR). The tool may utilize the Nationwide Health Information Network (NHIN) set of standards, services, and policies as a benchmark to address the disparity of information systems across care locations today, while ensuring interoperability and security as the landscape evolves over time. The standards-based solutions will enable patient-centric access to medical records and patient data among multiple health care providers and locations utilizing the Integrating the Healthcare Enterprise (IHE) frameworks among other approaches. The HIE will authenticate and authorize users, verify and validate the identity of patients for whom data is being exchanged, and log all transactions.

Health data exchange capabilities require that the DSTI safety net hospital system establish appropriate systems, processes, and linkages to create and maintain a longitudinal record, repository, and data warehouse of patient health information to more effectively improve data exchange and facilitate integrated patient care across multiple providers, which may include primary care sites, inpatient settings, outpatient and emergency departments, or other care settings. The tool(s) will support proactive care management addressing one or more preventive, primary, routine and chronic care needs. Depending on the design elements of the specific hospital projects, the tools may also be accessible to providers in multiple locations and provide for bi-directional health information data exchange.

Aggregating and warehousing this data is critical as a foundation for an integrated delivery system. Projects under this heading will help address several key healthcare issues such as limited access to clinical patient information, a contributing factor to health care costs and inefficiencies, as well as challenges to improving quality of patient care and the patient care experience.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Conduct environmental scan and identification of requirements and technical needs to establish appropriate systems, processes, and linkages to create and maintain a longitudinal record, repository, and data warehouse of patient health information to more effectively improve data exchange and facilitate integrated patient care across multiple providers.
B. Establish governance structure for management of data exchange tool(s), which shall include physician champions and key stakeholders representing care settings that will have access to—and provide information for—the data exchange tool(s).
C. Identify best practices surrounding privacy, security, data ownership and stewardship and develop a comprehensive policy and protocol document that address security and governance issues.
D. Design and determine how clinical shared data will be submitted, processed, and stored.

Potential Project Elements *DSTI hospitals undertaking this project may select from among the following project elements:*
E. Educate community providers, develop educational materials for participants, and adopt and use a patient consent form. F. Select and define a set of data elements, metrics, and other health information that will facilitate integrated patient care for one or more or more preventive, primary, routine and chronic care needs. G. Develop a plan to collect and aggregate the data, which may include initial paper collection, but which will lead to a data exchange warehouse. H. Build a data exchange warehouse and reporting functionality. I. Develop and implement a training program for identified providers on use of the data exchange.

Key Process Measures

DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Establish governance structure for a health information exchange with community physician champions.	• Governance Committee created with community physician involvement	• Information Systems Steering Committee
2. Identify potential stakeholders and participants for a health information exchange within the hospital-affiliated practices.	• List of hospital-affiliated providers committed to participating in the health information exchange	• Governance Committee
3. Provide education of health information exchange data-sharing models, privacy, and security concerns and regulations.	• Continuing medical education program for community providers	• Compliance, Legal, Director of Information Technology
4. Research privacy, security, and data ownership and stewardship best practices.	• Policy documentation for privacy, security, and data ownership	• Compliance, Legal, Director of Information Technology
5. Determine how clinical shared data will be submitted, processed, stored and used within the health information exchange system.	• Description of the clinical data architecture with technical diagram	• Governance Committee
6. Develop policy and protocol documentation on how data exchange issues such as interface and connectivity problems will be resolved.	• Completion of policy and protocols documentation for the resolution of data exchange	• Information systems

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
7. Develop educational materials relating to patient data sharing in the area of privacy, security, and data retention.	• Production of training materials to be provided to participating providers	• Compliance, Governance Committee, Legal, Information Systems
8. Perform workflow review of appropriate methodology for obtaining patient consent for inclusion in the health information exchange.	• Documentation of workflow for patient consents to implement an appropriate patient consent form to all users of the electronic health exchange	• Compliance, Legal, Governance Committee, internal EHR systems and records, hospital provider EHR records
9. Select a set of preventative measures, including screening tests and immunization in adult medicine that will be aggregated in a pilot test. Preventative measures shall include, but not be limited to: • Blood Pressure Screening in Adults • Breast Cancer Screening • Cervical Cancer Screening • Cholesterol Abnormality screening in men 35 and older • Cholesterol Abnormality screening in women 45 and older • Colorectal Cancer Screening.	• Documentation of the selected measures, based on the United States Preventative Services Task Force recommendations for adults	• Measure examples
10. Provide baseline data with compliance for the 6 identified USPSTF adult preventative tests.	• Provide currently measurable baseline compliance for breast, cervical and colorectal cancer, cholesterol screening in men and women, and blood pressure screening for all PCPs	• Internal electronic health record (EHR) system and records; hospital-affiliated providers EHR records

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
11. Design and pilot test a paper-based form that aggregates preventative testing results in one adult primary care practice.	• Narrative summary of the pilot process authored by the provider who participated in the pilot	• Summary narrative of pilot program
12. Develop a data aggregation tool that will be used to present adult preventative test results data.	• Documentation of the data aggregation tool	• Written data warehouse house plan • Written data warehouse schema
13. Create a plan to build a data warehouse that would replace the paper form and build the data warehouse in a test environment.	• Written plan describing structure and functionality of the data warehouse in the test system • Written document outlining exported tables of preventative care data and the data base scheme for the warehouse	• Written data warehouse house plan • Written data warehouse schema

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
1. Integrate X number or percent of hospital-affiliated system providers into the electronic information exchange.	• X percent increase in the number of providers who opted into the health information exchange	• Internal electronic health record (EHR) system and records; hospital-affiliated providers EHR records
2. Pilot test the electronic aggregation tool for reporting preventative test results in X adult primary care provider sites.	• X percent reduction in missing preventative testing for one or more measure by PCP at piloted practice site • X percent increase in number of patients who completed a particular preventative measure by PCP at piloted practice site • Develop report of percent of providers who access the HIE • Develop report of percent of unique patient encounters	• Internal electronic health record (EHR) system and records; hospital-affiliated providers EHR records • Sample reports generated by data warehouse

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
	where provider obtained data from the HIE • Sample report on the number/percentage of patients in a specific provider practice who have preventative testing completed for one test	

Project 1.5 Practice Support Center

Project Goal

This project's goal is to design and implement a dedicated practice support call center to improve the patient experience in the primary care setting, improve patient satisfaction, reduce "no-show" appointments, and provide critical primary care practice support to clinicians. These efforts will utilize technology and staffing care extenders to create an endurable, scalable, and flexible support system to better support patients and providers in a high-quality, cost-efficient, integrative model. The Practice Support Center will provide support through the development of scheduling protocols and work flows, utilizing Patient Care Assistants that will streamline administrative practice workflow, thereby allowing clinicians to operate at the top of their license. Performance standards and monitoring will be incorporated, and the Practice Support Center leadership will work collaboratively with the Practice Operations Management.

The Practice Support Center is the foundation for development and implementation of care coordination which is an integral component of Patient Centered Medical Home (PMCH). Initiatives in this project could include efforts focused on improvements of appointment scheduling and efficient incoming call triage as well as clinical assessment and advice by specially designated nursing resources for the Support Center. Care coordination can also be supported by preparing patients for their visits during visit reminder calls, performing outreach functions for patients with important care gaps, and improving population management with outreach for chronic care. As such, the Practice Support Center will serve a key outreach function of the hospital primary care practice(s)' PCMH.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Develop a Patient/Practice Call Center that enhances patient access while providing necessary support for clinical staff.
B. Provide real time patient demand matching with scheduling capacity.
C. Identify issues and barriers associated with scheduling and developing a plan to improve patient continuity.
D. Identify issues and barriers associated with patient failure to show for scheduled appointments and develop plan for decreased no-show rates.
E. Identify pertinent clinical information and develop plan to include it for the physician for the scheduled appointment.
F. Measure and improve patient service performance.
G. Recruit clinically trained staff with multiplicity of skill sets to better direct patient needs.

Key Process Measures

DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	Metric(s)	Data Source(s)
1. Develop staffing plan and recruitment of appropriate number of Patient Care Assistants.	• Copy of job descriptions • Copy of staffing schedule based on call analysis and demand	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
2. Designate and design space plan for Practice Support Center.	• Copy of space plan that includes IT, telecom, furniture, etc.	• Hospital and department project plans
3. Develop training curriculum program for Patient Care Assistant staff.	• Training plan and curriculum document	• Department training plan and orientation
4. Complete staffing and open Practice Support Center for incoming calls.	• Practice Support Center open to accept inbound scheduling calls	• Internal hospital records/documentation
5. Establish baseline level of calls to track increases in call volumes.	• Average number of fielded calls	• Internal hospital records/documentation
6. Develop and collect baseline data set of key measures (e.g., call volume, service level, abandonment rate, patient satisfaction, appointment access.	• Document one action plan for an outreach effort for a care gap	• Internal hospital records/documentation
7. Develop understanding of baseline measures for reasons patients are calling.	• Report on most common reasons for call and distribution of calls in each grouping	• Internal hospital records/documentation
8. Develop understanding of patient access.	• Report on no-show rate and patients seen per session (measure of practice efficiency)	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Milestone	**Metric(s)**	**Data Sources**
1. Expand call center capacity by X percent over baseline.	• Average number of fielded calls compared to baseline	• Internal hospital records/documentation
2. Track key measures for which baselines are developed (e.g., call volume, service level, abandonment rate, patient satisfaction, appointment access.	• Track change in baseline for measure (e.g., call volume, service level, abandonment rate, patient satisfaction, appointment access))	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Milestone	**Metric(s)**	**Data Sources**
3. Develop reporting tool to identify number of patients seen in primary care within time after inpatient discharge.	• Copy of baseline data	• Internal hospital records/documentation
4. Complete action plan for meaningful improvement of percent of patients seen in primary care within X time after inpatient discharge.	• Copy of report indicating % of patients seen in primary care within X times after discharge	• Internal hospital records/documentation
5. Develop meaningful implementation of outbound call effort related to one chronic care condition or preventative care gap.	• Percent of patients reached by phone with unfulfilled preventative care gap	• Internal hospital records/documentation
6. Improve patient access.	• Decrease no-show rate by X% from baseline data	• Internal hospital records/documentation
7. Improve patient experience in getting through to the practice by phone.	• Improve patient satisfaction in "ease of getting through to the practice by phone" by x %.	• Internal hospital records/documentation
8. Implement quality assurance and monitoring program with target measures.	Target measures: • X percent of calls answered within X seconds; and • less than X percent of calls abandoned	• Internal hospital records/documentation
9. Expand outbound call program to provide reminder calls with target measure.	• Staff will contact X percent of scheduled patients to confirm appointment and review clinical information	• Internal hospital records/documentation
10. Select appropriate Press Ganey Survey question(s) to trend and target for patient experience improvement.	• Identification of patient survey questions selected • Report results of survey questions	• Internal hospital records/documentation

Project 1.6 Implement Patient Navigation Services

Project Goal

The goal of this project is to utilize community health workers, case managers, or other forms of patient navigators to provide enhanced social support and culturally competent care to vulnerable and/or high-risk patients. Patient navigators will help and support these patients, especially in need of coordinated care, navigate through the continuum of health care services. Navigators will ensure that patients receive coordinated, timely, and site-appropriate health care services. Navigators may assist in connecting patients to primary care physicians and/or medical home sites, as well as diverting non-urgent care from the Emergency Department to site-appropriate locations. Hospitals implementing this project will aid in the development of new kinds of health care workers, needed to engage patients in a culturally and linguistically appropriate manner that will be essential to guiding patients through fully integrated health care delivery systems.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Establish or expand health care navigation services.
B. Train health care navigators in cultural competency.
C. Deploy innovative health care personnel, such as patient navigators, case workers, and community health workers.
D. Provide navigation services to targeted patients who are at high risk of disconnected or fragmented health care (for example Limited English Proficient patients, recent immigrants, the uninsured, those with low health literacy, frequent visitors to the ED).
E. Connect patients to primary and preventive care.
F. Increase access to care management and/or chronic care management, including education in chronic disease self-management.

Key Process Measures

DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	Metric(s)	Data Source(s)
1. Establish/expand a health care navigation program to provide support to patient populations who are most at risk of receiving disconnected and fragmented care.	• Number of patients enrolled in the patient navigation program • Number of Patient Navigators hired	• Documentation of Patient Navigation program
2. Provide care management/navigation services to targeted patient group (e.g., high utilizers of ED services).	• Number of targeted patients enrolled in program/receiving Patient Navigation services • Number of uninsured and under-insured patients receiving Patient Navigation services • Percent of patients entering ED assisted	• Patient Navigation activity reports

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
3. Increase patient engagement, such as through patient education, self management support, improved patient-provider education techniques, and/or coordination with community resources.	• Number of classes and/or initiations offered • Number/ percent of patients enrolled in the program • Number/ percent of patients attending courses	• Class lists or other hospital reports
4. Provide navigation services to patients using the ED for episodic care.	Potential metrics (select at least one): • Number/percent of patients without a primary care provider who received education about a primary care provider in the ED • Number/percent of patients without a primary care provider who were referred to a primary care provider in the ED • Number/percent of patients without a primary care provider who are given a scheduled primary care provider appointment • Number/percent of patients with a primary care provider who are given a scheduled primary care provider appointment	• Internal hospital records/documentation
5. Conduct analysis of patient knowledge / service assistance gaps.	Gap analysis status: • Project plan • Vendor hired • Completion	• Documentation of process
6. Identify needed skill set needed for patient navigators.	• Completed job description with identified skills	• Documentation of job description
7. Hire community health workers / patient navigators.	• Interviews • Number of navigators on site	• Internal hospital records/documentation
8. Train community health workers / patient navigators in core knowledge, skills, self-efficacy, and cultural competency.	• X% of hires trained • Pre and post-test results ➢ % Improvement ➢ X% at threshold score	• Attendance records • Pre and post-test results

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
9. Provide continuing education and evaluation of community health workers / patient navigators in core knowledge, skills, self-efficacy, and cultural competency.	• % of navigators attending continuing education • Pre and post-test results ➢ % Improvement ➢ X% at threshold score	• Attendance records • Pre and post-test results
10. Develop process for making patient referrals.	• Completion of ED patient referral policy • Patient navigator training on ED referral policy	• Internal hospital records/documentation
11. Create patient satisfaction survey.	• Completion of patient satisfaction survey for patients receiving navigation services	• Patient satisfaction survey
12. Identify ED top users.	• Identification of X number of top ED utilizers	• Internal hospital records/documentation
13. Develop plan to address identified gaps and barriers.	• Future State Process Map	• Documentation
14. Establish baseline / monitor number of patients targeted for services.	• Number of targeted patients	• Hospital records

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
1. Schedule primary care appointments from an ED, Urgent Care, or hospital department.	• Number/percent of patients discharged • Number/percent of patients receiving navigation services	• Internal hospital records/documentation
2. Measure ED visits and/or avoidable hospitalizations.	• Percent of patients enrolled in the navigator program who have had an ED visit or an inpatient admission • Percent of ED visits classified as avoidable/unnecessary	• Internal hospital records/documentation
3. Improve appropriate ED utilization.	• X% reduction in frequent user ED visits • X% reduction in unnecessary ED visits	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
4. Improve primary care utilization.	• X% increase in primary care utilization from those discharged from ED • X% increase in primary care utilization from those receiving navigation services	• Internal hospital records/documentation
5. Improve ED patient satisfaction.	• Above threshold • X% improvement	• Press Ganey
6. Improve patient navigator.	• X% of improved knowledge and/or self-efficacy	• Test scores

Project 1.7 Develop Integrated Acute and Post-Acute Network Across the Continuum of Care

Project Goal

This project will integrate patient care between acute and post-acute care settings to enhance coordination of care, improve the quality of care transitions, reduce readmissions, and develop a fully integrated delivery system capable of providing care in the most effective setting. Through the development of an integrated acute and post-acute network, health care delivery system efficiency is enhanced and providers are transformed to an integrated system capable of managing care along the entire care continuum. Hospitals selecting this project will develop integrative partnerships with post-acute care providers that allow for enhanced communication and care coordination. These partnerships will enable providers to better monitor patient care in post-acute settings and ensure appropriate care throughout the entire episode of care. This project will build hospital capabilities for functioning as an accountable care entity able to accept alternatives to fee-for-service reimbursement for entire episodes of care.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Identify significant post-acute providers for patient population.
B. Develop integrative partnerships with post-acute care provider.
C. Deploy personnel to provide enhanced oversight of acute to post-acute care transitions.
D. Develop / implement electronic medical record technology to connect acute and post-acute records.
E. Develop/ implement integrative protocols for regular communications between acute and post-acute setting.
F. Identify gaps in post-acute care.
G. Assist post-acute partners in targeted improvement efforts.

Key Process Measures

DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	Metric(s)	Data Source(s)
1. Identify post-acute care needs of patient population.	• Recommendations	• Internal hospital records/documentation
2. Identify potential post-acute partners.	• Analysis / recommendations	• Internal hospital records/documentation
3. Execute partnership agreements with post-acute providers.	• Number of partners • Number of patients to be covered	• Agreement
4. Hire personnel to serve as acute to post-acute care experts.	• Number of interviews • Number of personnel on site	• Internal hospital records/documentation
5. Implementation of EMR.	• Number of sites wired	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
6. Staff training on EMR.	• X% of hires trained • X% attendance in training sessions • Pre and post-test results ➢ X% improvement ➢ X% at threshold score	• Attendance records • Pre and post-test results
7. Evaluate post-acute partners / gap analysis.	• Evaluation report	• Internal report and recommendations

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Sources**
1. Coordinate primary, acute, behavioral health, and long-term services of patients in long-term post-acute care.	• Number of patients receiving coordinated care from post-acute setting	• Internal hospital records/documentation
2. Reduce 30 day all cause readmissions.	• X % reduced hospital readmissions • X% reduced readmissions from specified post-acute setting	• Internal hospital records/documentation
3. Use integrative EMR in post-acute setting.	• X% utilization by post-acute staff • Number of post-acute settings using integrative EMR	• Internal hospital records/documentation
8. Identify barriers to use of EMR in post-acute setting.	• Report of identified barriers	• Internal report and recommendations

29. **Category 2: Health Outcomes and Quality**
The projects identified under Category 2 include the development, implementation, and expansions of innovative care models that have the potential to make significant demonstrated improvements in patient experience, costs, and care management. Examples include:

i. Implementation of enterprise wide care management or chronic care management initiatives, which may include implementation and use of disease management registries;
ii. Improvement of care transitions, and coordination of care across inpatient, outpatient, post-acute care, and home care settings;
iii. Adoption of process improvement methodologies to improve safety, quality, and efficiency;
iv. Alternative Care Settings for non-emergency room care.

Each project includes a description of how the innovative care model can refine innovations, test new ways of meeting the needs of target populations, and disseminate findings in order to spread promising practices.

Introduction

The Massachusetts health care system is, in many respects, one of the best health care systems in the nation. The Commonwealth Fund ranks Massachusetts first in terms of access and seventh overall among states on its *State Scorecard*, which measures health system performance. Furthermore, trend data for the first five years of CMS's inpatient quality reporting program, demonstrate consistent and pronounced care improvement in Massachusetts acute care hospitals. Patients are receiving the treatments known to produce the best results more often and more reliably each year. Massachusetts' hospital performance over the last five years has exceeded the national average, even as national performance has improved during the same period. However, there is growing consensus that the health care system must move from a volume-based and fragmented health care system to one more based on achieving value for patients and providers through better care, better health, and lower cost.

The health care system is further challenged by many obstacles to innovation. Insufficient sharing of information and coordination of care across multiple providers often leads to disjointed, inefficient, and costly care. Massachusetts safety-net hospitals seek to improve their delivery systems by taking on innovative projects aimed at providing a coordinated care experience, and striving to improve and reduce unnecessary and more costly care. The hospitals are also trying to make improvements in areas where they have persistent challenges due to the social and medical complexity of the patient population they serve. Through these initiatives they can achieve better outcomes and lower costs for their patients.

