Signature Healthcare

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

Submission
Date June 18, 2012

Hospital Contact:
Patricia Cullen
VP Quality & Clinical Performance
Signature Healthcare
680 Centre Street
Brockton, MA 02301
(508) 941-7549
Email: pcullen@signature-healthcare.org

Table of Contents

I. Introduction…………………………………………………………………………....3

A. Background……………………………………………………………………………3

B. Executive Summary………………………………………………………………...7

II. Category 1 – Further Development of a Fully Integrated Delivery System 13

Project 1.1: Title: Improved Access to Care by Improving Primary Care Access 13

Project 1.2: Project Improve PCP Compliance with Preventative Testing, Leveraging EHR adoption and Data Warehouse 18

III. Category 2 – Improved Health Outcomes & Quality 21

Project 2.1: Apply Process Improvement Methodology to Improve Quality and Efficiency in Primary Care Practices 22

Project 2.2: Development of Congestive Heart Failure (CHF) Disease Management Program.......... 27

IV. Category 3 – Ability to respond to statewide transformation to value-based purchasing and to accept alternatives to fee-for-service payments.. 32

Project 3.1: Hospital-Based 360° Patient Care Management Program – the most comprehensive program to identify and manage the most seriously ill members of a defined managed care population.. 32

Project 3.2: Creation of a Comprehensive Diagnostic Patient Profile... 37

Project 3.3: Participate in a Learning Collaborative 42

V. Category 4 - Population-Focused Improvements ("Pay for Reporting") 444

I. Introduction

A. Background

Community Context:
The Greater Brockton community, approximately 430,000 (2010) people, is served by four major hospitals, Signature Healthcare Brockton Hospital, Steward Good Samaritan Medical Center, Steward Morton Hospital and South Shore Hospital, and several Academic Medical Centers located 25 miles to the north in Boston, MA. The Signature Healthcare system is comprised of Signature Healthcare Brockton Hospital and Signature Medical Group, an employed group of primary care physicians. Four major groups of primary care physicians provide population management to the community, including: Signature Medical Group; Steward Medical Group, a primary care group employed by Steward Good Samaritan Medical Center; Compass Medical, an independent group of over 50 primary providers contracting through Steward Good Samaritan Medical Center but serving multiple hospitals; and the Brockton Area Neighborhood Health Center, a Federal 330 organization.

Several providers offer post-acute services, including: the Brockton VNA; Steward's Home Health Company; numerous skilled nursing centers; Kindred and New England Sinai-Long Term Acute Care hospitals; and Braintree Rehabilitation Hospital. A number of other for-profit outpatient service providers supply diagnostic and treatment services to the population. The Signature Healthcare System and the Steward Good Samaritan Medical Center System care for approximately 40 percent of the population; the remaining population receives care through South Shore Hospital (11%), Morton Hospital (11%) and the Boston Academic Medical Centers (24%). Competition among health systems to capture the local population through employment or affiliation with primary care is intense, and consequently there are very few independent primary care providers in the area. Most of the few independent physicians contract through Tufts Medical Center's New England Quality Care Alliance. More importantly, access to these physician groups is not equal for all payer groups.

Signature Healthcare works collaboratively with Brockton's Department of Health, the Brockton Area Neighborhood Health Center and numerous community social service agencies to coordinate public health initiatives and address the at-risk population needs. For the past two years, the focus of this community collaborative has been obesity and nutrition, as 57.2 percent of the population is overweight/obese; prior years were dedicated to the treatment of asthma. Signature Healthcare is part of Brockton's Promise Healthy Start Team which has taken on the challenge of managing the "Mass in Motion" funds; i.e., a grant provided to selected communities to make wellness a priority in all areas of daily living. The Healthy Start Team is presently in year two of the grant funding process, which includes implementation of the program initiatives including community gardens at some of the BPS, Senior Center, and Housing Authority sites. Also, the Healthy Start Team wants to expand upon the Farmers Market that takes place at City Hall and will be adding Credit/Debit/EBT machines to make healthy fruits and vegetables more accessible. Signature Healthcare, in collaboration with the Brockton Area Neighborhood Health Center,

launched a program to coordinate the care and follow-up for Brockton Area Neighborhood Health Center patients seen in the Signature Healthcare ER, with the goal of reducing repeat visits and/or re-admissions. Additionally, Signature Healthcare offers specialty care clinics in TB, endocrinology and gynecology to which the Brockton Area Neighborhood Health Center refers patients. Signature Healthcare developed Healthy Beginnings, a community outreach program for pregnant women who require medical care, social support, financial counseling and translator services. Given the diverse nature of the patient population, Signature Healthcare supplies 24/7 translator services with 15 employed translators speaking 36 languages.

The payer mix of Signature Healthcare's patient panel is as expected given the demographics of the community with 3.4% residually uninsured, 22% Medicaid and Medicaid Managed care, and 66% public pay in total.[1] Additionally, the commercial payer rates vary considerably in Massachusetts per the Attorney General's 2008 report which revealed a greater than 300 percent variation in rates paid to the hospitals by a commercial payer. Signature Healthcare Brockton Hospital fell in the lowest quartile and had the 14th lowest rates of all 68 hospitals. These fiscal challenges resulted in operating margins at the hospital of -3.18% in FY 08 and 2.11% in FY 09. These margins <u>do not</u> take into account the *overall* Signature Healthcare system (hospital and medical group) experience, which were a loss of 7.3% in FY 08 - a consequence of the investment in the integrated care delivery model which includes physicians - and a loss of 2.9% in FY 09. In FY 10 Signature Healthcare saw a modest gain of 1.0%, which reflects a transitional relief payment of $5,965,000.

Population Description

The City of Brockton, MA is an ethnically diverse community: 42.0% are White non-Hispanic, 31.2% Black , 10.0 % Hispanic or Latino origin and 2.3% Asian/Pacific Islander (2010 US Census). The percentage of Brockton residents who are foreign born was 24.3% for 2005 to 2009 as compared to 14.1% for the State of Massachusetts for the same time period. More than 34% of the residents, age 5 and up speak a language other than English at home; the Massachusetts State percentage is 20.4%.

The City has a stable population (declining only -0.5% from 2000 to 2010) with 7.3% under 5 years of age, 25.7% under 18 years of age and 11.9% 65 years of age or older; the average age is 35.9. Women comprise 51.9 percent of the total population. The levels of educational achievement show that, of the Brockton population, 24.1% have less than a high school degree and 35.7% have graduated from high school, as compared to the state wide averages of 15.2% and 27.3% respectively (MA Dept. of Public Health and US Census 2000). The per capita income is $22,108 with a median household income of $50,197. Unemployment rates are 8.9% (December, 2011) as compared to a statewide rate of 6.5%. The top three major employers in the Brockton area are Signature Healthcare, Steward Good Samaritan Medical Center and Massasoit Community College.

---

[1] 66% total public pay includes Medicaid and Medicaid Managed Care; Health Safety Net Fund; Commonwealth Care; Medicare and other government payment

Health System Description

Signature Healthcare, founded as Brockton Hospital in 1896, is the oldest and largest inpatient facility in the service area. For 116 years, Signature Healthcare Brockton Hospital has maintained its mission of serving as the provider of last resort and is the only not-for-profit, full service acute care hospital in the area. Several years ago, Signature Healthcare acquired a geographically dispersed multi-specialty group of physicians comprised of 17 different specialties, now called Signature Medical Group. The high percentage of medically complex, underinsured patients has been historically underserved by both primary care and specialists, many of whom (outside of Signature Healthcare and Brockton Area Neighborhood Health Center) limit their practices' acceptance of Medicaid and Health Safety Net patients. This created long waits for many underinsured patients requiring the care of sub-specialists. In addition to working with Brockton Area Neighborhood Health Center to provide specialty care to their patients, Signature Healthcare continued to expand both primary care and specialty physician coverage in the local area, resulting in significant financial losses from the physician group. Signature Healthcare is the sole provider of inpatient pediatric care and psychiatric care (22 beds), with one of the busiest ER Departments in Massachusetts and a Level II Special Care Nursery.

