

# *MERCY MEDICAL CENTER*

Delivery System Transformation Initiatives  
Proposal for the Massachusetts Section 1115 Waiver  
Demonstration Years 15 - 17

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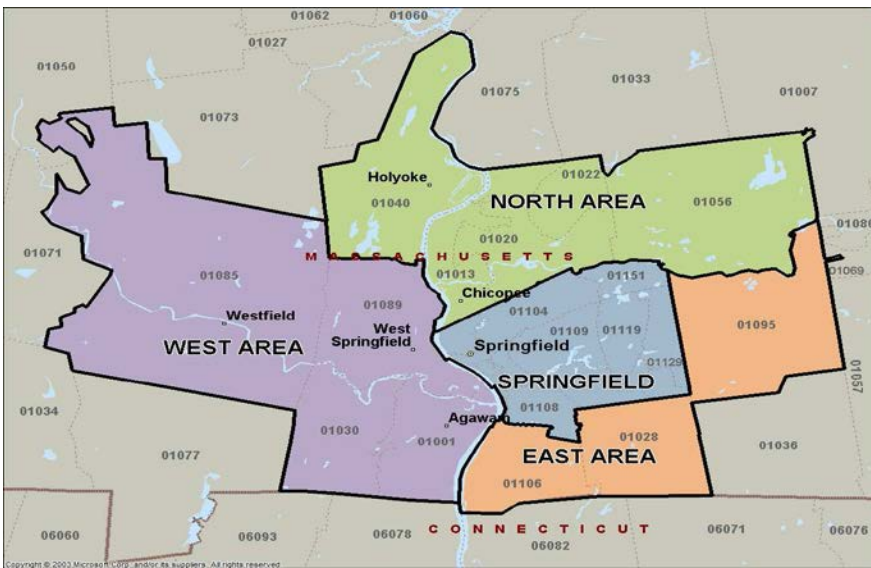
# I. Introduction

## A. Background

### Community Context: Hampden County, Massachusetts

With a population of 465,621, Hampden County, Massachusetts consists of urban, suburban and rural regions in Western Massachusetts. Dominated by the two largest cities, Springfield and Holyoke, Hampden County resembles other diverse and economically-distressed areas. Hampden County is the proving ground for healthcare reform and the staging ground for transformation. Despite the challenging economic and demographic context, the work of fundamental health care transformation must take place here, in Hampden County, and in other similar regions of the country. These are precisely the difficult places that matter for moving the needles of cost efficiencies, health outcomes and the patient's experience of care, especially for Medicaid beneficiaries. When gauging the challenges of health care transformations and their replication potential by other hospitals in regions with similar characteristics, economic and demographic contexts are important elements to consider. The clarion call to action is clear: Achieve significant transformational advances in Hampden County, Massachusetts, and similar advances might be achieved more easily elsewhere. To borrow a famous phrase: For our county, our Commonwealth and our country, this will be our finest hour.

**Figure 1. Mercy Medical Center's Primary Service Area by City and Zip Code**



The primary service area consists of four parts: 1) Springfield; 2) Towns north of Springfield, including Chicopee, Holyoke and Ludlow; 3) Towns east of Springfield, including East Springfield, Indian Orchard; East Longmeadow, Longmeadow and Wilbraham; 4) Towns west of Springfield, including Feeding Hills, Agawam, Westfield; and West Springfield.

Although Hampden County has pockets of considerable wealth in some suburban towns, its urban areas remain challenged by three, persistent economic realities: relatively high unemployment rates, low per capita income and high poverty rates.<sup>1</sup> The unemployment rate for persons over 16 years of age is 10.4%, compared to 8.5% average for the state. Per capita income is only \$19,541, nearly 25% lower than the state average. Nearly one-third of Hampden County residents live below 200% of federal poverty levels and nearly one-quarter of Hampden County children less than 18 years of age live below 100% of the federal poverty line.

<sup>1</sup> Massachusetts Community Health Information Profiles, *Health Status Indicators Report for Hampden County*, Massachusetts Department of Public Health. Retrieved from <http://www.mass.gov/eohhs/researcher/community-health/masschip/>

Within Mercy Medical Center's primary service area, the three most economically-challenged communities are: 1) Holyoke; 2) Springfield, especially the North End and Downtown areas; and 3) Chicopee, especially the southern part of the city that abuts the North End of Springfield. As detailed in the following section, many residents in these cities face a complex array of health problems, all linked to poverty, the relatively low educational status of the adult populations and persistently high unemployment rates. In fact, Holyoke and Springfield lead the state on one of the most critical indicators of health and well-being: child poverty, with rates of 41.9 % for Holyoke and 34.3% for Springfield. Poverty rates are genuinely alarming: In Springfield 43.6% live below 200% of the Federal Poverty Level, compared to 46.3% for Holyoke and 29.9% for Chicopee. The per capita income levels for Springfield, Holyoke and Chicopee are \$15,232, \$15,913 and \$18,646, respectively.

### **Greater Springfield Hospital and Health System Market Composition**

The Greater Springfield hospital and health systems market consists of Baystate Health Systems, with 52% market share of all acute care inpatient discharges, followed by Mercy Medical Center/Sisters of Providence Health Systems, with 20% market share, Cooley Dickinson Hospital, with 12% market share, Holyoke Medical Center, with 9% market share and other hospitals in the area accounting for the remaining 7% of acute care inpatient discharges.<sup>2</sup>

### **Area Primary and Specialty Care Physicians**

According to information compiled and analyzed by Market Street Research, Inc., there are about 1,407 full-time equivalent (FTE) physicians whose practices cover communities within Mercy Medical Center's primary service area.<sup>3</sup> Two-thirds (63.3%) of these physicians are based in Springfield. The Sisters of Providence Health System's service area has a significant oversupply of physicians in many specialties. Statistics suggest a need for the following numbers and types of physician practitioners:

- About 60 family or general practitioners, primarily in the North and West areas
- About 17 allergists, primarily in Springfield
- About 12 anesthesiologists in the North and West areas
- About 7 dermatologists, needed outside Springfield
- About 3 obstetricians/gynecologists, needed outside Springfield

As of 2010, specialties for which the greatest need exists include plastic surgery, pathology, pulmonary disease, psychiatry, physical medicine and rehabilitation, radiology, internal medicine, pediatrics, rheumatology, and urology.

### **Mercy Medical Center's Relationship with Primary Care Medical Group Practices**

Although the hospital does not employ its own primary care providers at this time (April 2012), Mercy Medical Center does have a number of ongoing business relationships with two of the larger physician groups located within its primary service area, Hampden County Physician Associates and Riverbend Medical Group. For more than a decade, Mercy Medical Center and Hampden County Physician Associates have collaborated, on creating a patient-centered medical network with a "Virtual ACO" that realigns incentives to achieve better clinical outcomes while lowering costs. Through this ongoing business relationship, the physicians group and

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<sup>2</sup> Decision Resources, Inc. (May 2011). *Health Leaders Inter Study: Springfield Market Overview*, 5-9.

<sup>3</sup> Market Street Research, Inc. (September 2010). *2010 Community Health and Human Services Needs Assessment Prepared for Sisters of Providence Health System, Phase 1*, 62-63.

the hospital continue to operate a full-risk contract with Tufts Health Plan, covering 5,000 Medicare beneficiaries.

## Population Description

Hampden County demographics and health status indicators resemble those in other diverse and economically-distressed regions of the country. Hampden County is more diverse than the state as a whole, with Hispanic persons comprising 17.4% of the population, Black non-Hispanics are at 8.1%, White non-Hispanics are at 72.6% and Asians make up 1.7% of the population. AFDC Medicaid beneficiaries account for 13.4% of the county's population, compared to the state average of 7.1%.

Starting at birth, health indicators for Hampden County<sup>4</sup> largely reflect poverty levels. Notably, Hampden County ranks as the least healthy county in Massachusetts, in both Health Outcomes and Health Factors.<sup>5</sup> In the University of Wisconsin report, every county in the nation received two summary ranks: 1) Health Outcomes and 2) Health Factors. Each rank represents a weighted composite of key indicators. The "Health Outcomes" rank depicts how healthy a county is, as measured by mortality rates and morbidity indicators. The "Health Factors" rank is a composite measure of key health behaviors like adult smoking rates, socioeconomic factors and physical environment factors, such as air quality and liquor store density. Over 36% of pregnant women in Hampden County do not receive prenatal care in the first trimester, compared with the state average of 31.7%. Mothers receiving publically-funded prenatal care make up 59.7% of the total, compared to only 36.1% for the state average. The infant mortality rate for Black non-Hispanics is at 11.8 per 1,000 births, well above the state average of 7.6 per 1,000 births for the same population. The 13.4% rate of teen pregnancy is more than double the rate for the state. The rates for some infectious diseases in Hampden County are also troubling. The Gonorrhea rate for teens is more than double the state's rate. Chlamydia rates for both adults and teens are nearly double the rates for the state as a whole. The number of persons with HIV/AIDS (1,600) in Hampden County computes to a crude rate of 342.8 per 10,000 persons, compared to a crude rate of 261 per 10,000 for the state as a whole. Chronic disease indicators in Hampden County are other causes for concern, with the age-adjusted rates of total cancer deaths and cardiovascular deaths, both exceeding state averages, and the high rate of alcohol and drug-related hospital discharges in Hampden County, standing at 166% above the rate for Massachusetts as a whole.

Unquestionably, the cities with the highest health risks are Springfield and Holyoke. Especially for these two communities, the health status indicators are troubling.<sup>6</sup> For example, Springfield and Holyoke residents have some of the highest rates in the state for a variety of infectious diseases, including AIDS prevalence and AIDS/HIV-related deaths, Gonorrhea and Chlamydia. Alcohol and drug-related hospital discharge rates for Medicaid beneficiaries are nearly twice the state averages. Larger percentages of residents smoke cigarettes, compared to other cities in the region. Holyoke and Springfield residents are also more likely to utilize hospital emergency departments for treatment of diabetes, asthma, angina and other cardiovascular problems, and bacterial pneumonia. Rates for cardiovascular disease deaths and lung cancer deaths in these two communities are higher than state averages.

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<sup>4</sup> *Ibid.*

<sup>5</sup> County Health Rankings: Mobilizing Action Toward Community Health. "2010 Massachusetts." University of Wisconsin Population Health Institute. Retrieved from <http://www.countyhealthrankings.org/massachusetts>.

<sup>6</sup> Massachusetts Community Health Information Profiles, *Health Status Indicators Reports for Springfield and Holyoke*, Massachusetts Department of Public Health. Retrieved from <http://www.mass.gov/eohhs/researcher/community-health/masschip/>

## Health System Description

Since 1873, the Sisters of Providence Health System (SPHS) has been the leading, mission-driven, faith-based health system in Hampden County, renowned for its unwavering passion and perseverance to provide high quality and affordable healthcare and social services, especially for persons who are most in need. Today, Mercy Medical Center and the Sisters of Providence Health System share a compelling mission to being a transforming, healing presence in the communities we serve. With Mercy Medical Center serving as the hub, the Sisters of Providence Health System, is strategically positioned to develop a high-value, integrated, patient-centered health care network, across a full continuum of care, including acute care, behavioral health, primary care, rehabilitation, long-term care, home care, laboratory services and end-of-life care. The SPHS Network includes:

- **Mercy Medical Center:** A fully-accredited and nationally-recognized as a high quality provider, Mercy Medical Center is a 182-bed, acute care medical facility located in Springfield, offering inpatient and outpatient surgery, emergency care, intensive care, critical care, cardiac care, maternity services, cancer treatment, breast care, diagnostic imaging, diabetes education, and community health services. Mercy's hallmark programs include the Sister Caritas Cancer Center, the Mercy Breast Care Center, specialized neurosurgery, the Family life Center for Maternity, a newly-expanded Emergency Department and the state-of-the-art Mary E. Davis Intensive Care Unit.
- **Providence Behavioral Health Hospital:** Functioning as the behavioral health campus of Mercy Medical Center in Holyoke and operating under its hospital license, Providence Behavioral Health Hospital is a 126-bed facility that is one of the largest providers of acute behavioral health services in the Commonwealth. Services include inpatient and outpatient psychiatric care for children and adults, an inpatient substance abuse treatment unit and 2 outpatient Methadone Maintenance Treatment programs.
- **Mercy Internal Medicine Service:** Mercy's pioneering hospitalist program is a group practice composed of 17 Board-Certified hospitalists devoted to providing hospital care, 24/7.
- **Weldon Rehabilitation Hospital:** A 60-bed hospital-based rehabilitation center.
- **Mercy Home Care:** One of the largest home health providers in Western Massachusetts.
- **Mercy Hospice:** patient-centered, culturally-competent, end-of-life care.
- **Mercy Continuing Care Network:** Comprised of six long-term care facilities, an adult day health program and a soon-to-be-launched PACE program.
- **Life Laboratories:** A full-service medical diagnostic laboratory conducting over one million tests per year for hospitals, physician group practices, mental health facilities, and dozens of long-term care facilities.
- **Brightside for Families and Children:** Brightside for Families and Children offers a range of family support services, including a home-based Family Stabilization and Treatment program, Community Support Programs, In-Home Therapy and Therapeutic Mentoring, as well as specialized assessments such as neuropsychological evaluations and other testing.

## Mercy Medical Center Nationally Recognized as High-Value Top 100 Hospital

As evidence of our achievements in delivering high-value care, Cleverly and Associates, a leading health care financial consulting firm specializing in operational benchmarking and performance-enhancing strategies, recognized Mercy Medical Center as both a “Community Value Top 100” and “Community Value Five-Star” hospital in both 2010 and 2011. Mercy’s designation is noted in the independent organization’s recent publication: *State of the Hospital Industry - 2011 Edition*. “The concept of health care ‘value’ has become increasingly important to payers (insurers), employers and individuals, not just here in Massachusetts, but also across the country. Mercy Medical Center’s reputation for providing high quality care at a reasonable cost has again been independently validated by the presentation of both the Community Value 100® and Community

Value Five Star® Awards,” said Daniel P. Moen, President and Chief Executive Officer, Sisters of Providence Health System.

### **Hospital’s Strategic Opportunity as Advocate and Integrator of Community Health Improvements**

As a major area medical center and health system with a long commitment to providing compassionate, faith-based care, tailored to the needs of the communities it serves, Mercy Medical Center and the Sisters of Providence Health System have a strategic opportunity to be a primary advocate and integrator for future community health improvements. This strategic opportunity is guided and inspired by a 140-year legacy of compassionate ingenuity.

As a primary advocate and integrator for future community health improvements, we are not only referring to the hospital’s formidable clinical expertise, but also its rich tradition of being an advocate for transforming the deeper problems impacting the communities it serves. This tradition taps into its “organizational DNA,” setting Mercy Medical Center apart from other hospitals. Mercy Medical Center operates within a faith-based Mission that compels it to transform and heal communities, giving priority to those persons most in need and especially to those persons whom the larger society ignores.

The genesis of what is now known as the Sisters of Providence Health System began in the 19<sup>th</sup> Century, with a massive engineering project that, inadvertently, created a public health catastrophe. When engineers literally harnessed the power of the Connecticut River with a dam in 1849, Holyoke transformed from a quaint New England town into a burgeoning city. Thousands of men from area farms moved to Holyoke to build the canals. Immigrants from Canada and Ireland and Scotland journeyed to Holyoke to work in the paper, cotton and woolen mills. If the Industrial Revolution advanced our notions of human progress, it also produced its share of dreaded consequences. Holyoke’s infrastructure was ill-equipped to support the sudden and massive influx of people. Overcrowded housing and inadequate sanitation set the stage for the spread of diseases. Following the epidemic of typhoid and a severe outbreak of smallpox in 1872, the death rates for Holyoke were the highest in Massachusetts, except for the town of Fall River.<sup>7</sup>

Enter the Sisters of Providence from Kingston, Ontario--women of extraordinary faith who just happened to be in Western Massachusetts on a “begging tour,” right in the midst of an unfolding series of public health calamities. The Sisters of Providence witnessed first-hand the needs of the families and children of canal builders and mill workers. Once the Sisters perceived the enormous scope of suffering, there could be no going back to Canada. The Sisters were here in the Pioneer Valley to stay. Amazingly, the Sisters conducted no formal needs assessment or sophisticated planning process back in the early days. They identified and responded to the steadily multiplying needs immediately, tacitly and experientially. The Sisters took in orphaned children, set up schools, and cared for the sick. In 1873, the Sisters established Providence House, the first Catholic hospital in Western, Massachusetts.

From this historic legacy, the Sisters of Providence Health System is now thriving into a third century of service in Western Massachusetts. Today’s most emblematic version of this mission-inspired service is Mercy Medical Center’s Health Care for the Homeless (Mercy HCH) program. For 28 years, Mercy HCH has provided essential health care services to the homeless population of Western Massachusetts. The Mercy HCH program began in a Springfield soup kitchen, operated by the Sisters of Providence. Arriving with basic medical supplies in the back of her station wagon, Sr. Julie Crane, a Sister of Providence and nurse practitioner, began ministering to homeless persons who frequented the soup kitchen. Sr. Julie’s ministry soon expanded to local shelters, highway underpasses and other places “on the streets.” Today, the mobile, 20-member Mercy HCH clinical team follows a patient-centered model of health care, providing community health outreach, intervention, assessment, referrals, follow-up, case management and disease management education.

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<sup>7</sup> Dolores Liptak, RSM and Grace Bennett, editors. (1990). *Seeds of Hope: The History of the Sisters of Providence, Holyoke, Massachusetts*. Sisters of Providence: Holyoke, Massachusetts.

With its legacy of transformational, faith-based service as a foundation, Mercy Medical Center will continue to develop new and ambitious coalitions and collaborations with local government, public health departments, physician groups and social service agencies. There is no doubt that many of the region’s economic and demographic indicators paint a bleak picture of community health. From one perspective, it is a still-life portrait of people, many of whom are recent immigrants from Puerto Rico, Vietnam, Russia, Mexico, the Middle East and Africa, many imprisoned by poverty, trapped in a seemingly endless negative cycle, low educational expectations, and poor health. Yet, from another perspective, these indicators trace yet-another rolling wave of immigrants to Western Massachusetts, yearning, sometimes against all odds, for a better, healthier and more prosperous life. Mercy Medical Center is committed to being a transforming, healing force, especially for the poorest communities and individuals in its primary service area.

### **The 5-Year Vision for the Hospital**

Mercy Medical Center, its network affiliates in the Sisters of Providence Health System, community physician groups and global payment collaborators partner with the Commonwealth, CMS and commercial payers as an appropriately-sized “Accountable Care Organization.” The hospital and the health system will develop adaptive-edge health care delivery and payment reform models into an integrated, patient-centered, Medical Home Network.