The Category 2 DSTI projects reflect a set of initiatives for the eligible Massachusetts safety-net hospitals to rapidly adopt proven models of delivery system transformation, while experimenting with emerging models, with a specific emphasis on how best to improve care for the populations they serve. Category 2 projects focus on areas where evidence – and safety net hospitals' experience-- suggest that there is potential for significant improvement in the quality and/or cost effectiveness of patient care: care management interventions targeting chronic disease or high-risk populations, redesigned care transitions between health

care settings, and robust process improvement programs. Successful interventions and models developed from these projects by safety net providers, given the complexity of the patient population they serve, could provide key models for major enhancements in quality care at the lowest cost setting.

First, many Category 2 projects include a focus on care management and care coordination models targeting chronic and high-risk populations. In order to substantially reduce costs, providers must outreach to, and manage smaller subsets of high-need, high-cost patients, with high intensity care approaches tailored to each patient. For low-income patients, this requires the development of cross-functional care teams that span the continuum of physical health, behavioral health, and social services, including long-term supports.[27] Better care coordination and care management can also help to ensure that patients receive care in the most appropriate, least intensive setting as possible, and that care is not duplicated or conflicting.

Necessary components of a successful disease management program include the ability to identify and monitor high-risk individuals (e.g. patient logs or registries), apply evidence-based practice guidelines, coordinate care between providers, and encourage patient self-management through education and patient tools. The range of disease management services can include timely initiation of ancillary health services, patient monitoring and empowerment, and coordinating community services.[28]

Second, improvements around care coordination and communication at critical transition points are also features of several Category 2 projects. Care should be coordinated, with the primary care team and hospitals jointly planning transitions from inpatient and emergency rooms to more appropriate care settings. According to the Institute for Healthcare Improvement (IHI), hospitals that go beyond the basic discharge plan and focus intensively on improving the transition of patients from hospital to community will have a much better impact on reducing readmissions.[29]

Finally, Category 2 also focuses on process improvement and education aimed at providing better care at lower cost. Much has been published about the safety of healthcare and the amount of waste in its delivery. The Institute of Medicine report *To Err Is Human* noted that according to two studies, between 44,000 and 98,000 Americans die each year because of medical error. Medication errors in particular account for more than 7,000 deaths a year, more than the 6,000 deaths attributed to workplace injuries.[30] Factors inside health care organizations needed to improve care include strong leadership for safety, an organizational culture that encourages recognition and learning from errors, and an effective patient safety program. The follow-up document, *Crossing the Quality Chasm,* noted that in order to achieve a safer health system, health care has to be safe, effective, patient-centered, timely, efficient and equitable. Process improvement education and methodologies, with their

[27] T. McGinnis, Small D.M. "Accountable Care Organizations in Medicaid: Emerging Practices to Guide Program Design,." *Center for Health Care Strategies* Policy Brief February 2012, p. 2.
[28] Fisher E, McClellan M, et al. "Accountable Care Learning Organization: Toolkit." *Engelberg Center for Health Care Reform. The Dartmouth Institute and The Brookings Institution. (*Jan. 2011) p 118.
[29] 5 Million Lives Campaign. "Getting Started Kit: Improved Care For Patients with Heart Failure How- To-Guide." *Institute for Healthcare Improvement*. 2008.
[30]Kohn L, Corrigan J, and Donaldson M, Editors. "To Err Is Human: Building a Safer Health System." *Institute of Medicine*. 2000.

emphasis on waste reduction and employee empowerment to solve problems at the operational level, help address all of these issues.

The eligible safety net systems may select from among the projects described below, as specified, for inclusion in their Category 2 DSTI plans.

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Project 2.1: Implement Care Management Interventions for Patients with Chronic Diseases

Project Goal

The goal of this project is to develop and implement chronic disease management interventions that are geared toward improving effective management of chronic conditions and ultimately improving patient clinical indicators, health outcomes and quality, and reducing unnecessary acute and emergency care utilization. Chronic disease management initiatives use population-based approaches to create practical, supportive, evidence-based interactions between patients and providers to improve the management of chronic conditions and identify symptoms earlier, with the goal of preventing complications and managing utilization of acute and emergency care.[31]

Program elements may include the ability to identify one or more chronic health conditions or co-occurring chronic health conditions that merit intervention across a hospital's patient population, based on a hospital's assessment of patients' risk of developing complications, co-morbidities or utilizing acute or emergency services. These chronic health conditions may include diabetes, congestive heart failure, chronic obstructive pulmonary disease, among others, all of which are prone to co-occurring health conditions and risks.

Best practices such as the Wagner Chronic Care Model and the Institute of Chronic Illness Care's Assessment Model may be utilized in program development.[32]

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Identify one or more chronic disease patient populations that are at high risk for developing complications, co-morbidities, and/or utilizing acute and emergency care services.
B. Review chronic care management best practices (e.g., Wagner Chronic Care model) and conduct an assessment of the hospital/health system to guide quality improvement efforts and evaluate changes in chronic illness care (e.g., the Institute of Chronic Illness Care's Assessment of Chronic Illness Care—ACIC[33]).
C. Assess common barriers for chronic disease patients to access necessary care and manage their chronic disease effectively using survey or focus group tools (e.g., the Institute of Chronic Illness Care's Patient Assessment of Care for Chronic Conditions—PACIC[34]).
D. Design and implement system for identifying chronic disease patients with difficulty managing their chronic disease.
E. Implement care management intervention(s) targeting one or more chronic disease patient populations. Examples of interventions include, but are not limited to, implementation of:
    - Patient and family education initiatives, using evidence-based strategies such as:
        - Teach-back—to reinforce and assess if patient or learner is understanding
        - Patient self-management coaching.

[31] Rabe KF, Hurd S, et al. "Global Strategy for the Diagnosis, Management and Prevention of COPD." *Global Initiative for Chronic Obstructive Lung Disease* Revised 2011.

[32] Information on the Wagner Chronic Care Model available at http://www.improvingchroniccare.org/index.php?p=The_Chronic_Care_Model&s=2 retrieved on March 11, 2012, and http://www.grouphealthresearch.org/faculty/profiles/wagner.aspx retrieved on March 11, 2012.

[33] Developed as a practical tool to help teams improve care for chronic illness, the content of the ACIC was derived for specific evidence-based interventions for the six components of the Chronic Care Model. Like the chronic care model, the ACIC addresses the basic elements for improving chronic illness care at the community, organizational, practitioner and patient level.

[34] PACIC measures specific actions or qualities of care, congruent with the chronic care model, that patients report they have experienced in the delivery system.

Potential Project Elements
DSTI hospitals undertaking this project may select from among the following project elements:

- Medication management
- Nurse and/or therapist-based education in primary care sites or patients' homes
- Standardized teaching materials available across the care continuum.

- Chronic disease management education programs for primary care, emergency department, homecare, skilled nursing facility, and/or health center staff.
- Chronic disease care management protocols (e.g. standing orders, risk-assessments prior to discharge, medication management, etc.).
- Pharmacist-led chronic disease medication management services in collaboration with primary care and other health care providers.[35]
- Systems to schedule and track rapid follow-up appointments with primary care physicians, specialists, and/or homecare providers following an inpatient or emergency department discharge.

F. Evaluate the intervention(s)' impact on care management process improvements, patient clinical indicators, and quality.
G. Identify "lessons learned," opportunities to scale all or part of the intervention(s) to a broader patient population, and identify key challenges associated with expansion of the intervention(s), including special considerations for safety-net populations.

Key Process Measures
DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Identify one or more chronic disease patient populations that are at high risk for developing complications, co-morbidities, and/or utilizing acute and emergency care services.	• Documentation of defined patient population	• Internal hospital records/documentation
2. Develop patient registry or manual logs to track target patient population with chronic disease/condition.	• Working registry as evidenced by monthly reporting of target patient population admissions and readmissions	• Hospital EHR and data warehouse

[35] Smith M, Bates DW, Bodenheimer T, Cleary P. "Why pharmacists belong in the medical home." *Health Affairs*, 2010; 29(5):906–913.
[35],Crosby J, Grundy P, Rogers E. "Integrating Comprehensive Medication Management to Optimize Patient Outcomes." *Patient-Centered Primary Care Collaborative Medication Management Task Force.* 2010.
[35] Giberson S, et al. "Improving Patient and Health System Outcomes through Advanced Pharmacy Practice, A Report to the U.S. Surgeon General. Office of the Chief Pharmacist." *U.S. Public Health Service* Dec. 2011.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
3. Develop care protocols, policies and/or procedures to be followed for the target patient population with a chronic disease/condition.	As evidenced by one or more of the following: • Documentation in the Hospital Meeting minutes of the creation and approval of said protocols, or • Copy of approved protocols, policies and/or procedures	• Internal hospital records/documentation
4. Share chronic disease care protocols for target patient group with community partners to improve care and communication across the continuum of care.	• Identify community partners who will be vital to the chronic disease program • Utilizing the patient registry, reports will be developed to report on outcomes as they relate to patients referred to local partners for follow-up	• Internal hospital records/documentation
5. Implement program to schedule follow-up appointments with primary care physicians and/or specialists scheduled prior to discharge.	• Reports from registry will be created to monitor discharge and the scheduling of follow-up care with the appropriate clinicians	• Internal hospital records/documentation
6. Provide a risk assessment to target patient population with chronic disease/condition.	• Risk assessment documented in patient record and registry to provide appropriate post-discharge services	• Hospital Project Coordinator, Case Management, Information Systems
7. Make follow-up appointments for minimum number/ percentage of target patient group with a chronic disease/condition prior to discharge.	• As documented by hospital report showing appointments made prior to discharge	• Electronic discharge instructions, patient registry
8. Target patient population with chronic disease/condition will be monitored to ensure adherence to the recommended medication regimen, unless contraindicated.	• As measured by the # of patients adhering to the recommended medication regimen compared to the total number of patients following a medication regimen – using the patient registry	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
9. Analyze hospital data to establish a baseline on "all cause" readmissions for target patient group with a chronic disease/condition.	• Monthly tracking of all cause readmissions with subset of primary or diagnostic code of identified chronic diseases	• Internal hospital records/documentation
10. Develop and implement patient training programs, education, and teaching tools for the target patient group to help them self-manage their chronic disease/condition (e.g., "teach-back" method, training on use of medical equipment, etc.).	Metrics may include: • Assess, select, and/or develop patient education tools based on nationally recognized tools previously developed • Development of tool for documenting the existence of patient's self-management goals in patient record for patients with chronic disease(s) at defined pilot sites(s) • Establishment of training programs developed and conducted by clinicians	• Internal hospital records/documentation
11. Identify number of patients with self-management goals.	• Document baseline measure of number of patients with self-management goals in patient record for patients with chronic disease(s) at defined pilot site(s) • Develop tool for documenting patient self-management goals in patient record	• Internal hospital records/documentation
12. Develop and deploy educational materials and/or training programs for clinical staff related to specific chronic disease/condition.	• Documentation of education materials and training programs • # of staff trained	• Internal hospital records/documentation
13. Implement a pilot to improve care management of target patient group with a chronic disease/condition at primary care sites.	• Copy of specific disease management protocol • Schedule of patient teaching/education sessions led by clinician or pharmacist	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
14. Design and implement system, including the establishment of an internal working group, to identify Emergency Department patients who have difficulty managing a chronic disease/condition.	• Documented parameters/criteria for identifying patients with barriers to managing a chronic condition • Working group membership list and meeting schedule	• Internal hospital records/documentation
15. Identify common complications and develop tracking tool of the same that could directly relate to increased Emergency Department visits or an uncontrolled chronic disease (e.g., diabetes).	• Chronic disease tracking tool	• Internal hospital records/documentation
16. Identify additional needs of patients with chronic conditions to develop further strategies for care management including strategic partnerships with vendors, community agencies, and others to expand quality of care across the continuum.	• Documentation of identified additional needs • Documentation of identified partners	• Internal hospital records/documentation
17. Establish a medical record tracking system for target patient group.	• Hospital electronic record flagging system • Documentation of list of hospital providers involved in care of patients with certain chronic conditions	• Hospital electronic health record
18. Design a process to facilitate treatment and rapid referral of patients who present at the Emergency Department with non-urgent chronic disease management needs that includes coordination with hospital outpatient clinic.	• Documentation of referral protocol	• Internal hospital records/documentation
19. Regularly assess, update, and improve care management approaches/programs for patients with a chronic disease/condition.	• Documentation of assessments and updated protocols/programs	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
20. Create process measures to track patient compliance (e.g. preventable inpatient admissions, patients participating in chronic disease management program, follow-up appointment scheduling, no-shows).	• Documentation of medical record tracking system to follow outcomes of patient referrals • Baseline measurement of percentage of patients discharged with a chronic disease diagnosis who complete a scheduled follow up within X days of discharge.	• Internal hospital records/documentation • Internal electronic health record (EHR) system and records; hospital-affiliated providers EHR records
21. Establish baseline percentage of patients who were discharged with a targeted chronic disease diagnosis (e.g. heart failure, COPD, etc.) who answered that they agree or strongly agree to the question, "Did staff take my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I leave the hospital?"	• Baseline percentage of patients who were discharged with a targeted chronic disease diagnosis (e.g. heart failure, COPD, etc.) who answered that they agree or strongly agree to the question, "Did staff take my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I leave the hospital?"	• Patient follow-up phone call responses

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Number/percent of target patient group with a chronic disease/condition contacted by hospital within 24 to 48 hours of hospital discharge (72 hours for weekend discharge).	• Follow up calls will be documented in the outpatient EHR as evidenced by documentation of a sample of 10 charts or chronic disease log	• Hospital Access Coordinator, Information Systems • Where possible, follow-up call documentation will reside within the patient registry; otherwise logs documenting follow-up phone calls will be created and made available for auditing

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
2. Number/percent of the target population admitted to hospital with a chronic disease/ condition who are enrolled in the patient registry/entered into a manual log.	• As measured using reports created from the patient registry /manual log	• Hospital Task Force, Information Systems for all patients
3. Number/percent of target patient group with a chronic disease/condition that has a risk assessment.	• Risk assessments documented in patient record and patient registry	• Hospital Access Coordinator, Case Management, Information Systems
4. Number/percent of target patient group with a chronic disease/condition that have follow-up appointments made prior to discharge.	• As evidenced by hospital reports	• Electronic discharge instructions; patient registry
5. Number/percent of target patient group who complete a scheduled follow up within 7 days of discharge.	• X percent increase over baseline measurement	• Internal electronic health record (EHR) system and records; hospital-affiliated providers EHR records
6. Increase in number/percent of patients with self-management goals for patients with chronic disease(s) at defined pilot site(s) compared to baseline.	• X number or percent increase in number of patients with self-management goals in patient record • Measurement and reporting of number of patients with self-management goals in patient record for patients with chronic disease(s) at defined pilot site(s) compared to baseline	• Internal hospital records/documentation
7. Increase in number of primary care sites to implement a chronic disease training program for clinicians.	• Copy of training program • Records that training has occurred	• Internal hospital records/documentation
8. Increase in number of primary care sites piloting a care management model/approach for target patient group with a chronic disease/condition.	• Copy of specific disease management protocol • Schedule of patient teaching/education sessions led by clinician or pharmacist	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
9. Number /percent of selected clinicians (e.g., RNs, pharmacists, RTs, etc.) educated on chronic disease program.	• X number or percent of selected clinical staff educated on chronic disease program	• Attendance records on education
10. Number/ percent of patients meeting criteria for chronic condition at pilot site(s) contacted or receiving enhanced chronic disease condition services for patient education, self-management coaching, teach-back, medication management or other intervention.	• Number or percent of patients contacted for intervention	• Internal hospital records/documentation
11. Track number of chronic disease inpatient admissions for specified chronic disease, such as HF, COPD, diabetes, depression, etc.	• X percent decrease in the number of chronic disease inpatient admissions over measurement period	• Internal hospital records/documentation
12. Track percent of patients who participate in select chronic disease program.	• X percent increase in the number of patients participating in select chronic disease program	• Internal hospital records/documentation
13. Using chronic disease tracking tool developed in Year 1, assess prevalence of diabetes complications in patients presenting for evaluation at their first follow-up appointment.	• Analysis of data captured by chronic disease tracking tool	• Internal hospital record/documentation
14. Expanding on identified complications and/or comorbidities to measure the percentage of follow-up care in the appropriate care settings in select clinics.	• Documentation of follow up visits in all identified outpatient clinics	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
15. Percentage of patients who were discharged with a targeted chronic disease diagnosis (e.g. heart failure, COPD, etc.) who answered that they agree or strongly agree to the question, "Did staff take my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I leave the hospital?"	• X percent increase in the number of patients who were discharged with a targeted chronic disease diagnosis (e.g. heart failure, COPD, etc.) who answered that they agree or strongly agree to the question, "Did staff take my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I leave the hospital?"	• Patient follow-up phone call responses

Project 2.2: Establish a Chronic Disease Registry

Project Goal

The goal of this project is to develop and implement a disease management registry for one or more patient populations diagnosed with a selected chronic disease. By tracking key patient information, a disease registry can help physicians and other members of a patient's care team identify and reach out to patients who may have gaps in their care in order to prevent complications, which often lead to more costly care interventions.[36] A disease registry can assist physicians in one or more key processes for managing patients with a chronic disease, including:

1. Prompt physicians and their teams to conduct appropriate assessments and deliver condition-specific recommended care;
2. Identify patients who have missed appointments, are overdue for care, or are not meeting care management goals;
3. Provide reports about how well individual care teams and overall provider organizations are doing in delivering recommended care to specific patient populations; and
4. Stratify patients into risk categories in order to target interventions toward patients with the highest needs.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Identify one or more chronic disease patient populations that are at high-risk for hospital readmissions and high utilization of health care services.
B. Identify patient care registry system requirements relevant to the chronic disease patient population(s).
C. Assess existing IT platforms for possible patient registry functionality and/or interface.
D. Review current and future state of workflow and identify barriers to implementation.
E. Select an appropriate chronic disease registry solution that meets the needs of the patient population.
F. Educate and train clinical and/or administrative staff on use of chronic disease registry.
G. Implement and utilize disease management registry for target chronic disease populations.
H. Develop and implement testing to evaluate the accuracy of the registry and effectiveness in addressing treatment gaps and reducing preventable acute care.

[36] 5 Million Lives Campaign. "Getting Started Kit: Improved Care For Patients with Heart Failure How- To-Guide." *Institute for Healthcare Improvement*. 2008.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Assess chronic disease registry functionality in electronic health record (EHR) systems.	• Review and analyze functionality and interface capability for EHR systems used by hospitals and affiliated physician practices to determine if they have necessary elements for a chronic disease registry. Necessary elements may include inpatient admissions, emergency department visits, test results, medications, weight, activity level changes and/or diet changes	• EHR systems
2. Develop an interface plan between EHR systems used by hospital and affiliated physician office practices.	• Production of interface model	• EHR systems
3. Issue Request for Proposal for a chronic disease registry.	• Analyze responses from top vendors to determine gaps in hospital/physician practice EHR systems to support a chronic disease registry	• Documentation of RFP
4. Select appropriate IT solution based on system functionality and procure a chronic disease registry.	• Procurement contract	• Documentation of contract
5. Evaluate workflow and use of chronic disease registry using Lean methodology.	• Review current and future state of workflow using chronic disease registry and identification of barriers to implementation	• Review of Lean event
6. Identify hospital and affiliated organization staff that will use the chronic disease registry.	• Develop list of users by location and by priority of use by functional area	• List of users
7. Develop an implementation plan for a chronic disease registry.	• Development of implementation plan	• Documentation of plan
8. Pilot test the selected chronic disease registry.	• Evaluate and identify gaps in information exchange in the registry within the hospital's identified staff and departments	• Implementation and testing plan

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
9. Identify target patient population with chronic disease to be entered into the registry.	• Document patients to be entered into the registry	• Internal hospital records/documentation
10. Develop and implement test plan to determine accuracy of information populated into the registry.	• Implement and document results of test plan	• Test plan
11. Educate and train staff on the chronic disease registry.	• Documentation of training materials/attendance	• Attendance list and educational content

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Go-Live – Enter patient information in the disease registry for target patient population with chronic disease.	• Identify gaps, via a review of the identified registry elements above, in treatments as identified Best Practices for the target patient population with a chronic disease	• Documentation of patients entered and gaps identified
2. Identify patients with chronic disease entered into registry who receive discharge instructions appropriate for their chronic disease such as: activity level, diet, medication management, etc.	• X percent increase of patients with chronic disease who receive appropriate disease specific discharge instructions.	• Chronic disease registry and hospital her

Project 2.3: Implement Improvements in Care Transitions

Project Goal

The goal of this project is to implement improvements in care transitions and coordination of care from inpatient to outpatient, post-acute care, and home care settings in order to prevent increased health care costs and hospital readmissions. Care transitions refer to the movement of patients from one health care provider or setting to another. For people with serious and complex illnesses, transitions in setting of care—for example from hospital to home or nursing home, or from facility to home- and community-based services—have been shown to be prone to errors.[37] Safe, effective, and efficient care transitions and reduced risk of potentially preventable readmissions require cooperation among providers of medical services, social services, and support services in the community and in long-term care facilities. High-risk patients often have multiple chronic diseases. The implementation of effective care transitions requires practitioners to learn and develop effective ways to successfully manage one disease in order to effectively manage the complexity of multiple diseases.[38]The discontinuity of care during transitions typically results in patients with serious conditions, such as heart failure, chronic obstructive pulmonary disease, and pneumonia, falling through the cracks, which may lead to otherwise preventable hospital readmission. [39]The goal is to ensure that the hospital discharges are accomplished appropriately and that care transitions occur effectively and safely.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following elements:

A. Develop a cross-continuum team comprised of clinical and administrative representatives from acute care, skilled nursing, ambulatory care, health centers, and home care providers.
B. Conduct an analysis of the key drivers of 30-day hospital readmissions using a chart review tool (e.g. the Institute for Healthcare Improvement's (IHI) State Action on Avoidable Re-hospitalizations (STAAR[40]) tool) and patient interviews.
C. Identify baseline top readmission diagnoses and populations at high risk for readmissions, including mental health and substance abuse.
D. Review best practices from a range of models (e.g. RED[41], BOOST[42], STAAR, INTERACT[43], Coleman[44], Naylor[45], GRACE[46], BRIDGE[47], etc.).