As consequence of the fiscal realities, Signature Healthcare has been restricted in their physical plant investment which has a 15.9 average age of plant (FY 11). Within the past year Signature Healthcare incurred $185,000 for four unbudgeted and unplanned repairs to the building exterior, mechanical, plumbing and electrical systems.

The Vision – Progress Made and Challenges Ahead

In 2008, Brockton Hospital recognized the need to create a fully integrated health care delivery system and aggressively sought to move away from traditional fee for service medicine and embrace population care management and preventative health. The Signature Healthcare system has progressed well, earning a reputation as a quality provider with low costs. In 2010, Signature Healthcare received the Premier award for Quality with most CORE measures well above the state and national average; the Harvard Pilgrim Physician Group Honor Roll: Pediatrics; and the Tufts Health Plan Blue Ribbon designation in Primary Care. In 2010 Signature Healthcare successfully achieved the ranking as the highest performing group in the state in 3 of the 4 measures relative to diabetic care. In 2010, Massachusetts Health Quality Partners conducted a phone survey to measure the satisfaction of Signature Healthcare's ambulatory physician practice patients, and found improvement in 7 of the 8 questions.

The hospital, due to its reliance on governmental payers and the lack of commercial payers to off-set revenue shortfalls, determined it necessary to position itself for global payment and the associated risks. Signature Healthcare acknowledges the tremendous pressure placed on state and federal governments from the continued escalation beyond inflation of total medical expense and accepts its role in bending the cost curve downward. Furthermore, Signature Healthcare believes that pressure on government resources will likely place continued downward pressure on government fee for service payments. Within this financial environment, it is critical for Signature Healthcare to manage more of the local population's total medical expense, utilizing the savings from reducing waste in the system to fund care and access to

services for Brockton's vulnerable, at risk population. Signature Healthcare's Board of Trustees has endorsed a strategic plan to transition from approximately 10% of revenue from population management to 50% within the next five years.

The transition to an Accountable Care Organization began in 2009 when Signature Healthcare partnered with Blue Cross to manage total medical expense and share in the savings from improving efficiency through the Blue Cross Alternative Quality Contract project. Since that time, Signature Healthcare expanded the number of patients in risk panels by contracting with other managed care organizations. Expanding from the current level of total medical expense management to 50% will require the development of infrastructure and knowledge in managing the total medical expense for very diverse groups of patients including traditional commercial employed populations, elderly, and Medicaid, each of whom have their own unique issues. From a financial perspective, Signature Healthcare made modest progress in bending the total medical expense curve within the Blue Cross population, however profitably managing Medicare patients has proven to be a challenge.

Signature Healthcare's transition to a robust accountable care organization capable of caring for the local diverse population has many components including: network development and management; care coordination; clinical information systems; and data analytics. Though Signature Healthcare began the transition to an accountable care organization several years ago, it is still in the early stages of transition. Signature Healthcare's development of network infrastructure and management began with employment of a broad base of physicians; the addition of a dedicated managed care team with a physician champion; development of an electronic medical record within the hospital and ambulatory practice; and implementation of a data warehouse to aggregate claims data along with the electronic medical records. In relation to network development and management, Signature Healthcare must develop an additional means of engaging physician leaders at the individual PCP practice level; reduce the administrative burden on PCPs and improve their internal systems providing time to focus on population health; develop a pay structure aligned with population management; enhance the capabilities of the data warehouse to assist in analyzing risk; identify patients in need of additional case management; and develop collaborative relationships with post-acute providers.

Care coordination has also been in progress for several years. Signature Healthcare developed an excellent hospitalist program; began the development of pharmacy risk management expertise; and implemented a number of patient centered medical home initiatives. The patient centered medical home concepts applied within the Signature Healthcare practice include improved access during and after hours; interpreter services; establishment of a lipid clinic; electronic systems to determine care needs within the population risk patients; use of electronic reminders in the ambulatory electronic medical record; identification of high risk patients within the risk contracts; improved referral management and extensive involvement in QI and improvement in patient satisfaction. Although some progress has been made in care coordination, this is the most significant area in need of development by Signature Healthcare over the next five years. With limited resources, it is imperative Signature Healthcare invest in areas with the highest return on investment in both improved quality and reduction in total medical expense. Although

the literature contains many references to various programs and approaches to care coordination, consensus does not exist on which programs have the highest degree of benefit or in which order a system should implement various improvements. Signature Healthcare will cautiously develop and implement additional case management; disease management; transitions in care coordination; and patient centered medical home concepts to implement improvements with the highest degree of leverage for total medical expense for Signature Healthcare's unique population.

Clinical information systems received heavy investment in the past few years, with full implementation of an electronic medical record in both the hospital and the ambulatory practices. Further development is ongoing to provide patient access through an electronic portal; integration of the system with other non-Signature Healthcare providers; coordination of data between the data warehouse and the ambulatory electronic medical record; and improvements in the utilization of the electronic medical record for electronic reminders related to chronic care and preventive care.

The development of data analytics has been focused primarily within the Blue Cross population reporting on numerous ambulatory quality measures. This resulted in excellent reporting capability on this portion of Signature Healthcare's population. Additional investment is needed to expand reporting to additional populations; analytical capabilities to understand variations in care and to identify the population needing additional monitoring before they become high users of resources.

Directly Related Initiatives Funded by the U.S. Department of Health and Human Services
Signature Healthcare Brockton Hospital DSTI Projects are not directly related to any initiatives funded by the U.S. Department of Health and Human Services. Signature Healthcare Brockton Hospital will provide updates on our participation in any new HHS-funded initiatives related to our DSTI projects in our biannual DSTI progress reports to be submitted to the Commonwealth.

B. Executive Summary

Signature Healthcare's challenge over the next five years is to leverage the early success in managing total medical expense; investing in programs that have the highest return on investment and likelihood of success, while maintaining and growing the base of primary care physicians for the underserved population. All this in a highly competitive environment while replenishing cash reserves depleted partially from the system's heavy investment in providing access to physician services. The projects selected for focus within the DSTI have many components of patient centered medical home and accountable care organizations. By expanding primary care access we hope to enhance patient/family-centeredness: delivering care with transparency, individualization, recognition, respect, linguistic and cultural competence, and dignity. Such care provides patients/families/caregivers with choice in all matters and possesses an ongoing focus on consumer service, with bi-directional feedback.

Our Chronic Care Congestive Heart Failure program is another patient centered medical home multi-disciplinary team approach to care requiring effective team communication, collaboration and role definition.

Our preventative care data warehouse program incorporates planned visits and follow-up care: in contrast to episodic, reactive care, this manner of primary care delivery tracks patients on an ongoing basis so the practice is informed and ready to address the patient's needs holistically whenever a patient makes contact, and follows up with patients after encounters, as necessary.