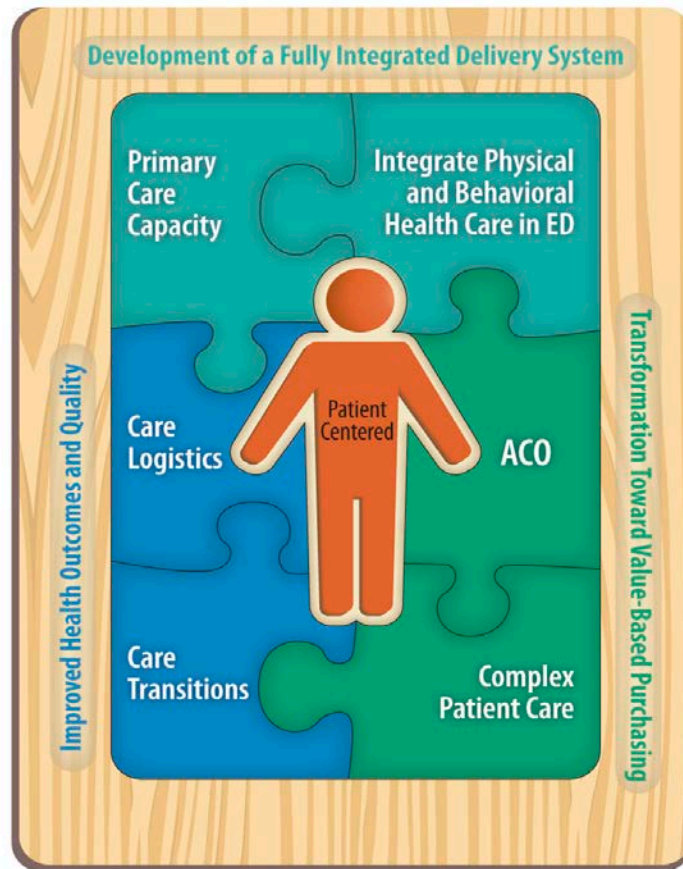
Across the continuum of medical care in the health system and through collaborations with primary care and specialty physician groups, Mercy Medical Center will also integrate physical and behavioral health. Our combined efforts reduce per capita health care costs, boost the health status of the community and improve the health care experience for patients. With an increase of transformational investments from the Commonwealth, the Federal Government and foundations, the hospital and the health system significantly increase their organizational capacities in community health, behavioral health, disease management, care management, wellness and health promotion, data mining and warehousing, information technology for Health Information Exchanges and leverage the integrated care network to recruit additional primary care physician practices and Federally Qualified Health Centers and utilize the high-value, patient-centered, continuum of care for their patients.

Beyond its “hospital walls,” Mercy Medical Center increases its efforts to make population health improvements in the community, in collaboration with local health and human service organizations and public health entities on regional, state and federal levels, to break the cycles of preventable chronic diseases, unhealthy behaviors and racial disparities—reaching the poorest of the poor, homeless persons and families, new immigrants, refugee and dual-eligible beneficiary populations.



# Medical Home Network

## Integrated Care Delivery and Management



**Figure 2. Mercy Medical Center's 6 DSTI Projects  
Converging to Shape the 5-Year Vision**

### **Statement Regarding Directly Related Initiatives Funded by the U.S. Department of Health and Human Services**

Mercy Medical Center DSTI Projects are not directly related to any initiatives funded by the U.S. Department of Health and Human Services. Mercy does anticipate participating in two programs that are aligned with Mercy DSTI Category 3 Projects. Mercy has submitted a Letter of Intent to CMS for the Medicare Shared Savings Program, and has also submitted an application to CMS (through the Massachusetts Executive Office of Health and Human Services), for a PACE program. Mercy will provide updates on our participation in HHS-funded initiatives related to DSTI projects in our biannual DSTI progress reports submitted to the Commonwealth.

## B. Executive Summary

Mercy Medical Center faces financial challenges that are unique to Massachusetts “Safety-Net Hospitals,” because of the hospital’s significantly higher percentages of Medicaid patients and significantly lower percentages of patients covered by commercial insurance payers. Converting a potential liability into an asset, Mercy Medical Center used the challenging payer mix to become one of the most cost-effective, acute care hospitals in the Commonwealth, as evidenced by the Massachusetts Attorney General’s Report, “Examination of Health Care Cost Trends and Cost Drivers.” (March 16, 2010.) At the same time, Mercy Medical Center and the Sisters of Providence Health System have pursued a number of strategies to target the now-ubiquitous “Triple Aim.”<sup>8</sup> 1) better care for individuals; 2) better health for populations; and 3) reduced per capita costs. For example, with its recent participation in the Executive Office of Health and Human Services’ Infrastructure and Capacity Building Initiatives, Mercy Medical Center has positioned itself on the adaptive edge of health care transformation in the Commonwealth.

With the opportunity to develop its Delivery System Transformation Initiatives (DSTI) proposal, Mercy Medical Center will work within a strategic framework to transform health care delivery and payment reform models into an integrated care network. The 6 projects are like puzzle pieces converging to shape the hospital’s 5-year vision for the future. Mercy Medical Center is prepared to take on the essential role and functions of an “integrator”<sup>9</sup> to implement the following DSTI Projects:

1. Enhance Primary Care Capacity and Access (Mercy DSTI Project 1.1)
2. Integrate Physical and Behavioral Health Care in Mercy Medical Center’s ED (Mercy DSTI Project 1.2)
3. Align New Organizational Structures, Human Systems and IT Infrastructure to Improve Health Outcomes and Quality (Mercy DSTI Project 2.1)
4. Develop Patient-Centered Care Transitions for Patients at the Highest Risk of Readmission (Mercy DSTI Project 2.2)
5. Develop Governance, Administrative and Operational Capacities to Accept Global Payments/Alternate Payments (Mercy DSTI Project 3.1)
6. Develop Administrative, Organizational and Clinical Capacities to Manage the Care of Complex Patient Populations (Mercy DSTI Project 3.2)
7. Participate in Learning Collaborative (Mercy DSTI Project 3.3)

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<sup>8</sup> Berwick, D., Nolan, T., and Whittington, J. (2008). The triple aim: care, health and cost. *Health Affairs*, 27(3), 759-769. Retrieved from: <http://www.content.healthaffairs.org/content/27/3/759.abstract>

<sup>9</sup> *Ibid*, 763.

**Mercy DSTI Project 1.1** will launch a number of interrelated activities to increase the number of primary care providers in the Greater Springfield area. Because Mercy Medical Center does not employ PCPs at the present time, the strategy is to involve PCPs from area physician groups on the Mercy Primary Care Committee to develop a building expansion plan for the hospital, for attracting and recruiting additional PCP and specialty providers to locate on the hospital campus. Concurrently, the Mercy Primary Care Committee will develop and implement its own recruitment and retention strategy. Finally, the hospital will forge an Affiliation Agreement with UMASS Medical School to create a 4<sup>th</sup>-Year Clerkship site at Mercy Medical Center, to stimulate student interest in primary care and internal medicine in the Greater Springfield area. This project is a pivotal element of Mercy Medical Center's 5-Year Vision, because only expanded and more accessible primary care capacity will serve to reduce further the demand for non-emergent care in the hospital's ED, provide continuity of care for patients with chronic conditions and deliver a better experience of care, one that can focus on prevention and disease management, especially for discharged hospital patients and complex patient populations in future global payment systems. Enhancing primary care capacity and access especially relates to DSTI Projects 2.2, 3.1 and 3.2, because an adequate and accessible primary care supply for "High Risk" and complex patient populations is essential for reducing hospital readmission rates and per capita costs, while managing the care of patients in global payment and alternative payment systems. Mercy Medical Center is focused on creating a strong foundation of primary care that will serve as a key component for integrated delivery systems and evolving global payment systems.

**Mercy DSTI Project 1.2** will develop and implement an operational plan that integrates physical and behavioral health for patients that present with significant mental health and substance abuse issues in the hospital's ED. This project will bring together the clinical and organizational resources of Mercy Medical Center in Springfield and the hospital's behavioral health campus in Holyoke, Providence Behavioral Health Hospital, into the newly-renovated Mercy ED. This project will work to streamline and expedite clinical assessment and referral to treatment for ED patients with significant mental health and substance abuse issues, thereby reducing their ED length of stay, lowering costs, increase overall patient ED patient flow and improving the quality of care. This project supports the 5-Year Vision by setting the stage for future integration of physical and behavioral health care throughout the health system and with primary physician and specialty practices in the community. Integrating physical and behavioral health in the Mercy ED will significantly impact Mercy DSTI Project 2.1 because it aims to improve ED patient flow, to reduce the number of ED patients that leave without being seen and to achieve optimum throughput of ED patients with significant mental health and substance abuse issues. This project also will develop valuable organizational knowledge on how best to apply lessons learned to Mercy DSTI Projects 1.1, 2.2, 3.1 and 3.2, for these projects involve the care of "High Risk" or complex patient populations, many of whom have chronic physical and behavioral health conditions.

**Mercy DSTI Project 2.1** will design and implement a new, patient-centered, care coordination and management system, Care Logistics™, that integrates departmental and hospital system workflows to reduce the time it takes to place patients in available beds, treat them effectively and discharge them safely to the next appropriate levels of care, across care transitions within the hospital setting. The task is to design an “airport control tower” solution to hospital operations, utilizing new staffing configurations into cross-department hubs, new IT system architecture and applications to track all inpatients and ED patients in real time. This project supports the hospital’s 5-Year Vision by reducing per capita costs, average length of stay, patient flow times, discharge process times, readmission rates, ED holds and the rates of ED patients who leave without being seen, while boosting quality measures and patient satisfaction. This project is closely related to several DSTI Initiatives, especially Projects 2.2 and 3.1, because of its cross-cutting approach to streamline the delivery of all patient services in ways that reduce costs, improve the quality of care and lower readmission rates, especially for “High-Risk” patients.

**Mercy DSTI Project 2.2** will design a patient-centered care management model and intervention for “High-Risk” patients with the highest rates of <30-day hospital readmissions, using the STAAR Chart Review Tool. The project will re-engineer the hospital discharge process for all admitted patients and develop a home-based disease management program for all patients identified as “High Risk.” This project supports the 5-Year Vision, primarily in its aims to reduce per capita health care costs and increase its data mining and disease management capacities. This project is closely related to Mercy DSTI Projects 1.1, 2.1, 3.1 and 3.2, because developing patient-centered care transitions for “High Risk” patients requires an adequate supply of and access to PCPs, rigorous tracking of care delivered in inpatient settings, and special enrollment status for disease management and other supportive services to stave off preventable and costly hospital or skilled care nursing admissions in global and alternate payment systems.

**Mercy DSTI Project 3.1** will formalize and bring to scale the existing, PCP-driven, “virtual ACO” of Mercy Medical Center/Providence Behavioral Health Hospital and a large physician group into a free-standing legal entity that will be able to contract with various payers for future global payment systems. A major focus of the project is to increase HIT connectivity for Health Information Exchanges (HIE) between Mercy Medical Center and collaborating physician groups, to deliver expanded care management, disease management and case management services for larger groups of complex patients/beneficiaries. The project supports the 5-Year vision because it will innovate and bring to scale an Accountable Care Organization that will contract for new payment models, as an alternative to fee-for-service systems, and build organizational capacities in administrative leadership and HIT connectivity. This Project is closely related to Mercy DSTI Projects 1.1, 1.2, 2.1 and 3.2, because it will: 1) depend on enhanced capacity and access to primary care; 2) benefit from the organizational learning on how best to integrate physical and behavioral health, especially for “High Risk” patients with chronic conditions; 3) yield significant gains in patient quality and lowered per capita cost for hospitalized beneficiaries; and 4) develop valuable insights from “lessons learned” from training and orienting clinical staff to manage resources and care for complex patient populations in value-based purchasing.

**Mercy DSTI Project 3.2** will increase a variety of organizational operating and learning capacities to serve complex patient populations in value-based purchasing and alternative payment systems, from site selection, physical infrastructure development, service mix and employee skills training for managing patients and resources in new payment systems, to new care coordination, cost management and accounting systems. The project supports the 5-year vision, particularly in areas ranging from scaling health care delivery and payment reform models into an integrated care network, to improving the health care experience, increasing

organizational capacity in administrative leadership and reducing per capita costs. This Project is most directly related to Mercy DSTI Projects 2.2 and 3.1 because: 1) many, if not all, of the beneficiaries in the complex patient population, predictably, will fit the “High Risk” patient criteria and require well-managed discharge processes, if and when they are hospitalized; 2) many of the capacity building activities to increase connectivity for Health Information Exchanges between Mercy Medical Center and collaborating physician groups will carry over to this project.

**Mercy DSTI Project 3.3.** 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. Demonstration Year 15 (SFY 2012) goals will be for eligible DSTI safety net hospitals to explore existing and/or potential new opportunities for participation in a learning collaborative relative to measure.

#### **Category 4 Measures and Their Relevancy to the 5-Year Vision**

An integrated, patient-centered, Medical Home network requires a rigorous evaluation framework to obtain quantitative and qualitative data sets in five domains: 1) The patient’s (and caregiver’s) experience of care and their level of satisfaction; 2) specific measures of the effectiveness of care transitions; 3) patient safety, including the effectiveness of medication and disease management during transitions, and quality of care, including readmission rates; 4) health care utilization and costs, including length of stay; and 5) access to primary care providers. Common measures 4.3 and 4.4 elicit measures of patients’ (and caregivers’) responses to their experience of care and also relate to the effectiveness and safety of their care transitions. Common measures 4.1, 4.2, 4.5, 4.6, 4.7, 4.8, and 4.9 elicit key measures of patient safety, medication effectiveness, disease management and the quality of care. Common measures 4.10, 4.11 and 4.12 elicit measures related to health care utilization and costs. Hospital-specific measure 4.1 obtains a measure of relative access to primary care providers for patients that seek non-emergent care in the Mercy Medical Center ED. Hospital-specific measure 4.2 obtains a measure of health care utilization and costs related to the care of the mental health/substance abuse patients in the Mercy Medical Center ED. Hospital-specific measure 4.3 obtains a metric related to ED patient satisfaction and health care utilization, especially for uninsured and Medicaid beneficiaries. Hospital-specific measure 4.4 is a pivotal metric for health care utilization and costs, and also relates to the patient’s experience of care, while measure 4.5 is a metric for patient safety and quality of care. Hospital-specific measures 4.6 and 4.7 are metrics of the effectiveness of care transitions, as well as health care utilization and costs. Hospital-specific measures 4.8 and 4.9 are indicators of the effectiveness of care management, care coordination, disease management, health care utilization and cost.

Project Title	Description	Three Year Goals
<b>Category 1 – Further Development of a Fully Integrated Delivery System:</b>		
<b>1.1 Enhance Primary Care Capacity and Access</b>	<p>Mercy Medical Center will initiate a set of interrelated activities to enhance primary care capacity and access in Greater Springfield:</p> <p>1) Establishing the Mercy Primary Care Committee to assess existing physical space and develop an expansion plan to attract and recruit additional PCP clinical and specialty services to locate on the hospital campus; 2) Forging an Affiliation Agreement with UMASS Medical School to create 4<sup>th</sup> Year Clerkship at Mercy to stimulate students’ interest in primary care and internal medicine in the Greater Springfield area; 3) Selecting a vendor to conduct a study of regional PCP supply, demographics and succession planning; 4) Developing a primary care recruitment and retention strategy of the Mercy Primary Care Committee, based on the findings of the PCP study; 5) Completing a new PCP and specialty practice building on the Mercy Medical Center campus.</p>	<p>An expanded primary care and specialty building expansion on the Mercy Medical Center campus will further develop Mercy’s integrated care network with physician groups, enhance patient access, improve care transitions for many hospital patients and sharpen the network’s focus to achieve the “triple aim” of boosting health quality outcomes, providing patients with a better experience of care and reducing health costs. With a physician-led effort to develop and implement a PCP recruitment and retention strategy for Greater Springfield, combined with a new affiliation agreement with UMASS Medical School, this project promises to attract new primary care physicians to the area.</p>
Project Title	Description	Three Year Goals
<b>1.2 Integrate Physical and Behavioral Health Care in Mercy Medical Center ED</b>	<p>This project will develop and implement an operational plan that integrates physical and behavioral health care for patients that present with significant mental health and substance abuse issues (MH/SA) in Mercy Medical Center’s (Mercy) ED, expediting assessment and referral to inpatient or outpatient mental health or substance abuse treatment or discharge and coalescing the clinical and organizational resources of Mercy’s ED in Springfield and the hospital’s behavioral health campus in Holyoke, Providence Behavioral Health Hospital (Prov.), into the newly-expanded Mercy ED.</p>	<p>This project will plan and implement a new model of organizational integration of physical and behavioral health, extending Clinical Assessment Center resources and clinical personnel of Prov. into the newly-renovated “Psych Pods” of the Mercy ED, collecting qualitative and quantitative baseline measures for MH/SA patients and implementing a rigorous quality improvement process to reduce ED length of stay, lower costs, increase ED patient flow and improve the quality of care.</p>

Project Title	Description	Three Year Goals
<b>Category 2 – Improved Health Outcomes &amp; Quality:</b>		
<b>2.1 Align New Organizational Structures, Human Systems and IT Infrastructure to Improve Health Outcomes and Quality</b>	This project will design and implement a new, patient-centered, care coordination and management system, Care Logistics™, that integrates departmental and hospital system workflows to reduce the time it takes to place patients in available beds, treat them effectively and discharge them safely to the next appropriate levels of care, across care transitions within the hospital setting. The task is to design an “airport control tower” solution to hospital operations, utilizing new IT system architecture and real time applications plus new staffing configurations into cross-department hubs, to track all inpatients and ED patients in real time.	This project will transform the current state of care management at Mercy Medical Center to reduce case costs, average length of stay, patient flow times, discharge process times, readmission rates, ED holds and the rates of ED patients who leave without being seen, while boosting quality measures and patient satisfaction.
Project Title	Description	Three Year Goals
<b>2.2 Develop Patient-Centered Care Transitions for Patients at the Highest Risk of Readmission</b>	This project will design a patient-centered care management model and intervention for “high-risk” patients with the highest rates of 30-day hospital readmissions, using the STAAR Chart Review Tool. The project will re-engineer the hospital discharge process for all admitted patients and develop a home-based disease management program for all patients identified as “High Risk.”	Goals include: 1) instituting the Mercy Medical Center/Sisters of Providence Health System Care Cross Continuum Team, drawing representation from acute care, home care, skilled nursing and ambulatory care to analyze readmissions data and to develop selection criteria for identifying “High Risk” patients; 2) deploying additional Advanced Practice Nursing and disease management resources for discharged “High Risk” patients; 3) studying the feasibility of providing wellness program on Mercy Medical Center campus for patients with “high-risk” diagnoses.