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[37]Coleman EA. "Falling Through the Cracks: Challenges and Opportunities for Improving Transitional Care for Persons with Continuous Complex Care Needs." *Journal of the American Geriatrics Society* (2003) 51:549-555

[38] Rittenhouse D, Shortell S, et al. "Improving Chronic Illness Care: Findings from a National Study of Care Management Processes in Large Physician Practices." *Medical Care Research and Review Journal* (2010) 67(3): 301-320

[39] Coleman, E., Parry, C., et. al. "The Care Transitions Intervention: a patient centered approach to ensuring effective transfers between sites of geriatric care." *Home Health Care Serv Q* (2003) 22 (3): 1-17

[40] IHI launched State Action on Avoidable Re-hospitalization (STAAR) Initiative in May 2009 – a ground breaking, multi-state, multi-stakeholder approach to dramatically improve the delivery of effective care at a regional scale. The STAAR initiative aims to reduce re-hospitalization by working across organizational boundaries and by engaging payers, stakeholders at the state, regional and national level, patients and families, and caregivers at multiple care sites.

[41] The Re-engineered Hospital Discharge, known as Project RED, is designed to re-engineer the hospital workflow process and improve patient safety by using a nurse discharge advocate who follows 11 discrete, mutually reinforcing steps shown to improve the discharge process and decrease hospital readmissions.

[42] Better Outcomes for Older Adults through Safe Transitions, a 2009 Society of Hospital Medicine (SHM) initiative working with hospitals to reduce readmission rates by providing them with proven resources and monitoring to optimize the discharge transition process, and enhance patient and family education practices

Potential Project Elements *DSTI hospitals undertaking this project may select from among the following elements:*
E. Identify and prioritize evidence-based strategies and clinical protocols that support seamless care transitions and reduce preventable 30-day readmissions. F. Implement one or more pilot intervention(s) in care transitions targeting one or more patient care units or a defined patient population. Examples of interventions include, but are not limited to, implementation of: a. Discharge checklists b. "Hand off" communication plans with receiving providers c. Wellness initiatives targeting high-risk patients d. Patient and family education initiatives including patient self-management skills and "teach-back" e. Post-discharge medication planning f. Early follow-up such as homecare visits, primary care outreach, and/or patient call-backs. G. Evaluate the intervention(s) impact on readmissions and patient care and identify "lessons learned," opportunities to scale all or part of the intervention(s) to a broader patient population, and identify key challenges associated with expansion of the intervention(s), including special considerations for safety-net populations.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Establish Task Force or Team to support or lead project.	• Establishment of Task Force or Team	• Documentation of task force or team

[43] Interventions to Reduce Acute Care Transfers (INTERACT) is a quality improvement program that focuses on the management of acute change in resident conditions. Developed by the Georgia Medical Care Foundations with support from CMS.
[44] The Care Transitions Intervention Program is a model developed by Dr. Eric Coleman in response to the need for a patient-centered interdisciplinary intervention that address continuity of care across multiple settings and practitioners.
[45] Also referred to as the Transitional Care Model (TCM) Naylor is an intensive nurse-led care management program provided to high-risk seniors during and after hospitalization.
[46] Geriatric Resources for Assessment for the Care of Elders model is a physician/practice-based care coordination model. GRACE is conducted for a long term/indefinite amount of time and requires a nurse practitioner and social worker.
[47] A novel hospital-to-home transition program for patients with cardiovascular disease which has shown to significantly reduce 30-day readmission rates and emergency department visits.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
2. Collect information and /or analyze data on factors contributing to preventable readmissions within 30 days.	Metrics may include: • Conduct a minimum of 10 interviews with patient/family members regarding an occurrence of a preventable 30 day hospital readmission • Review interview data conducted by multidisciplinary team • Improve electronic reporting of readmission data • Develop an electronic report on readmission data • Chart review Reports • Determine baseline metric for all cause 30 day readmission • Identification of key factors including primary and additional diagnoses such as CHF, DM, COPD and mental health/substance abuse that increase likelihood of preventable 30 day readmissions	• Documented summary of interview results • Report template on readmission • Minutes of meetings analyzing interview results • Report on readmission data • Report listing key contributing factors
3. Identify baseline high-risk Diagnostic-related Groups (DRGs) by analyzing 30-day readmissions for acute care and home care patients.	• Documentation of chart review (e.g., STARR Chart review report)	• Documentation of Chart Review Report
4. Hire clinician(s) with care transition/disease management expertise.	• Position offer letters	• Documentation of position of offer letters/ Human Resources records
5. Develop an assessment tool to identify patients who are at high risk for readmission.	• Multidisciplinary committee approves assessment tool	• Approved sample tool and meeting minutes

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
6. Identify evidence-based frameworks that support seamless care transitions and impact preventable 30-day readmissions.	• Selection of an evidence based framework	• STAAR meeting minutes displaying the selection of evidence based framework
7. Pilot test care management/ intervention approaches at selected provider sites (inpatient or outpatient).	Metrics may include: • Implementation of at least 2 evidence based interventions on a pilot unit; or • Implementation of pilot disease management program at one physician group practice	• Detailed implementation plan
8. Analyze pilot test results.	• Pilot report	• Copy of report
9. Develop plan (s) for a (1) hospital care transition process or (2) home-base disease management program for high-risk patients, or (3) to provide care management tools and health information exchanges with area physician groups and other post-acute providers.	• Care management tool and HIE Plan • Transition Process Improvement Plan • Home-base disease management plan	• Internal hospital records/documentation
10. Conduct study to determine feasibility of providing a wellness program on hospital campus for patients with high risk diagnoses.	• Hospital wellness plan	• Internal hospital records/documentation
11. Increase number of RN hours allocated to home-based disease management program.	• Increase RN hours for Home Care program	• Documentation of RN hours increase
12. Conduct baseline study and annual reassessments of at least X high-risk patients readmitted to hospital < 30 days to determine interval between hospital discharge and visit to PCP.	• Study of at least X high risk patients readmitted in less than 30 days to hospital in a given year	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
13. Collect baseline patient-centered measures for X number of high-risk patients.	• Baseline report on high-risk patients	• Internal hospital records/documentation
14. Educate appropriate clinical staff on key contributing factors to preventable readmissions.	• Educational sessions with key clinical staff	• Internal hospital records/documentation
15. Dedicate additional Advanced Practice RN resources to provide a bridge visit to high risk patients between hospital discharge and PCP visit.	• Advanced Practice RN position descriptions and work schedule	• Documentation of Advanced Practice RN position descriptions and work schedule
16. Re-engineer hospital discharge process for all admitted patients.	• Development of high-risk tool and discharge checklist	• Documentation of high risk tool and discharge check list
17. Develop reports and studies on lessons learned and share with health care community.	• Development of "Lessons Learned" report	• Internal hospital records/documentation
18. Implement enhanced assessment tool for inpatients with substance abuse and behavioral health issues.	• Multidisciplinary committee approves assessment tool	• Documentation of committee approval of tool
19. Identify community-based care transition partners.	• Number of care transition partners • Number of partner post-acute facilities	• Internal hospital records/documentation
20. Assess current knowledge / barriers to implementing evidence-based care transition tool or framework.	• Completion of survey or report	• Internal hospital records/documentation
21. Train hospital staff on standard use of evidence-based care transition tool or framework.	• X% of hospital staff trained	• Internal hospital records/documentation
22. Train post-acute partners on standard use of evidence-based care transition tool or framework.	• X% of post-acute partners trained	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
23. Document workflow protocol including use of evidence-based care transition tool or framework.	• Completion of written workflow protocol	• Internal hospital records/documentation
24. Implement workflow protocol including use of evidence-based care transition tool or framework.	• Dissemination of written workflow protocol to appropriate staff	• Internal hospital records/documentation
25. Establish baseline measure for the percentage of "High Risk" patients with customized care plans before discharge.	• Percentage of "High Risk" patients with customized care plans before discharge	• Report on "High Risk" patients with customized care plan before discharge
26. Creation of Patient Experience of Care Council	• Council creation • Meeting minutes	• Internal hospital records/documentation
27. Gap analysis regarding patient communication with doctors, nurses, and/or discharge information.	• Analysis complete	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Implement home-based disease management program for high-risk patients with enrollment target of X patients.	• Home health certification and plan of care signed by RN and patient's PCP	• Home health certification and plan of care
2. Implement trial use of warm handoffs (a clinician to clinician real time live communication) for adult inpatients being discharged to alternative care settings (.e.g., SNFs, Rehabs, and PCMH's).	• Warm Handoffs used for X percent of target population transitioned from adult inpatient units to alternative care settings (e.g., area SNFS, Rehabs, PCMH's)	• Report on percentage of adult transfers to alternative care settings during which warm handoff occurred (e.g., area SNFS, Rehabs, PCMH's)
3. Expand warm handoffs on target patient population.	• Increase expand warm handoffs to X percent of target patient population	• Report on percentage of adult transfers to alternative care settings during which warm handoff occurred
4. Educate X % of selected	• X percent of targeted	• Minutes and attendance lists

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
hospital clinicians (e.g. RNs, hospitalists) on use of teach-back methodologies.	hospital clinicians are educated on teach-back methodology	of meeting
5. Implement use of teach-back methodology for X percent of target high-risk patient group.	• Sample target high risk patient group to determine percentage who experience teach-back and assess impact on readmission rates	• Report on percentage of sampled high-risk patients who experienced teach-back methodology
6. Use of evidence-based care transition tool or framework by hospital staff.	• X% utilization by hospital staff	• Internal hospital records/documentation
7. Use of evidence-based care transition tool or framework by post-acute partner staff.	• X% utilization by post-acute staff	• Internal hospital records/documentation
8. Improve patient communication with doctors.	• Xth percentile in HCAHPS: Communication with Doctors	• Press Ganey
9. Improve patient communication with nurses.	• Xth percentile in HCAHPS: Communication with Nurses	• Press Ganey
10. Improve patient communication regarding discharge.	• Xth percentile in HCAHPS: Discharge Information	• Press Ganey
11. Improvement in percentage of "High Risk" patients with customized care plans before discharge	• X percent improvement in percentage of "High Risk" patients with customized care plans before discharge	• Report on "High Risk" patients with customized care plan before discharge
12. Increase number or percent of target inpatient population screened for a substance abuse or mental health disorder that receive an enhanced assessment.	• X percent increase in target inpatient population screened for a substance abuse or mental health disorder who receive an enhanced assessment	• Social work log books
13. Increase number or percent of target inpatient population with a substance abuse or mental health disorder discharged to home who underwent an enhanced assessment for whom clinicians made follow up calls (two attempts) to review treatment plans and assess compliance.	• X percent increase in follow up phone contacts (at least 2 attempts) made by hospitals to target inpatient population with a substance abuse or mental health disorder discharged to home and underwent an enhanced assessment	• Social work logbooks

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
14. Reduce admissions from targeted post-acute population.	• X% reduced readmissions from specified post-acute population	• Internal hospital records/documentation
15. Reduce all-cause readmissions for post-acute settings.	• X% reduced all-cause readmissions from specified post-acute setting	• Internal hospital records/documentation

Project 2.4: Develop or Expand Projects to Re-Engineer Discharge Processes

Project Goal
Comprehensive discharge processes -- wherein the patient and the hospital share an understanding of care and follow up plans -- are critical to successful implementation of accountable care models. To prepare in this regard, hospitals may need to refine, and in some cases re-engineer, their existing discharge processes to reduce unnecessary readmissions, increase adherence to follow up care recommendations and thrive under alternatives to fee-for-service payments. Projects will focus on standardizing and personalizing the complex hospital discharge process to reduce unnecessary readmissions and improve quality, thereby better positioning the hospital system for success in a global payment environment.

Potential Project Elements *DSTI hospitals undertaking this project may select from among the following project elements:*
A. Design and Implement Re-Engineered Discharge process for specified categories of patients B. Educate the patient about diagnosis throughout the hospital stay. C. Make appointments for follow-up and post discharge testing, with input from the patient about time and date. D. Discuss and document with the patients any tests not completed in the hospital E. Organize post discharge services. F. Confirm the medication plan. G. Reconcile the discharge plan with national guidelines and critical pathways. H. Review with the patient appropriate steps of what to do if a problem arises. I. Expedite transmission of the discharge summary to clinicians accepting care of the patient. J. Give the patient a written discharge plan. K. Assess the patient's understanding of the discharge plan. L. Call the patient 2 -3 days after discharge to reinforce the discharge plan and help with problem solving. M. Train clinicians and other staff to utilize new processes appropriately. N. Perform data analysis to track readmissions for participating patients. O. Identify common issues upon discharge from acute care setting. P. Coordinate with post-acute care providers regarding discharge processes. Q. Improve communication tools between acute and post-acute providers.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Develop and staff a re-engineered discharge process plan (RED) for implementation with targeted adult medical patients at a hospital.	• Project RED staffing plan • RED program description • Project RED patient criteria	• CMS Readmissions criteria • Internal hospital records/documentation
2. Implement RED for X number of hospitalized adults from one Medicaid MCO.	• Copy of hospital's implementation plan • Copy of report on number of patients participating in RED	• Internal hospital records/documentation
3. Using one X# of payer(s)' claims data, establish baseline data to be used in tracking designated hospital patients receiving RED.	• Copy of baseline report	• Payer Data
4. Design process to streamline and implement RED with additional population in a designated hospital' unit for adult medical patients across all payers. Redesign staffing component to better integrate RED into the daily workflow of the inpatient unit.	• Copy of RED redesigned process description for new unit • Copy of RED staffing plan for new unit	• Internal hospital records/documentation
5. Using hospital data, establish baseline data to be used in tracking designated hospital patients from additional hospital unit who will be receiving RED.	• Copy of baseline report	• Internal hospital records/documentation
6. Based on results of Project RED demos, recommend hospital-wide strategy to reduce avoidable readmissions.	• Copy of Project RED cost-benefit analysis • Copy of hospital wide readmissions policy report	Internal hospital records/documentation
7. Identify RED tool(s).	• Identification	Documentation of recommendation
8. Identify community-based partners.	• Internal records identifying partners	Internal hospital records/documentation
9. Provide staff training on RED tool(s).	• Documentation of training	Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Increase number of patients in Project RED by X percent.	• Copy of hospital's Implementation Plan for new inpatient unit • Copy of Report on number of patients participating in RED through Medicaid MCO • Copy of Report on number of patients participating in RED through one designated hospital unit	• Hospital and Insurer Data
2. Track number of readmitted patients from X payer(s) that received project RED using a methodology similar to one used by CMS for counting "all cause readmissions" against established baseline.	• Copy of payer-specific all cause readmission for participating RED patients at hospital report comparing hospital readmission to Year X	• Payer data
3. Track number of participating RED patients from one hospital unit readmitted to same hospital against established baseline.	• Copy of readmissions report for participating RED patients at designated hospital unit comparing hospital readmission to Year X	• Internal hospital records/documentation
4. Hospital utilization of RED tool or procedure.	• X% utilization	• Internal hospital records/documentation
5. Track and report on post-30, 60, and 90 day emergency room (ER) visit for patients discharged through Project RED.	• Copy of tracking report	• Internal hospital records/documentation

Project 2.5: Implement Primary Care Based System of Complex Care Management for High Risk Population(s)

Project Goal

This project's goal is to develop and implement a primary care-based system of complex care management to improve patient health and reduce unnecessary costs for safety-net patients determined to be at high risk. High-risk populations may be defined by the hospital's population specific criteria, including a combination of factors such as recent inpatient or emergency room utilization or utilization of high-cost health care services, risk stratification based on utilization and clinical indicators, poor control of a chronic disease (medical and behavioral), and/or patients who have an acute change in their medical, social or behavioral health condition. Primary care-based care management or complex care management teams will provide complex care management of medical conditions and behavioral health conditions as well as coordinate a range of social service supports such as effective patient engagement, housing, transportation, nutrition. These teams will also coordinate with inpatient, emergency department, and post-acute care management systems to facilitate a seamless care transition experience for patients.

Safety-net patients have complex health care needs and utilization behaviors that are significantly different than and far exceed expected patterns in the commercial population.[48] Development of primary care-based systems of care management has been linked to substantial improvements in quality of care and reduced cost.[49] Safety-net patient populations face not only co-occurring medical and mental health concerns but also social acuity, including linguistic, cultural, literacy, economic, psychological or cognitive barriers. These social determinants can factor into missed appointments, no-shows for follow-up tests, medication problems, disease progression and health care utilization patterns. The discontinuity of care can lead to otherwise preventable complications and/or hospital admissions and emergency room use. Projects under this heading will attempt to address these challenges through comprehensive care management programs for complex patients.

[48] Tang, N. et al. "Trends and Characteristics of U.S. Emergency Department Visits 1997-2007." *JAMA* (2010) 304(6): 664-670.
[49] Cosway R, et al. "Analysis of Community Care of North Carolina Cost Savings." *Milliman, Inc.* 2011.