Each program fits within Signature Healthcare's five year plan for transformation and need to further enhance network development and management; care coordination; clinical information systems; and data analytics. In addition, the programs touch the DSTI categories of fully integrated delivery system development; improved outcomes and quality; value based purchasing and improving population management.

Specific projects selected for the DSTI include:

Category I

- Improved Access to Care: increase the capacity of primary care physicians to care for more patients in the primary care setting for more efficient and timely preventative and proactive care. Increase the number of patients aligned with the organization to allow for the distribution of and management of risk for at risk populations.

- Improve PCP Compliance with Preventative Testing Leveraging EHR adoption and Data Warehouse: The primary care providers will develop organizational standards for routine health maintenance preventative testing. We will develop a process by which patient's routine health care needs are collected from across disparate health care delivery systems to improve compliance with recognized screening measures.

Category II

- Quality& Efficiency in Primary Care Offices: Creation of a program to improve the quality and efficiency in primary care practices through the implementation of Lean healthcare.

- Development of Congestive Heart Failure (CHF) Disease Management Program: Utilizing evidence-based practices to improve care for Congestive Heart Failure patients and reduce readmissions.

Category III

- Hospital-Based 360° Patient Care Management Program*: Improve the transitions of care for patients who are covered in population risk products. We expect improvements in care we perfect in this area will improve quality and reduce costs. These changes will prepare Signature Healthcare to manage additional population risk and improvements may cross over to other non-risk populations of patients.

- Creation of a Comprehensive Diagnostic Patient Profile: Risk adjustment remains the defining issue for Medicare Advantage health plans and is central to improving the quality of care provided to chronically-ill beneficiaries. Prospective health risk assessments are the most effective way to bring risk adjustment and case management together to drive better medical management, better Star Ratings and higher patient satisfaction.

- Participation in Learning Collaborative: Participation in the learning collaborative will provide a forum for eligible DSTI safety net providers to learn from other providers who share similar goals and capitalize on potential synergies in their efforts.

** Hereafter referred to as the 360° Care Program*

[2]The table below summarizes the projects that will be addressed in this proposal.

Project Title	Description	Three-Year Goals
Category 1 – Further Development of a Fully Integrated Delivery System		
1.1 Improved Access to Care by Improving Primary Care	A central element of transformation is empanelment of patients to care teams capable of improving population health, managing chronic disease and supporting patients to improve in their own health.	Measure and report the number of patients eligible for colorectal screening who underwent colonoscopy
1.2 Improve PCP Compliance with Preventative Testing, Leveraging EHR adoption and Data Warehouse	Create preventative health standards and build a process and tools to aggregate and integrate data across health care systems to allow PCP to coordinate care.	Improve adult PCP compliance with USPHTF preventative testing recommendations
Category 2 – Improved Health Outcomes & Quality		
2.1 Apply process improvement methodology to improve quality and efficiency in primary care offices	Creation of a program to improve the quality and efficiency in primary care practices through the implementation of Lean Healthcare	• Implement patient care centered process improvement projects in practices to increase compliance with preventative care. • Measure process by documentation of standard work for patient process improvement. • Develop and use standard leader work for checking improvement success.
2.2 Development of Congestive Heart Failure (CHF) Disease Management Program	We will expand on accepted heart failure treatment strategies by creating a multi-disciplinary team approach to: • Educate patients and family members • Utilize the best evidence-based clinical management • Create support systems to help patients participate in their care and symptom management • Implement Tracking systems • Coordinate care between inpatient and outpatient settings as well as outpatient specialists and primary care physicians	• Organization of a team to coordinate patient care for congestive heart failure. • Uniformly apply clinical pathways to manage patient care. • Create working partnerships with visiting nurse associations, elder care, palliative care, and hospice services. • Enroll at least 75% of eligible patients in the program.

[2] [2] "MP-P X" stands for Master Plan – Process Measure #X; similarly, "MP-I X" stands for Master Plan – Improvement Measure #X.A

Category 3 - Ability to respond to statewide transformation to value-based purchasing and to accept alternatives to fee-for-service payments		
3.1 Hospital-Based 360° Patient Care Management Program	Create a managed care team to identify and manage severely and chronically ill high risk patients who will use an inordinately high percentage of health care resources. Identify the root cause of suboptimal management of seriously ill members of a senior managed care population.	Improve the transitions and continuity of care for patients covered in population risk products. We expect the improvements in care we perfect in this area will improve quality and reduce admissions. These changes will prepare Signature to manage additional population risk.
3.2 Creation of a comprehensive diagnostic patient profile	Utilize historical claims data to create a comprehensive problem list for patients, and work with primary care providers to identify opportunities to improve coordination of care.	• Development of reporting tools, by diagnosis, to each PCP to assure appropriate testing assessed and evaluated based on patient case assessment • Identification of patients who need monitoring for chronic conditions.
3.3 Participation in a Learning Collaborative	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	Report on lessons learned from participation in learning collaborative as they relate to the hospital's delivery system transformation goals under DSTI.
Category 4 – Common Measures		
4.1.Improved access to Care by Improving Primary Care: measure compliance with colorectal cancer screening for Signature Medical Group patients	Report Data	Signature Medical Group will report on the percentage of patients eligible for colon cancer screening during a twelve month period who underwent screening. This data will be obtained from the medical group electronic medical record and data warehouse and reported annually.
4.2 Improve PCP Compliance with Preventative Testing Leveraging EHR adoption and Data Warehouse	Report Data	Use Data Warehouse to report on Hypertension control by Signature PCPs based upon goals defined by JNC 7. *(Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7)*
4.3 Process Improvement Methodology to Improve Quality and Efficiency in Primary Care Practices	Report Data	Develop a standard set of workflows for delivering hypertension evidence-based care that provides a consistent clinical experience for patients and a consistent process for care teams. Differentiate our organization to payers, employer groups, and government agencies.
4.4 Development of Congestive Heart Failure (CHF) Disease Management Program	Report Data	Research consistently shows a positive return on investment in the care management of CHF patients as this patient population represents an opportunity to reduce the high costs related to the treatment of chronically ill patients.

4.5 Hospital-Based 360° Patient Care Management Program	Report Data	The outcome measure, admissions per 1000 covered lives in our senior managed care plan (Tufts Medicare Preferred), is reported by the Health Plan at regular intervals with a delay necessitated by their data collection methodology. We anticipate (see Category 3, Project 3.1) a measurable reduction in admits/1000 for this population.
4.6 Creation of a Comprehensive Patient Profile	Report Data	Population health management strengthens the physician-patient relationship because it provides for numerous opportunities for the care team and the patient to interact. From a patient satisfaction perspective, patients with the strongest relationships to specific primary care physicians are more likely to receive recommended tests and preventive care. We anticipate an improvement in diabetic testing in the TMP members.