Project Title	Description	Three Year Goals
<b>Category 3 - Ability to respond to statewide transformation to value-based purchasing and to accept alternatives to fee-for-service payments:</b>		
<b>3.1 Develop Governance, Administrative and Operational Capacities to Accept Global Payments/Alternative Payments</b>	<p>This project will formalize and bring to scale the existing, PCP-driven, “virtual ACO” of Mercy Medical Center/Providence Behavioral Health Hospital and a large physician group into a free-standing legal entity that will be able to contract with various payers for future global payment systems. A major focus of the project is to increase HIT connectivity for Health Information Exchanges (HIE) between Mercy Medical Center and collaborating physician groups, to deliver expanded care management, disease management and case management services for larger groups of complex patients/beneficiaries.</p>	<p>Goals include: 1) transforming the current “virtual ACO” of the hospital and physician group into a legal entity; devising an Operating Agreement that details roles and responsibilities for collaborating entities--Mercy Medical Center, Noble Hospital, physician groups and other entities in the new ACO configuration; 2) deploying a new Health Information Exchange (HIE) platform at Mercy Medical Center to provide greater connectivity with collaborating physician groups; 3) establishing a Specialist Advisory Council to promote integration and coordination of care for beneficiaries; and 4) developing a Quality and Cost Incentive Plan for future ACO participation; 5) instituting new quality and cost benchmarking, reporting measures; 6) delivering a pilot program proposal to serve a dual-eligible and/or Medicaid population.</p>
Project Title	Description	Three Year Goals
<b>3.2 Develop Administrative, Organizational and Clinical Capacities to Manage the Care of Complex Patient Populations</b>	<p>This project will increase a variety of organizational operating and learning capacities to serve complex patient populations in value-based purchasing and alternative payment systems, from site selection, physical infrastructure development, service mix and employee skills training for managing patients and resources in new payment systems, to new care coordination, cost management and accounting systems.</p>	<p>Goals include: 1) selecting a physical site for pilot program operations; 2) developing program policies and procedures and HIT infrastructure to align with value-based purchasing requirements; 3) identifying the mix of health care and supportive services that meet the needs of a complex patient population; 4) delivering a comprehensive training and orientation program for new and current health system employees on managing care for complex patient populations in value-based purchasing and alternative payment systems for health system employees; and 5) delivering reports on “lessons learned” from devising a service mix and training and orienting clinical and administrative staff to manage resources and care for a complex patient population in value-based purchasing.</p>



Project Title	Description	Three Year Goals
<p><b>3.3 Participate in Learning Collaborative</b></p>	<p>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 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.</p>	<p>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. Demonstration Year 15 (SFY 2012) goals will be for eligible DSTI safety net hospitals to explore existing and/or potential new opportunities for participation in a learning collaborative.</p>

<b>Project Title</b>	<b>Description</b>	<b>Three Year Goals</b>
<b>Category 4 – Population-Focused Improvements</b>		
<b>Common Measure 4.1</b>	<b>Care Transitions Measure Set (CTM-3)</b>	<b>Report Measure in FY14</b>
<b>Common Measure 4.2</b>	<b>Patients who reported that staff "Always" explained about medicines before giving it to them.</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.3</b>	<b>Patients at each hospital who reported that YES, they were given information about what to do during their recovery at home.</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.4</b>	<b>ED Wait Time: Door to Diagnostic Evaluation by a Qualified Medical Personnel</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.5</b>	<b>Pneumonia Immunization</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.6</b>	<b>Influenza Immunization</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.7</b>	<b>Percent of discharged patients under age 75 who were hospitalized for Chronic Obstructive Pulmonary Disease</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.8</b>	<b>Percent of discharged patients under age 75 who were hospitalized for Congestive Heart Failure</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.9</b>	<b>Low Birth Weight Rate: number of low birth weight infants per 100 births</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.10</b>	<b>Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for all patients 18 and older</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.11</b>	<b>Percent of Emergency Department visits for children age 18 or less with a primary diagnosis of asthma</b>	<b>Report in FY13 and FY14</b>
<b>Common Measure 4.12</b>	<b>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</b>	<b>Report in FY 13 and FY 14</b>

<b>Hospital Specific Measure 4.1</b>	<b>Percentage of Mercy Non-Emergent ED Patients sampled that are unable to identify a Primary Care Physician</b>	<b>Report in FY13 and FY 14</b>
<b>Hospital Specific Measure 4.2</b>	<b>Average Length of stay for Mental Health/Substance Abuse Patients in Mercy ED</b>	
<b>Hospital Specific Measure 4.3</b>	<b>The rate of ED patients who leave without being treated by a Licensed Independent Practitioner</b>	<b>Report in FY 13 and FY 14</b>
<b>Hospital Specific Measure 4.4</b>	<b>Average Length of Stay for all Mercy Medical Center Inpatients</b>	<b>Report in FY13 and FY14</b>
<b>Hospital Specific Measure 4.5</b>	<b>Central Line-Associated BSI</b>	<b>Report in FY13 and FY 14</b>
<b>Hospital Specific Measure 4.6</b>	<b>Percentage of High Risk Patients readmitted &lt;30 days</b>	<b>Report in FY13 and FY14</b>
<b>Hospital Specific Measure 4.7</b>	<b>Percentage of Patients who reported that their nurses “Always” communicated well</b>	<b>Report in FY13 and FY14</b>
<b>Hospital Specific Measure 4.8</b>	<b>Percentage of “Virtual” ACO beneficiaries readmitted &lt; 30 days</b>	<b>Report in FY13 and dFY14</b>
<b>Hospital Specific Measure 4.9</b>	<b>Number of Dual Eligible ED visits</b>	<b>Report in FY13 and FY14</b>

## II. Category 1 – Further Development of a Fully Integrated Delivery System

### Narrative: Project 1.1 – Enhance Primary Care Access and Capacity

#### Master Plan Project 1.3

- **Goal:** To enhance existing capacity of and access to an expanded network of primary care providers (PCPs), including physicians, nurse practitioners, and physician assistants, that are focused on patient-centered care delivery models. Mercy Medical Center does not currently employ PCPs directly or through an affiliated entity. To enhance primary care capacity and access, therefore, the hospital must utilize its network to leverage additional primary care resources. There are several major challenges for the hospital: 1) Competition is stiff: Compared to more affluent cities in the Commonwealth, recruiting PCPs to Greater Springfield has proven to be a difficult task, because this distressed, urban area is among the poorest in the state; 2) PCP supply is relatively low: According to a study done by the American Academy of Family Physicians, the number of recent medical school graduates that select residency slots in family medicine declined nearly 54%, from 1997-2009<sup>10</sup>; 3) The hospital's historic reliance on region's PCP group practices: Mercy Medical Center does not employ PCPs, but collaborates with several, large group practices in the region; 4) Limited existing hospital office space: The hospital may need to expand Mercy Medical Center campus facilities to attract primary care and specialty practices that want to enhance the care for their patients by providing them direct access to the health system's emerging, patient-centered, medical home network.

To overcome these challenges, this project will launch several, interrelated activities over a 3-year period. Establishing the Mercy Primary Care Committee to assess physical space for primary care physician services and devising a PCP clinical services expansion plan is a major activity that will result in new construction on the Mercy Medical Center campus. Construction of new facilities will enhance access to primary care for hospital patients and serve as a recruitment tool for new PCPs. A related activity will analyze the region's physician supply, demographics and succession planning. Results from this study will inform the primary care physician recruitment and retention strategy. A third set of activities will forge an affiliation agreement with UMASS Medical School for Mercy to serve as a clerkship placement site for 4<sup>th</sup> year medical students and to develop a curriculum in primary care and internal medicine for the clerkship. These later activities represent a supporting strategy for attracting 4<sup>th</sup> year medical students to enter primary care medicine and to seriously consider the Greater Springfield area as a future practice location. While there may be no direct evidence that the 4<sup>th</sup>-year Clerkship supportive strategy, in and of itself, will solve the shortage of PCPs, it does link the region directly to a supply chain of potential PCPs at nearby UMASS Medical School in Worcester. Furthermore, the transformational advancements in DSTI Project 3.1 will allow these PCP prospects a first-hand look at how many PCPs of the future work in collaboration with hospitals to deliver an integrated model of care in an Accountable Care Organization that Mercy Medical Center and its collaborating physician group partners are bringing to scale. We believe that this fairly distinctive feature in Greater Springfield will complement other strategies, even though this supporting strategy may have a 2-3 year payoff.

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<sup>10</sup> Lloyd, J. (2008, August 18), Doctor shortage looms as primary care loses its pull. *USA Today*. Accessed from [http://www.usatoday.com/news/health/2009-08-17-doctor-gp-shortage\\_N.htm](http://www.usatoday.com/news/health/2009-08-17-doctor-gp-shortage_N.htm).

- Rationale:** Enhanced primary care capacity and access is a foundational element of Mercy Medical Center’s integrated delivery system. While we readily acknowledge that there are larger forces at work to restrict the supply chain of primary care physicians and nurses, an expanded primary care and specialty network on the Mercy Medical Center campus can further develop Mercy’s integrated care network, enhance patient access, improve care transitions for patients, and help to achieve the “triple aim” of boosting health quality outcomes, providing patients with a better experience of care and reducing health costs. Yet, the existing capacity of primary care physicians in the Commonwealth is insufficient. The 2011 Physician Workforce Study by the Massachusetts Medical Society indicated that less than 50% of Primary Care Physicians were accepting new patients.<sup>11</sup> Since 2006, Mercy Medical Center’s Emergency Department has seen a significant increase in the number of patients that are seeking care (more than 72,000 visits in 2011), and a corresponding increase of those seeking care with non-emergent conditions. Not all ED patients who seek non-emergent care lack a PCP. Many patients seeking non-emergent care simply cannot obtain timely appointments with their PCPs for their immediate concerns. The average wait time to see an internist in Massachusetts is 48 days, while the average time to see a family practice doctor is 36 days.<sup>12</sup> Other patients seeking non-emergent care at the ED report that they have not established any relationship with a PCP for a variety of reasons, not the least of which is many PCPs in the area are not accepting new Medicaid patients. In a sample of all Mercy ED patients seen from February 1, 2012 through February 7, 2012, 112 reported that they had no primary care physician, representing 8.2% of all 1,358 ED patients seen that week. In response to the demand for non-emergent care, the Mercy ED has made over 2,700 ED patient referrals to a Federally Qualified Health Center (The Caring Health Center) in 2011 for primary care. If access to primary care is lacking, patients with chronic conditions generally receive little, if any, continuity of care in an ED, and are at-risk of preventable, acute episodes that typically require costly hospital admissions. Enhancing capacity and patient access to PCPs, therefore, will help improve health quality outcomes, improve the patients’ experience of care and lower health care costs.
- Expected Results:** The five-year goal of the expanded and more accessible primary care network will further develop Mercy’s integrated care network, improve health outcomes for chronic conditions, provide patients a better experience of care and reduce per capita health costs. Establishing and engaging Mercy Medical Center’s Primary Care Committee will engage a vendor to gauge key demographic and succession planning features of the regional supply of PCPs and craft a physician recruitment and retention strategy from the findings. To enhance primary care and specialist access, especially for its discharged hospital patients, Mercy Medical Center will devise a clinical services expansion plan and complete construction on a new clinical services building on the hospital’s campus. DSTI funding will not be utilized to pay for the building construction. Newly-designed and expanded clinical office space on Mercy Medical Center’s campus will enhance primary care physician recruitment efforts by creating a more conducive environment for coordinating care between PCP’s and Mercy.
- Relation to other Projects:** Enhancing primary care capacity and access especially relates to DSTI Projects 2.2, 3.1 and 3.2, because an adequate and accessible primary care supply for “High Risk” and complex patient populations is essential for reducing hospital readmission rates and per capita costs, while managing the care of patients in global payment and alternative payment systems. Mercy Medical Center is focused on creating a strong foundation of primary care that will serve as a key component for integrated delivery systems and evolving global payment systems.

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<sup>11</sup> Massachusetts Medical Society. (September 2011). *Physician Workforce Study*, 73. Accessed from <http://www.massmed.org/workforce>.

<sup>12</sup> *Ibid*, 71.

<b>Project 1.1: Development of Primary Care Capacity (Master Plan Project 1.3)</b>		
<b>SFY 2012</b>	<b>SFY 2013</b>	<b>SFY 2014</b>
<p><b>1.1.1 Milestone:</b> Establish Mercy Primary Care Committee to complete infrastructure capacity assessment of physical space at Mercy Medical Center’s campus and engage vendor to study regional PCP supply, demographics and succession planning</p> <p><b>1.1.1 (MP-P1) Metric:</b> Mercy Primary Committee Membership List and Committee Charge</p> <p><b>1.1.1 Data Source:</b> Documentation Mercy Primary Care Committee Membership List and Committee Charge</p> <p><b>1.1.2 Milestone:</b> Conduct infrastructure capacity assessment of physical space for PCP clinical services on the Mercy Medical Center campus.</p> <p><b>1.1.2 (MP-P3) Metric:</b> Infrastructure Capacity Assessment of Physical Space for Clinical Services on the Mercy Medical Center Campus Report</p> <p><b>1.1.2 Data Source:</b> Documentation of Infrastructure Capacity Assessment of Physical Space for PCP Clinical Services on the Mercy Medical Center Campus Report</p> <p><b>1.1.3 Milestone:</b> Devise PCP Clinical Services Building Expansion Plan for Mercy Medical Center Campus</p> <p><b>1.1.3 (MP-P3) Metric:</b> Plan to expand physical space for primary care services</p> <p><b>1.1.3 Data Source:</b> Documentation of Plan</p> <p><b>1.1.4 Milestone:</b> Establish Affiliation Agreement with UMASS Medical School to create 4<sup>th</sup> Year Clerkship for students interested in primary care and internal medicine.</p> <p><b>1.1.4 (MP-P7) Metric:</b> Executed Affiliation Agreement</p> <p><b>1.1.4 Data Source:</b> Executed Affiliation Agreement</p> <p><b>1.1.5 Milestone:</b> Establish baseline for the number of referrals to PCPs for Mercy ED patients that were unable to identify a PCP at time of ED admission</p> <p><b>1.1.5 (MP-P11) Metric:</b> The number of PCP referrals for Mercy ED patients</p> <p><b>1.1.5 Data Source:</b> Documentation of PCP referrals</p>	<p><b>1.1.6 Milestone:</b> Complete study of regional PCP supply, demographics and succession planning</p> <p><b>1.1.6 (MP-P2) Metric:</b> Vendor Study of Regional PCP Supply, Demographics and Succession Planning</p> <p><b>1.1.6 Data Source:</b> Documentation of Vendor Study</p> <p><b>1.1.7 Milestone:</b> Develop PCP recruitment and retention strategy based on findings of Study of Regional PCP Supply, Demographics and Succession Planning</p> <p><b>1.1.7 (MP-P3) Metric:</b> PCP Recruitment Strategy Report of Mercy Primary Care Committee</p> <p><b>1.1.7 Data Source:</b> Documentation of Mercy Primary Care Committee PCP Recruitment Strategy Report</p> <p><b>1.1.8 Milestone:</b> Begin construction of Clinical Services Building</p> <p><b>1.1.8 (MP-P6) Metric:</b> Building Permit</p> <p><b>1.1.8 Data Source:</b> Documentation of Building Permit</p> <p><b>1.1.9 Milestone:</b> Develop curriculum for Mercy/UMASS Medical School 4<sup>th</sup> Year Clerkship for students interested in primary care and internal medicine</p> <p><b>1.1.9 (MP-P7) Metric:</b> Completion of curriculum approved by Medical School</p> <p><b>1.1.10 Data Source:</b> Documentation of 4<sup>th</sup> Year Clerkship Curriculum</p> <p><b>1.1.10 Milestone:</b> Launch of 4<sup>th</sup>-Year Clerkship for X number of UMASS Medical Students that Select Mercy Medical Center as a Clerkship Site</p> <p><b>1.1.10 (MP-P8) Metric:</b> 4<sup>th</sup>-Year Clerkship List of UMASS Medical School students who select Mercy Medical Center as Clerkship Site</p> <p><b>1.1.10 Data Source:</b> Documentation of Mercy Medical Center’s 4<sup>th</sup>-Year Clerkship List of Students Who Select Mercy Medical Center as Clerkship Site</p> <p><b>1.1.11 Milestone:</b> Increase the number of referrals to PCPs for Mercy ED patients that were unable to identify a PCP at time of ED admission</p> <p><b>1.1.11 (MP-I12) Metric:</b> Increase by 10% the number of PCP referrals for Mercy ED patients</p> <p><b>1.1.11 Data Source:</b> Documentation of PCP referrals</p>	<p><b>1.1.12 Milestone:</b> Implement PCP recruitment and retention strategy</p> <p><b>1.1.12 (MP-I5) Metric:</b> Progress Report on PCP recruitment and retention efforts to date</p> <p><b>1.1.12 Data Source:</b> Documentation of recruitment and retention</p> <p><b>1.1.13 Milestone:</b> Complete New Clinical Services Building Initiative for Primary Care and Specialty Services on Mercy Medical Center Campus</p> <p><b>1.1.13 (MP-I4) Metric:</b> Certificate of Occupancy</p> <p><b>1.1.13 Data Source:</b> Documentation of Certificate of Occupancy</p> <p><b>1.1.14 Milestone:</b> Develop plan to incorporate outpatient placements to be included as part of Mercy/UMASS Medical School 4<sup>th</sup> Year Clerkship for students interested in primary care and internal medicine</p> <p><b>1.1.14 (MP-P9) Metric:</b> Completion of Outpatient Placement Plan</p> <p><b>1.1.14 Data Source:</b> Documentation of Plan</p> <p><b>1.1.15 Milestone:</b> Report on the number of 4<sup>th</sup>-Year Clerkship Students from UMASS Medical School that select Mercy Medical Center as their Clerkship Site</p> <p><b>1.1.15 (MP-P8) Metric:</b> 4<sup>th</sup>-Year Clerkship List of UMASS Medical School students who select Mercy Medical Center as Clerkship Site</p> <p><b>1.1.15 Data Source:</b> Documentation of Mercy Medical Center’s 4<sup>th</sup>-Year Clerkship List of Students Who Select Mercy Medical Center as Clerkship Site</p> <p><b>1.1.16 Milestone:</b> Increase over SFY 2013 the number of referrals to PCPs for Mercy ED patients that were unable to identify a PCP at time of ED admission</p> <p><b>1.1.16 (MP-I12) Metric:</b> Increase by 10% the number of PCP referrals for Mercy ED patients</p> <p><b>1.1.16 Data Source:</b> Documentation of PCP referrals</p>

## II. Category 1 – Further Development of a Fully Integrated Delivery System

### Narrative: Project 1.2 - Integrate Physical and Behavioral Health Care in Mercy Medical Center ED Master Plan Project 1.2

- **Goal:** To develop and implement an operational plan that integrates physical and behavioral health care for patients that present with significant mental health and/or substance abuse issues (MH/SA) in Mercy Medical Center’s (Mercy) ED. The operational plan will bring together the clinical and organizational resources of Mercy’s ED in Springfield, including the SBIRT Program and the Psychiatric POD, and the hospital’s behavioral health campus in Holyoke, Providence Behavioral Health Hospital (Prov.), including the Clinical Assessment Center, into the newly-expanded Mercy ED, for appropriate referral and/or admission to inpatient or outpatient mental health treatment. By focusing on process and patient-centered improvements, identified through the Health Metrics analysis, with MH/SA patients in the Mercy ED, Mercy Medical Center and Prov. will apply an integrated model of care to a significant and challenging population. From an organizational perspective, integrating physical and behavioral clinical domains into the Mercy ED provides an appropriately-scaled focal point to develop and transfer significant organizational learning for future integration applications throughout the health system and with other partners in the community. Although they share the same hospital license and exist within the same health system (Sisters of Providence Health System) Mercy and its behavioral health campus, Prov., this project represents one of the first attempts to integrate the considerable capacities, cultures and “silos” of both entities into a single physical location. In joining forces with the Mercy ED, Prov. will be able to leverage its formidable array of mental health and substance abuse resources, which include the Clinical Assessment Center, inpatient psychiatric treatment facilities for children, adolescents, adults and older adults, inpatient substance abuse unit, 2 outpatient Methadone Maintenance Treatment clinics, and other outpatient treatment programs for mental health and substance abuse. Specific project activities include: 1) Engaging a vendor (Health Metrics) to provide data analysis, process description, patient-centered measures on medical and psychiatric health, comparison data and actionable recommendations for process and cost improvements in treating MH/SA patients in the Mercy’s ED; 2) Developing and implementing a plan for Prov.’s “Psychiatric Provider of the Day” (either a psychiatrist, an Advanced Practice RN or a Physician’s Assistant for the Mercy ED to reduce patient wait times, expedite the MH/SA patient’s assessment, treatment acceptance and transfer to next appropriate level of care; 3) Deploying a Prov. MSW clinician into the Mercy ED for pilot phase in order to facilitate further expansion of the Prov. Clinical Assessment Center in the ED; 4) Developing a MH/SA Patient Registry for MH/SA patients that visit the Mercy ED in order to facilitate more patient-centered effective and efficient care in the appropriate setting ; 5) Creating streamlined performance processes between Mercy and Prov. for assessing, referring and admitting MH/SA patients to the next, appropriate level of care, in both inpatient and outpatient settings.