Potential Project Elements *DSTI hospitals undertaking this project may select from among the following project elements:*
A. Define population of patients determined to be at high risk for utilization of high-cost health care services based on available clinical and administrative data (e.g. payer data, emergency room and hospital discharge logs, health records or registries identifying patients with a poorly controlled chronic disease, etc.). B. Develop a multi-disciplinary team-based framework for a primary care-based complex care management model for high-risk patients. C. Identify competencies and qualifications required for members of the primary care complex care management team. D. Develop and implement reports and/or EMR capabilities to designate high-risk patients. E. Design, develop, and implement integrated care plans for use with high-risk patients enrolled in a primary care-based system of complex care management. F. Enroll high-risk patients in primary care-based complex care management model in one or more primary care sites. G. Evaluate the effectiveness of the initial or pilot site primary care-based complex care management model in areas that may include addressing treatment gaps, reducing missed appointments, inpatient or emergency care patterns or follow-up, improving patient engagement or satisfaction, and/or wellness/clinical indicators.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Develop primary care-based complex care management program for high-risk patients including the methodology for identifying high-risk patients and the multi-disciplinary framework for the program.	• Submission of care management workgroup minutes and recommendations that include a multidisciplinary framework for a primary care-based care management program for high-risk patients	• Internal hospital records/documentation
2. Develop a report of high-risk patients and deliver these in a timely way to primary care-based complex care management staff.	• Submission of sample multi-payer report delivered to participating primary care sites	• Internal records that incorporate payer data
3. Develop job requirements and/or identify competencies for members of the primary care complex care management team (such as community health workers, RN clinical care managers, social workers).	• Submission of revised job descriptions and/or competencies for community health worker, nurse and social worker with integration of care management competencies	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Implement primary care-based complex care management program for high-risk patients at X number of primary care sites. Hospital may increase the number of participating primary care sites over the demonstration years.	Metrics may include: • Create a way to designate high-risk patients in the EMR for participating primary care sites • Enroll high- risk patients into the complex care management program at X number of participating primary care sites • Create a report to identify the number of patients enrolled in the complex care management program • Create baseline reports for: ➢ the number of patients enrolled in the complex care management program at initial pilot sites and, ➢ the % of patients enrolled in the complex care management program who have a documented care plan during the measurement period at X number of initial participating primary care sites	• Submission of EMR screen shot illustrating patient identified as receiving complex care management • EMR reports • Care management report
2. Expand primary care-based complex care management program for high-risk patients to X number of additional primary care sites.	• Increase number of primary care sites participating in the complex care management program for high-risk patients	• Care Management Report from EMR
3. Increase the number of patients enrolled in the complex care management program by X percentage increase at X primary care sites.	• Increase the number of patients enrolled in the complex care management program by X percent over the baseline established across the X primary care sites	• Care management report from EMR

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
4. Monitor care management plans developed for high risk patients enrolled in the complex care management program across participating primary care pilot site(s).”	• # and % of patients enrolled in the complex care management program that have a care plan that has been developed by the care manager with input from the care team during the measurement period.	• EMR
5. Evaluate the effectiveness of the initial or pilot site primary care-based complex care management model in areas that may include addressing treatment gaps, reducing missed appointments, inpatient or emergency care patterns or follow-up, improving patient engagement or satisfaction, and/or wellness/clinical indicators.	• Written report	• Internal hospital records/documentation

Project 2.6: Establish a Multi Disciplinary Education and Simulation Center

Project Goal

The goal of this project is to improve patient safety and quality and to improve the delivery of high-quality health care through education, training and research. Programs will utilize experiential, simulated scenarios and participatory courses to focus on effective communication, collaboration, crisis management and cultural competency. A multidisciplinary team approach—rather than a traditional, siloed approach—will be utilized to allow for training, in a true simulated environment, of all related hospital staff responsible for the care and treatment of patients (e.g. physicians, nurses, pharmacists, etc.). Curricula will be designed to reflect this multidisciplinary approach and to address the multicultural needs of a safety net population. The project will focus on continuous quality improvement and will consist of the creation of a state-of-the-art, centralized simulation and education center for its core community, including clinicians, residents, students, nurses, pharmacists, allied health professions and potentially the community at large for certification courses. The Simulation Center will accommodate the needs of multiple departments, including surgery, anesthesiology, nursing, pediatrics, medicine, and obstetrics/gynecology.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Design, staff, and open a dedicated, multi-disciplinary Simulation and Education Center.
B. Create a Simulation Center clinical implementation work group.
C. Identify training programs to be offered.
D. Develop curriculum and materials for multidisciplinary team training programs.
E. Train multidisciplinary team members across hospital.

Key Process Measures

DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Identify and design space for creation of a Simulation Center.	• Documentation that space has been identified • Documentation that the Center has been designed	• Internal hospital records/documentation
2. Create Simulation Center clinical implementation workgroup and identify training programs to be offered; begin planning for implementation.	• Provide list of Simulation Center workgroup members and meeting agenda • Provide outline of recommended list of Simulation Center training programs for SFY 2013 and 2014	• Simulation Center Training Summary

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
3. Develop curriculum materials for initial Simulation Center training program after thorough review of the literature.	• Copy of curriculum materials • Summary of literature review	• Hospital Simulation Center training materials
4. Develop materials for additional training teams.	• Copy of additional training materials	• Hospital Simulation Center training materials

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Provide training to X number of clinical staff.	• Documentation of training to X number of clinical staff, including pre- and post-skills assessments, where applicable.	• Hospital Simulation Center attendance records

Project 2.7: Implement Process Improvement Methodologies to Improve Safety Quality and Efficiency

Project Goal

The goal of this project is to implement process improvement methodologies to improve safety, quality, and efficiency. Hospitals may design customized initiatives based on various process improvement methodologies such as Lean, Care Logistics, Nurses Improving Care for Healthsystem Elders (NICHE) among others.

For example, the Lean methodology as applied to medicine evaluates the use of resources, measures the value to the patient, considers the use of resources in terms of their value to the patient, and eliminates those that are wasteful. Using methodologies such as Lean that are proven to eliminate waste and redundancies and optimize patient flow, hospitals may customize a project that will develop and implement a program of continuous improvement that will increase communication, integrate system workflows, provide actionable data to providers and patients, and identify and improve models of patient-centered care that address issues of safety, quality, and efficiency. Implementation frequently requires a new "operational mindset" using tools such as Lean to identify and progressively eliminate inefficiencies while at the same time linking human performance, process performance and system performance into transformational performance in the delivery system.[50] The process improvement, as a further example, may include elements such as identifying the value to the patient, managing the patient's journey, facilitating the smooth flow of patients and information, introducing "pull" in the patient's journey (e.g. advanced access), and/or continuously reducing waste by developing and amending processes awhile at the same time smoothing flow and enhancing quality and driving down cost.[51]

Furthermore, projects designed and implemented using the Care Logistics™ patient-centered, care coordination model involves managing the simultaneous logistics of a patient moving through the hospital. It may be used to help hospitals transform their operations to improve patient flow into cross departmental hubs and provide actionable data in real-time on key performance indicators, such as, but not limited to, length of stay, patient flow times, discharge process times, re-admission rates, and patient, provider and staff satisfaction.[52]

In addition, hospitals may design a process improvement initiative utilizing the NICHE program framework, which aims to facilitate the infusion of evidence-based geriatric best practices throughout institutions to improve nursing care for older adult patients. NICHE is based on the use of principles and tools to support a systemic change in nursing practice and in the culture of healthcare facilities to achieve patient-centered care.[53]

[50] Oujiri J, Ferrara C. "The Phoenix Project – Integrating Effective Disease Management Into Primary Care Using Lean Six-Sigma Tools." *Duluth Clinic Presentation*. 2010.
[51] Bibby J. "Lean in Primary Care: The Basics – Sustaining Transformation." *Asian Hospital and Healthcare Management* (2011) 18.
[52] http://www.carelogistics.com/
[53] http://www.nicheprogram.org/

Potential Project Elements
DSTI hospitals undertaking this project may select from among the following project elements:

A. Provide training and education to clinical and administrative staff on process improvement strategies, methodologies, and culture.
B. Develop an employee suggestion system that allows for the identification of issues that impact the work environment, patient care and satisfaction, efficiency and other issues aligned with continuous process improvement.
C. Design, develop, and implement a program of continuous, rapid process improvement that will address issues of safety, quality, and efficiency.
D. Define key safety, quality, and efficiency performance indicators and develop a system for continuous data collection, analysis, and dissemination of results.
E. Develop standard workflow process maps, staffing and care coordination models, protocols, and documentation to support continuous process improvement.
F. Implement software to integrate workflows and provide real-time performance feedback.
G. Evaluate the impact of the process improvement program and assess opportunities to expand, refine, or change processes based on the results of key performance indicators.

Key Process Measures
DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Senior hospital leadership collect information on a patient-centered flow management system (e.g., Care Logistics Model) to gain new ideas on best practices with qualitative and quantitative, evidence-based information.	• Site visit to hospital that has implemented the patient-centered flow management system	• Confirmation of visit
2. Senior hospital leadership attend educational seminars on a patient-centered flow management system (e.g., Care Logistics Model).	• Attendance on a seminar on the patient-centered flow management system	• Seminar attendance list
3. Hire vendor to implement a care management system at the hospital (e.g., Care Logistics Model).	• Agreement with system vendor	• Documentation of agreement
4. Conduct educational sessions for hospital leadership, executives, and other hospital staff on the care management system.	• Completion of education sessions	• Evaluation surveys
5. Define current state of care management at the hospital.	• Completion of reports	• Documentation of report

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
6. Define operational procedures needed to improve overall efficiencies in care management.	• Report on at least 2 new operational procedures needed to improve overall efficiencies in care management	• Report on two new operational procedures
7. Adopt new care coordination/management model.	• New care coordination model report	• Documentation of report
8. Implement new care management software (e.g., Care Logistics) to integrate workflows and provide real-time performance feedback.	• Installation of new care management software	• Health system HIT documentation
9. Train hospital staff on new care coordination model.	• Training schedule and attendance list	• Documentation of training schedule and attendance list
10. Define key performance indicators for the new care coordination/ management model.	• Report on new care management indicators • Conduct GIAMP study (Geriatric Institutional Assessment Profile)	• Documentation of report
11. Finalize communication plan on the new care coordination/ management model.	• Hospital Care Coordination Communication Plan	• Documentation of plan
12. Develop baseline rate of Emergency Department patients who leave without being seen.	• Report on ED patient throughput over a 6 month period	• Internal hospital records/documentation
13. Implement a Lean Workplace Standardization class at primary care practices.	• Completion of Lean Workplace Standardization class at X primary care practices.	• On site verification

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
14. Complete a Lean Workplace goal setting process at primary care practices.	• Completion of Lean Workplace goal setting process at X primary care practices, including completion of: ➢ Develop a balanced score card with practice level goals for people, quality, and reduction of waste from the patient's perspective ➢ Develop patient safety cross for each practice	• Documentation of plan
15. Complete an employee suggestion system in X number of practices.	• Develop an employee suggestion system which identifies issues that impact the associate's work environment, quality, patient satisfaction, financial issues or practice growth, aligned with the balanced scorecard goals, done at minimal cost by the submitter and within the submitter's area of responsibility.	• On site verification
16. Collect baseline measurement in one or more of the following: documentation of BMI, smoking status, or medication reconciliation in X number of practices.	• Completion of baseline data collection for one or more of the following: documentation of BMI, smoking status, or medication reconciliation in X number of practices.	• Documentation of each metric at the pilot practices.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
17. Complete a kaizen assessment.	• Implement at least one patient care centered process improvement project in X number of practices • Measure process by documentation of standard work for patient process improvement • Develop and use standard leader work for checking improvement success	• Kaizen event reports
18. Complete care improvement educational program.	• Number of staff completing • X% of staff completing educational program	• Course record
19. Certify nursing staff in geriatric care.	• Number of staff receiving ANCC certification • X% of staff receiving ANCC certification	• Documentation of certification
20. Conduct GIAP survey (Geriatric Institutional Assessment Profile).	• X% staff participating in survey	• Survey results
21. Establish baseline measures and set improvement targets on a minimum of X key performance indicators. Key performance indicators could include, but are not limited to: length of stay, patient flow times, discharge process times, ED patient holds.	• Report on baseline measures, key performance indicators and improvement targets.	• Documentation of report on baseline measures, key performance indicators and improvement targets
22. Complete clinical leadership training.	• Number of staff completing • X% of staff completing educational program	• Course record
23. Develop education and marketing on new care coordination models.	• Creation of educational / promotional materials	• Documentation of materials
24. Analysis of GIAP survey (Geriatric Institutional Assessment Profile).	• Completion of analysis identifying gaps and starting points for education	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. "Go-live" with the New Care Coordination Model.	• HIT system configuration confirmation	• Documentation of HIT system configuration confirmation
2. Reduce rate of ED patients who leave without being seen.	• X percent reduction from previous year baseline in ED patients who leave without being seen (measured over a 6 month period)	• Internal hospital records/documentation
3. Implement a minimum of X operational procedures needed to improve overall efficiencies in care management.	• Report on Implementation of New Operational Procedures to Improve Overall Efficiencies in Care Management	• Documentation of Report
4. Implement process improvement lessons from the pilot practices and achieve improvement in documentation of BMI, smoking status or medication reconciliation.	• X% improvement in documentation of BMI, smoking status or medication reconciliation in X number of pilot practices	• Pre-Kaizan assessment
5. Reduce rate of falls for target population.	• X % improvement in rate of falls • X falls per thousand patient days or fewer	• Internal hospital records/documentation
6. Achieve X percent improvement for a minimum of X key performance indicators. Key performance indicators could include, but are not limited to: length of stay, patient flow times, discharge process times, ED patient holds.	• Report on key performance indicators' improvement from baseline	• Documentation of report on key performance indicators' improvement
7. Reduce rate of pressure ulcers.	• X % improvement in rate of pressure ulcers	• Internal hospital records/documentation
8. Improved knowledge and attitudes.	• X% improvement in surveyed knowledge and attitudes	• Internal hospital records/documentation

Project 2.8: Provide an Alternative Care Setting for Patients who Seek Non-Emergent Department Care

Project Goal

The goal of this project is to provide an alternative care setting for patients with non-emergent complaints who present to the emergency department (ED) for care. This concept will provide patients with a convenient primary care access point for those patients who routinely come to the hospital campus ED for primary care. Through patient education about the alternative site, and creative staffing with independently licensed providers, patients will be encouraged to use primary care providers for non-emergent care rather than the more expensive ED. Despite improvements in primary care access in many communities, patients continue to rely on emergency departments for care that should be provided in a primary care setting. Having a reliable source of primary care alone is not sufficient for these individuals and will not entirely eliminate hospital ED use, however, it remains the most effective health care resource to meet and improve a population's health.

Strong evidence suggests that having a regular source of care produces better health outcomes, reduces disparities, and reduces costs. This initiative will reduce overall costs for the state and allow for all patients to receive better continuity of care and more efficient care.[54]

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Identify the patient population that utilizes ED for non-emergent complaints.
B. Design and implementation of process and methods to encourage the use of the new PCMH primary care site by patients who utilize the ER for non-emergent complaints.
C. Documentation of process and methods to encourage and educate patients.
D. Devise methodology to measure financial impact and cost savings associated with ED efficiencies using baseline data.

Key Process Measures

DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	Metric(s)	Data Source(s)
1. Analyze non-emergent ER complaints and identify patient population that utilizes ER for non-emergent complaints.	• Documentation of baseline data on most common non-emergent patient complaints for the most recent 12-month period stratified by patient demographic and PCP • Documentation of baseline number of patients with and baseline number of patients without PCPs who use ER	• Baseline Data Report from Hospital Information Systems

[54] According to the Commonwealth Fund's 2006 health Care Quality Survey, health care settings with a medical home component that offer a patient a regular source of care, enhanced access to physicians, and timely, well-organized care, have the potential to eliminate disparities in terms of access to quality care among racial and ethnic minorities.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
	for non-emergent care	
2. Design a screening tool for non-emergent care, which would serve as the method to identify the primary reason a patient sought non-emergent patients, and ultimately drive the determination of baseline population.	• Documentation of screening tool	• Internal hospital records/documentation
3. Perform an environmental scan to analyze reasons why patients seek ER care for non-emergent conditions, separate from the complaint itself, using a screening tool for non-emergent patients.	• Identify the top 5 reasons non-emergent patient seek care at the ER	• Documentation of top 5 reasons.
4. Design and implement a process and develop educational materials highlighting the value to patients of having a medical home and continuity of care, as well as encourages use of the new PCMH primary care site by target patient population who utilize the ER for non-emergent complaints.	• Documentation of process and methods to encourage and educate patients to use the new site	• Documentation of deliberations of ER and PCMH Practice Collaborative
5. Determine baseline number of target patient population to be educated and encouraged to use the PCMH site.	• Documentation of baseline number of patients to be educated	• Internal hospital records/documentation
6. Design and implement a process and method to educate patients without a PCP about its value to them and schedule a PCP appointment before they leave the ER.	• Report on baseline number of target patient population to be educated and to have an appointment with PCP scheduled	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Establish a PCMH primary care site within close proximity to Hospital ER (co-located). Staff the site, gaining approval (e.g. FTCA coverage etc.) from authorities.	• Alternative site open and operating.	• Documentation of site opening
2. Educate X percent of target patient population about the PCMH site.	• Educate X percent of target population	• Report of targeted population and educational efforts
3. Schedule PCP appointments for X percent of target patient population who do not have a PCP.	• Schedule PCP appointments for X percent of target population who do not have a PCP	• Documentation of appointments scheduled

Project 2.9: Reduce Variations in Care for Patients with High Risk Conditions

Project Goal

Develop and implement evidence-based clinical care pathways to reduce variations in care, improve health outcomes, and engage patients in disease management. Effective care management requires the standard implementation of clinical best practices as well as patient understanding and engagement in care. For conditions such as congestive heart failure or pneumonia, non-uniform care and poor communication places patients at high risk for readmission and subsequent complications. This project will implement a standard set of "best practices" for conditions with high risk of complication and/or readmission. Care pathways will span the continuum of care from inpatient to outpatient, post-acute care, and home care settings. Pathways will not only reduce variations in care within the hospital, but ensure smooth handoffs between hospital departments and from the hospital to post-acute care.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Identify one or more diagnoses at high risk for readmission, complications, co-morbidities, and/or variations in care.
B. Review and select evidence-based "best practices."
C. Define standards for expected duration of stay and use of tests and treatments.
D. Implement / develop evidence-based standardized clinical care pathways targeting the selected high risk condition(s). Elements of care pathways may include, but are not limited to:
    - Clinical care team roles
    - Medications
    - Nutrition
    - Patient teach back—to reinforce and assess if patient or learner is understanding
    - Patient self-management coaching
    - Expectations for follow-up care
    - Transitions from hospital to home, home care, nursing facility, or other post-acute care provider.
E. Examining care team roles to ensure most efficient and appropriate allocation of responsibility.
F. Improving patient satisfaction with care by educating patients and their families about the plan of care and involving them more fully in its implementation.
G. Identify "lessons learned," adopt refinements to clinical pathway, including special considerations for safety net patient populations.

Key Process Measures

DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	Metric(s)	Data Source(s)
1. Identify evidence-based frameworks that support improved care transitions and health care outcomes.	• Selection of an evidence based framework	• Care management and transitions protocol documentation
2. Develop evidence-based care pathways.	• Care pathway	• Documentation

3. Use evidence-based framework or pathway in patient care.	• X% utilization of care pathway	• Internal hospital records/documentation
4. Educate hospital clinicians (e.g. RNs, hospitalists) on use of teach back methodologies.	• X% of targeted hospital clinicians are educated on teach back methodology	• Internal hospital records/documentation
5. Pilot evidence-based framework or pathway in patient care.	• Use in multidisciplinary rounds	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Complete patient teach back for targeted conditions / patient populations.	• X% completion of teach back for targeted population	• Internal hospital records/documentation
2. Decrease 30 day all cause readmissions.	• X% decrease in 30 day all cause readmissions	• Internal hospital records/documentation
3. Decrease CHF 30 day all cause readmissions.	• X% decrease in CHF 30 day all cause readmissions	• Internal hospital records/documentation
4. Decrease PN 30 day all cause readmissions.	• X% decrease in PN 30 day all cause readmissions	• Internal hospital records/documentation
5. Improve overall core measure compliance for CHF bundle.	• Xth percentile overall core measure compliance for CHF bundle	• Whynotthebest[55]
6. Improve overall core measure compliance for PN bundle.	• Xth percentile overall core measure compliance for PN bundle	• Whynotthebest
7. Improve overall core measure compliance for AMI bundle.	• Xth percentile overall core measure compliance for AMI bundle	• Whynotthebest
8. Expand pharmacy discharge interventions.	• X% pharmacy discharge interventions for targeted patient population	• Internal hospital records/documentation

[55] The Commonwealth Fund's website Why Not The BEST? at www.whynotthebest.org, utilizes data derived from Medicare's Hospital Compare database

30. **Category 3: Ability to Respond to Statewide Transformation to Value-Based Purchasing and to Accept Alternatives to Fee-For-Service Payments that Promote System Sustainability.**

The projects identified under Category 3 include an array of initiatives to build safety net hospital capacity and core building blocks essential to preparations for payment reform and alternative payment models. Evidence-based and industry best practices indicate a range of building blocks are integral to a successful transition, especially for safety net hospital patient populations. The following menu of projects are recognized by leading industry and policy groups as key elements in preparation for payment reform and the ability to accept alternative payment models.[56] [57]

Examples include:

i. Enhancement of performance improvement and reporting capabilities
ii. Development of enhanced infrastructure and operating and systems capabilities that would support new integrated care networks and alternative payment models to manage within new delivery and payment models
iii. Development of risk stratification functionalities

Introduction

Massachusetts, building on its health care coverage expansion, is now moving toward payment reforms that focus on alternatives to fee-for-service payments and that align with population health, wellness, and models that foster greater accountability and value in the health care system. Massachusetts' safety net hospitals aspire to the Triple Aim goals of improving the health of populations, improving the experience of care, and health care cost effectiveness. While each of the hospitals has a unique starting place and community context for the work ahead, all of the participating hospitals seek to increase their capacities to participate in alternative payment arrangements that foster the Triple Aim goals.