Better Care **Common Measures**	**DY 17 Reporting Date(s) to EOHHS**
4.1 Care Transitions Measure Set (CTM-3) *Voluntary HCAHPS questions* *Data Source: Hospital vendor or Hospital Compare as available*	7/31/14
4.2: Patients who reported that staff "Always" explained about medicines before giving it to them. *HCAHPS Composite (Questions 16 & 17)* *Data Source: Hospital Compare*	1/31/14
4.3: Patients at each hospital who reported that YES, they were given information about what to do during their recovery at home. *HCAHPS Composite (Questions 19 & 20)* *Data Source: Hospital Compare*	1/31/14
4.4: ED Wait Time: Door to Diagnostic Evaluation by a Qualified Medical Personnel *CMS IQR measure (OP-20)* *Data Source: Hospital Compare*	1/31/14
4.5: Pneumonia Immunization CMS IQR/Joint Commission measure IMM-1a[3] Data Source: Hospital Compare	01/31/14

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

4.6: Influenza Immunization (seasonal measure) CMS IQR/Joint Commission measure IMM-2 [4] Data Source: Hospital Compare	01/31/14
4.7: Percent of discharged patients under age 75 who were hospitalized for Chronic Obstructive Pulmonary Disease (Ambulatory Sensitive-Condition Admissions Measure) Modified AHRQ PQI-5: denominator modified to include only discharged hospital inpatients Data Source: Hospital billing data	01/31/14
4.8: Percent of discharged patients under age 75 who were hospitalized for Congestive Heart Failure (Ambulatory Sensitive-Condition Admissions Measure) Modified AHRQ PQI-8; denominator modified to include only discharged hospital inpatients Data Source: Hospital billing data	01/31/14
4.9: Low Birth Weight Rate: number of low birth weight infants per 100 births[5] AHRQ PQI-9 Data Source: Hospital records	01/31/14
4.10: Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for all patients 18 and older (not risk adjusted) See CMS IQR Readmissions Measures (AMI, CHF, and Pneumonia) for a list of standard exclusions, including: 1) index admissions for patients with an in-hospital death, 2) patients transferred from the index facility to another acute care facility, and 3) patients discharged against medical advice.[6] Data Source: Hospital billing data	01/31/14
4.11: Percent of Emergency Department visits for children age 18 or less with a primary diagnosis of asthma--Ambulatory Sensitive-Condition See AHRQ PDI-14 for numerator specification. Denominator specification includes children ages 2 to 17 with an ED visit Data Source: Hospital ED billing data	01/31/14
4.12: Percent of patients with elective vaginal deliveries or elective cesarean sections at greater than or equal to 37 weeks and less than 39 weeks of gestation completed[7] MassHealth Maternity Measure-3 Data Source: MassHealth Quality Exchange(MassQEX)	01/31/14

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

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

[6] 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.

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

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

Project 1.1: Title: Improved Access to Care by Improving Primary Care Access

Master Plan Project: 1.3 Further Develop Integrated Care Network for Primary & Specialty Care

Goal:
The goal of this project is twofold: provide consistent access to patients for timely, efficient, high quality care; and increase total primary care panel size to support our goal of taking on more risk in the management of our patients.[21][22] Signature Healthcare will develop and implement a primary care access plan supporting the transformation of health care delivery toward a patient centered medical home. This plan will incorporate physicians and nurse practitioners or physician assistants (herein referred to as midlevels), space development, after hour care processes, non-primary care providers as needed, and a recruitment and midlevel utilization plan. Midlevel recruitment and practice development will team the midlevel with specific physicians, allowing the midlevel to schedule primary care appointments and support same day access. This approach allows large panels to be shared, effectively reducing the burden on physicians – allowing them to focus on care pathways for chronically ill patients. Properly structured same day access will be available for all Signature Healthcare primary care patients through a centralized program, supporting quality and cost efforts across the organization. This plan keeps patients out of emergency rooms, and supports the provision of the right care, in the right location, within the right time frame.

Rationale:
The Institute of Medicine (IOM) documented disturbing shortfalls in the quality of health care in the United States, including the quality of preventive care services. In its 2001 report, Crossing the Quality Chasm: A New Health System for the 21st Century, the IOM focused national attention on system changes needed to decrease the sizable gap, or chasm, between what we know from evidence and what we do in clinical practice. Quality-of-care indicators document the gaps between recommended preventive services and what is actually done in clinical practice. These gaps illustrate that the availability of sound, evidence-based recommendations for appropriate clinical preventive services is insufficient to ensure that clinicians routinely offer, and patients receive, these services. NPs and other members of a primary care team face barriers to delivering appropriate preventive services.

Signature Healthcare currently employs 33 adult primary care physicians caring for 60,000 patients in primary care practices organized around traditional methods of care delivery. More than a third of these physicians have panels in excess of the 75th percentile. The ideal ratio for PCP-patient is unknown. Variables that can affect this include patient demographics, severity of illness, use of midlevels, use of care pathways, and type of physician whether internal medicine or family medicine. As SHC changes the delivery of care within its primary care practices it expects to observe changes in panel size over time as a result.
There are no panel restrictions amongst our payers at this time

[21] Access to Primary Care Physicians Getting Tougher, Report Finds Boston Globe (2010) July 6
[22] Study Links More Access to Primary-Care Doctors to Improved Health for Seniors, JAMA and National Journal (2011) May 24

Signature Healthcare evaluated care capability in its ambulatory practices and determined the current size and configuration of the employed primary care practice had several fundamental areas for improvement in order to position the system for further transformation. These fundamental issues are: a) current panel sizes and limited utilization of midlevel's limits any successful internal model to establish same day access – fundamental to the medical home initiative; b) the large panel sizes for certain physicians may not provide adequate manpower to focus on patients' chronic illnesses; and c) the total population served by Signature Healthcare primary care physicians is too small to aggregate risk within some patient payer classes. This project addresses the problems caused by large panels through the development of additional same day access capacity and by adding midlevels to some of the primary care practices. Increasing the total population served will be addressed through additional physician and midlevel recruitment.

While the definitions and goals of healthcare reform are varied and hotly debated, core principles make up the foundation of reform efforts: coordinating care across the continuum to improve disease management and prevention; patient centered care providing the correct care in the most appropriate setting; and transferring financial risk for quality and efficiency onto health systems. Each of these elements brings unique pressures to primary care providers and necessitates a restructuring of primary care practices.

The percentage of physicians entering primary care versus specialty training remains low; physicians who enter primary care are more likely to work part time; and lifestyle considerations make younger physicians less inclined to manage large panels, work evenings and weekends as older physicians often did. In the near future, caring for a given population will require an incremental increase in provider Full Time Equivalents (FTEs). The American Medical Group Association estimates these forces will combine to create a shortfall of 50,000 physicians nationwide by 2020. Therefore, Signature Healthcare will need more providers to care for its patients and will need to increase its use of midlevel providers to mitigate what is expected to be a difficult recruiting environment. Increasing the number of providers through the use of care teams, midlevel's, and job sharing will require more space to care for the same patient population. Currently most midlevels in SHC are used for episodic care. Creating teams with midlevels providing longitudinal care to patients as true PCP's is a cultural shift. It is expected that such a shift will take time to gain traction and therefore expect a small increase in these types of appointments in the first few years.

Like many health systems in Massachusetts, Signature Healthcare struggles to meet the access demands of its patients. Large panels, increasing practice demands, expectations for same day access, and time spent managing complex patients all impact access. As a result patients do not always get seen within the ideal time frame. Access is often provided through the emergency department, increasing cost and negatively impacting continuity. To improve same day access, Signature will develop a centralized program utilizing both non-primary care providers and midlevels incorporated into care teams. This will improve access and provide additional time for the existing providers to care for patients with chronic illness.

In addition to addressing providing additional same day access and restructuring the practice through the utilization of midlevel providers, we will improve overall population access to primary care and the size of the population served by Signature Healthcare. This increase in overall population served is necessary for Signature to establish the volume needed within various contracts to successfully spread risk across different insured populations. Approximately 5,000-10,000 patients are the threshold best linked to success in risk contracting so that the size of the population served will mitigate the volatility of claims experience within a small population. While Signature Healthcare currently

cares for 60,000 patients, these patients are spread across a number of health plans; some with volumes too small to adequately risk adjust and manage.
Our risk patients are currently allocated in the following plans:

Blue Cross AQC – 8400
TMP – 1500
Tufts Commercial – 2500
BMC Healthnet – 4600

Therefore, growth in panels is needed to increase the number of patients within separately defined risk populations. Addressing this issue will require increasing the total number of providers in relation to the needs of the community.