Utilizing chart audits and satisfaction surveys from both patients and staff will help to assess and identify areas in the process that could be improved to facilitate the best possible care for mental health patients. Information being collected includes, but is not limited to: diagnosis, disposition, and length of stay, type of insurance and basic identifying factors of the patients. Mercy Medical Center will maintain responsibility for implementing any and all operational changes related to recommendations made by HealthMETRICS. The behavioral Health staff in the ED POD will be available for all Emergency patients who are identified as at risk, or who request assistance for any mental health or substance abuse related concern. It is anticipated that the data collection will identify the factors that contribute to delays in mental health and substance abuse patients receiving care. Patient-centered measures will include tracking the time to initiate psychiatric medications when deemed appropriate and tracking the time to admit patients to either a mental health or substance abuse treatment facility.

The project has a two-fold focus for the clinical assessment of the behavioral health of patients in the Mercy ED: 1) major mental health issues including, but not limited to, severe depression and anxiety, risks of harm to self and/or others, psychosis and schizophrenia; 2) major chemical dependency issues, including but not limited to alcohol, crack cocaine, prescription narcotics, crystal meth, marijuana, heroin and benzodiazepines. Because of the dynamic interplay of physical and behavioral health for numerous medical conditions, both focal points have equal priority in clinical assessment. For example, strong evidence suggests that a patient with a Heart Failure, for example, ought to be screened for depression following diagnosis.<sup>13</sup> Tobacco, alcohol or illicit drug use during pregnancy, to use another example, is associated with a range of adverse outcomes for the fetus.<sup>14</sup> If mental health status and/or substance abuse behaviors are not routinely assessed for patients with these and numerous other physical conditions, decreases in health quality, patient safety and corresponding increases in health costs are likely consequences.

The project will also utilize and enhance the existing SBIRT (Screening, Brief Intervention and Referral to Treatment) program in the Mercy ED. Project activities will extend the health system's existing Clinical Assessment Center (CAC) function into the Mercy ED, expediting MH/SA patient flow and referral to the next level of substance abuse treatment. For ED patients that screen positive for substance abuse, the CAC will expedite patient referral for inpatient and outpatient substance abuse treatment. An integral feature of CAC extension into the ED is to provide clinical supervision of ED's 2 SBIRT social workers, by the MSW CAC case manager. Under new clinical supervision, SBIRT social workers will be trained to register and admit patients that screen positive for substance abuse to Prov.'s inpatient and outpatient substance abuse programs, or refer them to other inpatient or outpatient treatment venues in the community. SBIRT is a featured, evidence-based practice of the Substance Abuse and Mental Health Services Administration of the U.S. Department of Health and Human Services. "A growing body of evidence about SBIRT's effectiveness--and cost effectiveness--[demonstrates] that SBIRT is an effective way to reduce drinking and substance abuse problems."<sup>15</sup>

Blue Cross Blue Shield Foundation of Massachusetts recently awarded Mercy HCH with a \$375,000 grant to provide specialized outreach and clinical services to a subset of the chronically homeless population that frequently seeks non-emergent care at area hospital EDs. Over the course of the proposed 3-year grant term, it is expected that 120 homeless persons who are identified as "high-end utilizers" of area hospital EDs will be appropriately "redirected" from accessing hospital EDs for non-emergent conditions to Mercy HCH and will receive primary care and intensive case management services to resolve a wide-range of underlying, chronic conditions. Purposely keeping this vulnerable target population relatively small will maximize cost savings, by giving the Mercy HCH clinical team ample time to provide intensive services, referral and follow-up. Project activities will closely align to provide Mercy HCH with referrals of homeless "high-end utilizers, for primary care, case management and treatment for chronic conditions that typically include mental health and substance abuse issues. Mercy HCH has strong working and business relationships with the City of Springfield's Departments of Community Health and Health and Human Services and will link this DSTI project into the ongoing planning efforts, which include connecting homeless individuals who present in the ED with primary care and mental health counseling.

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<sup>13</sup> Adams, K.F., Arnold, J.M., *et al.* (2006). Executive summary: hfsa 2006 comprehensive heart failure practice guideline. *Journal of Cardiac Failure*, 12(1), 9.

<sup>14</sup> National Institute on Drug Abuse. (May 2011). Topics in brief: prenatal exposure to drugs of abuse. Retrieved from: <http://www.drugabuse.gov/publications/topics-in-brief/prenatal-exposure-to-drugs-abuse>

<sup>15</sup> SAMHSA News. (November/December 2009, Volume 17, Number 5). Screening, brief intervention, and referral to treatment: new populations, new effectiveness data, 3.



- Rationale:** ED patients that present with MH/SA issues are particularly challenging to manage and care for effectively and efficiently. Patients with significant MH/SA issues typically come to the hospital ED as a “gateway” to behavioral health inpatient and/or outpatient services. These patients often arrive at the ED in distress, frequently exhibit behaviors that may be unsafe and/or disruptive to other patients and require careful management. Currently, these ED patients typically spend a fairly long time in the ED as they await clinical evaluation and possible placement to the next level of appropriate care. To reduce costs, increase patient flow and improve health outcomes in the ED, safe and efficient management of the MH/SA patient is an essential, if challenging, imperative. Creating an enhanced therapeutic model of care for Mercy ED patients that present with MH/SA problems would address a number of unresolved issues. Currently, there is considerable frustration on the part of both MH/SA patients and Mercy ED staff, mainly centered on the time intervals between ED admission and referral or discharge. MH/SA patients frequently present numerous safety issues, stemming from their assaultive or self-harming behaviors. Typically, the management of MH/SA patients adversely affects overall patient flow in the ED, sometimes impacting how other patients receive effective and timely care for their conditions. There are numerous process and procedure issues for managing MH/SA patients safely in the ED, clinically assessing them effectively and efficiently transferring them to the next appropriate level of care (or discharging them). The HealthMETRICS study will identify how MH/SA patients’ expectations are set up and managed in the ED; what is causing delays in the ED; what can be done to remove “bottlenecks;” and what kinds of processes other EDs are doing with MH/SA patients that are working well. The major delivery system solution will be to design a new clinical assessment treatment pilot, integrating the behavioral health resources of Prov. into Mercy’s ED to improve patient and ED staff satisfaction, increase ED capacity and improve patient health outcomes for these challenging patients by rigorously analyzing current processes and identifying specific ways to improve processes and outcomes to optimal levels and reduce per capita costs.
- Expected Results:** Achieving the “triple aim” for MH/SA patients in the ED is strategic: Lowering the cost of their care, improving the quality of care and increasing the MH/SA experience of ED care likely will yield improvements to the overall ED patient flow and quality of care for other ED patients. Expediting clinical assessment and appropriate referral to treatment of MH/SA patients in the ED will result in a lower average length of stay in the ED and a higher rate of admission to the next appropriate levels of mental health or substance abuse treatment. This project will develop a new model of organizational realignment and integration between physical and behavioral health into a single physical location, paving the way for future integration of physical and behavioral healthcare throughout the Sisters of Providence Health System.
- Relation to other Projects:** Integrating physical and behavioral health in the Mercy ED will significantly impact Mercy DSTI Project 2.1 because it aims to improve ED patient flow, to reduce the number of ED patients that leave without being seen and to achieve optimum throughput of ED patients with significant mental health and substance abuse issues. This project also will develop valuable organizational knowledge on how best to apply lessons learned to Mercy DSTI Projects 1.1, 2.2, 3.1 and 3.2, for these projects involve the care of “High Risk” or complex patient populations, many of whom have chronic physical and behavioral health conditions.

**Project 1.2: Integrate Physical and Behavioral Health Care in Mercy Medical Center ED (Master Plan Project 1.2)**

SFY 2012	SFY 2013	SFY 2014
<p><b>1.2.1 Milestone:</b> Receive approval from DPH on remodeled Mercy ED Behavioral Health “Psych Pods”  <b>1.2.1 (MP-P5) Metric:</b> Approval from DPH  <b>1.2.1 Data Source:</b> DPH Approval Letter</p> <p><b>1.2.2 Milestone:</b> Develop guidelines for management of the behavioral health patient in the Mercy ED Behavioral Health “Psych Pod”  <b>1.2.2 (MP-P6) Metric:</b> Signed approval of guidelines by appropriate health system leadership  <b>1.2.2 Data Source:</b> Appropriately-Signed Guidelines for Management of the Behavioral Health Patient in the Behavioral Health Pod of the Emergency Department</p> <p><b>1.2.3 Milestone:</b> Engage vendor to provide data analysis, process description, costs, comparison data from other hospitals and actionable recommendations for process improvements in treating MH/SA patients in the Mercy’s ED  <b>1.2.3 (MP-P7) Metric:</b> Letter of Agreement/Contract  <b>1.2.3 Data Source:</b> Documentation of Copy of Agreement/Contract</p> <p><b>1.2.4 Milestone:</b> Host site visit to Mercy ED by vendor to conduct clinical and administrative staff interviews to gather qualitative data on delivery of care to BH patients  <b>1.2.4 (MP-P7) Metric:</b> Vendor’s Report on Clinical and Administrative Interviews  <b>1.2.4 Source:</b> Documentation of Vendor’s Report on Clinical and Administrative Interviews</p> <p><b>1.2.5 Milestone:</b> Deploy Prov. MH/SA case manager with Masters Level Training in Mercy ED for pilot phase  <b>1.2.5 (MP-I5) Metric:-</b> Placement of . Masters Level Clinician in Mercy ED  <b>1.2.5 Data Source:</b> Position Description</p> <p><b>1.2.6 Milestone:</b> Establish baseline for the percentage of Mercy ED “High-End” Utilizers assessed for MH/SA issues  <b>1.2.6 (MP-P18) Metric:</b> The percentage of ED “High-End” Utilizers assessed for MH/SA issues  <b>1.2.6 Data Source:</b> Documentation of ED “High-End” Utilizers assessed for MH/SA issues</p>	<p><b>1.2.7 Milestone:</b> Develop plan for Prov. “Psychiatric Provider of the Day” (Psychiatrist, Physician Assistant or Advanced Practice RN) for Mercy ED to expedite assessment, treatment, acceptance and transfer of patients to next appropriate level of care.  <b>1.2.7 (MP-P12) Metric:</b> Plan for providing “Psychiatric Provider of the Day” to Mercy ED”  <b>1.2.7 Data Source:</b> Documentation of Plan</p> <p><b>1.2.8 Milestone:</b> Designate Prov. “Psychiatric Provider Of the Day” for Mercy ED  <b>1.2.8 (MP-P13) Metric:</b> “Psychiatric Provider of the Day” Schedule  <b>1.2.8 Source:</b> “Psychiatric Provider of the Day” Schedule</p> <p><b>1.2.9 Milestone:</b> Mercy ED-based Screening, Brief Intervention and Referral to Treatment “SBIRT “ social workers re-assigned to Prov. MSW case manager for clinical supervision  <b>1.2.9 (MP-P14) Metric:</b> New SBIRT Position Description  <b>1.2.9 Data Source:</b> Documentation of New SBIRT Position Description</p> <p><b>1.2.10 Milestone:</b> Determine baseline satisfaction levels for at least 75 MH/SA ED patients and all appropriate ED clinical staff  <b>1.2.10 (MP-P16) Metric:</b> Returned Satisfaction surveys from ED patient defined sample and select ED staff deemed appropriate  <b>1.2.10 Data Source:</b> Vendor surveys of Mercy ED Patients and Clinical ED Staff</p> <p><b>1.2.11 Milestone:</b> Increase by 10% over baseline the percentage of Mercy ED “High-End Utilizers that are assessed for MH/SA issues.  <b>1.2.11 (MP-I8) Metric:</b> The percentage of ED “High-End” Utilizers assessed for MH/SA issues  <b>1.2.11 Data Source:</b> Documentation of ED “High-End” Utilizers assessed for MH/SA issues</p>	<p><b>1.2.15 Milestone:</b> Analyze vendor’s Final Report detailing actionable recommendations to measurably improve Mercy ED processes with MH/SA patients  <b>1.2.15 (MP-P8) Metric:</b> Final Report  <b>1.2.15 Data Source:</b> Final Report</p> <p><b>1.2.16 Milestone:</b> Develop Joint Plan to Optimize Performance Processes between Mercy Medical Center and Providence Behavioral Health Hospital for Integrating Physical and Behavioral Health in Mercy ED  <b>1.2.16 (MP-P9) Metric:</b> Joint Plan  <b>1.2.16 Data Source:</b> Copy of Plan</p> <p><b>1.2.17 Milestone:</b> Develop guidelines for management of the CAC “secured assessment area” at Providence Behavioral Health Hospital  <b>1.2.17 (MP-P10) Metric:</b> Approval of CAC Secured Assessment Area guidelines  <b>1.2.17 Data Source:</b> Documentation of approval</p> <p><b>1.2.18 Milestone:</b> Determine satisfaction levels for new sample of at least 100 MH/SA ED patients and all appropriate ED clinical staff  <b>1.2.18 (MP-P16) Metric:</b> Returned Satisfaction surveys from ED patient defined sample and select ED staff deemed appropriate  <b>1.2.18 Data Source:</b> Vendor surveys of Mercy ED Patients and Clinical ED Staff</p> <p><b>1.2.19 Milestone:</b> Increase by 10% over SFY 2013 the percentage of Mercy ED “High-End Utilizers that are assessed for MH/SA issues.  <b>1.2.19 (MP-I8) Metric:</b> The percentage of ED “High-End” Utilizers assessed for MH/SA issues  <b>1.2.19 Data Source:</b> Documentation of ED “High-End” Utilizers assessed for MH/SA issues</p>

<b>Project 1.2: Integrate Physical and Behavioral Health Care in Mercy Medical Center ED</b>		
<b>SFY 2012</b>	<b>SFY 2013</b>	<b>SFY 2014</b>
	<p><b>1.2.12 Milestone:</b> Document baseline ED performance for MH/SA patients in cost-productivity; patient-centered measures and clinical outcomes, including ED length of stay, number and/or percentage of SA patients receiving SBIRT services, presenting problems, primary and secondary psych and medical diagnoses; unit cost and staff productivity measures, patient and staff satisfaction</p> <p><b>1.2.12 (MP-P17) Metric:</b> Vendor Report on Mercy Medical Center’s ED Performance with MH/SA Patients</p> <p><b>1.2.12 Data Source:</b> Documentation of Vendor Report</p> <p><b>1.2.13 Milestone:</b> Identify specific data elements for MH/SA Patient Registry</p> <p><b>1.2.13 (MP-P19) Metric:</b> Data elements for MH/SA Patient Registry</p> <p><b>1.2.13 Data Source:</b> Documentation of data elements for MH/SA patient registry.</p> <p><b>1.2.14 Milestone:</b> Develop plan to expand Prov.’s Clinical Assessment Center (CAC) hours to 24/7 by January 1, 2013</p> <p><b>1.2.14 (MP-P11) Metric:</b> Plan to Expand Prov. CAC hours to 24/7</p> <p><b>1.2.14 Data Source:</b> Documentation of Plan to Expand Prov. CAC hours to 24/7</p>	<p><b>1.2.20 Milestone:</b> Develop MH/SA Patient Registry, that includes registry maintenance and cost assessment, for patients that visit Mercy ED</p> <p><b>1.2.20 (MP-P15) Metric:</b> MH/SA Patient Registry</p> <p><b>1.2.20 Data Source:</b> Documentation of BH/SA Patient Registry</p> <p><b>1.2.21 Milestone:</b> Expand Prov.’s CAC hours to 24/7</p> <p><b>1.2.21 (MP-I8) Metric:</b> Prov.’s CAC Schedule of Operations</p> <p><b>1.2.21 Data Source:</b> Documentation of Prov.’s CAC Schedule of Operations</p>

### III. Category 2 – Improved Health Outcomes & Quality

#### Narrative: Project 2.1 - Align New Organizational Structures, Human Systems and IT Infrastructure to Improve Health Outcomes and Quality

#### Master Plan Project 2.7

- **Goal:** To design and implement a new patient-centered, care coordination model for all Mercy Medical Center ED patients and inpatients, involving every department of the hospital—e.g., housekeeping, transportation, physical therapy, operating rooms, nursing, laboratory, radiology, and so forth. By the end of 2014, Mercy Medical Center will employ a new care coordination and management system throughout the entire hospital, with cross departmental hubs tracking all inpatients and ED patients in real-time. To accomplish the goal, the sisters of Providence Health System will contract with Care Logistic™ to devise with hospital staff a care coordination and management system, operating 24/7, that integrates departmental and hospital system workflows, providing actionable data, to both clinical staff and patients, on key performance indicators(KPIs), such as, but not limited to, length of stay (LOS), patient flow times (e.g., the time it takes to get a patient’s bed ready or the time it takes to obtain an MRI), discharge process times, re-admission rates, the number of ED patient holds (ED patients awaiting hospital beds), and patient satisfaction levels upon discharge. With a transformational care coordination and management model, hospital staff in all departments will be able to “follow” each patient throughout his or her day on a visual board, displaying the patient’s name, DRG (diagnostic related group), risk status and real-time tracking of all scheduled tests and procedures. The underlying objective is to significantly reduce or eliminate the “white space” in a patient’s hospital stay--the time the patient spends simply waiting for a bed or for transportation to radiology. With a transformative care coordination and management system, hospital staff, across departmental silos, will be able to see how much time has been allotted for each ordered departmental service for each patient. The Care Logistics™ Model helps hospitals reduce their average LOS, increase operational capacities, lower case costs, boost quality metrics and improve patient satisfaction scores. Three hospital case studies are featured on the Care Logistics™ website as case study evidence<sup>16</sup>: Baptist Medical Center South in Montgomery, Alabama, St. Rita’s Medical Center in Lima, Ohio, and Mercy Community Regional Medical Center in Lorain, Ohio. All three hospitals reported marked reductions in LOS, leveraging significant cost savings, capacity increases and quality health improvements. Recently, the Sisters of Providence Health System CEO and the Sr. V.P. of Patient Care Services conducted a site visit to Mercy St. Vincent Hospital in Toledo, Ohio to gain new ideas on best practices with qualitative and quantitative, evidence-based information. Mercy St. Vincent Hospital applied the Care Logistics™ model to transform hospital care coordination and management, from 2008 through 2010, and achieved significant reductions in infection rates, such as, but not limited to, Central line-associated BSI, Ventilator-associated pneumonia and Foley-related Urinary Tract Infection, and surgical site infections. Mercy St. Vincent Hospital reported significant improvements related to the Care Logistics™ transformational process, including, but not limited to: 1) LOS decreased from 5.1 days to 3.8; 2) infection rates fell by 49%; 3) core measure performance increased by 37% and 5) a 97<sup>th</sup> percentile achievement in patient satisfaction.