The Massachusetts Special Commission on the Health Care Payment System recommended a move toward global payment frameworks and models of health care delivery that encourage the clinical and financial accountability of networks of providers for the coordinated care of patient populations.[58] The journey toward new payment reform models necessarily requires a transformed health care delivery system to develop the capabilities to take on these new types of responsibilities – some of which have previously been vested in payers and other aspects are novel.

Safety net hospitals have unique challenges and opportunities in preparing for reform, including constraints in financial resources, limited commercial insurance populations, and high concentration of Medicaid and low-income patient populations that present a set of unique characteristics, including multiple chronic health conditions.

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[56] Fisher E, McClellan M, et al. "Accountable Care Organization Learning Network Toolkit." *Engelberg Center for Health Care Reform | The Dartmouth Institute and The Brookings Institution*. Jan. 2011.

[57] Moore K, Coddington D. "The Work Ahead: Activities and Costs to Develop An Accountable Care Organization*." American Hospital Association and McMannis Consulting* 2011.

[58] *"Recommendations of the Massachusetts Special Commission on the Health Care Payment System.*" *Massachusetts Special Commission on the Health Care Payment System.* July 16, 2009.

Safety net hospitals and health systems need to develop a set of core capabilities to transform health care delivery in the context of new payment reform models and the highly concentrated government payer populations they serve. New models have the potential to overcome existing gaps in care delivery by moving clinical care management activities to the point of care and aligning incentives more effectively at the provider level. To meet these goals, safety net hospitals and systems must organize with: (1) a clear mission; (2) a set of core capabilities; (3) collaborative relationships across their communities, providers, and payers; and (4) strong executive and provider leadership.[59] There is an opportunity to develop and begin to implement a range of models in different Massachusetts safety net hospital delivery system contexts.

New accountable care models require hospitals and providers to consider organizational, governance and operational requirements to operate in new payment paradigms, enhance performance measurement and data and health care analytics, and transform health care delivery to ultimately achieve better health and high-value health care.[60] A recent case study identified 23 activity areas in 4 domains (network development and management; care coordination, quality improvement and utilization management; clinical information systems; and data analytics) important in the development of accountable care or other organizational models that seek to manage the health of a defined population and accept performance-based reimbursement.[61]

For Medicaid and low-income populations, new delivery system models require a strong foundation in patient-centered, team-based care to manage patients across a continuum of medical, behavioral, and social services. Targeted and intensive complex care management is needed to identify, outreach to, and tailor care management to a subset of the high-need, high-cost patients. Robust data systems and analysis skills, including risk stratification, business intelligence and clinical decision support and reporting, are required to translate clinical and claims-based information into care management activities.[62]

The Category 3 DSTI projects reflect a customized set of initiatives for the eligible Massachusetts safety net hospitals to develop core capabilities to prepare for alternative payment models and strategies to be successful in this new environment.

The eligible safety net systems may select from among the following projects, as specified, for inclusion in their Category 3 DSTI plans.

[59] McGinnis, T. and Small, D. "Accountable Care Organizations in Medicaid: Emerging Practices to Guide Program Design." *Center for Health Care Strategies*. Policy Brief (Feb. 2012) pages 1-2.
[60] Fisher E, McClellan M, et al. "Accountable Care Organization Learning Network Toolkit." *Engelberg Center for Health Care Reform | The Dartmouth Institute and The Brookings Institution.* Jan. 2011.
[61] Moore K, Coddington D. "The Work Ahead: Activities and Costs to Develop An Accountable Care Organization*." American Hospital Association and McMannis Consulting.* 2011.
[62] McGinnis, T. and Small, D. "Accountable Care Organizations in Medicaid: Emerging Practices to Guide Program Design," *Center for Health Care Strategies*. Policy Brief (Feb. 2012) page 2.

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Project 3.1: Develop Risk Stratification Capabilities for Patient Populations and Alternative Payment Models

Project Goal

As a core part of preparations toward accepting alternative payment methods and improving quality and coordination of patient care, hospitals need to develop the capabilities for risk stratification, risk adjustment, and/or the development of comprehensive diagnostic patient profiles. These capabilities are essential tools to support effective strategies to improve the care, outcomes, and cost-effectiveness of care for high-risk patients and/or patients with specific chronic conditions by collecting and disseminating accurate patient data and stratifying by health risk indicators and utilization indicators. Hospitals plan to develop the capability to target high-risk patients by collecting accurate patient data and stratifying the patient population by health risk indicators and utilization indicators. The development of risk stratification capabilities has been identified by health care experts and learning collaboratives, such as the American Hospital Association and Brookings-Dartmouth, as integral to accepting alternative payment models and impacting the Triple Aim goals.[63] [64]

Risk stratification means arranging patients according to the severity of their illness, utilization, costs, and/or other factors that classify patients according to risk profiles. Implicit in this definition is the ability to predict outcomes from a given intervention based on preexisting illness or the severity of intervention. The usefulness of any risk stratification system arises from how the system links severity to a specific outcome.[65]

Through these projects, hospital system will acquire a better understanding of the chronic conditions, risk, and utilization profile of their patient population. This process may include sharing data between the hospital system and insurers to better understand the health risk indicators, utilization trends and patterns, and costs of the shared patients. The hospital system may utilize patient profiling and/or risk stratification for determining the most prevalent chronic conditions and/or the top highest risk, highest cost patients. These risk stratification tools will allow the hospital system to assign patients to care management and/or design interventions to better coordinate care, to improve health, and contain cost. In developing these capabilities, the safety net hospital system will be positioned to better manage utilization and population health under alternative payment methodologies, and advance the Triple Aim goals.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Develop risk stratification criterion that may be payer population-specific, to better identify high-risk patients or patients that would benefit from care management, disease management and other special programs.
B. Develop capabilities to work with risk stratification information to identify high-risk patients.
C. Conduct risk stratification for patients with the health risk and utilization indicators and/or targeted chronic conditions.

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[63] Fisher E, McClellan M, et al. "Accountable Care Organization Learning Network Toolkit." *Engelberg Center for Health Care Reform | The Dartmouth Institute and The Brookings Institution*. Jan. 2011.

[64] Moore K, Coddington D. "The Work Ahead: Activities and Costs to Develop An Accountable Care Organization*." American Hospital Association and McMannis Consulting.* 2011.

[65]. Ferraris V, Ferraris S. "Risk Stratification and Comorbidity: Historical Perspectives and the Purpose of Outcome Assessment: Nightingale Codman, and Cochrane." *Cardiac Surgery in the Adult* 3rd Edition (2003) p.187-224.

Potential Project Elements ***DSTI hospitals undertaking this project may select from among the following project elements:***
D. Apply the risk stratification methodology, utilize risk scores for the patients, and assign associated patients to the appropriate medical home, primary care based care management, centralized care management, or disease management program. E. Expand risk stratification capabilities from an initial insurer population to one or more additional insurer populations. F. Develop organizational plan to improve accuracy in hierarchical condition categories (HCC) data submissions to accurately reflect the health status of a patient population. G. Deploy hospital resources to improve the quality and accuracy of patient records. H. Develop reports to identify patients that require a scheduled provider visit. I. Identify patients with chronic conditions requiring management or monitoring and prioritize those with high-cost cases. J. Develop reporting tools on the prevalence of specific health conditions in the patient populations and to ensure patients with specific conditions receive proper testing and evaluation.

Key Process Measures
DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Obtain risk stratification information from X number of insurers for a target patient population(s), document payer-population-specific criteria for identifying the top X% high-risk patients, and produce risk scores for the top X% highest risk patients.	• Documentation that risk stratification information has been obtained • Document insurer-specific criteria for identification of top X % high-risk patients and identify or obtain top X% high-risk patients by applying the risk stratification methodology and producing risk scores for top X% payer-specific patients	• Internal hospital records/documentation and insurer data
2. Identify patients in the target patient group who have not had an office visit in the prior year and/or have a chronic condition and contact X percent/number of them to schedule a PCP appointment/risk assessment.	• Number of patients in the target patient group and percent or number contacted to schedule a PCP appointment or risk assessment	• Payer data • Baseline risk adjustment factor • Medical record

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
3. Develop organizational plan to improve accuracy in hierarchical condition categories data submissions for a target patient population.	• Approved organizational protocol • # of Provider education sessions aimed at reviewing risk status of members and care management plan	• Internal hospital records/documentation
4. Hire a documentation specialist to review/audit medical records.	• Documentation specialist hired • Chart review by Documentation Specialist • Develop database to enter data reported by Documentation specialist	• Hospital internal records • Log of charts reviewed by documentation specialist • Payer data • Patient management report generated from hospital Data Warehouse
5. Conduct PCP educational sessions aimed at reviewing risk status of members and care management plans.	• Completion of PCP educational sessions aimed at reviewing risk status of members and care management plans	• Education log • Departmental minutes • Managed Care Portal educational summaries
6. Collect baseline data on target patients with diagnosis of diabetes mellitus in SFY12 identify patients who are in need of hemoglobin A1c testing.	• Completion of baseline data collection	• Payer Data • Patient management report generated from hospital Data Warehouse • Medical Record

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Number/percentage of target patient population contacted to schedule a PCP visit/annual risk assessment.	• X percent improvement of target patient population contacted to schedule a PCP visit/annual risk assessment	• Internal hospital records/documentation
2. Increase in the number of payer-specific initiatives that the hospital is undertaking related to alternative payment models and related risk stratification activities within the payer-specific patient population(s).	• Documentation that the hospital has initiated an increasing number of payer-specific initiatives that relates to related risk stratification activities within the payer-specific patient population(s).	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
3. Assign top X% highest risk patients identified through risk stratification process to primary care site-based care management or centralized care management, as appropriate. Hospital may propose to increase the number of patients identified through risk stratification processes assigned to primary care-based care management or centralized care management, which may be achieved in a payer-specific cohort and/or as additional payer-specific populations are added to the initiative.	• Total number or percent of the top X % cohort of patient for that insurer assigned to primary care-based care management or centralized care management • Increase in the number of patients identified through risk stratification processes assigned to primary care-based care management or centralized care management	• Internal hospital records/documentation and/or insurer data
4. X% of selected population outreached and scheduled for PCP visit/annual risk assessment.	• % of risk Assessments completed vs. baseline total # patients identified in population	• Risk assessments identified by documentation specialists

Project 3.2: Design and Implement a Hospital-Based 360 Degree Patient Care Program

Project Goal

The goal of this project is to design and implement an innovative, comprehensive program to identify and manage the most seriously ill members of a defined managed care population, on the theory that "paying the best and brightest physicians to care for the sickest patients as simply and effectively as humanly possible"[66] will yield the best medical and psychosocial patient outcomes, yet decrease overall costs of care by eliminating that which is neither necessary nor desirable.

A novel, highly sophisticated managed care team, involving clinical and administrative team members, will be dedicated to working with the most severely ill members of the managed care population to enhance the care experience and ensure optimal care planning, coordination and integration. This hybrid of 360-degree Patient Care program [without the fees] and the patient-centered medical home[67], taking the best attributes of both, will improve the transitions of care for patients who are covered in population risk products and will ultimately improve quality and reduce costs. An integrated, coordinated and well-structured program can improve outcomes by reducing hospital admissions and length of stay, improving the quality of care and simultaneously decreasing the cost for the highest risk patients in the designated population, as measured initially by decreased admission rates. The care of patients enrolled in this program will be safe, high quality, cost effective, coordinated with a tremendous degree of patient and family satisfaction.

Potential Project Elements
DSTI hospitals undertaking this project may select from among the following project elements:

A. Define the role of the hospital based team members, including: 1) Determining skill sets and education required; 2) Identifying chronic conditions to be followed; and 3) Creating essential policies, protocols and pathways for care.
B. Identify risk population to be served initially.
C. Implement 360 Degree Patient Care Program.
D. Coordinate complex care.
E. Validate arrived follow-up visits.
F. Coordinate with post-acute care, including visiting nurses.
G. Track and report on progress, such as number of co-managed patients, hospital admissions data.
H. Develop an implementation plan:
    1. Create a communication plan;
    2. Develop a budget;
    3. Develop a scorecard to measure outcomes;
    4. Determine when to add resources and expand coverage;
    5. Develop a risk evaluation tool.

[66] Browne M. "Concierge and Primary Care Medical Home Hybrid Model of Care *Policy " Pershing Yoakley & Associates.* 2011.
[67] Pines J, Meisel Z. "Can Better Access to Health Care Really Lower Costs? Concierge medicine versus patient-centered medical homes: debating the benefits of enhanced access to care." *Medical Insider* (2012) Jan. 23.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Establish a physician led-team at the hospital to design and begin implementation of a 360-Degree Patient Care program to identify and coordinate care for a cohort of severely and chronically ill high-risk patients enrolled in a managed care plan.	• Start-up team hired • Training started • Ability to identify the target population through emergency department registration developed • Team schedule reflects five day/week coverage of service • Call coverage schedule and contact numbers published • Contracts signed for continuum of care case/disease management • Communications expectations documented and met • Meetings occur regularly (with special exceptions) • Balanced scorecard created and maintained consistently	• Human resources: identification of team and orientation plan; communication plan • ED Tracker example (with personal identifiers removed) of identification of risk population members • Health Plans • Published schedules • Case Management Contract • Minutes of meetings • Balanced score card goal and measurement samples
2. Increase staffing for the 360-Degree Patient Care Program and implement a process to follow selected patients post hospital discharge.	• Clinical staff hired • Seven day/week coverage initiated by sample schedule • Follow up visits documented • Care coordination documented by samples with personal data obscured	• Human resources: identification of second nurse practitioner • Call coverage schedule • Sample ambulatory arrived visit notes (absent patient identifiers) • Care coordination documentation in meeting minutes
3. Hospital team for 360 Degree Patient Care Program will co-manage the patient cohort, implement a risk assessment tool, and track hospital admission rates.	• Number of co-managed patients during reporting period • Risk evaluation tool on file • Pathway for risk evaluation screening • Pathway for risk patient evaluation and intervention • Report on other potential areas for improvement	• Managed care team documents for co-managed panels, evaluation tools; sample pathway for risk patients • Hospital data warehouse

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
4. Create a pathway to evaluate and proactively intervene with patients deemed high-risk by the evaluation screening process.	List of patients evaluated and documentation of interventions for the identified population	• Managed care team documents for co-managed panels, evaluation tools; sample pathway for risk patients • Hospital data warehouse
5. Collect baseline measurement of percentage of target patients who complete a scheduled post-discharge visit with their PCP or specialist.	Completion of baseline data collection	• Appointment records

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Develop outpatient follow-up visit process for certain discharged patients based on severity and complexity of illness.	• One month log documenting patients with outpatient management by the 360-Degree Patient Care Program Hospitalist team	• Internal hospital records/documentation
2. Develop process to coordinate care with SNF rounder, VNA, palliative care, hospice, primary and specialist physicians.	• Summary of case notes from 10 charts demonstrating the team's coordination with community resources	• Internal hospital records/documentation
3. Improvement in percentage of target patients who complete a scheduled post-discharge visit with their PCP or specialist.	• X percent of percentage of target patients who complete a scheduled post-discharge visit with their PCP or specialist over baseline	• Appointment records

Project 3.3: Develop Governance, Administrative, and Operational Capacities to Accept Global Payments/Alternative Payment

Project Goal

The goal of this project is to develop governance, administrative and operational safety net health system capacity to transform toward alternative payment models including global payments and other models. Hospital-defined projects will focus on building blocks and key capabilities needed by the specific-hospital system to move along the continuum towards participating in new payment models. Key capacities may include creation of appropriate legal entities, operating agreements, completion of health information technology inventory, development of information management capabilities in preparation for accepting alternative payments, health information exchange capabilities, formalization of leadership models to manage the transition to new accountable care models, development of new care management and clinical care models, education of network physicians about local opportunities for managing cost and quality, and quality/cost benchmarking among others.

In addition, this project may evaluate models for an Accountable Care Organization (ACO) that take responsibility for providing care to a defined population, and establish a system that provides comprehensive and coordinated care and assures access across the continuum. The accountable care or integrated care organizational models of care delivery are specific recommendations of leading national organizations and experts to address the challenges inherent in the current fee-for-service system, such as the volume driven use of services toward a high value system focused on better health, better quality and patient experience of care, and improved cost-effectiveness of care.[68] Key issues facing the delivery of care to medically vulnerable populations include: 1) assuring quality of care and appropriate and timely access to services; 2) delivering care in a more cost-effective manner by eliminating duplications and lack of coordination; and 3) assuring that this new delivery system approach results in a healthier population.

Integrated delivery systems are focused on a number of transformative goals aligned with the Triple Aim including:

- Improving care and reducing cost;
- Advancing the management of chronic disease;
- Reducing avoidable hospital admissions and preventable readmissions;
- Improving patient satisfaction;
- Managing financial risk for performance under an alternative payment or global payment arrangement over time.

Hospitals electing this project have different organizational structures, initial operational capabilities, and different pathways for advancing next steps toward payment reform readiness.

[68] Fisher, E.S. "Doctor's pay, a key to health care reform: share saving with doctors." *The New York Times* (2009) June 18 Message posted to http://www.roomfordebate.blogs.nytimes.com/2009/06/18/better-medical-carefor.

Potential Project Elements
DSTI hospitals undertaking this project may select from among the following project elements:

A. Develop expertise in preparation for transition to a risk-bearing Accountable Care Organization.
B. Develop information management capabilities in preparation for accepting alternative payment methodologies.
C. Formalize hospital leaders to manage transition to accountable care.
D. Contract with outside parties to produce ACO development report and work plan.
E. Begin implementation of appropriate consultant recommendations toward ACO development.
F. Analyze data to create baseline and identify potential savings opportunities.
G. Develop governance and legal entity that will be able to accept an array of alterative payment models across payers, including: (1) Governance documents; (2) Operational agreement; (3) Medical staff organization (4) Roles and responsibilities for all partners; and (5) Establishment of a clinical advisory council or steering group.
H. Determine the health status, outcomes and disparities for the population(s) to be served.
I. Complete health information technology inventory.
J. Develop health information technology plan that includes care management and care management capacities.
K. Complete gap analysis of global payment contracting and management system capacities.
L. Determine model for clinical care delivery.
M. Develop a pilot program, such as a proposal to a payer to serve dual eligible, Medicaid, or other population under an alternative payment arrangement.