Expected Results:
Expansion of primary care is a prerequisite for system-wide improvement, and will have a ripple effect throughout the system. With expanded primary care capacity, more patients can have access to primary care; including the quality of preventive care services which increases opportunities to prevent disease and treat it early and keep people out of the hospital. A central element of transformation is empanelment of patients to care teams capable of improving population health, managing chronic disease and supporting patients to improve in their own health.

- A comprehensive plan to achieve the staffing, space, and processes needed to support access to care for Signature Healthcare.
- Recruitment, space allocation, and access processes as a result of the planning process.
- Increased total panel as a result of above efforts.
- Demonstrated improvement in Colon Cancer screening

Relation to other Projects: This project supports and depends on:

- Preventative testing project requires patient access to care teams to review and monitor compliance with preventive testing. There is an opportunity for midlevel's to be involved in this program.
- Lean project presents the opportunity for improved work flow in primary care practices and allows for the practice to improve access for patients by providing more efficient care.
- Congestive heart failure management project requires post discharge access for patients. Requires PCP practices structured to support disease management pathways.

Project 1.1: Title: Improved Access to Care by Improving Primary Care Access
Master Plan Project: 1.3

SFY 2012	SFY 2013	SFY 2014
Milestone: **1.1.1 [MP-P3]** Develop PCP access plan. The plan will review the current capacity of Signature physicians and midlevel and current access patterns and limitations. The plan will include assessing the need for additional providers in the service area, recruitment and space needs and set a goal to improve access. **Metrics**: Documentation of plan with following core elements: **1.1.1 (1) [MP-P3 Metric 5]** Develop a plan(s) with the following core elements: • Market based needs assessment • Provider recruitment plan to include projected location, ramp up, and support needs • Development of separate midlevel plan to include team based medical care • Space needs and acquisition plan • Development of access protocols • Identify staffing needs of non-PCP providers to facilitate access • Develop a report of current ability to measure access and assessment of new reporting methodologies **Data Source:** Market/Internal assessment **,** IDX, internal space data **Milestone:** **1.1.2 [MP-P2]** Develop plan to assess patient access needs. Plan will assess provision of same day access in the most appropriate settings. The plan will incorporate the use of access protocols and non PCP providers for weekend and evening access. The plan will assess the ability to measure access across the medical group. **Metrics**: Documentation of plan development in core areas: **1.1.2 (2) [MP-P2 Metric 1]** Access protocols. Staffing plan of non-PCP providers to facilitate access. **1.1.2 (3) [MP-P10 Metric 1]** Report baseline measurement of same day access for Family Practice Department at 110 Liberty street practice site.	**Milestone**: **1.1.1 [MP-I-2]** Implement planning from SFY 12 to include recruitment of providers as per plan, acquisition of space as determined in plan, implementation of midlevel PCP partnering. **Metrics:** **1.1.1 (5) [MP-I 2 Metric 1]** Recruit 2 PCP's (Defined by total number of PCP's increased over number present July 2011 independent of any PCP who leaves employ of SMG.) **1.1.1 (6) [MP-P3 Metric4]** Report of space plan based on PCP space requirements of plan and total number and growth of primary care across medical group **Data source**: IDX, internal space data **Milestone:** **1.1.2** [**MP-I 11]** Contract with additional PCP providers as per plan. **Metric:** **1.1.2 (7) [MP-I 11 Metric 1]** Demonstrate increase in undifferentiated primary care appointments as compared to prior year. **Data Source**: IDX **Milestone**: **1.1.3 [MP-I 7]** Implement same day access plan across Signature Medical Group for all PCP practices. Plan to incorporate both day time access in PCP offices and use non PCP providers in evenings and weekends to increase access in off hours. **Metrics**: **1.1.3 (8) [MP-I 7 Metric 13]** Increase number of same day appointments available by 5% over SFY 12 **1.1.3 (9) [MP-P 10 Metric 2]** Establish baseline number of patients seen by non PCP providers per month. **1.1.3 (10)[MP-P 10 Metric 4]** Report of 3rd	**Milestone**: **1.1.1 [MP-I 9]** Reconfigure recruit, space and access needs based on: growth curve of new recruits, impact of PCP-midlevel partnering, retention of physicians, impact of access protocols. **Metrics**: **1.1.1 (11) [MP-P 3 Metric 2]** Documentation of plan that assesses further growth needs for PCP's and midlevel's Develops recruit targets for SY15 Assesses space and infrastructure needs **Data Source**: IDX **Milestone**: **1.1.2 [MP-I -8]** Increase number of PCPs and/or midlevel providers above previous year. **Metric**: **1.1.2 (12) [MP-I- 8 Metric 1**] Demonstrate increase in midlevel primary care providers as compared to prior SY12. **Data Source:** IDX **Milestone:** **1.1.3 [MP-I 11]** Increase midlevel PCP partnering contract with additional PCP providers as per plan. **Metric:** **1.1.3 (13) [MP-I 11 Metric 1]** Target: increase of primary care appointments by 10% from SY12 across primary care mid-level practices. **Data Source**: IDX, , internal space data, market/Internal assessment **Milestone**: **1.1.4 [MP-I 7]** Expand capacity of same day access plan **Metrics**: **1.1.4 (14) [MP-I 7 Metric 3]** Increase number of same day appointments available on average by 10% over SFY 12 **1.1.4 (15) [MP-I 8 Metric 1]** Increase number of patients seen by non PCP providers during year by 10% over SY12

Project 1.1: Title: Improved Access to Care by Improving Primary Care Access **Master Plan Project: 1.3**		
SFY 2012	**SFY 2013**	**SFY 2014**
1.1.2 (4) [MP-P10 Metric 4] Report showing ability to track 3rd next available appointment. **Data source**: IDX	next available appointments **Data source**: IDX	**1.1.4 (16) [MP-I 12 Metric 1**] Continue to use 3rd next available appointment as tracking tool for access. **Data Source**: IDX

Project 1.2: Project Improve PCP Compliance with Preventative Testing, Leveraging EHR adoption and Data Warehouse

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

Goal:

By adopting standards from the United States Preventative Services Task Force, Signature Healthcare will develop organizational standards for adult preventative testing. During the first year (SFY 2012), Signature Healthcare plans to develop a standard for preventative testing – screening tests and immunizations – in one adult primary care practice based upon recommendations from the USPSTDF. Using these nationally recognized standards, we will pilot a paper template and a manual data aggregation process in a single adult primary care practice. Simultaneously, we will establish baseline compliance within the chosen set of standards for our PCPs. After reviewing the manual process, in SFY2013 we will design and build a data warehouse in our test system designed to capture patient specific data. Using this data warehouse to integrate care provided by Signature Healthcare and from multiple other providers, we believe that the PCP can decrease the number of a particular missing screening tests by 5% compared to the baseline set in SFY 2012. In SFY 14, we will expand the program in both breadth and depth. Leveraging the data warehouse, 5 additional adult providers will decrease the number of particular missing screening tests by 5% compared to the baseline set in SFY 2012.