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<sup>16</sup> <http://www.carelogistics.com>

Because the Care Logistics™ methods constitute proprietary information, our explanation of the model will be limited to general descriptions and terms. For more detailed information on Care Logistics™ specific methods, consult the website listed below. This project will entail a robust analysis of Mercy Medical Center's current state of patient care management, operational and quality features and, based upon findings, engage hospital executives and cross functional teams of leaders to design new organizational structures, human systems and IT infrastructure that can measurably improve patient-centered care coordination and management. To implement a new hospital care coordination system, the Care Logistics™ team and process will engage Mercy Medical Center's leadership cadre and operational teams of clinicians and technicians to complete a rigorous, onsite audit to analyze various performance elements throughout the entire span of hospital operations, on every level of the hospital—from frontline staff to managers and executives. This constitutes the “current state milestone.” Once the current state of care management operations is mapped out, Care Logistics™ consultants will devise an “ideal, future state” of operations, building transition pathways from the current state. The design of the “ideal future, state” is another milestone in the project that will key on optimum quality and safety metrics, throughput that meets or exceeds targets, patients' experience of care and resource management. Basically, the ultimate task is to design a sort of “airport control tower” solution to all hospital care coordination and management operations, utilizing new IT system architecture and real-time applications, plus corresponding staffing reconfigurations across departmental silos, to reduce the time it takes to place patients in available beds, treat them effectively and discharge them safely to the next appropriate levels of care.

This project entails much more than a technological fix. It will also involve “human systems re-engineering” that reconfigures the current “silos” of patient care departments into new care coordination “hubs.” Human systems re-engineering means that a new “mindset” needs to be developed by employees at all levels and across all departments, a mindset that centers on each patient's experience of care, moving through the hospital system in real time. This organizational transformation must be driven to boost optimal efficiencies and effectiveness, maximizing existing hospital capacities, while further reducing preventable hospital readmissions. Inherent in making these organizational and technological transformations will be continuous learning to devise, operate and constantly improve a new model of care coordination and management throughout the hospital. Recent advances in hospital care coordination and management systems and HIT architecture and software applications are necessary, yet insufficient, to make transformational changes in hospital operations. What is also required in care management transformations are organizational realignments among key departments into cross-functional teams. The realignment process will require a new “operational mindset” to link human performance, process performance and system performance into transformational performance for the hospital's operating system as a whole.

- **Rationale:** “Transformation” is not just a buzz word; it is an imperative to literally transform our fragmented processes of health care into seamless, team-based approaches that place each patient at the absolute center of care-- from arrival to the ED, triage assessment, and waiting for room assignment, to being scheduled for medical tests, waiting for results, being transported to surgery, visiting with family members and, finally, listening to discharge instructions before entering a rehabilitation hospital. In response to financial challenges, the hospital has instituted several workforce reductions in the past few years. These workforce reductions, in turn, have created a more challenging environment to efficiently manage existing hospital resources and to provide the highest levels of patient care in a sustained effort. Another set of challenges consists of finding real-time solutions to eliminate wasteful practices that create “white space,” delaying the provision of patient care services. Reducing average LOS for patients is pivotal, not only for containing health care costs, but also for boosting quality metrics. For example, keeping patients in the hospital for shorter stays, on average, can reduce the number of hospital-acquired infections

and/or injuries like falls. Ideally, the patient flow ought to be a seamless, logistical stream that connects the patient and cross-functional teams of hospital staff with information during and between each milestone, every step of the way. Not only will no patient get lost between one delivered hospital service and the next scheduled one, the patient will be less likely to feel “lost in transition” when she asks a nurse how long it will take to get her lab results; the attending clinician can track her lab process in real-time and give the patient the actual number of minutes or hours to expect.

The prolonged economic downturn, both in the region and nationally, has accelerated significant financial losses and prompts the need for a transformational intervention to enhance operational performance, efficiencies and system capacities. With the advent of new payment models that tie directly to key efficiency and quality metrics, both within the hospital and across care transitions, traditional practices of care management put the hospital at risk of further financial losses. Accountability for efficiency and quality performance has intensified and the hospital must adapt to a rapidly changing environment if it expects to increase its value to patients and payers, by reducing costs, boosting quality of care and increasing patient satisfaction.

- **How the Project Can Refine Innovations, Test, and Disseminate Findings:** The comprehensive Carelogistics™ methodology is transformational by design to: 1) identify and refine innovations in care management and care delivery; 2) test new ways for meeting the needs of target populations; and 3) disseminate findings about promising practices to improve quality, enhance patient services and reduce costs. Specifically, Sisters of Providence Health System executives and Mercy Medical Center’s clinical leadership will lead cross-functional teams in a radical, data-driven, organizational development process to redesign the flow of patients, physicians, information and resources in the hospital. One component of organizational development will be to fundamentally change the ways in which the hospital tracks and obtains quality and service data, so both can be viewed, literally, in real time. A second component is to shift from departmental to hospital-wide coordination, eliminating “departmental silos” to create a seamless transition in the care delivery process. Transformation within an acute care community hospital will require new organizational structures and corresponding “mindsets” to effectively realign staff, processes and appropriate technology applications. Carelogistics™ project activities will test new ways of delivering patient-centered care, with ongoing training, daily huddles, weekly care reviews and consistent, regular feedback. A strategic communication process is inherent in the Carelogistics™ method to disseminate findings about promising practices developed by cross-functional teams, so there will be a constant diffusion of innovations in areas such as, but not limited to, admissions, unit transfers, discharges and transportation.
- **Expected Results:** The overarching aims for results are ambitious: 1) to improve health outcomes for patients; 2) to boost quality and safety metrics for the hospital; 3) to increase patient satisfaction levels; and 4) to reduce health care costs.
- **Relation to other Projects:** This project is closely related to several DSTI Initiatives, especially Projects 2.2 and 3.1, because of its cross-cutting approach to streamline the delivery of all patient services in ways that reduce costs, improve the quality of care and lower readmission rates, especially for “High-Risk” patients.

**Project 2.1: Align New Organizational Structures, Human Systems and IT Infrastructure to Improve Health Outcomes and Quality (Master Plan Project 2.7)**

SFY 2012	SFY 2013	SFY 2014
<p><b>2.1.1 Milestone:</b> Health System CEO and Sr. V.P. of Patient Care conduct site visit to hospital that has undergone transformational steps in patient care management using the Care Logistics™ Model, to gain new ideas on best practices with qualitative and quantitative, evidence-based information</p> <p><b>2.1.1 (MP-P1) Metric:</b> Attendance at hospital site visit in Toledo, Ohio</p> <p><b>2.1.1 Data Source:</b> Documentation of visit to Ohio hospital</p> <p><b>2.1.2 Milestone:</b> Engage members of Senior Leadership Team to learn essential features of the Care Logistics model for transformational improvement</p> <p><b>2.1.2 (MP-P2) Metric:</b> Send delegation of Senior Leadership Team to attend 1-day Care Logistics™ Care Coordination Model Overview, Methodology and Technology Intensive Seminar</p> <p><b>2.1.2 Data Source:</b> Care Logistics Seminar Participant List</p> <p><b>2.1.3 Milestone:</b> Engage Vendor to implement Care Logistics Model</p> <p><b>2.1.3 (MP-P3) Metric:</b> Agreement with Care Logistics™</p> <p><b>2.1.3 Data Source:</b> Documentation of Agreement</p> <p><b>2.1.4 Milestone:</b> Conduct “Boot Camp” sessions for hospital leadership and executives</p> <p><b>2.1.4 (MP-P4) Metric:</b> Completion of “Boot Camp” sessions</p> <p><b>2.1.4 Data Source:</b> Leadership and executive “Boot Camp” evaluation surveys</p>	<p><b>2.1.5 Milestone;</b> Define current state of care management</p> <p><b>2.1.5 (MP-P5) Metric:</b> Report on the Current State of Care Management</p> <p><b>2.1.5 Data Source:</b> Report on the Current State of Care Management</p> <p><b>2.1.6 Milestone:</b> Define operational procedures needed to improve overall efficiencies in care management</p> <p><b>2.1.6 (MP-P6) Metric:</b> Report on at least 2 New Operational Procedures needed to improve overall efficiencies in care management</p> <p><b>2.1.6 Data Source:</b> Report on 2 New Operational Procedures</p> <p><b>2.1.7 Milestone:</b> Establish baseline measures and set improvement targets on a minimum of 2 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.)</p> <p><b>2.1.7 (MP-P21) Metric:</b> Report on Baseline Measures, Key Performance Indicators and Improvement Targets</p> <p><b>2.1.7 Data Source:</b> Documentation of Report on Baseline Measures, Key Performance Indicators and Improvement Targets</p> <p><b>2.1.8 Milestone:</b> Identify and train “Super-Users” on new Care Coordination Model</p> <p><b>2.1.8 (MP-P9) Metric:</b> List of “Super-User” Trainee Names and Training Sign-Up Sheets</p> <p><b>2.1.8 Data Source:</b> Documentation of “Super-User” Names and Training Sign-Up Sheets</p> <p><b>2.1.9 Milestone:</b> Finalize Communication Plan</p> <p><b>2.1.9 (MP-P11) Metric:</b> Mercy Care Coordination Communication Plan</p> <p><b>2.1.9 Data Source:</b> Documentation of Plan</p>	<p><b>2.1.10 Milestone:</b> Schedule and train majority of hospital staff on new Care Coordination Model prior to <i>operational</i> “go live”</p> <p><b>2.1.10 (MP-P9) Metric:</b> List of Hospital Staff Trainee Names and Training Sign-Up Sheets</p> <p><b>2.1.10 Data Source:</b> Documentation of List of Hospital Staff Trainee Names and Training Sign-Up Sheets</p> <p><b>2.1.11 Milestone:</b> Adopt New Care Coordination Model throughout entire hospital in operational “go live”</p> <p><b>2.1.11 (MP-P7) Metric:</b> Mercy Medical Center’s New Model of Care Coordination Report on Operational “Go-Live”</p> <p><b>2.1.11 Data Source:</b> Mercy Medical Center’s New Model of Care Coordination Report on Operational “Go Live”</p> <p><b>2.1.12 Milestone:</b> Test Care Logistics™ software and interfaces</p> <p><b>2.1.12 (MP-P8) Metric:</b> Report on Test of Care Logistics™ Software and Interfaces</p> <p><b>2.1.12 Data Source:</b> Health system HIT documentation</p> <p><b>2.1.13 Milestone:</b> Implement a minimum of 2 operational procedures needed to improve overall efficiencies in care management</p> <p><b>2.1.13 (MP-I3) Metric:</b> Report on Implementation of New Operational Procedures to Improve Overall Efficiencies in Care Management</p> <p><b>2.1.13 Data Source:</b> Documentation of Report</p> <p><b>2.1.14 Milestone:</b> “Go live” with Care Logistics™ software and interfaces</p> <p><b>2.1.14 (MP-I1) Metric:</b> HIT System Configuration Confirmation</p> <p><b>2.1.14 Data Source:</b> Documentation of HIT System Configuration Confirmation</p> <p><b>2.1.15 Milestone:</b> Achieve X% improvement for a minimum of 2 key performance indicators (Note: Baseline and Improvements Targets established in Milestone 2.1.7)</p> <p><b>2.1.15 (MP-I6) Metric:</b> Report on Key Performance Indicators’ Improvement from Baseline</p> <p><b>2.1.15 Data Source:</b> Documentation of Report</p>

### III. Category 2 – Improved Health Outcomes & Quality

#### Narrative: Project 2.2 - Develop Patient-Centered Care Transitions for Patients at the Highest Risk of Readmission Master Plan Project 2.3

- **Goal:** To develop a patient-centered, care transitions model for patients at the highest risk of hospital readmission. The Sisters of Providence Health System is focused on expanding the Mercy Homecare Disease Management Program that has played an integral role in the “virtual ACO” model collaborative with Hampden County Physician Associates and Mercy Medical Center. The strategic direction is clear: Develop a truly comprehensive, seamless continuum of care in a “medical home” approach that ensures that no patient gets “lost in transition.” Implementation challenges are numerous. The optimum care management model will entail the development of a patient-centered approach that provides direct referrals and strong “hand offs” between levels of the care continuum (e.g., acute care to home care) to reduce the potential for adverse events and complications. A patient-centered approach must take into account the experience and unique characteristics of each patient, as it provides new referral channels between various components (e.g., PCP to disease management or homecare). The formal care management function and operational framework must be supported by an appropriate technology infrastructure, as well by enhanced system capacities to provide outpatient disease management clinics for patients with serious, chronic conditions. This project will design a patient-centered care transition intervention for patients that are identified as “High-Risk,” using the Massachusetts State Action on Avoidable Re-hospitalizations (STAAR) Chart Review Tool.
- **Rationale:** Unplanned hospital readmissions of “High-Risk” patients in the United States rack up annual medical costs in the \$17 billion range. Patients who have these serious conditions (and their care givers) typically face a chasm as they transition from acute care to the next appropriate level of care, whether it be their homes or another facility. Typically, a relatively high percentage of “High-Risk” patients return to the hospital within 30 days. Typically, this is because they did not have a follow-up appointment with their primary care provider or specialist within 2 to 5 days after discharge, were released to the wrong post-acute care setting, or did not have their medications reconciled with a nurse or pharmacists within first or second day after discharge. In a patient-centered model, it will be essential for providers to take into account that many “High-Risk” patients (and their care givers) often feel anxious and confused about how to manage chronic conditions. When devising care management interventions, it is vital for providers to understand that their patients and their families often feel burdened with a fragmented health system and are frequently confused about the plan of care at discharge and what “red flags” to watch for that signal a need to contact the right provider immediately. There may be linguistic, cultural, racial, literacy, psychological or cognitive barriers that block communication between the patient and provider, especially during care transitions. These barriers may result in missed appointments or no-shows for follow-up tests or medication problems. The discontinuity of care during transitions typically results in patients with serious conditions falling through the cracks and, all too frequently, leads to an otherwise preventable hospital readmission.<sup>17</sup> Yet, for all the formidable challenges facing high-risk patients in their care transitions, there is a growing body of evidence suggesting that carefully guided interventions can significantly reduce hospital readmission rates. Eric Coleman and his colleagues provided an experimental group of elderly hospital patients with a “transitions coach,” specialized tools to enhance communication between care sites and taught them to take a more

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<sup>17</sup> Coleman, E., Parry, C., *et. al.* (2003). The care transitions intervention: a patient-centered approach to ensuring effective transfers between sites of geriatric care. *Home Health Care Serv Q*, 22 (3), 1-17. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/14629081?dopt=AbstractPlus>



assertive stance in managing their diseases and making their preferences known to providers, resulting in significantly lower hospital readmission rates, at 30 and 90 days, than patients in the control group.<sup>18</sup>

- **How the Project Can Refine Innovations, Test, and Disseminate Findings:** This project is intended to accomplish three major goals: 1) identify and refine innovations in care management and care delivery for “High Risk” patients; 2) test new ways for meeting the needs of this patient population; and 3) disseminate findings about promising practices to improve quality, enhance “High Risk” patient services and reduce costs. For “High Risk” patients and family members, the Sisters of Providence Health System’s Care Cross Continuum Team will identify and refine innovations to more closely involve family caregivers and community providers “...as full partners in completing assessment of patients’ home-going needs,”<sup>19</sup> reconciling medications at admission and creating a customized care plan prior to discharge. It is anticipated that the Care Cross Continuum Team will devise ways for “High Risk” patients and caregivers to inform operational aims, goals and methods in this project. Project activities include re-engineering the discharge process, testing new ways to provide effective teaching and learning on the part of patients and caregivers, on topics ranging from understanding discharge instructions to knowing what condition “warning signs” to watch for that would warrant an immediate call to a provider. Hospital clinicians will test new ways for the hospital to fill the critical gap between discharge and the “High Risk” patient’s next physician appointment and to increase the percentage of “High Risk” patients that have customized care plans prior to discharge and reduce <30-day readmission rates. Finally, this project will develop a “lessons learned” report and share it throughout the health system. The report will detail the promising practices devised, the challenges of implementation and the initial results for quality improvement, patient satisfaction and <30-day readmission rates.
- **Expected Results:** Expected results aim to decrease the rates of 30-day hospital readmissions for high-risk patients, and to improve these patients’ quality of life by providing more seamless care transitions from the acute care setting to the next level of care. Milestones will include the development of a cross-functional care transitions task force, with representatives from acute care, home care, nursing homes, case management, quality and medical staff at the hospital. A key result will be to develop a “high risk tool” to identify the patients at greatest risk of hospital readmission. The highest risk patients will likely benefit from home care nursing visits and disease management services that can be scheduled prior to discharge. Another expected result will strengthen referral linkages between Mercy Home Care and two, large primary care physician practices to access expanded disease management services for “High Risk” patients. This project will re-engineer the hospital’s discharge process for all patients, with a focus on assessment of post-hospital needs, patient and family education regarding diagnosis, post-discharge services and medication plan. A key project feature will evaluate the feasibility of providing a follow-up visit by a Mercy Medical Center Advanced Practice RN between hospital discharge and PCP appointment, for all patients that have the highest risk of <30 day hospital readmission.

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<sup>18</sup> Coleman, E., Parry, C., *et al.* (2006). The care transitions intervention: results from a randomized controlled trial. *Archives of Internal Medicine*. 166: 1822-1828. Retrieved from <http://www.caretransitions.org/documents/The%20CTI%20RCT%20-%20AIM.pdf>

<sup>19</sup> Institute for Healthcare Improvement. *State Action on Avoidable Rehospitalization: Improvement Areas*. Accessed from: [www.ihl.org/offerings/Initiatives/STAAR/Pages/Improvement.aspx](http://www.ihl.org/offerings/Initiatives/STAAR/Pages/Improvement.aspx)

- **Relation to other Projects:** This project is closely related to Mercy DSTI Projects 1.1, 2.1, 3.1 and 3.2, because developing patient-centered care transitions for “High Risk” patients requires an adequate supply of and access to PCPs, rigorous tracking of care delivered in inpatient settings, and special enrollment status for disease management and other supportive services to stave off preventable and costly hospital or skilled care nursing admissions in global and alternate payment systems.