Key Process Measures
DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Create new legal entity that may contract for an array of global payment systems across public and commercial payers.	• Certificate of organization filed with the Commonwealth of Massachusetts	• Document of submission
2. Develop operational agreement addressing roles and responsibilities for collaborating entities.	• Operational agreement	• Operational agreement
3. Select Health Information Exchange (HIE) platform to exchange data with physician groups in the community.	• Agreement/contract with HIE platform vendor	• Documentation of agreement/contract
4. Develop implementation plan for at least X number of HIE platform components, tools or applications.	• Implementation plan for 2 HIE Platform components	• Documentation of implementation plan

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
5. Establish baseline for the number of physician offices utilizing HIE platform components, tools or applications.	• The number of physician offices utilizing HIE platform components, tools or applications	• Health System IT Report
6. Develop plan to expand HIT care management and care coordination capacities.	• HIT expansion plan	• Documentation of plan
7. Survey a sample of collaborating physician groups to determine interest levels in participating in a dual eligible and/or Medicaid pilot.	• Report on physician survey result	• Documentation of report
8. Develop a pilot program proposal for payer to serve dual eligible and/or Medicaid population.	• Copy of proposal to payer	• Documentation of proposal
9. Establish Special Advisory Council to promote integration and coordination of care for beneficiaries.	• Special Advisory Council Membership list with representation across multiple specialty disciplines	• Documentation of Specialist Advisory Council membership list
10. Develop a plan on quality and cost performance.	• Quality and Cost Performance Incentive Plan	• Documentation of plan
11. Develop plan to institute quality and cost benchmarking, measurement, and reporting.	• Plan for Patient Quality and Cost Benchmarking Reporting measure	• Documentation of plan
12. Establish an Accountable Care Organization (ACO) steering committee and subcommittees that focus on Finance, Clinical, Quality, and Informational Technology.	• List of steering committee and subcommittee membership • Copies of steering committee and subcommittee meeting agendas • Documentation of attendance at ACO training/conferences	• Internal hospital records/documentation
13. Determine estimated number of primary care patients by payer at affiliated community health center sites.	• Copy of primary care patient report	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
14. Prepare an ACO concept paper.	• Copy of paper	• Hospital and CHC data
15. Hire a consultant to assess ACO development needs.	• Documentation of consultant hired • Copy of consultant scope of work to include assessment of readiness to achieve NCQA ACO accreditation	• Hospital internal documents • NCQA ACO standards
16. Assess the current state of utilization and cost of care information and tools available to health care community to control costs and improve quality.	• Survey and review data available to hospital's key provider partners • Explore with both commercial payers and Medicaid MCOs the opportunities and criteria to secure data from existing sources • Plan and schedule educational seminars and written communications for provider community about health care transformation including opportunities to manage cost of care and utilize local clinical resources	• Survey sheets • Meeting minutes • Written documentation of communications to providers about educational programs
17. Hire a consultant to assist in ascertaining gaps in available information and types of data systems that would be required to administer and succeed and under alternative payment methodologies.	• Write an RFP to engage a consultant to assist and review data needs and planning process to move to alternative payments • Review proposals to choose the ideal candidate or group • Devise a work plan and timeframes to make investments in systems or processes for data collection on quality reporting and utilization that incorporates the health care community, including physicians, hospitals, and ancillary care providers.	• Documentation of RFP • Candidate interview evaluation form • Work plan for system investments

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
18. Produce an ACO development report (by consultant) and internal timeline for future ACO activity.	• Copy of consultant's report • Copy of implementation data	• Internal hospital records/documentation
19. Participation in ACO education sessions offered by nationally recognized entities (e.g. NCQA, Brookings/Dartmouth).	• Documentation of attendance at ACO educational sessions	• Internal hospital records/documentation • Vendor records
20. Steering Committee and Board review and approval of appropriate components of ACO consultant report.	• Copy of Steering Committee minutes • Copy of Board vote	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Implement plan to go "live" with at least one HIE component, tool, or application.	• Screen shot(s) of HIE component, tool or application	• Hospital IT system
2. Implement quality and cost benchmarking plan that includes elements of the Specialist Advisory Council Quality and Cost Performance Incentive Plan and the CMS-approved MSSP Quality Performance Standards.	• Copies of quality and cost benchmarking and measurement reports	• Documentation of quality and cost benchmarking reports
3. Increase the number of physician offices utilizing HIE platform components, tools, or applications by X offices over baseline.	• Increase by X the number of physician offices utilizing HIE platform components, tools or applications	• Internal hospital records/documentation
4. Begin implementation of approved steps from consultant report toward achieving NCQA ACO Accreditation.	• Schedule of implementation • Documentation of implementation	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
5. Implement systems or processes that will facilitate keeping care local, lowering cost, improving quality, and accepting alternative payment methodology.	• Implement Year One work plan to have access to a system to help manage utilization costs and quality improvement • Produce leakage reports that will define the types of care leaving the hospital community, the locations where that care is being delivered, and the cost of that care as compared to the cost at the hospital. Both quality and utilization data, measured against national standards, will be reviewed by committee in order to identify action plans including peer recommendations for identified outliers	• Workflow diagram, documentation of infrastructure investment, meeting minutes • Utilization and quality reports • Leakage Reports

Project 3.4: Develop an Integrated Care Organization to Enhance Capacity and to Respond to Alternative Payment Systems

Project Goal

In order to transform toward value-based purchasing and build the capacity to respond to alternative payment systems, it is critical for hospitals and affiliated independent physicians and independent physician groups to develop and implement integrated organizational structures, including governance structure and board, physician leadership and administrative staff. This integrated care organizational structure is essential to advance shared accountability for the cost and quality of care for a population of patients. The ICO is distinct from an ACO because it does not envision comprising all of the components of health care delivery from academic medical center to nursing homes, and home care. Rather it is a component of an ACO, built on a health system's capabilities, and expertise, accountable but not comprising all of the parts. It envisions participation in a larger accountable care organization. For hospitals without a network of owned or employed physicians, it is imperative to develop a strategy that aligns the hospital and independent physicians through both clinical and administrative integration.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Structure or re-structure and design the hospital's related Physician-Hospital Organization (PHO) into an Integrated Care Organization (ICO) to advance integration between the hospital and local medical community.
B. Develop associated organizational and governance requirements, such as Articles of Organization and bylaws.
C. Design the integrated ICO's organizational structure.
D. Build initial capacity, including essential personnel and systems, to administer the integrated ICO.
E. Identify and develop physician leadership for integrated ICO.
F. Devise work plan and timelines for ICO initiatives in systems and care coordination capabilities.
G. Design integrated ICO proposal for a payer population to accept an alternative payment method.

Key Process Measures

DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	Metric(s)	Data Source(s)
1. Restructure and redesign the hospital-related Physician Hospital Organization (PHO), referred to as an Integrated Care Organization (ICO), based upon an investigation of successful regional affiliation models and structures to advance the integration of the hospital	• Develop and file PHO Articles of Organization and By-Laws • Establish a governing board and hold at least one ICO Board meeting	• Secretary of State Filings • ICO Board Meeting Minutes

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
and local medical community.		
2. Continue to support E.H.R. implementation in community physician offices and evaluate options for connectivity between hospital and physician practices, allowing for greater patient safety by having more timely and accurate results.	• Provide project manager support and continue E.H.R. implementation • Pilot delivery of hospital laboratory results to one clinical information system in at least one physician practice • Create list of all ambulatory E.H.R. vendors in hospital's community physician practices	• E.H.R. project for all practices • System report of lab results delivery activity • Vendor list
3. Identify and develop physician leadership for ICO to lead clinical integration activities.	• Identify at least 3 prospective ICO physician leaders from among the local medical community • Provider leadership training for the prospective ICO physician leaders to assist in education of the entire physician community	• Meeting minutes • Proof of attendance at educational sessions
4. Design an organizational structure and build capacity to run initial critical functions of the ICO.	• Draft an organizational chart for approval by ICO Board that identifies the staffing disciplines and priority required to run the ICO • Hire at least two ICO personnel identified as high priority on the organizational chart who may include: care managers, data analyst, and administrative staff • Establish a Clinical Integration Committee responsible for devising a work plan and timeframes for additional investments in IT connectivity and care management initiatives, including creating a vehicle for enhanced	• Documentation of the hiring of organizational chart and ICO Board meeting minutes • Human Resources hiring record • Board meeting minutes and work plan

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
	communication from provider to provider	
5. Further develop infrastructure necessary to enhance capacity to respond to alternative payment systems.	• Implement critical components of Clinical Integration work plan to create seamless transfers between providers for the care of patients	• Documentation of work plan action and hiring of staff to help implement the work plan
6. Design an ICO alternative payment method proposal for a payer population.	• Present ICO proposal to at least one payer under an alternative payment method	• Documentation of proposal

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Develop a clinical integration plan to include expanding E.H.R. implementation support and interface development.	• Achieve E.H.R. implementation with X practices or X percent of total practices, resulting in improved coordinated patient care • Extend opportunity to the X practices for electronic laboratory and radiology results delivery	• E.H.R. project plan for X practices • Documentation of opportunity offered

Project 3.5: Develop Administrative, Organizational, and Clinical Capacities to Manage the Care for Complex Patients

Project Goal

The goal of this project is to develop administrative, organizational and clinical capacities to manage the care of complex patients, including populations in a global payment environment. Key capacities include a comprehensive, coordinated, and continuous care approach for managing the care of complex patients that is person-centered and integrated using an interdisciplinary team approach to needs assessment and care planning. Key capacities also include health information and financial management. Development of the capacities to manage complex patients will also provide significant learning opportunities to be utilized in expanding care management models in a global payment environment.

The interdisciplinary team integrates care provided by multiple, individual providers into a single comprehensive, individualized care plan that takes into account the need for care 24 hours a day, 7 days a week, 365 days a year. This patient-centered approach represents a fundamental shift from the current fee-for-service model to a model based on the clinical and financial accountability for the population and ensuring the appropriate care, at the appropriate time, and in the appropriate setting. This system of care will have the following benefits: 1) integrated financing; 2) increased accountability; 3) an improved standard for care; 4) prevention and timely intervention; 5) inclusion of patients and family caregivers; 6) education and training for a specific workforce (caregivers and providers); and 7) transportation support.

Potential Project Elements

DSTI hospitals undertaking this project may select from among the following project elements:

A. Determine the number of potentially eligible participants in the targeted service area.
B. Select a physical site for program operations and create a physical hub for health care and services in one convenient location in close proximity to the population to be served.
C. Develop a marketing/communication plan.
D. Strategic assessment of how this specific plan for care of the dual eligible population might fit into existing operations, including:
    1. Gap analysis of existing care coordination, HIT, and accounting systems;
    2. Primary, behavioral health and specialty care capacity;
    3. Long term and end-of-life care;
    4. Preventive and rehab services;
    5. Access to diagnostic and pharmacy services.
E. Develop plan for care and services based on strategic assessment, including:
    1. Identify capital requirements;
    2. Determine financial risk;
    3. Determine transportation needs;
    4. Select performance indicators
F. Determine organizational structure.
G. Develop comprehensive training and orientation program for workforce.
H. Establish contracts for services as appropriate.
I. Enroll first group of participants.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Select physical site for program operations.	• Hospital approves site	• Board of Trustee minutes
2. Develop program policies and procedures to align with requirements and specifications of insurance payers.	• Policies and procedures are developed to meet various requirements and specifications for dual-eligible population in global payment configurations	• Hospital policies and procedures
3. Finalize engineering study for site development.	• Engineering study	• Documentation of engineering study
4. Complete analysis of existing health system information technology, care coordination, cost management, and accounting systems in light of global payment and care management requirements").	• Analysis Report: Findings and Recommendations	• Gap Analysis Report
5. Identify the mix of health care and supportive services to be selected from, but not limited to: preventive, primary, acute, behavioral, pharmacy, long-term, end-of-life care, transportation, meals, safe housing.	• Plan for Health and Supportive Services Mix	• Plan for Health and Supportive Services Mix
6. Development of comprehensive training and orientation program on Complex Patient Program Philosophy and Clinical Model.	• Successful production of Comprehensive Training and Orientation Program	• Comprehensive Training and Orientation Program
7. Establish contracts for services to be provided.	• Agreements in place for services to be provided	• Hospital System Contracts
8. Train and orient employees on Complex Patient Program philosophy and clinical model.	• Completion of Complex Patient Training Program	• Copies of Employee Certificates of Completion

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
9. Develop report(s) on "lessons learned" to educate hospital system to foster innovative thinking in developing alternative models of patient-centered care.	• Lessons Learned Report(s)	• Documentation of Report (s)
10. Conduct baseline study on patients' experience of care and utilization.	• Study of patients' experience of care and utilization	• Documentation of study

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Implement at least X number of recommendations from analysis report.	• Report on how at least X number of recommendations from analysis report on HIT, care coordination, cost management, and accounting system were implemented	• Report
2. Enroll first group of program participants.	• Enrollment forms	• Enrollment records
3. Deliver Comprehensive Training and Orientation Program on Complex Patient Program Philosophy and Clinical Model for a minimum of X employees.	• Completion of training and orientation program	• Training and orientation program curriculum/documentation

Project 3.6: Establish an Enterprise-Wide Strategy for Information Management and Business Intelligence

Project Goal

The focus of this project is to implement an enterprise-wide strategy to move from fragmented silos of information and integrate data into a unified data warehouse, enhancing the efficiency by which clinical and operational reporting and analytical activities are conducted. Goals may also include developing information management and business intelligence tools to improve performance and decision making, placing greater emphasis on monitoring and improving costs and quality. New delivery models, such as the patient-centered medical home and alternative reimbursement methodologies, will require hospitals to leverage the new information management platform to address the myriad of alternative reimbursement methodologies challenges and imperatives facing the healthcare industry by applying the tools to perform analyses areas that may include the following:

- Financial analysis - Needed visibility into the full scope of financial operations, use of resources by patients and providers;
- Quality performance and safety analysis – monitoring performance comparisons across quality, patient access, patient satisfaction and utilization;
- Market and patient satisfaction analysis – reporting on patient satisfaction supports the goal within the organization for increased accountability among healthcare providers;
- Claims and clinical data analysis – analyzing and monitoring claims will help determine the biggest risk areas and devise the most effective rate structures and pricing when participating in alternative reimbursement methodologies or bundled payments;
- Patient care analysis – the new strategy will enable the right people to access the right information at the right time, delivering a single platform for sharing information with patients for better decision-making and connecting patients across hospital, nursing home, physician office, and community social support settings.

The data warehouse may provide the capabilities over time to compare providers by: patient outcomes based on National Patient Safety and Quality measures; utilization of resources for their Top 10 clinical diagnoses, Volumes by Top 10 clinical diagnoses, and mortality rates. Key performance indicator (KPI) goals and benchmarks are additional areas of focus that a hospital may develop to empower the organization to answer crucial questions such as:

- How are physicians performing in relation to costs and quality?
- What could be done to improve performance in individual departments?
- How to improve capacity and throughput without modifying facilities?
- How to identify patients during a hospital stay who are at risk for readmission?

Potential Project Elements
DSTI hospitals undertaking this project may select from among the following project elements:

A. Evaluate current data collection systems by performing a gap analysis to determine ability to respond to value-based purchasing and continuous quality improvement:
    1. Where is patient data collected?
    2. Who is collecting data?
    3. How is it collected and how is it used?
B. Identify current alternative reimbursement methodologies and KPI field requirements, which are not, captured electronically utilizing the data collection systems identified in the gap analysis.
C. Document requirements for assessment of data warehouse and business intelligence software to include capabilities to include integration with hospital and provider health information systems, web user interface, and ability to create data marts and real-time dashboards related to business operations and select best-qualified vendor.
D. Identify human and capital resources needed to create and utilize data warehouse and business intelligence tools.
E. Develop a training and education plan for data warehouse and business intelligence tool users.
F. Implement population improvement projects that utilize data warehouse and business intelligence tools.
G. Develop dashboards and reports that enable quality improvement and respond to alternative payment methodologies.

Key Process Measures
DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Perform gap analysis of current data collection systems.	• Complete gap analysis and determine ability to respond to alternative reimbursement methodologies in a concurrent fashion	• Internal hospital records/documentation
2. Identify current alternative reimbursement methodologies field requirements that are not captured electronically utilizing the data collection systems identified in the gap analysis.	• List of data fields not captured electronically for the alternative reimbursement methodologies requirements	• Gap analysis, requirements for alternative reimbursement methodologies, existing systems
3. Determine requirements for assessment of data warehouse and business intelligence vendor selection/approach.	• Requirements document for assessment of data warehouse and business intelligence software	• Quality, information systems

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
4. Post job description and identify resource to create and utilize data warehouse and business intelligence tools.	• Job description developed and posted	• Information Systems • Human Resources
5. Fill resource to create and utilize business intelligence tools.	• Resource hired	• Information Systems • Human Resources
6. Hire a data warehouse and business intelligence vendor.	• Vendor hired	• Documentation of vendor hired
7. Conduct staff training on business intelligence software and benefits, complexities, and challenges of developing a business intelligence environment.	• Evidence of training. • Training materials provided to the organization	• Business Intelligence Vendor • Quality Improvement
8. Implement, at a minimum, three targeted population improvement projects to respond to statewide transformation to alternative reimbursement methodologies.	• Identify baseline of the three targeted populations based on an assessment of high prevalence and/or high risk conditions or patient characteristics identified via the data warehouse	• Data warehouse • Business Intelligence Software
9. Using data, ID gaps in population-focused improvements.	• Percent of population-focused gaps in improvement of care	• Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Create current alternative reimbursement methodologies requirement dashboards and reports.	• Documentation of dashboards and reports	• Quality, data warehouse • Business Intelligence Software
2. Design reporting of Emergency Department visits for patients with chronic diseases such as heart failure, COPD, diabetes, depression, etc.	• X percent decrease of the identified chronic disease patient population with Emergency Department visits	• Data warehouse

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
3. Design reporting of admissions for patients with chronic diseases such as heart failure, COPD, diabetes, depression, etc., by primary care physician.	• X percent decrease of admissions of the identified chronic disease patient population by primary care physician	• Data warehouse

Project 3.7: Develop Capacity to Address the Population Health of the Community Associated with the Triple Aim and Alternative Payment Models

Project Goal

The goal of this project is to develop the capacity to promote the Triple Aim goal of improved population health, the safety net hospital proposes a population health initiative to develop the capabilities and processes to assess, monitor, and eventually improve population health.
In order to prepare to accept alternative or global payment models, hospitals and health systems need to understand their overall patient population in the context of the communities they serve. Hospitals electing this population health project may not yet be reimbursed for these activities through alternative payment models, as these initiatives are being undertaken to prepare for future participation in alternative payment models that reward population health improvement. State and federal policymakers have expressed interest in developing indicators of progress for how new accountable care organizations and integrated care models are charting the course for improvements in the Triple Aim in this regard. One area that has been identified is the "measurement of and fixed accountability for the health status and health needs of designated populations."[69] It is recognized that "the 'actual' causes of mortality in the United States lie in the behavior that the individual health care system addresses unreliably or not at all, such smoking, violence, physical inactivity, poor nutrition, and unsafe choices."[70] [71] Hospitals undertaking this population health initiative need to build the functionality to understand their overall population, morbidities, and compare what is learned to the public health indicators of the population in our target communities. Thus, a more system-level approach is developed in addition to the panel management of patients managed under accountable care arrangements.

Upon identifying the major morbidities of the hospital system's population and its relationship to the population health of communities within the hospital's service area, the safety net hospital will embark upon the development and implementation of an evidence-based population health intervention, in areas that are locally developed and consistent with the Centers for Disease Control and Prevention's winnable battles. These "winnable battles" are those leading public health challenges and causes of death and disability that have large-scale impact and known, effective strategies to combat them such as tobacco use identification and cessation, obesity and physical activity, nutrition, and global immunization.[72]

Collaborations with community and public health organizations are integral to the development of population health capacity and initiatives. Over the three-year period, the hospital system will be able to evaluate the lessons learned to inform a future population health agenda. By developing initial

[69] Berwick D, Nolan, T, Whittington J. " The Triple Aim: Care, Health, and Cost." *Health Affairs* 27 3 (May/June 2008): 759-769.
[70] Berwick D, Nolan, T, Whittington J. " The Triple Aim: Care, Health, and Cost." *Health Affairs* 27 3 (May/June 2008): 759-769.
[71] McGinnis J.M, Foege W.H. "Actual Causes of Death in the United States." *Journal of the American Medical Association* 270, no. 18 (1993): 2207-2212; and Mokdad, A.H. et al, "Actual Causes of Death in the United States, 2000." *Journal of the American Medical Association* 291, no. 10 (2004): 1238-1245.
[72] "Winnable Battles." Centers for Disease Control and Prevention. http://www.cdc.gov/winnablebattles/, retrieved on May 11, 2012.

Project Goal
capabilities to address these population health issues in its patient population, the hospital system will develop an ongoing capacity for population-based risk assessment and monitoring, aimed at making foundational and meaningful progress toward the Triple Aim goal of improving the health of the community.

Potential Project Elements *DSTI hospitals undertaking this project may select from among the following project elements:*
A. Create a data tool for reporting on the hospital's population morbidities and social determinants of health. B. Identify the leading morbidities in the primary care population and the health indicators of local communities. C. Prioritize an intervention. D. Develop a plan for intervention, which may include sites for intervention, baseline data, required patient care workflows, and electronic medical record tools to support the intervention. E. Train providers on the protocol for identifying and documenting the specified at-risk population. F. Implement and monitor the intervention, including reporting, which may include screening rates, clinical indicators, and/or interventions. G. Document lessons learned and application/recommendations for future population health work associated with the Triple Aim.