Rationale:

- Signature Healthcare is working toward developing an integrated healthcare delivery system between our community hospital and our 100+ employed multispecialty physician group. A review of the current state of preventative testing within Signature Healthcare demonstrates that for any one patient, the preventative testing data resides in multiple different locations (physical and virtual) and different formats (handwritten paper and electronic). The first 3 years of this project will allow Signature Healthcare to build a model whereby eventually all primary care preventative testing data resides in one virtual location that can be accessed by the provider.
- While we integrate ambulatory and inpatient care delivery within our own system, we must also work to integrate ourselves into the complex healthcare delivery system of southeastern Massachusetts. With a myriad of nearby community hospitals, close proximity to an array of tertiary care facilities all of which are a mix of non-profit and for-profits with varying organizational goals, Signature must design processes that allow for efficient, cost effective care of our patients with the primary care provider at the center of the delivery model. This project lays the groundwork for a technology and a process that can incorporate preventative testing data that occurs outside of Signature Healthcare.
- Currently, PCPs in the Signature Healthcare system deliver only approximately 20-40% of the medical care to their patients due to the proximity of other community and tertiary care hospitals. The presents a significant day-to-day burden of keeping track of a myriad of preventative measure on, in some cases, 3000 patients in a single provider panel if 60-80% of the care occurs elsewhere. Tracking down results, scanning results into the EHR, leafing through reams of paper to find a specific result is inefficient and impractical. By providing the provider a process and repository for aggregating, saving and reporting this data, we strongly believe that there will be two positive

outcomes. First, there will be a simple way for providers to identify gaps in a patients care so that some preventative care may occur at times when "preventative care" is not on the agenda for a specific patient visit. Secondly, a meaningful patient summary page would help the provider avoid redundant/unnecessary testing.

- To measure quality in an environment where Signature Healthcare PCPs only have 20-40% of patient data, it is essential that Signature Healthcare create its own tool for defining, measuring and reporting quality. The quality measures that we have chosen are drawn from the United States Preventative Health Task Force's list of Grade A and B recommendations. While we acknowledge that all of these guidelines would be ideal, the sheer number (46) is beyond the time scope of this project. The measures we have chosen focus on adult primary care.
    - PCP Preventative Measures
        - Blood Pressure Screening in Adults
        - Breast Cancer Screening
        - Cervical Cancer Screening
        - Cholesterol Abnormality screening in men 35 and older
        - Cholesterol Abnormality screening in women 45 and older
        - Colorectal Cancer Screening

Expected Results: Reduction in missing USPHTF recommended screening tests for adult primary care patients at Signature Healthcare.

Relation to other Projects: This plan dovetails with a myriad of other Signature Healthcare endeavors. Once built, the data warehouse can be expanded to disease specific patient needs like congestive heart failure and other chronic diseases as we try to focus care around the PCPs. Signature Healthcare has plans to grow primary care practices while simultaneously becoming more operationally efficient and this tool will play a role in helping primary care providers reconcile these potentially divergent goals.

Project 1.2: Project Improve PCP Compliance with Preventative Testing, Leveraging EHR adoption and Data Warehouse Master Plan Project: 1.4		
SFY 2012	**SFY 2013**	**SFY 2014**
Milestone: **1.2.1[MP-P9]** Complete a review of the United States Preventative Services Task Force (USPSTF) recommendations for adults and pilot a patient non-specific paper template. **Metric**: **1.2.1 (1) [MP-P9 Metric 1]** Sample of blank paper template. **Data Source:** Example of paper form **Milestone:** **1.2.2[MP-P10]** Provide baseline data with compliance for the 6 identified USPSTF adult preventative tests. **Metric**:**[MP-P10]** Provide currently measurable baseline compliance for: **1.2.2 (2) [MP-P10 Metric1]** Breast cancer screening Cervical cancer screening Colorectal cancer screening Cholesterol screening in men Cholesterol screening in women Blood pressure screening for all current Signature Adult PCPs NQF #13 **Data Source:** Report from Allscripts	**Milestone:** **1.2.1** [MP-P13] Completion of warehouse specs with tables of data representing the screening measures. **Metric:** **1.2.1 (3**) [MP-P13 Metric 1] Written plan describing structure and functionality of the application. **Data Source:** Written Plan of schema and protocol **Milestone:** **1.2.2** [MP-I 2] A 5% reduction in missing preventative testing for one measure for a pilot provider compared to SFY 2012. **Metric:** **1.2.2 (4)** [MP-I 2Metric2] # of patients who completed a particular preventative measure in SFY 2013 compared to SFY 2012 for single provider. **Data Source:** Report showing compliance with Preventative measure for SFY 2012 from Allscripts (EMR) and report showing compliance with preventative measure from data warehouse for SFY 2013. **Milestone:** **1.2.3** [MP-P 7] The process by which a provider accesses, updates and acknowledges the data will be defined. **Metric:** **1.2.3 (5)** [MP-P 7 Metric 1] Written protocol for how providers use the system. **Data Source:** Written Plan of schema and protocol Screenshot of Tool showing presence of one preventative measure.	**Milestone:** **1.2.**1 [MP-I 2] A 5% reduction in missing preventative measure for 5 (five) adult PCPs compared to their baseline in SFY 2012 for one measure **Metric:** **1.2.1 (6**) [MP-I 2Metric2] % of patients who completed a particular preventative measure in SFY 2013 compared to SFY 2012 for 5 (five) adult PCP providers. **Data Source:** Report showing compliance with Preventative measure for SFY 2012 from Allscripts (EMR) and report showing compliance with preventative measure from data warehouse for SFY 2014. **Milestone:** **1.2.2** [MP-I 2] 5% reduction in missing preventative measure for 3 of the 6 measures for pilot provider compared to SFY 2012. **Metric:** **1.2.2 (7)** [MP-I 2 Metric 5] • Breast cancer screening: the pilot provider's baseline % compliance for that measure in SFY 2012 will be compared with the achieved compliance for SFY 2014. • Cervical cancer screening: the pilot provider's baseline % compliance for that measure in SFY 2012 will be compared with the achieved compliance for SFY 2014. • Blood pressure screening: the pilot provider's baseline % compliance for that measure in SFY 2012 will be compared with the achieved compliance for SFY 2014. • Cholesterol screening in men the pilot provider's baseline % compliance for that measure in SFY 2012 will be compared with the achieved compliance for SFY 2014. • Cholesterol screening in women the pilot provider's baseline % compliance for that measure in SFY 2012 will be compared with the achieved compliance for SFY 2014. • Colorectal screening the pilot provider's baseline % compliance for that measure in SFY 2012 will be compared with the achieved compliance for SFY 2014. **Data source:** SFY 2012 report from Allscripts EMR & SFY 2104 report from data warehouse.

III. Category 2 – Improved Health Outcomes & Quality

Per the Waiver Terms and Conditions, the purpose of Category 2 Innovation and Redesign is "investments in new and innovative models of care delivery that have the potential to make significant, demonstrated improvements in patient experience, cost and disease management."

Signature Healthcare is a leader in delivery system innovation. Our integrated healthcare delivery system has allowed us to implement effective methods for improving quality, efficiency and expanding access, all with the goal of containing cost.

Our Category 2 plans were developed with the overarching goals of the Triple Aim.

Applying Process Improvement Methodology to Improve Quality and Efficiency in Primary Care Practices (LEAN Healthcare) incorporates patient safety, patient centeredness, efficiency and patient satisfaction. Transitioning primary care physicians from episodic care to a medical home environment will require the providers schedule additional time with patients. To sustain improvement in the care of patients in the primary care office, the systems and processes utilized in the office need to be standardized and combined with effective measurements and engaging staff in a continuous improvement culture. The lessons learned and best practices that stem from these improvements will be documented and shared among the project sites and help pave the way for enhancing the rollout of these initiatives across the system.