**Project 2.2: Develop Patient-Centered Care Transitions for Patients at the Highest Risk of Readmission (Master Plan Project 2.3)**

SFY 2012	SFY 2013	SFY 2014
<p><b>2.2.1 Milestone:</b> Develop Mercy/Sisters of Providence Health System Care Cross Continuum Team to include representatives from Acute Care, Skilled Nursing, Ambulatory Care and Home Care</p> <p><b>2.2.1 (MP-P1) Metric:</b> Mercy/Sisters of Providence Health System Care Cross Continuum Team</p> <p><b>2.2.1 Data Source:</b> Documentation of Sisters of Providence Health System Care Cross Continuum Team</p> <p><b>2.2.2 Milestone;</b> Identify baseline for Mercy Medical Center’s High-Risk Diagnostic-Related Groups (DRGs) by analyzing 30-day readmissions for acute care and home care patients using STARR Chart Review Tool</p> <p><b>2.2.2 (MP-P3) Metric:</b> STARR Chart Review Report on &lt;30-day Readmissions identifying High-Risk Diagnoses</p> <p><b>2.2.2 Data Source:</b> Documentation of Chart Review Report on &lt;30-day Readmissions</p> <p><b>2.2.3 Milestone:</b> Re-engineer hospital discharge process for all admitted patients</p> <p><b>2.2.3 (MP-P16) Metric:</b> “High-Risk Tool” and “Discharge Checklist”.</p> <p><b>2.2.3 Data Source:</b> Documentation of “High-Risk Tool” and “Discharge Checklist”</p> <p><b>2.2.4 Milestone:</b> Develop Home-Based Disease Management Program Plan for Discharged High-Risk Patients</p> <p><b>2.2.4 (MP-P9) Metric:</b> Home-Based Disease Management Program Plan for High-Risk Patients</p> <p><b>2.2.4 Data Source:</b> Documentation of Disease Management Program Plan</p>	<p><b>2.2.6 Milestone:</b> Conduct baseline study of at least 30 High-Risk patients<sup>20</sup> that readmitted &lt;30-days in SFY 2013 to determine average time interval between hospital discharge and PCP visit and feasibility to provide follow-up visit by Advanced Practice RN to all High-Risk Patients</p> <p><b>2.2.6 (MP-P12) Metric:</b> Study of Sample of at least 30 High Risk Patients Readmitted &lt;30-days</p> <p><b>2.2.6 Data Source:</b> Patient Medical Records</p> <p><b>2.2.7 Milestone:</b> Dedicate additional Advanced Practice RN resources, as feasible, to provide bridge visit to high-risk patients between hospital discharge and patients’ PCP visit</p> <p><b>2.2.7 (MP-P15) Metric:</b> Advanced Practice RN Position Description and Work Schedule</p> <p><b>2.2.7 Data Source;</b> Documentation of Advanced Practice RN Position Description and Work Schedule</p> <p><b>2.2.8 Milestone:</b> Expand number of RN hours allocated to Home-Based Disease Management Program for High-Risk Patients</p> <p><b>2.2.8 (MP-P11) Metric:</b> Increase RN Hours for Home Care Program</p> <p><b>2.2.8 Data Source:</b> Documentation of RN Hours Increase</p> <p><b>2.2.9 Milestone:</b> Implement Home-Based Disease Management Program for High-Risk Patients Discharged from Mercy Medical Center for at least 30 patients</p> <p><b>2.2.9 (MP-II)Metric:</b> Home Health Certification and Plan of Care signed by RN and Patient’s PCP</p> <p><b>2.2.9 Data Source:</b> Home Health Certification and Plan of Care</p>	<p><b>2.2.11 Milestone:</b> Develop Mercy/ Sisters of Providence Health System Care Cross Continuum Team report on “lessons learned” and share it throughout the health system</p> <p><b>2.2.11 (MP-P17) Metric:</b> Sisters of Providence Health System Care Cross Continuum Team report on “lessons learned”</p> <p><b>2.2.11 Data Source:</b> Documentation of Mercy/Sisters of Providence Health System Care Cross Continuum Team Report on “lessons learned”</p> <p><b>2.2.12 Milestone:</b> Conduct study of at least 30 High-Risk patients that are readmitted &lt;30-days to determine average time interval between hospital discharge and PCP visit and compare results with SFY 2013 baseline study</p> <p><b>2.2.12 (MP-P12) Metric:</b> Study of at least 30 High-Risk patients that are readmitted &lt;30-days in SFY 2014</p> <p><b>2.2.12 Data Source:</b> Documentation of Study</p> <p><b>2.2.13 Milestone:</b> Collect baseline patient-centered measures for sample of 30 high-risk patients to determine percentages for participating in teach back method and warm hand-offs</p> <p><b>2.2.13 (MP-P13) Metric:</b> Report on Baseline Patient-Centered Measures for 30 High-Risk Patients</p> <p><b>2.2.13 Data Source:</b> Documentation of Report</p> <p><b>2.2.14 Milestone:</b> Conduct study to determine feasibility of providing wellness program on Mercy Medical Center campus for patients with high-risk diagnoses</p> <p><b>2.2.14 (MP-P10) Metric:</b> Feasibility Study for Providing Wellness Program on Mercy Medical Center Campus for Patients with High-Risk Diagnoses</p> <p><b>2.2.14 Data Source:</b> Documentation of Mercy Medical Center Wellness Center Plan</p>

<sup>20</sup> The basis for selecting a sample of 30 “High Risk” patients that are readmitted <30-days is not to establish a baseline and follow-up improvement measure *per se*, but rather to perform a gap analysis to gauge the number of Advanced Practice RN hours that would be needed to provide bridge visits to “High Risk” patients discharged from the hospital.

<b>Project 2.2: Develop Patient-Centered Care Transitions for Patients at the Highest Risk of Readmission</b>		
<b>SFY 2012</b>	<b>SFY 2013</b>	<b>SFY 2014</b>
<p><b>2.2.5 Milestone:</b> Establish baseline measure for the percentage of “High Risk” patients with customized care plans before discharge</p> <p><b>2.2.5 (MP-P25) Metric:</b> Percentage of “High Risk” patients with customized care plans before discharge</p> <p><b>2.2.5 Data Source:</b> Report on “High Risk” patients with customized care plan before discharge</p>	<p><b>2.2.10 Milestone:</b> Increase by 5% over baseline the percentage of “High Risk” patients with customized care plans before discharge</p> <p><b>2.2.10 (MP-I11) Metric:</b> Percentage of “High Risk” patients with customized care plans before discharge</p> <p><b>2.2.10 Data Source:</b> Report on “High Risk” patients with customized care plan before discharge</p>	<p><b>2.2.15 Milestone:</b> Increase by 5% over SFY 2013 the percentage of “High Risk” patients with customized care plans before discharge</p> <p><b>2.2.15 (MP-I11) Metric:</b> Percentage of “High Risk” patients with customized care plans before discharge</p> <p><b>2.2.15 Data Source:</b> Report on “High Risk” patients with customized care plan before discharge</p>

## IV. Category 3 – Ability to Respond to Statewide Transformation to Value-Based Purchasing and to Accept Alternatives to Fee-For-Service Payments

### Narrative: Project 3.1 - Develop Governance, Administrative and Operational Capacities to Accept Global Payments/Alternative Payments Master Plan Project 3.3

- **Goal:** Formalize existing, PCP-driven, “virtual accountable care organization”<sup>21</sup> collaborative of Mercy Medical Center, Hampden County Physician Associates, Accountable Care Associates (ACA), LLC, Noble Hospital and Independent Practice Associates (IPA) into a free-standing legal entity that will be able to contract with various payers for future global payment systems and build system capacities within the hospitals, physician groups and new free-standing entity to deliver expanded care management, disease management and case management services for new and much larger groups of beneficiaries. None of the PCPs in the physician groups are hospital employees. Mercy Medical Center and its collaborators are riveted on 5 transformational goals for this project: 1) improve care and reduce per capita costs; 2) advance the management of chronic disease; 3) reduce hospital admissions and preventable readmissions; 4) boost patient satisfaction; and 5) manage financial risk for performance under a global payment arrangement.

Project activities are geared to build capacities in three areas: governance, administration and operations. Project activities for the first year include creating a new legal entity and governing board for an Accountable Care Organization, drawing representation from Mercy Medical Center, Noble Hospital, physician groups and the community. Other first-year activities include devising an operating agreement, detailing respective roles and responsibilities of Mercy Medical Center, Noble Hospital, physician groups and other entities in the new configuration. The first project year activities also include developing plans for Health Information Exchange (HIE) platform components, tools or applications, in order to increase the hospital’s connectivity with physician groups. As part of this process, the hospital will review the Massachusetts Statewide HIE Plan and align its efforts with the state-wide plan. Second year activities include establishing a Specialist Advisory Council to enhance the integrated model of care among hospitals and physician groups, and to enlist specialist participation in future program proposals to serve Dual-Eligible and/or Medicaid, non-elderly populations. Second year activities also include implementing a HIE component for physician groups. Rounding out second year activities is planning new quality, cost benchmarking and measurement reports for ACO beneficiaries that are hospitalized at Mercy Medical Center. Third year activities include developing a plan to expand HIT care management and care coordination capacities at the hospital and implementing the plan for quality, and cost benchmarking, measurement and reporting. Following the implementation of another HIE component, third year activities will culminate in developing a pilot program proposal to serve a Dual-Eligible and/or Medicaid population, such as, but not limited to the Commonwealth’s anticipated Dual-Eligible Initiative for non-elderly adults enrolled in both Medicaid and Medicare.

- **Rationale:** The dominant business model of “illness-based” health care and fee-for-service reimbursement is being upended by unsustainable costs, fragmented services and relatively poor health outcomes for unmanaged care. Driven by growing concerns over spiraling health care costs, and the uneven quality of care for unmanaged Medicare patients, Mercy Medical Center in partnership with Hampden County

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<sup>21</sup> Fisher, E.S., Staiger, D.O., Bynum, J.P.W., Gottlieb, D.J., (2007). Creating accountable care organizations: the extended hospital. *Health Affairs*, 26 (1), w44-w57. (Published online) Retrieved from <http://www.content.healthaffairs.org/cgi/content/full/26/1/w44>.

Physician Associates, developed a pilot for 6,200 Medicare members, in partnership with commercial insurance payers. On a relatively small scale, this “virtual ACO” shifted from a fee-for-service business model to a new payment model: performance incentives were aligned so that health cost savings were shared by patients, physicians, the hospital and the insurance payer, but only if quality and cost effectiveness benchmarks were achieved. Created more than a decade ago, this “virtual ACO” has far-reaching potential for replication for emerging global payment systems in the Commonwealth and nationally, especially as it allows for relatively small physician practices to participate. The integrated model of care delivery and payment reform is precisely what leading authorities like Elliott Fisher have pointed to as a remedy for the overuse, high-cost and low-value of medical care in a fragmented health care system.<sup>22</sup> On a relatively small scale, the “virtual ACO” in Hampden County, Massachusetts bent the health care cost curve by integrating care management, care delivery and disease management into a single, high-performance network. Compared to metrics of unmanaged Medicare populations, hospital utilization rates and average LOS diminished significantly, as did hospital readmission rates. Financial performance has been outstanding, yielding surpluses in both the hospital’s service fund and the physician service fund. With its robust disease management program for “high-risk” patients, the “virtual ACO” was able to reduce utilization costs and enhance shared savings margins. Thus, cost efficiencies were inextricably tied to quality outcomes for beneficiaries.

- **Expected results:** The former “Virtual ACO” will establish itself as a legal entity, thereby positioning itself within the emerging market for value-based purchasing and other alternatives to fee-for-service payment, including risk-bearing arrangements. Mercy Medical Center will expand its operational capacities to develop new Health Information Exchanges, and increase its connectivity for sharing patient medical information with area physician groups. By collaborating with physician groups and another community hospital in a physician-led ACO, Mercy Medical Center will advance organizational learning on how to serve much larger patient populations in a new business model that aims to lower cost, increase quality and boost patient satisfaction.
- **Relationship to other Projects:** This Project is most directly related to Mercy DSTI Projects 2.2 and 3.1 because: 1) many, if not all, of the beneficiaries in the complex patient population, predictably, will fit the “High Risk” patient criteria and require well-managed discharge processes, if and when they are hospitalized; 2) many of the capacity building activities to increase connectivity for Health Information Exchanges between Mercy Medical Center and collaborating physician groups will carry over to this project.

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<sup>22</sup> Fisher, E.S. (2009, June 18). Doctor’s pay, a key to health care reform: share saving with doctors. *The New York Times*. Message posted to <http://www.roomfordebate.blogs.nytimes.com/2009/06/18/better-medical-carefor>.

**Project 3.1: Develop Governance, Administrative and Operational Capacities to Accept Global Payments/Alternative Payments (Master Plan Project 3.3)**

SFY 2012	SFY 2013	SFY 2014
<p><b>3.1.1 Milestone:</b> Create new legal entity that will be able to contract for an array of future global payment systems with Medicare, Medicaid and commercial payers.</p> <p><b>3.1.1 (MP-P1) Metric:</b> Certificate of Organization filed with the Commonwealth of Massachusetts</p> <p><b>3.1.1 Data Source:</b> Documentation of Submission by the Commonwealth of Massachusetts' Secretary of State</p> <p><b>3.1.2 Milestone:</b> Develop Operating Agreement that details roles and responsibilities for collaborating entities</p> <p><b>3.1.2 (MP-P2) Metric:</b> Operating Agreement</p> <p><b>3.1.2 Data Source:</b> Documentation of Operating Agreement</p> <p><b>3.1.3 Milestone:</b> Select Health Information Exchange (HIE) Platform for Mercy Medical Center to provide health data exchange with collaborating physician groups</p> <p><b>3.1.3 (MP-P11) Metric:</b> Agreement/contract with HIE platform vendor</p> <p><b>3.1.3 Data Source:</b> Documentation of agreement/contract</p> <p><b>3.1.4 Milestone:</b> Develop implementation plan for at least 2 HIE Platform components, tools or applications, which could include Laboratory and Radiology Reports, to go "live," one in SFY 2013 and the other in SFY 2014</p> <p><b>3.1.4 (MP-P4) Metric:</b> Implementation Plan for 2 HIE Platform Components, Tools or Applications</p> <p><b>3.1.4 Data Source:</b> Documentation of Implementation Plan</p>	<p><b>3.1.6 Milestone:</b> Establish Specialist Advisory Council to promote integration and coordination of care for beneficiaries</p> <p><b>3.1.6 (MP-P9) Metric:</b> Specialist Advisory Council Membership List that includes representation from at least 5 specialties such as , but not limited to: cardiology, pulmonology, oncology, orthopedics, general surgery/GYN</p> <p><b>3.1.6 Data Source:</b> Documentation of Specialist Advisory Council Membership List</p> <p><b>3.1.7 Milestone:</b> Survey sample collaborating physician groups to determine interest levels and most compelling provider agreement features that would attract their participation in a dual-eligible and/or Medicaid pilot</p> <p><b>3.1.7 (MP-P7) Metric:</b> Report on Physician Survey Results</p> <p><b>3.1.7 Data Source:</b> Documentation of Report</p> <p><b>3.1.8 Milestone:</b> Specialist Advisory Council develops Quality and Cost Performance Incentive Plan</p> <p><b>3.1.8 (MP-P10) Metric:</b> Quality and Cost Performance Incentive Plan</p> <p><b>3.1.8 Data Source:</b> Documentation of Plan</p> <p><b>3.1.9 Milestone:</b> Implement plan to "go live" with 1 HIE component, tool or application for physician groups</p> <p><b>3.1.9 (MP-I1) Metric:</b> Screen Shot(s) of HIE component, tool or application</p> <p><b>3.1.9 Data Source:</b> Sisters of Providence Health System IT</p> <p><b>3.1.10 Milestone:</b> Develop plan to institute quality and cost benchmarking, measurement and reporting, utilizing the CMS-approved MSSP Quality Performance Standards</p> <p><b>3.1.10 (MP-P11) Metric:</b> Plan for Patient Quality and Cost Benchmarking Reporting Measures</p> <p><b>3.1.10 Data Source:</b> Documentation of Plan</p>	<p><b>3.1.12 Milestone:</b> Develop plan to expand HIT care management and care coordination capacities</p> <p><b>3.1.12 (MP-P6) Metric:</b> HIT Expansion Plan</p> <p><b>3.1.12 Data Source:</b> Documentation of HIT Expansion Plan</p> <p><b>3.1.13 Milestone:</b> Implement plan to "go live" with 1 additional HIE component, tool or application for physician groups</p> <p><b>3.1.13 (MP-I1) Metric:</b> Screen Shot(s) of HIE component, tool or application</p> <p><b>3.1.13 Data Source:</b> Sisters of Providence Health System IT</p> <p><b>3.1.14 Milestone:</b> Implement plan to institute quality and cost benchmarking, measurement and reporting that includes elements of Specialist Advisory Council Quality and Cost Performance Incentive Plan and the CMS-approved MSSP Quality Performance Standards</p> <p><b>3.1.14 (MP-I2) Metric:</b> Copies of quality and cost benchmarking, and measurement reports</p> <p><b>3.1.14 Data Source:</b> Documentation of quality, cost benchmarking and measurement reports</p> <p><b>3.1.15 Milestone:</b> Develop a pilot program proposal to serve non-elderly, Dual-Eligible and/or Medicaid population</p> <p><b>3.1.15 (MP-P8) Metric:</b> Copy of proposal to payer</p> <p><b>3.1.15 Data Source:</b> Documentation of proposal</p>

<b>Project 3.1: Develop Governance, Administrative and Operational Capacities to Accept Global Payments/Alternative Payments</b>		
<b>SFY 2012</b>	<b>SFY 2013</b>	<b>SFY 2014</b>
<p><b>3.1.5 Milestone:</b> Establish baseline for the number of physician offices utilizing HIE platform components, tools or applications</p> <p><b>3.1.5 (MP-P5) Metric:</b> The number of physician offices utilizing HIE platform components, tools or applications</p> <p><b>3.1.5 Data Source:</b> Sisters of Providence Health System IT Report</p>	<p><b>3.1.11 Milestone:</b> Increase the number of physician offices utilizing HIE platform components, tools or applications by 5 offices over baseline</p> <p><b>3.1.11 (MP-I3) Metric:</b> Increase by 5 the number of physician offices utilizing HIE platform components, tools or applications</p> <p><b>3.1.11 Data Source:</b> Sisters of Providence Health System IT Report</p>	<p><b>3.1.16 Milestone:</b> Increase the number of physician offices utilizing HIE platform components, tools or applications by 5 over SFY 2013</p> <p><b>3.1.16 (MP-I3) Metric:</b> Increase by 5 the number of physician offices utilizing HIE platform components, tools or applications</p> <p><b>3.1.16 Data Source:</b> Sisters of Providence Health System IT Report</p>



#### **IV. Category 3 – Ability to Respond to Statewide Transformation to Value-Based Purchasing and to Accept Alternatives to Fee-For-Service Payments.**

##### **Narrative: Project 3.2 - Develop Administrative, Organizational and Clinical Capacities to Manage the Care of Complex Patient Populations Master Plan Project 3.5**

- **Goal:** Paving the way for the Mercy Medical Center and the Sisters of Providence Health System to develop cost-effective and patient-centered care for complex populations, this project will increase a variety of organizational learning opportunities, from site selection, physical infrastructure development and employee skills training in new service delivery models, to new health information care management technologies and billing systems that mesh with new payer requirements. A new program site will be designed and built by renovating an existing building. A number of challenges are involved in implementing this pioneering program thrust to care for a dual-eligible population. Value-based purchasing to care for complex populations at risk of hospital admissions and/or skilled nursing home placement will require hospital and health system employees to utilize a new model of care and a new, operational mindset, one that evaluates a patient's perceived benefit of potential diagnosis and treatment and manages resources prudently. This patient-centered orientation represents a fundamental shift away from the current mode of diagnosing all possible conditions for fee-for-service payments. Instead, by shifting to alternate payment systems for serving complex patient populations, a new philosophy and operating framework will be instilled for all clinical and administrative staff. Value-based purchasing to care for patients at risk of hospital and/or skilled nursing home placement will require employees to utilize a new model of care within an ethical framework. Other challenges include training employees who can listen to a patients' individualized care needs and can respond with flexibility and creativity to help patients live in the least restrictive setting in the community. A final challenge will consist of developing, for a specialized demographic of patients, plans to renovate existing space for a primary care and specialty clinic, day programs, rehabilitation therapy facilities and administrative offices. The vision for facility and program development is to become a Center of Excellence for serving the broad range of needs of a specific patient demographic, one that includes not only global payment program beneficiaries, but other patients as well. Specific project activities include: 1) Selecting a physical site for program operations/approval of program operations site by hospital and health system Board of Trustees and property owners; 2) Devising a comprehensive orientation and training program on complex patient program philosophy and clinical model, to include elements that impact patients' health status, such as transportation, meals, safe housing and access to exercise; 3) Engaging an architect to provide feasibility study on site development; 4) Completing a report that will include an analysis of existing capacities necessary to manage the care of dual eligible/complex patients under new payment methodologies, including current employee IT competencies, IT infrastructure, IT capacities of community vendors, Health System care coordination, cost management, accounting, claims adjustment and coordination of benefits; 5) Developing a plan for providing optimum mix of health and supportive services on the new program site; and 6) enrolling program beneficiaries.
- **Rationale:** This project will operate on two levels for the hospital and the health system: 1) For clinical and administrative staff, this represents a pioneering effort to develop infrastructure, train and reorient staff to care for a complex patient population in a global payment system; 2) For the hospital and health system, the project represents a significant organizational learning opportunity to prepare for new

payment systems and models of care for complex patient populations. In a patient-centered model of coordinated care, a defined, complex patient population will be able to live in the least restrictive setting in the community. Patients' autonomy will not only be respected; it will be deeply honored. With a convenient and reorganized hub of health and supportive services, complex patients can receive all of their health care in one location. With "one-stop shopping" caregivers of complex patients are relieved of a significant burden of having to navigate a fragmented health system. Government payers expect costs savings from maintaining beneficiary health and a reduction of preventable hospital readmissions or premature placement in specialized care facilities. Beyond the value to develop capacities to manage care for a defined set of complex patients in the community, this project also will have considerable carryover value for the health system's development of value-based purchasing for other complex patient populations. The lessons learned from developing program policies and procedures, the optimum mix of integrated services, comprehensive orientation and training of clinical and administrative staff and analyzing care coordination, cross-referral and cost management HIT and accounting systems will inform future health system initiatives to develop a continuum of care for new patient-centered care delivery models with other patient populations.