Key Process Measures
DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Convene population health workgroup.	• Documentation of formation and implementation of Population Health workgroup as evidenced by workgroup charter, meeting minutes, and roster or participants	• Internal records of population health workgroup report to hospital leadership
2. Design and develop initial data tool for reporting on the hospital's primary care population morbidities and behavioral risk factors The tool will help identify the major morbidities of the hospital's patient and will be compared to the behavioral risk factors and major morbidities of the community served by the hospital.	• Data analytic tool developed that can be used to assess and report on the morbidities of the patient population. This tool will draw from the hospital's data warehouse in real time	• Screen shot of the data tool and report listing numbers of patients with each morbidity

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
3. Review and analyze population health data and health indicators of local communities. Select an intervention for implementation.	• Criteria for potential intervention documented, findings from the analysis, identification of area for intervention, such as tobacco use prevention and cessation or another public health challenge such as those identified by the Centers for Disease Control and Prevention Winnable Battles	• Internal data, minutes from meetings, report on data from target communities
4. Develop intervention to address population health, such as tobacco use or other population health initiative in areas such as obesity, cardiovascular risk, behavioral health screening among others.	• Documentation of intervention plan which may include components related to the specific intervention such as those outlined below related to tobacco use prevention and cessation: ➢ Establish baseline data such as: percentage of primary care patients 18 years of age and older with tobacco use presenting at adult primary care sites (numerator is the number of patients 18 years of age and older with active tobacco use and denominator is the total number of patients 18 years of age and older at primary care sites) ➢ Identification of primary care sites for intervention ➢ Develop Intervention Workflow such as: Tobacco Verification and Counseling Workflow for primary	• Internal data and records and EMR report

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
	care so that tobacco use is verified at primary care visit ➢ Develop tools in the Electronic Medical Record (EMR) for support of intervention	
5. Evaluate the population health process and report on lessons learned, including about collaboration with community and public health organizations, and application/recommendations for future and ongoing population health work associated with the Triple Aim.	• Documentation of recommendations from first three years of work on population health	• Internal hospital records/documentation and report
6. Document baseline rate of Obesity – BMI Screening.	• Establish baseline percentage of adult primary care patient population with a clinical visit at participating pilot site(s) during the measurement period who have a BMI in the obesity category linked to NQF 421 or other measure	• Internal data from electronic medical record
7. Document baseline rate of Obesity - Adult Height and Weight Verification.	• Establish baseline percentage of adult primary care patient population with a clinical visit at participating pilot site(s) during the measurement period who received verification of height and weight	• Internal data from electronic medical record

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
8. Document baseline rate of Cardiovascular Risk Screening.	• Establish baseline percentage of adult primary care patient population with a clinical visit at participating pilot site(s) during the measurement period who were identified with cardiovascular risk factors linked to NQF 17 or other measure	• Internal data from electronic medical record
9. Document baseline rate of Behavioral Health Screening.	• Establish baseline percentage of adult primary care patient population with a clinical visit at participating pilot site(s) during the measurement period who received an annual behavioral health screening using an approved screening instrument linked to NQF 418 or other measure	• Internal data from electronic medical record

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Implement the population health pilot intervention at X number of primary care sites. Hospital may propose to increase the number of primary care sites for the population health intervention.	• Documentation that X number of primary care sites' providers have been trained on the protocol for identifying and documenting the specified at-risk population • Establish baseline measure related to intervention at pilot sites, such as tobacco status verification, as measured by: ➢ Numerator: number of primary care visits for patients 18 and older where tobacco use	• Internal hospital records/documentation: EMR report, email instructions

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
	verified at pilot primary care site(s) ➢ Denominator: total number of primary care visits for patients 18 years of age and older, seen at pilot primary care site(s) during the previous month (Measure is a monthly measure of tobacco status verification, linked to NQF 0028a but with a different measurement period)	
2. Increase screening rates for population health intervention such as tobacco status verification, at first pilot site.	• Increase screening rate by X% above baseline for population health measure, such as tobacco status verification, at first pilot site	• Internal hospital records/documentation
3. Establish targeted population health indicator, such as tobacco prevention and cessation as an institutional improvement measure.	• Reports on population health matter verified during primary care visits, such as reports on tobacco use verification documented for all primary care sites ➢ Numerator: number of primary care visits for patients 18 and older where tobacco use status verified at primary care sites. ➢ Denominator: total number of primary care visits for patients 18 years of age and older, seen at primary care sites during the previous month ➢ (Monthly data will be aggregated for baseline comparison to future performance)	➢ Internal hospital records/documentation

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
	• Establish baseline data on population health intervention such as smoking cessation intervention measure across all primary care sites to inform future improvement work: ➢ Percentage of patients 18 years and older, identified as tobacco users, who received cessation intervention in the past 24 months, using the MA PCMHI measure (PCMHI 0028b) and NQF Measure (NQF 0028b) ➢ Numerator: patients 18 and older who are tobacco users who received a cessation intervention, including counseling, diagnosis, and/or medication intervention in past 24 months ➢ Denominator: all patients 18 and older who are identified as being tobacco users, who have had at least 2 visits to the primary care site in the past 24 months	
4. Improve rate of Obesity – BMI Screening.	• X percent increase over established baseline in the percentage of adult primary care patient population with a clinical visit during the measurement period who have a BMI in the obesity category at participating	Internal data from electronic medical record

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
	pilot site(s) (linked to NQF 421 or other measure)	
5. Improve rate of Obesity - Adult Height and Weight Verification.	• X percent increase over established baseline in the percentage of adult primary care patient population with a clinical visit during the measurement period who received verification of height and weight at participating pilot site(s)	Internal data from electronic medical record
6. Improve rate of Cardiovascular Risk Screening.	• X percent increase over established baseline in the percentage of adult primary care patient population with a clinical visit during the measurement period who were identified with cardiovascular risk factors at participating pilot site(s) (linked to NQF 17 or other measure)	Internal data from electronic medical record
7. Improve rate of Behavioral Health Screening.	• X percent increase over established baseline in the percentage of adult primary care patient population with a clinical visit during the measurement period who received an annual behavioral health screening using an approved screening instrument at participating pilot site(s) (linked to NQF 418 or other measure)	Internal data from electronic medical record

Project 3.8: Implement Global /Risk-Based Payments

Project Goal
Ultimately, all DSTI projects should rapidly transition safety net providers to operate under value-driven global payment arrangements that reward quality and care coordination, rather than volume of Medicaid patients. In particular for the selected safety net hospitals, it is important that infrastructure is developed to implement alternatives to fee-for-service reimbursement from public payers. Global payment arrangements are an effective alternative to the traditional fee-for-service model, as global payment and shared risk arrangements reward the appropriate management of lower total medical expenses and more importantly, high quality care in the right settings. Under this project, DSTI hospitals will work with MassHealth, state government, and/or other payer(s) who provide services to eligible state-subsidized low-income patients (herein after, the "payers") to implement a global payment, risk-based, or ACO-like demonstration.

Potential Project Elements *DSTI hospitals undertaking this project may select from among the following project elements:*
A. Collaborate with a payer(s) for state-subsidized low-income patients to develop and refine features of the demonstration. B. Develop data-sharing capabilities and execution of data-sharing agreement with payer(s). C. Execution of global payment contractual agreement with payer(s). D. Implement risk-based contracts with physicians and post-acute providers. E. Educate impacted physicians and post-acute providers.

Key Process Measures
DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.

Measure	**Metric(s)**	**Data Source(s)**
1. Submit Letter of Intent to participate in / develop global/risk-based payment pilot.	• Submission of Letter of Intent	• Letter of Intent
2. Submit data use and/or data sharing agreement.	• Development / signing of formal data use and/or data sharing agreement	• Signed agreement
3. Assess physician and/or post-acute provider contracting for opportunities to align with global / risk-based structure.	• Completion of analysis or report on contracting and opportunities	• Internal hospital records/documentation

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
4. Amend physician and/or post-acute provider contracts to align with global / risk-based structure.	• Completion of contract amendments	• Amended contract/documentation
5. Develop education materials for physicians and/or post-acute providers in network regarding global / risk-based payment strategies.	• Completion of educational materials	• Documentation of educational materials
6. Conduct educational outreach to physicians and/or post-acute providers in network regarding global / risk-based payment strategies.	• Number of educational sessions held • Number of physicians and/or post-acute providers provided educational materials	• Internal hospital records/documentation
7. Provide preliminary quality data based on MSSP set to payer(s).	• Submission of preliminary quality report based on MSSP	• Documentation
8. Execute final agreement to accept global / risk-based payments for aligned patients.	• Signed agreement with payer(s) for reimbursement under global / risk-based arrangement	• Agreement

Key Improvement Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. Accept global / risk-based payment for increasing portion of aligned patient population.	• X% of aligned patient population reimbursed under global or risk-based payment arrangement	• Documentation
2. Reduce trend for aligned patient population.	• X% reduced trend in expenditures (total medical expense) year to year • Health status adjusted total medical expense trend X% below comparable patient population	• Performance report
3. Accept increasing level of risk for aligned patient population.	• X% risk sharing for achieved savings/loss • X% increase in risk sharing for achieved savings/loss	• Documentation

Project 3.9: Participate in a Learning Collaborative (mandatory)

Project Goal
Collectively, the DSTI projects proposed in Categories 1, 2 and 3 of this plan have the potential to significantly transform the care experience for Massachusetts residents served by eligible safety net hospitals. As important as individual hospital efforts will be, there is even greater potential value in leveraging the hospitals' efforts for delivery system transformation through the sharing of best practices. Participation in a learning collaborative will provide a forum for eligible DSTI safety net providers to learn from other providers that share similar goals and to capitalize on potential synergies in their efforts. The learning collaborative model supports the development of a shared culture of continuous improvement and innovation, which will facilitate and enhance the individual hospitals' efforts to advance the Triple Aim through their DSTI projects. Through this project, each hospital participating in DSTI will join an existing learning collaborative – such as the Brookings-Dartmouth ACO Learning Network or another ongoing learning collaborative that aligns with DSTI goals – or will develop a new learning collaborative designed to support its transformation goals. As an initial step, in the first year of the Demonstration period, eligible DSTI safety net hospitals will explore existing and/or potential new opportunities for participation in a learning collaborative.

Potential Project Elements *All DSTI hospitals must select from among the following project elements:*
A. Explore existing and/or potential new opportunities for participation in a learning collaborative whose goals align with the Triple Aim and DSTI transformation objectives. B. Select a learning collaborative in which to participate, which may consist of either: 1. Identifying and joining an existing learning collaborative whose goals align with the Triple Aim and DSTI objectives; OR 2. Developing a new learning collaborative structure designed to support the hospital's delivery system transformation goals and to align with the Triple Aim and DSTI objectives. C. In the case that a hospital elects to develop a new learning collaborative, establish and implement a new learning collaborative designed to support the hospital's delivery system transformation goals under DSTI and to align with the Triple Aim and DSTI objectives. D. Participate actively in the selected or new learning collaborative. E. Report on lessons learned from participation in a learning collaborative as they relate to the hospital's delivery system transformation goals under DSTI.

Key Process Measures *DSTI hospitals undertaking this project may select from among the following measures, with their associated metrics and data sources.*		
Measure	**Metric(s)**	**Data Source(s)**
1. DY 15: Explore existing and/or potential new opportunities for participation in a learning collaborative.	• Hospital meeting minutes and/or documentation of research findings on learning collaboratives	• Internal hospital documentation
2. DY 16 option: Select and join an existing learning collaborative (if selecting option 1 of Project Element B, above).	• Documentation of hospital joining learning collaborative	• Internal hospital documentation and/or learning collaborative documents
3. DY 16 option: Develop a new learning collaborative structure (if selecting option 2 of Project Element B, above).	• Documentation of new learning collaborative goals, structure and membership • Signed agreement with facilitator of new learning collaborative (if applicable)	• Learning collaborative documents • Agreement
4. DY 16 option: Establish and implement a new learning collaborative (if selecting option 2 of Project Element B, above).	• Documentation of learning collaborative activities	• Learning collaborative documents
5. DY 16 and DY 17: Participate actively in a learning collaborative.	• Documentation of attendance at and/or participation in learning collaborative activities	• Internal hospital documentation • Learning collaborative documents
6. DY 17: Report on lessons learned from participation in a learning collaborative as they relate to the hospital's delivery system transformation goals under DSTI.	• Hospital report on lessons learned	• Hospital report

31. **Category 4: Population-Focused Improvements**

This section includes a menu of Category 4 measures related to population-focused improvements. The purpose of Category 4 is to evaluate the impact of the investments and system changes described in Categories 1, 2 and 3 through population-focused measures. Category 4 metrics shall recognize that the population-focused objectives do not guarantee outcomes but result in learning, adaptation, and progress. As such, eligible safety net hospitals will measure and report on selected measures but will not have milestones associated with the achievement of specific improvements. Hospitals shall commence reporting Category 4 measures starting in Demonstration Year 16 (SFY 2013).

a) Common measures: All participating safety net hospitals will develop plans to report on a core set of Category 4 measures that are included below. Hospitals shall report on 11 Common Measures in Demonstration Year 16 (SFY 2013) and report on one additional Common Measure in Demonstration Year 17 (SFY 2014), for a total of 12 Common Measures in Demonstration Year 17.

b) Hospital-specific measures: For each project a hospital selects in its individual DSTI plan, the hospital shall elect at least one Category 4 hospital-specific measures up to a total of 15 Category 4 hospital-specific measures for all the hospital's projects on which the hospital will include a plan to report, selected from the list included in below. Project 3.9: Participate in a Learning Collaborative will not have associated Category 4 hospital-specific measures.

Hospitals must ensure that sampling procedures consistently produce statistically valid and useful data. If a hospital's denominator population for a given measure is not sufficiently large to produce statistically valid data, then hospitals shall not be required to report the data under Category 4 measures.

Introduction

As defined in the Massachusetts Section 1115 Demonstration Special Terms and Conditions, the purpose of Category 4 is to evaluate the population-focused objectives and improvements related to the projects selected by hospitals in Categories 1, 2, and 3. In recognition that the transformation projects do not guarantee outcomes but result in learning, adaptation, and progress, eligible safety net hospitals will measure and report on the population-focused measures outlined below but will not have milestones associated with the achievement of specific improvements.

Because this category involves evaluating the initiatives and system changes described in Categories 1, 2, and 3 through population-focused objectives, the common measure set is organized around the Triple Aim:

- **Better Care:** Improve the overall quality of the US health system by making health care more patient-centered, reliable, accessible, and safe.
- **Better Health:** Improve the health of the population by supporting proven interventions and enhancing the quality of care delivered.

- **Cost-Effective Care:** Improve cost-effectiveness of care through improved care delivery for individuals, families, employers, and the government.

Table 1: Category 4 Common Measures[73]

Better Care: Improve the overall quality of the US health system by making health care more patient-centered, reliable, accessible, and safe. These goals, set forward by the Institute of Medicine in *Crossing the Quality Chasm*, are important domains for assessing the effectiveness of care improvements. In the context of the DSTI program, there is a focus on both the quality and experience of patient care.

One area of increasing national attention has been a focus on improvement of care transitions between providers or settings of care. Health care transitions, such as moves in and out of hospitals to post-acute care/nursing home care, home care (with and without home care supports), or outpatient care have been shown to be prone to medical errors; poor care coordination, infections and incorrect usage of medications—leading to potentially avoidable hospital readmissions, less than optimal patient health outcomes, and added health care costs. This is especially the case for complex care needs, patients with social acuity, and co-occurring health conditions.

Given the importance of examining patient care transitions and their effect on patient outcomes, three Common Measures, utilizing patient experience of care measures from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey focus on whether patients' felt they had a good understanding of their medications and care needs post-discharge. Medication adherence and errors are a leading source of unnecessary emergency and acute care; therefore, it is an area of shared focus.[74] Included within the HCAHPS measures is the Three-Item Care Transition Measure (CTM-3). This measure set has recently been added as a voluntary option to the HCAHPS survey.

Better Care also includes a focus on care in Emergency Departments. Reducing the time patients remain in the emergency department (ED) can improve access to treatment and increase quality of care. Reducing this time potentially improves access to care specific to the patient condition and increases the capability to provide additional treatment. Overcrowding and heavy emergency resource demand have led to a number of problems, including prolonged patient waiting times, increased suffering for those who wait, rushed and unpleasant treatment environments, and potentially poor patient outcomes.

[73] Hospitals must ensure that sampling procedures consistently produce statistically valid and useful data. If a hospital's denominator population for a given measure is not sufficiently large to produce statistically valid data, then hospitals shall not be required to report the data under Category 4 measures.

[74] Forster AJ, Murff HJ, et al. "The Incidence and Severity of Adverse Events Affecting Patients after Discharge from the Hospital." *Ann Intern Med*. (2003) 138:161-167.

Better Care Common Measures	**DY 16 Measure-ment Period**	**DY 16 Reporting Date(s) to EOHHS**	**DY 17 Measure-ment Period**	**DY 17 Reporting Date(s) to EOHHS**
4.1 Care Transitions Measure Set (CTM-3) *Voluntary HCAHPS questions* *Data Source: Hospital vendor or Hospital Compare as available*	Not applicable in DY16. Requires new data capture.	Not applicable in DY16. Requires new data capture.	07/01/12 – 06/30/13	7/31/14
4.2: Patients who reported that staff "Always" explained about medicines before giving it to them. *HCAHPS Composite (Questions 16 & 17)* *Data Source: Hospital Compare*	01/01/11 – 12/31/11	1/31/13	01/01/12 – 12/31/12	1/31/14
4.3: Patients at each hospital who reported that YES, they were given information about what to do during their recovery at home. *HCAHPS Composite (Questions 19 & 20)* *Data Source: Hospital Compare*	01/01/11 – 12/31/11	1/31/13	01/01/12 – 12/31/12	1/31/14
4.4: ED Wait Time: Door to Diagnostic Evaluation by a Qualified Medical Personnel *CMS IQR measure (OP-20)* *Data Source: Hospital Compare*	01/1/2012 - 06/30/12	1/31/13	07/1/2012 - 06/30/13	1/31/14

Better Health: Improve the health of the population by supporting proven interventions and enhancing the quality of care delivered. Many of today's individual health care processes are designed to respond to the acute needs of individual patients, rather than to anticipate and shape patterns of care for important subgroups. Population health focuses on segmenting the population, perhaps according to health status, level of support from family or others, and socioeconomic status, to facilitate efficient and appropriate care delivery. The Category 4 common measures share a focus on examining population dynamics. Two CMS Inpatient Quality Reporting/Joint Commission measures report on proven immunization interventions that can improve the health of hospitalized populations following discharge—preventing

subsequent care interventions.[75] Two other ambulatory- sensitive measures examine acute admissions for chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF) patients—two patient populations of particular concern given their chronic care needs. A fifth measure looks at maternal and child health—examining the incidence of low-birth weight children, a leading determinant of newborn health especially important for Medicaid populations.

Better Health Common Measures	**DY 16 Measure-ment Period**	**DY 16 Reporting Date(s) to EOHHS**	**DY 17 Measure-ment Period**	**DY 17 Reporting Date(s) to EOHHS**
4.5: Pneumonia Immunization *CMS IQR/Joint Commission measure* *IMM-1a* [76] *Data Source: Hospital Compare*	01/01/12 – 06/30/12	01/31/13	07/01/12 – 06/30/13	01/31/14
4.6: Influenza Immunization (seasonal measure) *CMS IQR/Joint Commission measure* *IMM-2* [77] *Data Source: Hospital Compare*	01/01/12 - 03/30/12	01/31/13	10/01/12- 03/30/13	01/31/14
4.7: Percent of discharged patients under age 75 who were hospitalized for Chronic Obstructive Pulmonary Disease (Ambulatory Sensitive-Condition Admissions Measure) *Modified AHRQ PQI-5: denominator modified to include only discharged hospital inpatients* *Data Source: Hospital billing data*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14

[75] See Specifications Manual for National Hospital Inpatient Quality Measures for selected references on clinical effectiveness of immunizations. Available at http://www.qualitynet.org

[76] CMS and the Joint Commission began collecting this measure effective with January 1, 2012 discharges. IMM-1a includes all inpatients.

[77] CMS and the Joint Commission began collecting this measure effective with January 1, 2012 discharges. IMM-2 includes all inpatients.