Development of Congestive Heart Failure (CHF) Disease Management Program will test new ways of managing the health of this population. The development of the CHF Disease Management Program at Signature Healthcare will provide a forum for regular collaboration of the entire team of care providers – those within Signature as well as our external partners – to include local visiting nurse associations, nursing homes, skilled nursing facilities, elder care services and palliative and hospice services. Meetings of the multi-disciplinary team will allow for the discussion and enhancement of care plans and protocols, the ability to provide timely assessments of targeted and actual outcomes, the sharing of successful interventions and an on-going methodology towards continuous process improvement where deficiencies are identified.

Project 2.1: Apply Process Improvement Methodology to Improve Quality and Efficiency in Primary Care Practices

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

Goal:

Creation of a program to improve the preventive care quality and efficiency in primary care practices through the implementation of Lean Healthcare. Lean, as applied to medicine, considers the use of resources (human or otherwise) for anything other than what adds value to the patient's care or experience to be wasteful. Using Lean tools to identity and progressively eliminate muda (waste) links human performance, process performance and system performance into transformational performance in the delivery system; identifying what is of value to the patient, managing the patient's journey, facilitating the smooth flow of patients and information, introducing "pull" in the patient journey (e.g., advanced access), and/or continuously reducing waste by developing and amending processes.[23][24] The interventions will focus on improving documentations of body mass, smoking status and medication reconciliation. This program consists of training the staff in one or more primary care offices on Lean fundamentals, development of balanced score cards, suggestion systems and problem-solving methodologies to reduce waste, improve efficiency, and identify and improve patient-centered care and safety issues. The short-term goal is to train the staff in Lean management methodologies and create the infrastructure necessary for its implementation. The medium goal is to conduct kaizen improvement events in one adult practices to develop a baseline for improvement in clinical processes, with a long term goal of developing an action plan to apply improvements learned from the one kaizen events conducted in SFY2013 that can be applied to additional adult Primary Care practices and achieve improvement in documentation of BMI (body mass index), smoking status or medication reconciliation in the three pilot practices.

Rationale:

Lean, as implemented at Signature Healthcare, is a management system that can be applied to any area and is designed to achieve operational excellence by continuous process improvement. Over a year ago we began the process to implement Lean at Signature Healthcare. The process began with an intensive educational program for the Executive Leadership Team and selected managers. The goal was and is to gain a better appreciation for all the system has to offer – its applicability to every aspect of the organization and its potential to transform the culture. Many institutions focus primarily on Lean tools and projects without the interconnecting system, which makes it particularly difficult to sustain the improvements made over time.

Although very early in the process, we've seen enough positive change from daily meetings, the use of balanced score cards, and the few Lean improvement activities we've conducted to recognize the value this type of system can have in transforming Signature Medical Group from a traditional practice model to a patient centered medical home.

The physician practices at Signature, like most primary care practices, have an opportunity to improve the standardization of care processes, quality improvement methods, and routine monitoring and reporting infrastructure necessary to sustain change over time. Signature will use

---

[2323] Lean in Primary Care: The Basics – Sustaining Transformation *Asian Hospital and Healthcare Management* (2011) 18
[24] The Phoenix Project - Integrating Effective Disease Management Into Primary Care Using Lean Six-Sigma Tools Duluth Clinic presentation

consulting support from the Kennametal Center for Operational Excellence (KCOE) and the Greater Boston Manufacturing Partnership (GBMP) to implement targeted quality improvement through Kaizen events and an overall management improvement infrastructure to sustain these changes and other process improvement changes over time. Signature believes this rigorous cultural transformation process coupled with targeted process improvement will lead to clinical improvement and standardized processes.

- Signature's physician practices have not previously invested in Lean quality improvement and the management infrastructure necessary to sustain change over time. Without these basic quality improvements (error proofing, standardization, work place simplification, measurement and leadership, standard work processes) or a standardized quality management infrastructure, changes made to transform care in the practices would likely not be sustained over time. Many studies have shown that 75% of business transformation fails to sustain change over time.

- While the use of improvement methods from other industries has some limited, but generally non-sustained successes, one exception is the adoption of Lean management to healthcare. As noted in an IHI White Paper, Lean management principles have been successfully applied in healthcare. Adopting a Lean culture naturally leads to the Institute of Medicine six aims by reducing waste, improving flow and achieving safe, patient-centered care. Lean has the structure to encourage the identification of defects and waste, with the flexibility needed in the dynamic environment of healthcare. (Going Lean in Health Care Innovation Series 2005, Institute for Healthcare Improvement). Much has been published about the safety of healthcare and the amount of waste in its delivery. The Institute of Medicine report *To Err Is Human* noted that according to two studies, between 44,000 and 98,000 Americans die each year because of medical error. Medication errors in particular account for more than 7,000 deaths a year, more than the 6,000 deaths attributed to workplace injuries. (To Err Is Human: Building a Safer Health System (2000) Institute of Medicine). Factors needed to improve care include strong leadership for safety, an organizational culture that encourages recognition and learning from errors, and an effective patient safety program. The follow-up document, *Crossing the Quality Chasm*, noted that in order to achieve a safer health system, healthcare has to be safe, effective, patient-centered, timely, efficient and equitable. (Crossing the Quality Chasm: A New Health System for the 21st Century (2001) Institute of Medicine). Lean Healthcare, with its emphasis on waste reduction and employee empowerment to solve problems at the operational level, is uniquely equipped to address all of these issues. Many studies have been published addressing the amount of waste in the delivery of healthcare in this country. One example is a Thomson-Reuters white paper, *Where Can $700 Billion In Waste Be Cut Annually From The U.S. Healthcare System?,* published in October of 2009. According to the analysis, the U.S. healthcare system wastes between $600 billion and $850 billion annually or approximately one-third of the nation's healthcare bill. The most significant drivers of waste were administrative inefficiency, unnecessary treatment, medical errors, and fraud based on a review of published research and analyses of proprietary healthcare data.

  Most studies have been directed towards inpatient populations. The extent to which these same problems exist in outpatient settings is not as well known. It is critical to have a system that can readily identify defects as they occur and effectively and efficiently respond to them.

  Transitioning primary care physicians from episodic care to a medical home environment will take more time in each visit, and require processes to be improved within the practices. To sustain improvement in the care of patients in the primary care office, the systems and

processes utilized in the office need to be standardized and combined with effective measurements and engaging staff in a continuous improvement culture. Signature Medical Group (SMG) has focused the last few years on improving ambulatory quality within the Blue Cross AQC contract, however, many of the improvements were implemented and sustained through the data warehouse and additional staff in the referral and quality departments. Process changes will need to be imbedded within the practices to not only sustain those improvements but also build upon them.