- **Expected results:** A defined set of complex patients will receive health care at lower cost, greater quality and increase their satisfaction in a new model of care. This project will enhance organizational learning and system capacities, throughout the Sisters of Providence Health System, to serve complex patient populations in future global payment systems.
- **Relation to other Projects:** This Project is most directly related to Mercy DSTI Projects 2.2 and 3.1 because: 1) many, if not all, of the beneficiaries in the complex patient population, predictably, will fit the "High Risk" patient criteria and require well-managed discharge processes, if and when they are hospitalized; 2) many of the capacity building activities to increase connectivity for Health Information Exchanges between Mercy Medical Center and collaborating physician groups will carry over to this project.

**Project 3.2: Develop Administrative, Organizational and Clinical Capacities to Manage the Care of Complex Patient Populations (Master Plan Project 3.5)**

SFY 2012	SFY 2013	SFY 2014
<p><b>3.2.1 Milestone:</b> Selection of physical site for program operations  <b>3.2.1 (MP-P1) Metric:</b> Approval of Site by Sisters of Providence Board of Trustees and Property Owners  <b>3.2.1 Data Source:</b> Board of Trustee Minutes</p> <p><b>3.2.2 Milestone:</b> Develop program policies and procedures to align with requirements and specifications of insurance payers  <b>3.2.2 (MP-P2) Metric:</b> Policies and procedures are developed to meet various requirements and specifications for dual-eligible population in global payment configurations  <b>3.2.2 Data Source:</b> Sisters of Providence Health System Policies and Procedures,</p> <p><b>3.2.3 Milestone:</b> Finalize engineering study for site development  <b>3.2.3 (MP-P3) Metric:</b> Engineering Study  <b>3.2.3 Data Source:</b> Documentation of Engineering Study</p> <p><b>3.2.4 Milestone:</b> Complete analysis of existing health system information technology, care coordination, cost management and accounting systems in light of global payment and care management requirements  <b>3.2.4 (MP-P4) Metric:</b> Analysis Report: Findings and Recommendations  <b>3.2.4 Data Source:</b> Analysis Report: Findings and Recommendations</p>	<p><b>3.2.5 Milestone:</b> Implement at least 3 recommendations of report on existing health information technology, care coordination, cost management and accounting systems  <b>3.2.5 (MP-I1) Metric:</b> Report on How Recommendations on Health System Information Technology, Care Coordination, Cost Management and Accounting Systems Were Implemented  <b>3.2.5 Data Source:</b> Documentation of Report</p> <p><b>3.2.6 Milestone:</b> Identify the mix of health care and supportive services to be selected from, but not limited to: transportation, meals, housing, preventative, primary, acute, behavioral, pharmacy, long-term, end-of-life care  <b>3.2.6 (MP-P5) Metric:</b> Plan for Health and Supportive Services Mix  <b>3.2.6 Data Source:</b> Plan for Health and Supportive Services Mix</p> <p><b>3.2.7 Milestone:</b> Development of comprehensive training and orientation program on Complex Patient Program Philosophy and Clinical Model  <b>3.2.7 (MP-P6) Metric:</b> Successful production of Comprehensive Training and Orientation Program for Health System Employees  <b>3.2.7 Data Source:</b> Comprehensive Training and Orientation Program</p> <p><b>3.2.8 Milestone:</b> Establish contracts for services to be provided, based on Plan for Health and Supportive Services Mix  <b>3.2.8 (MP-P7) Metric:</b> Agreements in place for services to be provided  <b>3.2.8 Data Source:</b> Provider contracts</p> <p><b>3.2.9 Milestone:</b> Deliver Comprehensive Training and Orientation Program on Complex Patient Program Philosophy and Clinical Model for a minimum of 7 employees  <b>3.2.9 (MP-I3) Metric:</b> Completion of training and orientation program  <b>3.2.9 Data Source:</b> Documentation of completion of training and orientation program</p>	<p><b>3.2.10 Milestone:</b> Train and orient health system employees in the complex patient program philosophy and clinical model.  <b>3.2.10 (MP-P8) Metric:</b> Completion of Complex Patient Training  <b>3.2.10 Data Source:</b> Copies of Employee Certificates of Completion</p> <p><b>3.2.11 Milestone:</b> Enroll first group of program participants  <b>3.2.11 (MP-I2) Metric:</b> Enrollment Forms  <b>3.2.11 Data Source:</b> Enrollment records</p> <p><b>3.2.12 Milestone:</b> Conduct baseline study on patients' experience of care and utilization data  <b>3.2.12 (MP-P10) Metric:</b> Study of Patients' Experience of Care and Utilization  <b>3.2.12 Data Source:</b> Study of Patients' Experience of Care and Utilization</p> <p><b>3.2.13 Milestones:</b> Deliver reports to hospital and health system leaders on "lessons learned" from (1) selecting a mix of site-based, health care and supportive services for a complex patient population, and (2) training and orientation of clinical and administrative staff to manage resources and care for patients in a global payment system  <b>3.2.13 (MP-P9) Metric:</b> Lessons Learned Report  <b>3.2.13 Data Source:</b> Documentation of Report</p> <p><b>3.2.14 Milestone:</b> Deliver Comprehensive Training and Orientation Program on Complex Patient Program Philosophy and Clinical Model for a minimum of 20 employees  <b>3.2.14 (MP-I3) Metric:</b> Completion of training and orientation program  <b>3.2.14 Data Source:</b> Documentation of completion of training and orientation program</p>

## IV. Category 3 – Ability to Respond to Statewide Transformation to Value-Based Purchasing and to Accept Alternatives to Fee-For-Service Payments.

### Narrative: Project 3.3 – Participate in Learning Collaborative Master Plan Project 3.9

- **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.
- **Rationale:** Participation in 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.
- **Expected Results:** Through this project, Mercy Medical Center 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. Demonstration Year 15 (SFY 2012) goals will be for eligible DSTI safety net hospitals to explore existing and/or potential new opportunities for participation in a learning collaborative.
- Potential project elements Include (All DSTI hospitals must select from among the following project elements):
  - A. Explore existing and/or potential new opportunities for participation in 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 learning collaborative as they relate to the hospital's delivery system transformation goals under DSTI.
- **Relation to Other Projects:** 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.

**Project 3.3: Participate in Learning Collaborative (Master Plan Project 3.9)**

SFY 2012	SFY 2013	SFY 2014
<p><b>3.3.1 Milestone:</b> Explore existing and/or potential new opportunities for participation in learning collaborative.</p> <p><b>3.3.1 (MP-P1) Metric:</b> Hospital meeting minutes and/or documentation of research findings on learning collaboratives.</p> <p><b>3.3.1 Data Source:</b> Internal hospital documentation</p>	<p><b>3.3.2 Milestone:</b> Participate actively in learning collaborative.</p> <p><b>3.3.2 (MP-P5) Metric:</b> Documentation of attendance at and/or participation in learning collaborative activities.</p> <p><b>3.3.2 Data Source(s):</b> Internal hospital documentation and/or learning collaborative documents</p> <p><b><u>Choice of one of the following options for Project Element B (select a learning collaborative in which to participate):</u></b></p> <p><u>Option 1 of Project Element B:</u>  <b>3.3.3 Milestone:</b> Select and join an existing learning collaborative (if selecting option 1 of Project Element B).  <b>3.3.3 (MP-P2) Metric:</b> Documentation of hospital joining learning collaborative.  <b>3.3.3 Data Source:</b> Internal hospital documentation and/or learning collaborative documents</p> <p><b>OR:</b></p> <p><u>Option 2 of Project Element B:</u>  <b>3.3.3 Milestone:</b> Develop a new learning collaborative structure (if selecting option 2 of Project Element B).  <b>3.3.3 (MP-P4) Metric:</b> Documentation of new learning collaborative goals, structure and membership and/or signed agreement with facilitator of new learning collaborative (if applicable).  <b>3.3.3 Data Source(s):</b> Learning collaborative documents and/or agreement</p>	<p><b>3.3.4 Milestone:</b> Participate actively in learning collaborative.</p> <p><b>3.3.4 (MP-P5) Metric:</b> Documentation of attendance at and/or participation in learning collaborative activities.</p> <p><b>3.3.4 Data Sources(s):</b> Internal hospital documentation and/or learning collaborative documents</p> <p><b>3.3.5 Milestone:</b> Report on lessons learned from participation in learning collaborative as they relate to the hospital's delivery system transformation goals under DSTI.</p> <p><b>3.3.5 (MP-P6) Metric:</b> Hospital report on lessons learned.</p> <p><b>3.3.5 Data Source:</b> Hospital report</p>

## V. Category 4 – Population Focused Improvements

Pursuant to Section X of Attachment J to the Massachusetts Section 1115 Demonstration Special Terms and Conditions, 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 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 pursuant to Table 1 of Section X.D of Attachment J. 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. 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. 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.<sup>23</sup> 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

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<sup>23</sup> 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.

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.

<b>Better Care Common Measures</b>	<b>DY 16 Measurement Period</b>	<b>DY 16 Reporting Date(s) to EOHHS</b>	<b>DY 17 Measurement Period</b>	<b>DY 17 Reporting Date(s) to EOHHS</b>
<p>4.1 (MP-CM4.1) Care Transitions Measure Set (CTM-3)</p> <p><i>Voluntary HCAHPS questions</i></p> <p><i>Data Source: Hospital vendor or Hospital Compare as available</i></p>	<p>Not applicable in DY16. Requires new data capture.</p>	<p>Not applicable in DY16. Requires new data capture.</p>	<p>07/01/12 – 06/30/13</p>	<p>7/31/14</p>
<p>4.2: (MP-CM4.2) Patients who reported that staff "Always" explained about medicines before giving it to them.</p> <p><i>HCAHPS Composite (Questions 16 &amp; 17)</i></p> <p><i>Data Source: Hospital Compare</i></p>	<p>01/01/11 – 12/31/11</p>	<p>1/31/13</p>	<p>01/01/12 – 12/31/12</p>	<p>1/31/14</p>
<p>4.3: (MP-CM4.3) Patients at each hospital who reported that YES, they were given information about what to do during their recovery at home.</p> <p><i>HCAHPS Composite (Questions 19 &amp; 20)</i></p> <p><i>Data Source: Hospital Compare</i></p>	<p>01/01/11 – 12/31/11</p>	<p>1/31/13</p>	<p>01/01/12 – 12/31/12</p>	<p>1/31/14</p>

<b>Better Care Common Measures</b>	<b>DY 16 Measure- ment Period</b>	<b>DY 16 Reporting Date(s) to EOHHS</b>	<b>DY 17 Measure- ment Period</b>	<b>DY 17 Reporting Date(s) to EOHHS</b>
4.4: (MP-CM4.4) ED Wait Time: Door to Diagnostic Evaluation by a Qualified Medical Personnel  <i>CMS IQR measure (OP-20)</i>  <i>Data Source: Hospital Compare</i>	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.<sup>24</sup> 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.

<sup>24</sup> See Specifications Manual for National Hospital Inpatient Quality Measures for selected references on clinical effectiveness of immunizations. Available at <http://www.qualitynet.org>



<b>Better Health Common Measures</b>	<b>DY 16 Measure- ment Period</b>	<b>DY 16 Reporting Date(s) to EOHHS</b>	<b>DY 17 Measure- ment Period</b>	<b>DY 17 Reporting Date(s) to EOHHS</b>
<p>4.5: (MP-CM4.5) Pneumonia Immunization</p> <p><i>CMS IQR/Joint Commission measure IMM-1a<sup>25</sup></i></p> <p><i>Data Source: Hospital Compare</i></p>	01/01/12 – 06/30/12	01/31/13	07/01/12 – 06/30/13	01/31/14
<p>4.6: (MP-CM4.6) Influenza Immunization (seasonal measure)</p> <p><i>CMS IQR/Joint Commission measure IMM-2<sup>26</sup></i></p> <p><i>Data Source: Hospital Compare</i></p>	01/01/12 - 03/30/12	01/31/13	10/01/12- 03/30/13	01/31/14
<p>4.7: (MP-CM4.7) Percent of discharged patients under age 75 who were hospitalized for Chronic Obstructive Pulmonary Disease (Ambulatory Sensitive-Condition Admissions Measure)</p> <p><i>Modified AHRQ PQI-5: denominator modified to include only discharged hospital inpatients</i></p> <p><i>Data Source: Hospital billing data</i></p>	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14

<sup>25</sup> CMS and the Joint Commission began collecting this measure effective with January 1, 2012 discharges. IMM-1a includes all inpatients.

<sup>26</sup> 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 Measurement Period	DY 16 Reporting Date(s) to EOHHS	DY 17 Measurement Period	DY 17 Reporting Date(s) to EOHHS
<p>4.8: (MP-CM4.8) Percent of discharged patients under age 75 who were hospitalized for Congestive Heart Failure (Ambulatory Sensitive-Condition Admissions Measure)</p> <p><i>Modified AHRQ PQI-8; denominator modified to include only discharged hospital inpatients</i></p> <p><i>Data Source: Hospital billing data</i></p>	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14
<p>4.9: (MP-CM4.9) Low Birth Weight Rate: number of low birth weight infants per 100 births<sup>27</sup></p> <p><i>AHRQ PQI-9</i></p> <p><i>Data Source: Hospital records</i></p>	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

<sup>27</sup> Hospitals without maternity services are exempted from this measure.

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.<sup>28</sup>

<b>Cost-Effective Care Common Measures</b>	<b>DY 16 Measure-ment Period</b>	<b>DY 16 Reporting Date(s) to EOHHS</b>	<b>DY 17 Measure-ment Period</b>	<b>DY 17 Reporting Date(s) to EOHHS</b>
<p>4.10: (MP-CM4.10) Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for all patients 18 and older (not risk adjusted)</p> <p><i>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.<sup>29</sup></i></p> <p><i>Data Source: Hospital billing data</i></p>	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14

<sup>28</sup> Clark, S., Miller, D., Belfort, M., Dildy, G., Frye, D., & Meyers, J. (2009). Neonatal and maternal outcomes associated with elective delivery. [Electronic Version]. *Am J Obstet Gynecol.* 200:156.e1-156.e4.

<sup>29</sup> 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.

<b>Cost-Effective Care Common Measures</b>	<b>DY 16 Measurement Period</b>	<b>DY 16 Reporting Date(s) to EOHHS</b>	<b>DY 17 Measurement Period</b>	<b>DY 17 Reporting Date(s) to EOHHS</b>
<p>4.11: (MP-CM4.11) Percent of Emergency Department visits for children age 18 or less with a primary diagnosis of asthma-- Ambulatory Sensitive-Condition</p> <p><i>See AHRQ PDI-14 for numerator specification. Denominator specification includes children ages 2 to 17 with an ED visit</i></p> <p><i>Data Source: Hospital ED billing data</i></p>	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14
<p>4.12: (MP-CM4.12) 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<sup>30</sup></p> <p><i>MassHealth Maternity Measure-3</i></p> <p><i>Data Source: MassHealth Quality Exchange(MassQEX)</i></p>	07/01/11-06/30/12	01/31/13	07/01/12-06/30/13	01/31/14

## **B. Hospital-Specific Measures**

In addition to the common measures listed in 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

<sup>30</sup> Hospitals without maternity services are exempted from this measure.

Category 4 hospital-specific measures. Hospitals shall choose from the options listed in the Master DSTI Plan, which are associated with the project in Categories 1-3 to which they pertain.<sup>31</sup>

### **1. Project 1.1: Enhance Primary Care Capacity and Access**

- Rationale for Measure: The overarching goal of this project is to increase primary care capacity and access in the hospital's primary service area. Measuring the percentage of non-emergent ED patients that are unable to identify a primary care provider, therefore, is one key metric for gauging the lack of capacity and access to primary care physicians in the hospital's primary service area. Project activities will aim to increase the number of primary care providers and refer non-emergent ED patients that lack primary care physicians to a Federally Qualified Health Center (The Caring Health Center) and other providers.

### **2. Project 1.2: Integrate Physical and Behavioral Health Care in Mercy Medical Center's ED**

- Rationale for Measures: The primary goals of this project are to improve the quality of care, lower the cost and enhance the experience of ED care for patients that present with significant mental health and substance abuse (MH/SA) issues. Establishing a baseline for the average length of stay (LOS) for the MH/SA ED patient is a key improvement metric for patient flow, gauging the time interval between ED admission and referral to appropriate treatment and/or discharge for patients that present with significant mental health and/or substance abuse issues. Reducing the LOS will not only reduce per capita costs for these patients, it also may leverage improvements in the overall patient flow in the ED and reduce waiting times for all ED patients. When MH/SA ED patients are managed more effectively to reduce the time they spend in the ED, assessed more efficiently and receive expedited referral and/or admission to appropriate treatment, it is likely that the quality of care, safety and the experience of care for these patients will improve. As a corresponding measure, the rate of ED patients that leave without being treated by a Licensed Independent Practitioner will serve as an indicator of ED overcrowding and/or patient flow, as well as ED patient satisfaction and safety. Evidence suggests that there is a strong correlation between uninsured or Medicaid status and ED patients that leave without being treated.<sup>32</sup> Uninsured and Medicaid patients generally face numerous obstacles in seeking timely treatment elsewhere. Another study found that 45% of ED patients who left without treatment needed "...immediate medical attention and 11 percent who left were hospitalized within the next week."<sup>33</sup>

### **3. Project 2.1: Align New Organizational Structures, Human Systems and IT Infrastructure to Improve Health Outcomes and Quality**

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<sup>31</sup> 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.

<sup>32</sup> Ru, D., McCarthy, M., Guohua, *et. al.*, (December 2006). Patients who leave without being seen: their characteristics and history of emergency department use. *Annals of Emergency Medicine*, 48 (3), 686-689.

<sup>33</sup> United States General Accounting Office. (March 2003). Hospital emergency departments: crowded conditions vary among hospitals and communities. *Report to the Ranking Minority Member, Committee on Finance, United States Senate.*

- Rationale for Measures: The primary goals of this project are to improve health quality and safety outcomes, to boost patient satisfaction, to enhance hospital capacity and to reduce health care costs. When average LOS is reduced, typically there are improvements in health quality and safety, patient satisfaction, and hospital capacity, with corresponding reductions in per capita costs. By eliminating non-value added and wasteful “white space” during a patient’s hospital stay, diagnostic and treatment procedures can be delivered more timely and effectively for patient-centered care, while leveraging more bed capacity. Keeping patients in the hospital for shorter stays can reduce the number of hospital-acquired infections and/or injuries like falls. The Central Line-Associated BSI measure is a key indicator of patient safety. Project activities will reengineer various processes for patient care quality and safety.