Better Health Common Measures	DY 16 Measure-ment Period	DY 16 Reporting Date(s) to EOHHS	DY 17 Measure-ment Period	DY 17 Reporting Date(s) to EOHHS
4.8: Percent of discharged patients under age 75 who were hospitalized for Congestive Heart Failure (Ambulatory Sensitive-Condition Admissions Measure) *Modified AHRQ PQI-8; denominator modified to include only discharged hospital inpatients* *Data Source: Hospital billing data*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14
4.9: Low Birth Weight Rate: number of low birth weight infants per 100 births[78] *AHRQ PQI-9* *Data Source: Hospital records*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14

Cost-Effective Care: Improve cost-effectiveness of care through improved care delivery for individuals, families, employers, and the government. Measures that provide insights both into improved opportunities for health care delivery and health care cost-effectiveness are an area of particular focus in the Triple Aim. Many of the DSTI Category 1-3 projects include a specific focus on improving population health outside of the walls of the hospital (e.g. Primary Care Medical Homes, Health Information Exchanges, ACO development, etc.); therefore, it will be important to examine measures within the Category 4 Common Measures that look at hospital care indicators that are ambulatory-sensitive and that have the potential for better care coordination or care venues. Preventable readmissions are an area of nationwide focus, both for their cost and health implications, but also because many readmissions are the result of poor care hand-offs and lack of care coordination post discharge. Similarly, many pediatric asthma emergency department visits are potentially avoidable with concerted outpatient management and care plans; therefore, an ambulatory-care sensitive pediatric asthma measure, relevant to Medicaid populations, has been included. Lastly, a measure of early elective delivery examines a practice of care for which the evidence-base suggests can lead to unnecessary newborn complications and health care costs.[79]

[78] Hospitals without maternity services are exempted from this measure.

[79] Clark, S., Miller, D.,et al. "Neonatal and maternal outcomes associated with elective delivery." *Am J Obstet Gynecol*. (2009) 200:156.e1-156.e4.

Cost-Effective Care Common Measures	DY 16 Measure-ment Period	DY 16 Reporting Date(s) to EOHHS	DY 17 Measure-ment Period	DY 17 Reporting Date(s) to EOHHS
4.10: Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for all patients 18 and older (not risk adjusted) *See CMS IQR Readmissions Measures (AMI, CHF, and Pneumonia) for a list of standard exclusions, including: 1) index admissions for patients with an in-hospital death, 2) patients transferred from the index facility to another acute care facility, and 3) patients discharged against medical advice.*[80] *Data Source: Hospital billing data*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14
4.11: Percent of Emergency Department visits for children age 18 or less with a primary diagnosis of asthma--Ambulatory Sensitive-Condition *See AHRQ PDI-14 for numerator specification. Denominator specification includes children ages 2 to 17 with an ED visit* *Data Source: Hospital ED billing data*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14
4.12: Percent of patients with elective vaginal deliveries or elective cesarean sections at greater than or equal to 37 weeks and less than 39 weeks of gestation completed[81] *MassHealth Maternity Measure-3* *Data Source: MassHealth Quality Exchange(MassQEX)*	07/01/11-06/30/12	1/31/13	07/01/12-06/30/13	1/31/14

[80] In addition, if a patient has one or more admissions within 30 days of discharge from the index admission, only one is counted as a readmission. No admissions within 30 days of discharge from an index admission are considered as additional index admissions. The next eligible admission after the 30-day time period following an index admission will be considered another index admission.

[81] Hospitals without maternity services are exempted from this measure.

Category 4 Hospital-Specific Measures

In addition to the common measures listed in Table 1 above, hospitals must select hospital-specific measures on which to report according to the projects they have selected in Categories 1-3. Hospitals must select for reporting in Category 4 a minimum of one measure per project up to a total of 15 Category 4 hospital-specific measures for projects selected in Categories 1-3. Project 3.9: Participate in a Learning Collaborative will not have associated Category 4 hospital-specific measures. Hospitals shall choose from the options listed below in Table 2, which are associated with the project in Categories 1-3 to which they pertain.[82]

Given the innovative nature of delivery system transformation and its highly-specific application relative to the existing needs, capacities, and opportunities for improvement at each DSTI hospital, some Category 4 hospital-specific measures include customized measurement to appropriately and meaningfully evaluate the progress and improvements related to projects hospitals have selected in Categories 1, 2, and 3. In the case of some DSTI projects, the program of activities does not lend itself to standard measures. In other cases, such measures are not a fit with the specific transformation goals of the project and/or reporting capabilities of the hospital based on the data available to them. Therefore, the menu of hospital-specific measures includes a blend of nationally recognized measures and hospital-specific customized measures. In many cases, the hospital-specific measures are customized to the nature of the transformation project, the patient population, available payer-specific data, the measurement period, and/or hospital data capabilities including whether hospital systems include employed physicians or ambulatory care. Additionally, customized measures provide feasible data collection opportunities while providing valuable evaluative information on transformation goals. Each hospital, in their hospital-specific plan, will include a narrative on the hospital-specific Category 4 measures it has elected and the rationale for how that measure fits with evaluating the impact of the transformation project being undertaken by the hospital.

Table 2 Category 4: Hospital-Specific Measures

Project 1.1 Patient Centered Medical Home	
ID	**Measure**
PCMHI 0033	Average third next available appointment (wait time) for the practice
PCMHI 0035	Average panel size for the practice

[82] Hospitals must ensure that sampling procedures consistently produce statistically valid and useful data. If a hospital's denominator population for a given measure is not sufficiently large to produce statistically valid data, then hospitals shall not be required to report the data under Category 4 measures.

Press Ganey	Medical practice satisfaction: overall rating score on Medical Practice Survey for two large medical practices
NQF 0031	Percent of eligible women 40-69 who receive a mammogram in a two-year period
Customized Measure	Percent of patients with a minimum of one chronic disease in each adult and pediatric practice
Customized Measure	Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for patients 18 and older discharged with a diagnosis of diabetes
Customization of Patient Continuity of Care	Continuity of Care Measure: measures visit continuity for patients with their primary care physician or the primary care physician and/or the primary care team
Project 1.2 Integrate Physical Health & Behavioral Health	
ID	**Measure**
NQF 0575	Percent of patients 18–75 years of age with diabetes (type 1 or type 2) who were screened for depression using PHQ-2 or other approved screening instruments during the measurement period.
NQF 0712	Percent of patients 18 years of age and older receiving depression screening through the use of PHQ-2 or other approved screening instruments within the measurement period.
Customized Measure	Percent of Emergency Department patients who screen positive for substance abuse using Screening, Brief Intervention, and Referral to Treatment (SBIRT) Protocol
Customized Measure	Average length of Emergency Department stay for mental health/substance abuse patients in hospital Emergency Department
Customized Measure	The rate of ED patients who leave without being treated by a Licensed Independent Practitioner
Customized Measure	The percentage of patients 18 years and older with a new episode of depression and started on an anti-depressant medication in primary care, who have had a 50 percent reduction in their PHQ9 Score during the 16-week acute phase, at pilot site(s).

1.3 Further Develop Integrated Care Network for Primary and Specialty Care	
ID	**Measure**
Customized Measure	Urgent Care Volume
Customized Measure	Volume of patients obtaining care in hospital-based Express Care as it relates to total Emergency Dept visits. Report as change in percentage of hospital-based Express Care visits compared to total visits for patients at ambulatory based Urgent Care during operational hours.
Customized Measure	Number of primary care physician FTEs and attributed patients
Customized Measure	Percent of hospital's non-emergent Emergency Department patients sampled that are unable to identify a Primary Care Physician
Customized Measure	Using survey sampling techniques, determine time to first appointment and time to third next appointment for patients seeking care with PCP
1.4 Establish Health Data Exchange Capability to Facilitate Integrated Patient Care	
ID	**Measure**
USPHTF	Baseline compliance with USPHTF measure for 2 providers for ALL of the following: BP screening Br CA screening Cervical CA screening Cholesterol screening (M and F) Colon CA screening Osteoporosis screening Tobacco Screening
Customized Measure	Percent of providers with integrated Electronic Health Records into the Health Information Exchange whose patients had a duplicate or unnecessary test.
1.5 Practice Support Center	
ID	**Measure**
Press Ganey	Medical practice satisfaction: percent of patients surveyed answering “good” or “very good” to Press Ganey survey question regarding “ease of getting clinic on phone”
Press Ganey	Medical practice satisfaction: percent of patients surveyed answering “good” or “very good” for Press Ganey survey questions regarding “ease of scheduling appointments”

1.6 Implement Patient Navigation Services	
ID	**Measure**
Customized Measure	Frequent User ED Visits
Customized Measure	Unnecessary ED Visits
1.7 Develop Integrated Acute and Post-Acute Network Across the Continuum of Care	
ID	**Measure**
Customized Measure	X% reduced hospital 30-day all-cause readmissions from prior year baseline
Customized Measure	X% reduced readmissions from specified post-acute setting from prior year baseline
2.1 Implement Care Management Interventions for Patients with Chronic Diseases	
ID	**Measure**
NQF 0575 with adjustment to measurement period	Percent of patients 18-75 years of age with diabetes (type 1 or type 2) who had HbA1c < 8.0% during the measurement period at implemented pilot sites.
NQF 0059 with adjustment to measurement period	Percent of patients 18-75 years of age with diabetes (type 1 or type 2) who had HbA1c > 9.0% during the measurement period at implemented pilot sites.
NQF 0061with adjustment to measurement period	Percent of patients 18-75 years of age with diabetes (type 1 or type 2) who had BP <140/90 mmHg during the measurement period at implemented pilot sites.
NQF 0064 with adjustment to measurement period	Percent of patients 18-75 years of age with diabetes (type 1 or type 2) who had LDL C <100mg/dL during the measurement period at implemented pilot sites.
NQF 0055 with adjustment to measurement period	Percent of adult patients with diabetes (type 1 or type 2) who had eye exam at least once during the measurement period at implementation sites.
NQF 0057	Percent of patients 18-75 of age with diabetes who received one or more A1c test(s) per year
NQF 0062	Percent of adult patients with diabetes (type 1 or type 2) who had micro-albumin screening at least once during the measurement period at implemented pilot sites.

NQF 0018	The percentage of patients 18–85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure (BP) was adequately controlled during the measurement period at implementation sites.
Customized Measure	Repeat ED visit rate
Modified NQF 0330	Hospital 30-day, all-cause, readmission rate to the index hospital following a hospitalization for patients 18 and older discharged with a primary diagnosis of heart failure
Customized Measure	Hospital 30-day, all-cause, readmission rate to the index hospital following a hospitalization for patients 18 and older discharged with a primary diagnosis of chronic obstructive pulmonary disease (COPD)
Customized Measure	Percent of patients enrolled in Heart Failure disease management program with evaluation of LVS function
Customized Measure	Percent of LVSD patients enrolled in Heart Failure disease management program prescribed ACEI or ARB at discharge
Customized Measure	Percent of patients who smoke and are enrolled in Heart Failure disease management program who receive adult smoking cessation advice/counseling
Customized Measure	Percent of patients enrolled in Heart Failure disease management program contacted within 24 hours post discharge
Customized Measure	Percent of targeted chronic disease patients who received a follow up appointment within 7 days of being discharged from the hospital with PCP
Customized Measure	Percent of Tele-health eligible patients enrolled in Heart Failure disease management program with Tele-health capabilities post discharge
Customized Measure	Percent of patients enrolled in Heart Failure disease management program discharged with home support post discharge
Customized Measure	Percent of adult patients with diabetes (type 1 or type 2) who had a hospitalization at the index hospital at least once during the measurement period at implemented pilot sites.
Customized Measure	Percent of COPD patients who go home with their inhaler if it is “continued” on their medication discharge instructions.

2.2 Establish a Chronic Disease Registry	
ID	**Measure**
Customized Measure	Percent of patients enrolled in the Chronic Disease Registry who are given a referral for specialist treatment of a chronic disease
Customized Measure	For patients enrolled in the Chronic Disease Registry, average turn-around time of referral report for specialist treatment of chronic disease
Customized Measure	Percent of patients with identified chronic disease who did not keep follow-up appointments with Primary Care Physician
Customized Measure	Percent of patients with identified chronic disease who are referred to attend smoking cessation counseling from a certified smoking cessation counselor.
2.3 Implement Improvements in Care Transitions	
ID	**Measure**
HCAHPS	HCAHPS Discharge Information
Modified NQF 0330	Hospital 30-day, all-cause, readmission rate to the index hospital following a hospitalization for patients 18 and older discharged with a primary diagnosis of heart failure
Customized Measure	Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for high-risk patients (as defined by STARR High Risk Tool) 18 and older
HCAHPS	Percent of Patients who reported that their nurses "Always" communicated well
2.4 Develop or Expand Projects to re-Engineer Discharge Processes	
ID	**Measure**
Customized Measure	Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization patients ages 18 – 65, admitted for medical care (non-surgical and non-maternity) and are MassHealth or Commonwealth Care members of the BMC HealthNet Plan, who are served by re-engineered discharge process to reduce readmissions
Customized Measure	Percent of patients ages 18 – 65, admitted for medical care (non-surgical and non-maternity) and are MassHealth or Commonwealth Care members of the BMC HealthNet Plan, who are served by re-engineered discharge process to reduce readmissions
Customized Measure	Percent of parents or caregivers of patients ages 18 – 65, admitted for medical care (non-surgical and non-maternity) to a specific cohort, who receive a hospital after care plan at discharge

2.5 Implement Primary Care-Based System of Complex Care Management for High Risk Population(s)	
ID	**Measure**
PCMHI 0012	Percent of hospitalized patients who have clinical, telephonic, or face-to-face follow-up interaction with the care team within 2 days of discharge during the measurement month at sites with implemented complex care management.
PCMHI 0013	Percent of patients who have been seen in the Emergency Room with a documented chronic illness problem, who have clinical telephonic or face-to-face follow-up interaction with the care team within 2 days of ER visit during the measurement month at sites with implemented complex care management.
2.6 Establish a Multi-Disciplinary Education and Simulation Center	
ID	**Measure**
Customized Measure	Percent of infants delivered vaginally with shoulder dystocia
AHRQ PSI 39	Failure to Rescue Rate: Deaths per 1,000 patients having developed specified complications of care during hospitalization.
2.7 Implement Process Improvement Methodologies to Improve Safety, Quality and Efficiency	
ID	**Measure**
BCBS AQC	Percent of patients aged 18 through 85 enrolled in the Blue Cross Blue Shield Alternative Quality Contract who had a diagnosis of hypertension and whose blood pressure was adequately controlled (<140/90)
Standard measure	Falls per thousand patient days
Standard measure	Average Length of Stay for all Inpatients
Customized Measure	Percent of registered Emergency Department Patients leaving Emergency Department without being seen
CDC CLASBI	Central Line Associated Blood Stream Infections

2.8 Provide an Alternative Care Setting for Patients who Seek Non-Emergent Department Care	
ID	**Measure**
Customized Measure	Average monthly non-emergent Hospital emergency department volume that is level, 3, 4, and 5 on the ESI scale, separately, as a percentage of the total ER volume
Customized Measure	Measure average monthly visits at new co-located PCMH primary care site
2.9 Reduce Variations in Care for Patients with High Risk Conditions	
ID	**Measure**
Customized Measure	30-day all-cause readmissions
3.1 Develop Risk Stratification Capabilities for Patient Populations and Alternative Payment Models	
ID	**Measure**
Customized Measure	Estimated total costs avoided due to interventions triggered by X percent highest risk patient identification and care management in specific payer cohort
Customized Measure	Admits/1,000 (Tufts Medicare Preferred population)
Customized Measure	Acute Admits/1,000 from a SNF (Tufts Medicare Preferred population)
3.2 Design and Implement a Hospital-Based 360 Degree Patient Care Program	
ID	**Measure**
Customized Measure	Admits/1,000 (Tufts Medicare Preferred population)
3.3 Develop Governance, Administrative, and Operational Capacities to Accept Global Payments/Alternative Payment	
ID	**Measure**
NQF 0036	Percentage of patients who were identified as having persistent asthma and who were dispensed a prescription for either an inhaled corticosteroid or acceptable alternative medication during the measurement year
NQMC-1976	Heart failure: percentage of patients aged greater than or equal to 18 years with diagnosed heart failure (HF) who also have left ventricular systolic dysfunction (LVSD) who were prescribed angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy.
NQMC-6217	Comprehensive diabetes care: percentage of members 18 through 75 years of age with diabetes mellitus (type 1 and type 2) whose most recent hemoglobin A1c (HbA1c) level is greater than 9.0% (poorly controlled).

Customized Measure	For a targeted population, the percentage of women aged 40 through 69 years who had a mammogram to screen for breast cancer within 24 months.
Customized Measure	Report of claims based utilization data for targeted population and service lines compared to benchmarks
Customized Measure	Average Length of Stay for existing Mercy/Physician Group Medicare Advantage "Virtual" ACO beneficiaries
Customized Measure	Percentage of existing Mercy/Physician Group Medicare Advantage "Virtual" ACO beneficiaries readmitted < 30 days
3.4 Develop an Integrated Care Organization to Enhance Capacity and to Respond to Alternative Payment Systems	
ID	**Measure**
Customized Measure	Number of physicians in new ICO
Customized Measure	Number of patients attributed to PCPs in ICO
Customized Measure	Percent of primary care physicians who successfully qualify for a Medicare or Medicaid EHR Incentive Program payment
Customized Measure	Count of patients represented by PCPs in the original PHO organization, prior to redesigning it to become the ICO.
3.5 Develop Administrative, Organizational, and Clinical Capacities to Manage the Care for Complex Patients	
ID	**Measure**
Customized Measure	Number of Dual Eligible Inpatient Admissions
Customized Measure	Number of Dual Eligible ED visits
Customized Measure	Percent of Dual Eligible Patients readmitted all cause < 30 days

3.6 Establish an Enterprise-Wide Strategy for Information Management and Business Intelligence	
ID	**Measure**
Customized Measure	Identify top 5 most costly providers compared to 30 day readmission rates for HF
Customized Measure	Percent of identified "high risk" for readmission patients who are scheduled a follow up visit prior to discharge using nationally recognized evaluation tool (e.g. STAAR) for identifying high risk patients for readmission.
Customized Measure	Percentage of times critical information is transmitted at the time of discharge on identified high risk patients to the next site of care, i.e., home health, LTC, rehab and/or PCP office
3.7 Develop Capacity to Address the Population Health of the Community Associated with the Triple Aim and Alternative Payment Models	
ID	**Measure**
NQF 0028a with adjustment to measurement period	Percent of patients 18 years and older who were queried about tobacco use in the past 24 months (at implementing pilot site(s))
NQF 0028b with adjustment to measurement period	Percent of patients 18 years and older, identified as tobacco users, who received cessation intervention in the past 24 months (at implementing pilot site(s))
Obesity – BMI Screening (linked to NQF 421)	Percent of adult primary care patient population with a clinical visit during the measurement period who have a BMI in the obesity category during the measurement period (at implementing pilot site(s))
Obesity - Adult Height and Weight Verification	Percent of adult primary care patient population with a clinical visit during the measurement period who received verification of height and weight during the measurement period (at implementing pilot site(s))
Cardiovascular Risk Screening (linked to NQF 17)	Percent of adult primary care patient population with a clinical visit during the measurement period who were identified with cardiovascular risk factors during the measurement period (at implementing pilot site(s))
Behavioral Health Screening (linked to NQF 418)	Percent of adult primary care patient population with a clinical visit during the measurement period who received an annual behavioral health screening using an approved screening instrument during the measurement period (at implementing pilot site(s))
3.8 Global Payment Pilot Project	
ID	**Measure**
Customized Measure	X% of aligned patient population reimbursed under global payment arrangement
3.9 Participate in a Learning Collaborative	
N/A	N/A

XI. DSTI EVALUATION

32. **State Process for Developing an Evaluation of DSTI**

A draft design for the evaluation of DSTI will be included in the draft evaluation design for the 1115 Medicaid Demonstration, to be submitted in accordance with STC section 84. The evaluation design will be refined further after CMS approval of the master DSTI plan and hospital specific plans. The Commonwealth will contract with an external evaluator to develop an evaluation plan in accordance with STCs 84-86.

The DSTI evaluation will include both process and outcome measures and will draw on both qualitative and quantitative data sources. Content analyses of DSTI project documents, including the master DSTI plan contained in these STCs, will advise the specification of a delivery system theory of change, specific evaluation measures and specifications, and data sources.