#### **4. Project 2.2: Develop Patient-Centered Care Transitions for Patients at the Highest Risk of Readmission**

- Rationale for Measures: The primary goals for this project are to decrease the rates of 30-day hospital readmissions for “High Risk” patients and to improve the patient safety and health quality by providing more seamless care transitions from the acute care setting to the next level of care. Tracking the percentage of “High Risk” patients readmitted <30-days, therefore, is a pivotal metric for gauging project success. By re-engineering the hospital discharge process, utilizing the “High Risk Tool” and “Discharge Checklist,” additional resources in disease management and Advanced Practice Nursing will be deployed to “High Risk” patients to increase the likelihood that the transition from acute care will result in fewer missed appointments or follow-up tests, better outpatient medication management or less patient confusion about what “red flags” to watch for that warrant an immediate call to a medical provider. A second, hospital-specific measure for this project is the percent of patients who reported that their nurses “Always” communicated well. This HCAHPS measure refers to how well patients rate how well nurses treated them with courtesy and respect, listened carefully to them and explained things in ways they could understand. This measure is especially important for “High Risk” patients who may typically feel vulnerable and powerless about their conditions and prognoses. Patient-centered care requires clear and understandable communication with all patients on a number of dimensions, including: 1) the coordination and integration of care; 2) information about their health status; 3) the process of care, self-care and health promotion; 4) physical comfort, especially pain management, assistance with daily living activities and hospital surroundings.

#### **5. Project 3.1: Develop Governance, Administrative and Operational Capacities to Accept Global Payments/Alternate Payments**

- Rationale for Measure: The primary goals for this project are to boost governing, administrative and operational capacities to accept global payments by transforming a “virtual ACO” into a legal entity. Measuring the percentage of “virtual ACO” Managed Medicare beneficiaries that are readmitted <30-days will be an important baseline measure to track during the project’s development, because it is a key indicator of a number of outcomes that the newly-formed legal entity will seek to accomplish with new and larger patient populations, namely: 1) improved care quality; 2) reduced per capita costs; 3) reduced preventable readmissions; and 4) increased patient satisfaction. By utilizing this metric as an organizational learning reference point, the newly-formed ACO and Mercy Medical Center will be able to build sufficient capacities in HIT connectivity, Health Information Exchanges, disease management, care coordination among

collaborating entities and quality and cost benchmarking to develop pilot program proposals to serve new Dual-Eligible and/or Medicaid populations.

## **6. Project 3.2: Develop Administrative, Organizational and Clinical Capacities to Manage the Care of Complex Patient Populations**

- **Rationale for Measure:** The primary goals for this project are to develop capacities for delivering health care to a complex patient population at lower cost, higher quality and with increased patient satisfaction. Measuring the number of ED visits for this complex patient population will be a key indicator for a number of intended outcomes. A reduced number of ED visits will be a function of more effectively managing the needs and complex medical conditions of this patient population. By shifting the care delivery model from the currently-configured, fragmented dispersion of clinical and supportive services in the community to a site-based, clinical and supportive services model, patients (and care givers) will have more convenient access to care management, reducing the likelihood that patients will seek care at the ED. By reducing the number of ED visits, patients will obtain better care and receive it at lower cost.

<b>Hospital-specific measures</b>			
<p><b>Project 1.1 – Enhance Primary Care Capacity and Access</b></p> <p>4.1 (MP Project 1.3) Measure Description: Percentage of Mercy Non-Emergent ED Patients sampled that are unable to identify a Primary Care Physician</p> <p>This measure will be obtained by counting the number of ED patients that report that they have no primary care physician when they register and dividing that number by the total number of ED patients seen.</p>	N/A	<p><b>Report measure</b></p> <p>Percentage of Mercy Non-Emergent ED Patients sampled that are unable to identify a Primary Care Physician</p>	<p><b>Report measure</b></p> <p>Percentage of Mercy Non-Emergent ED Patients sampled that are unable to identify a Primary Care Physician</p>
<p><b>Project 1.2 - Integrate Physical and Behavioral Health Care in Mercy Medical Center ED</b></p> <p>4.2 (MP Project 1.2) Measure Description: Average Length of stay for Mental Health/Substance Abuse Patients in Mercy ED</p> <p>This measure will be obtained by adding medical records data on the individual length of stay in hours for all ED patients that present with significant behavioral health issues dividing the total number of hours by the number of ED patients that presented with significant behavioral health issues during that same month of September to compute the average length of stay.</p> <p>4.3 (MP Project 1.2) Measure Description: The rate of ED patients who leave without being treated by a Licensed Independent Practitioner</p> <p>This measure will be obtained by counting the number of ED patients that are registered and triaged and leave the ED without being seen by a Licensed Independent Practitioner and dividing this number by the total number of patients that are registered and triaged.</p>	N/A	<p><b>Report measures</b></p> <p>A. Average Length of stay for Mental Health/Substance Abuse Patients in Mercy ED</p> <p>B. The rate of ED patients who leave without being treated by a Licensed Independent Practitioner</p>	<p><b>Report measures</b></p> <p>A. Average Length of stay for Mental Health/Substance Abuse Patients in Mercy ED</p> <p>B. The rate of ED patients who leave without being treated by a Licensed Independent Practitioner</p>



<p><b>Project 2.1 - Align New Organizational Structures, Human Systems and IT Infrastructure to Improve Health Outcomes and Quality</b></p> <p>4.4 (MP Project 2.7) Measure Description: Average Length of Stay for all Mercy Medical Center Inpatients</p> <p>This measure will be calculated by dividing the number of acute care inpatient days by the number of acute care inpatient discharges, excluding the following: 1) patients with an admission service of Rehab, Psych, Substance Disorder, Long Term Acute Care, Hospice, Skilled Nursing, deliveries and newborns, cases which exceed 365 days LOS, and cases missing a principal diagnosis.</p> <p>4.5 (MP Project 2.7) Measure Description: Central Line-Associated BSI</p> <p>This measure will be calculated by dividing the number of cases of BSI infections by 1,000 central line days.</p>	<p>N/A</p>	<p><b>Report measure</b></p> <p>A. Average Length of Stay for all Mercy Medical Center Inpatients</p> <p>B. Central Line-Associated BSI</p>	<p><b>Report measure</b></p> <p>A. Average Length of Stay for all Mercy Medical Center Inpatients</p> <p>B. Central Line-Associated BSI</p>
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<b>Project 2.2 - Develop Patient-Centered Care Transitions for Patients at the Highest Risk of Readmission</b>	N/A	<b>Report measure</b>	<b>Report measure</b>
<p data-bbox="237 280 909 342">4.6 (MP Project 2.3) Measure Description: Percentage of High Risk Patients readmitted &lt;30 days</p> <p data-bbox="237 378 926 613">This measure will be obtained by utilizing the STARR tool methodology to identify “High Risk” patients and dividing the number of &lt;30-day readmissions by the total number of discharges, excluding rehab, psych, skilled nursing LTAC, hospice, substance abuse disorder (based on admission, deliveries and newborns, elective admissions and patients with a discharge disposition of death.</p> <p data-bbox="237 657 846 751">4.7 (MP Project 2.3) Measure Description: Percentage of Patients who reported that their nurses “Always” communicated well</p> <p data-bbox="237 797 926 927">This measure will be obtained by dividing the number of patients who reported that their nurses “Always” communicated well on completed surveys by the total number of completed survey items on this question</p>		<p data-bbox="1209 302 1524 396">A. Percentage of High Risk Patients readmitted &lt;30 days</p> <p data-bbox="1209 638 1503 768">B. Percentage of Patients who reported that their nurses “Always” communicated well</p>	<p data-bbox="1551 302 1818 396">A. Percentage of High Risk Patients readmitted &lt;30 days</p> <p data-bbox="1551 618 1845 748">B. Percentage of Patients who reported that their nurses “Always” communicated well</p>

<p><b>Project 3.1 - Develop Governance, Administrative and Operational Capacities to Accept Global Payments/ Alternative Payments</b></p> <p>4.8 (MP-Project 3.3) Measure Description: Percentage of “Virtual” ACO beneficiaries readmitted &lt; 30 days</p> <p>This measure will be obtained by dividing the number of “Virtual ACO” Medicare Advantage beneficiaries that are readmitted &lt;30-days by the total number of discharges.</p>	<p>N/A</p>	<p><b>Report measure</b></p> <p>Percentage of “Virtual” ACO beneficiaries readmitted &lt; 30 days</p>	<p><b>Report measure</b></p> <p>Percentage of “Virtual” ACO beneficiaries readmitted &lt; 30 days</p>
<p><b>Project 3.2 - Develop Administrative, Organizational and Clinical Capacities to Manage the Care of Complex Patient Populations</b></p> <p>4.9 (MP Project 3.5) Measure Description: Number of Dual Eligible ED visits</p> <p>This measure will be obtained by counting the number of ED visits made by dual eligible patients.</p>	<p>N/A</p>	<p><b>Report measure</b></p> <p>Number of Dual Eligible ED visits</p>	<p><b>Report measure</b></p> <p>Number of Dual Eligible ED visits</p>

Appendix A  
Metric Funding Allocation Table

Hospital Name: Mercy Medical Center  
DSTI Proportional Allotment Factor: .0727

DY 15/SFY12			DY 16/SFY13			DY 17/SFY14		
Cat 1: Integration			Cat 1: Integration			Cat 1: Integration		
Annual Metric Base Value		\$3,349,333	Annual Metric Base Value		\$5,024,000	Annual Metric Base Value		\$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		\$243,413	Metric Base Value Adjusted for Proportional Allotment Factor		\$365,120	Metric Base Value Adjusted for Proportional Allotment Factor		\$365,120
Project/ Metric	Optional Adjust-ment (%)	Metric Value	Project/ Metric	Optional Adjust-ment (%)	Metric Value	Project/ Metric	Optional Adjust-ment (%)	Metric Value
<b>Project 1.1</b>			<b>Project 1.1</b>			<b>Project 1.1</b>		
Metric Base Value Adjusted for # Metrics		\$243,413	Metric Base Value Adjusted for # Metrics		\$304,267	Metric Base Value Adjusted for # Metrics		\$365,120
Metric 1.1.1		\$243,413	Metric 1.1.6		\$304,267	Metric 1.1.12		\$365,120
Metric 1.1.2		\$243,413	Metric 1.1.7		\$304,267	Metric 1.1.13		\$365,120
Metric 1.1.3		\$243,413	Metric 1.1.8		\$304,267	Metric 1.1.14		\$365,120
Metric 1.1.4		\$243,413	Metric 1.1.9		\$304,267	Metric 1.1.15		\$365,120
Metric 1.1.5		\$243,413	Metric 1.1.10		\$304,267	Metric 1.1.16		\$365,120
			Metric 1.1.11		\$304,267			
<b>Project Subtotal</b>		<b>\$1,217,067</b>	<b>Project Subtotal</b>		<b>\$1,825,600</b>	<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>Project 1.2</b>			<b>Project 1.2</b>			<b>Project 1.2</b>		
Metric Base Value Adjusted for # Metrics		\$202,844	Metric Base Value Adjusted for # Metrics		\$228,200	Metric Base Value Adjusted for # Metrics		\$260,800
Metric 1.2.1		\$202,844	Metric 1.2.7		\$228,200	Metric 1.2.15		\$260,800
Metric 1.2.2		\$202,844	Metric 1.2.8		\$228,200	Metric 1.2.16		\$260,800
Metric 1.2.3		\$202,844	Metric 1.2.9		\$228,200	Metric 1.2.17		\$260,800
Metric 1.2.4		\$202,844	Metric 1.2.10		\$228,200	Metric 1.2.18		\$260,800

Metric 1.2.5		\$202,844
Metric 1.2.6		\$202,844
<b>Project Subtotal</b>		<b>\$1,217,067</b>
<b>CAT 2: Innovations</b>		
Annual Metric Base Value		\$3,349,333
Metric Base Value Adjusted for Proportional Allotment Factor		\$243,413
Project/ Metric	Optional Adjust-ment (%)	Metric Value
<b>Project 2.1</b>		
Metric Base Value Adjusted for # Metrics		\$304,267
Metric 2.1.1		\$304,267
Metric 2.1.2		\$304,267
Metric 2.1.3		\$304,267
Metric 2.1.4		\$304,267
<b>Project Subtotal</b>		<b>\$1,217,067</b>
<b>Project 2.2</b>		
Metric Base Value Adjusted for # Metrics		\$243,413
Metric 2.2.1		\$243,413
Metric 2.2.2		\$243,413
Metric 2.2.3		\$243,413
Metric 2.2.4		\$243,413
Metric 2.2.5		\$243,413

Metric 1.2.11		\$228,200
Metric 1.2.12		\$228,200
Metric 1.2.13		\$228,200
Metric 1.1.14		\$228,200
<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>CAT 2: Innovations</b>		
Annual Metric Base Value		\$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		\$365,120
Project/ Metric	Optional Adjust-ment (%)	Metric Value
<b>Project 2.1</b>		
Metric Base Value Adjusted for # Metrics		\$365,120
Metric 2.1.5		\$365,120
Metric 2.1.6		\$365,120
Metric 2.1.7		\$365,120
Metric 2.1.8		\$365,120
Metric 2.1.9		\$365,120
<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>Project 2.2</b>		
Metric Base Value Adjusted for # Metrics		\$365,120
Metric 2.2.6		\$365,120
Metric 2.2.7		\$365,120
Metric 2.2.8		\$365,120
Metric 2.2.9		\$365,120
Metric 2.2.10		\$365,120

Metric 1.2.19		\$260,800
Metric 1.2.20		\$260,800
Metric 1.2.21		\$260,800
<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>CAT 2: Innovations</b>		
Annual Metric Base Value		\$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		\$365,120
Project/ Metric	Optional Adjust-ment (%)	Metric Value
<b>Project 2.1</b>		
Metric Base Value Adjusted for # Metrics		\$304,267
Metric 2.1.10		\$304,267
Metric 2.1.11		\$304,267
Metric 2.1.12		\$304,267
Metric 2.1.13		\$304,267
Metric 2.1.14		\$304,267
Metric 2.1.15		\$304,267
<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>Project 2.2</b>		
Metric Base Value Adjusted for # Metrics		\$365,120
Metric 2.2.11		\$365,120
Metric 2.2.12		\$365,120
Metric 2.2.13		\$365,120
Metric 2.2.14		\$365,120
Metric 2.2.15		\$365,120

<b>Project Subtotal</b>		<b>\$1,217,067</b>
<b>CAT 3: Payment Reform</b>		
Annual Metric Base Value		\$3,349,333
Metric Base Value Adjusted for Proportional Allotment Factor		\$243,413
Project/ Metric	Optional Adjust-ment (%)	Metric Value
<b>Project 3.1</b>		
Metric Base Value Adjusted for # Metrics		\$243,413
Metric 3.1.1		\$243,413
Metric 3.1.2		\$243,413
Metric 3.1.3		\$243,413
Metric 3.1.4		\$243,413
Metric 3.1.5		\$243,413
<b>Project Subtotal</b>		<b>\$1,217,067</b>
<b>Project 3.2</b>		
Metric Base Value Adjusted for # Metrics		\$304,267
Metric 3.2.1		\$304,267
Metric 3.2.2		\$304,267
Metric 3.2.3		\$304,267
Metric 3.2.4		\$304,267
<b>Project Subtotal</b>		<b>\$1,217,067</b>
<b>Project 3.3: Learning Collaborative</b>		
Learning Collaborative Annual Metric Base Value		\$837,333

<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>CAT 3: Payment Reform</b>		
Annual Metric Base Value		\$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		\$365,120
Project/ Metric	Optional Adjust-ment (%)	Metric Value
<b>Project 3.1</b>		
Metric Base Value Adjusted for # Metrics		\$304,267
Metric 3.1.6		\$304,267
Metric 3.1.7		\$304,267
Metric 3.1.8		\$304,267
Metric 3.1.9		\$304,267
Metric 3.1.10		\$304,267
Metric 3.1.11		\$304,267
<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>Project 3.2</b>		
Metric Base Value Adjusted for # Metrics		\$365,120
Metric 3.2.5		\$365,120
Metric 3.2.6		\$365,120
Metric 3.2.7		\$365,120
Metric 3.2.8		\$365,120
Metric 3.2.9		\$365,120
<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>Project 3.3: Learning Collaborative</b>		
Learning Collaborative Annual Metric Base Value		\$1,256,000

<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>CAT 3: Payment Reform</b>		
Annual Metric Base Value		\$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		\$365,120
Project/ Metric	Optional Adjust-ment (%)	Metric Value
<b>Project 3.1</b>		
Metric Base Value Adjusted for # Metrics		\$365,120
Metric 3.1.12		\$365,120
Metric 3.1.13		\$365,120
Metric 3.1.14		\$365,120
Metric 3.1.15		\$365,120
Metric 3.1.16		\$365,120
<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>Project 3.2</b>		
Metric Base Value Adjusted for # Metrics		\$365,120
Metric 3.2.10		\$365,120
Metric 3.2.11		\$365,120
Metric 3.2.12		\$365,120
Metric 3.2.13		\$365,120
Metric 3.2.14		\$365,120
<b>Project Subtotal</b>		<b>\$1,825,600</b>
<b>Project 3.3: Learning Collaborative</b>		
Learning Collaborative Annual Metric Base Value		\$1,256,000

Metric Base Value Adjusted for Proportional Allotment Factor		\$60,853
Metric Base Value Adjusted for # Metrics		\$304,267
	OptionalAdj. (%)	
Metric 3.3.1		\$304,267
<b>Project Subtotal</b>		<b>\$304,267</b>
<b>CAT 4: Population Health</b>		
Annual Metric Base Value	N/A	
Metric Base Value Adjusted for Proportional Allotment Factor	N/A	
Metric Base Value Adjusted for # Metrics	N/A	
# Measures Reported	N/A	
<b>Category 4 Subtotal</b>		<b>\$0</b>
Plan Approval (50% total annual allotment)		\$7,606,667
<b>Annual Target Total</b>		<b>\$15,213,333</b>

Metric Base Value Adjusted for Proportional Allotment Factor		\$91,280
Metric Base Value Adjusted for # Metrics		\$ 228,200
	OptionalAdj. (%)	
Metric 3.3.2		\$228,200
Metric 3.3.3		\$228,200
<b>Project Subtotal</b>		<b>\$456,400</b>
<b>CAT 4: Population Health</b>		
Annual Metric Base Value		\$3,078,431
Metric Base Value Adjusted for Proportional Allotment Factor		\$223,725
Metric Base Value Adjusted for # Metrics		\$190,167
# Measures Reported		20
<b>Category 4 Subtotal</b>		<b>\$3,803,333</b>
<b>Annual Target Total</b>		<b>\$15,213,333</b>

Metric Base Value Adjusted for Proportional Allotment Factor		\$91,280
Metric Base Value Adjusted for # Metrics		\$228,200
	OptionalAdj. (%)	
Metric 3.3.4		\$228,200
Metric 3.3.5		\$228,200
<b>Project Subtotal</b>		<b>\$456,400</b>
<b>CAT 4: Population Health</b>		
Annual Metric Base Value		\$2,907,407
Metric Base Value Adjusted for Proportional Allotment Factor		\$211,296
Metric Base Value Adjusted for # Metrics		\$181,111
# Measures Reported		21
<b>Category 4 Subtotal</b>		<b>\$3,803,333</b>
<b>Annual Target Total</b>		<b>\$15,213,333</b>