- By deploying the project in a step-wise fashion, it is structured in a way to first explain the rationale behind the methodology and work to promote the necessary change in culture. With an understanding of Lean and some of the needed tools, the project calls for a kaizen event during which that knowledge can be applied. The experience gained from that kaizen will allow for more kaizen events and afford the organization the opportunity to disseminate lessons learned; accelerating change and re-enforcing culture change.
- A preliminary assessment of patient-centered elements of Signature Medical Group's electronic health record identified three problematic areas. One, medication reconciliation, is a patient safety measure. The other two, body mass index and smoking status, are patient care measures. As part of the Lean deployment project, the designated practice will select one of the three measures and apply the Lean methodologies learned in SFY 12 to effect a five percent improvement over baseline in SFY 13 and a ten percent improvement over baseline in SFY 14 **.**

Expected Results: By the end of SFY 2014, one adult medicine practice, will have:

- Demonstrated improvement in clinical processes in the pilot practices
- Completed the training of staff in the Introduction to Lean and Workplace Organization(5S/6S)
- Developed a Balanced Score Card
- Developed a patient safety cross
- Developed an employee suggestion system
- Developed a problem solving method and forms and constructed a problem solving board
- Completed a kaizen event

These results will be evidenced by documented participation in the training program and verification of the presence and appropriate use of Balanced Score Cards, patient safety crosses, employee suggestions systems and problem solving sheets and boards. Each kaizen event will have a report outlining the pre-kaizen assessment, the event itself, lessons learned, and post-kaizen event follow-up. The kaizen event reports will be shared among the pilot site A .The ultimate goal is to spread the improvements to all sites within Signature Medical Group (SMG) but the initial roll-out will focus on Practice A since they will have the infrastructure necessary to support sustained improvements. Signature medical group consists of 17 sites. Site A was selected because it is the location of our first kaizen event (5S) and where we have started to deploy Lean. This practice accounts for 5.9% of the arrived appointments for Signature Medical Group.

Additional improvements focused on the needs of target populations will be realized through the use of the lean system, which involves the tracking key measures, root cause problem solving and employee suggestions. The problem solving and suggestion systems leverage the Plan Do Check Act (PDCA) improvement methodology, also known as the scientific method, to plan, test, refine and standardize process

improvements. The lessons learned and best practices that stem from these improvements will be documented and shared among the project sites.

Relation to other Projects: Lean Healthcare is a management system that can be applied to any project in any area of the organization. The goal setting, visual management and process improvement initiated through lean can help the practices implement patient throughput changes to improve patient access (Project 1.1); error proof processes to improve preventive testing (Project 1.2); and manage primary care access for post discharge CHF patients (Project 2.2).

Project 2.1: Apply Process Improvement Methodology to Improve Quality and Efficiency in Primary Care Practices **Master Plan Project: 2.7**		
SFY 2012	**SFY 2013**	**SFY 2014**
Milestone: **2.1.1[MP-P 9]** Completion of Lean skills course development. **Metrics:** **2.1.1 (1) [MP-P 9 Metric 1]** Develop a Lean skills training program and calendar. **Data Source:** Training calendar **Milestone:** **2.1.2** [**MP-P 14]** Completion of goal setting process in one pilot practices (designated Practice A). **Metrics:** **2.1.2 (2) [MP-P 14 Metric 1)]** Develop a balanced score card for Practice A with practice level goals for people, quality, and reduction of waste from the perspective of the patient. Develop patient safety cross for practice A to identify and measure patient safety problems in the practices evidenced by documentation of utilization of the safety cross. **2.1.2 (3) [MP-P 16 Metric 1]** Develop a baseline of the proposed measures for practice A for documentation of BMI, smoking status or medication reconciliation. **Data Source:** • Documentation of each metric at the pilot practices. • Copy of balanced scorecard documentation, and internal documents. **Milestone:** **2.1.3 [MP-P 15]** Completion of employee suggestion system in practice A. **Metrics:** **2.1.3 (4) [MP-P 15 Metric 1]** Develop an employee suggestion system in practice A that facilitates employee's engagement in continuous process improvement. Evidenced by the sample suggestions completed by the staff. **Data Source:** Documentation of each metric at the pilot practices.	**Milestone:** **2.1.1 [MP-P 17]** Completion of kaizen process improvement events in Practice A along with a method to measure and sustain the changes over time. **Metrics:** As part of the Kaizen: **2.1.1** (**5**) **[MP-P 17 Metric 1]** Implement at least one patient care centered process improvement project in 1 practices evidenced by documentation of kaizen event. **2.1.1 (6) [MP-P 17 Metric 2]** Develop standard work for patient process improvement. **2.1.1 (7) [MP-P 17 Metric 3]** Develop standard leader work for checking improvement success. **Data Source:** Kaizen event report which would include pre-kaizen assessment, the kaizen event itself, lessons learned, and relevant action plans. **Milestone:** **2.1.**2 **[MP-I 4]** Apply lessons learned to Practice A and achieve improvement in documentation of BMI, smoking status or medication reconciliation. **Metric:** **2.1.2** (**8**) **[MP-I 4 Metric 1]** Implement process improvement lessons to achieve at least a 5% improvement over the SFY 2012 baseline, in either documentation of BMI, smoking status or medication reconciliation in Practice A. **Data Source:** Kaizen event reports which would include pre-kaizen assessment, the kaizen event itself, lessons learned, and relevant action plans.	**Milestone:** **2.1.2** [**MP-I 4]** Apply lessons learned to achieve further improvement in documentation of BMI, smoking status or medication reconciliation in Practices A. **Metric:** **2.1.2 (9) [MP-I 4 Metric 1]** Implement process improvement lessons to achieve at least a 10% improvement over SFY 2012 baseline in either documentation of BMI, smoking status or medication reconciliation in Practice A **Data Source:** Kaizen event reports which would include pre-kaizen assessment, the kaizen event itself, lessons learned, and relevant action plans.

Project 2.2: Development of Congestive Heart Failure (CHF) Disease Management Program

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

Goal:

Signature Healthcare Brockton Hospital has a high rate of readmissions after a sentinel admission for congestive heart failure (www.hospitalcompare.hhs.gov). In response to these statistics, Signature Healthcare will create a program to provide comprehensive management of patients with congestive heart failure. The reality is that most high-risk patients have multiple chronic diseases; yet the other reality is that systems starting to implement effective care transitions need to learn how to manage one in order to learn how to manage the complexity of multiple diseases.[25][26][27] This program consists of an enrollment process; clinical pathways; novel communication tools among patients, primary care physicians, cardiologists, and other specialists as appropriate; coordination with supportive services/community partners such as visiting nurses, palliative care and hospice; and strategies to increase patient participation in their care. Our program will lead to the following outcomes:

- Enrolled patients getting guidance and tracking through the program
- A higher percentage of qualifying patients seeing their primary care physician and cardiologist on an appropriately regular basis

Rationale:

Congestive heart failure is the number one cause of admission in the elderly, with prevalence tied to advancing age, hypertension and coronary heart disease. It accounts for 2,007 admissions per 100,000 patient years and the one-year mortality after heart failure hospitalization at a staggering 29.6% (JAMA, October 19, 2011, Chen, Jersey et al in a Fee for Service Medicare Claims Analysis). Non-compliance with medical regimens, lack of appropriate clinical pathways, the presence of co-morbidities and complex social situations all contribute to heart failure admissions and readmissions. Heart failure management programs can be simplified to concentrate on three accepted categories: (1) Monitoring and fluid management, (2) Sustaining therapeutic modifications, and (3) Patient education (Konstam et al, JACC 2010).

We will expand on accepted heart failure treatment strategies by creating a multi-disciplinary team approach to:

- Educate patients and family members
- Utilize the best evidence-based clinical management
- Create support systems to help patients participate in their care and symptom management
- Implement Tracking systems

---

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

[26] Improving Chronic Illness Care: Findings From a National Study of Care Management Processes in Large Physician Practices Med Care Res Rev (2010) 67(3): 301-320

[27] Bottom-up Implementation of Disease-Management Program: Results of a Multi-site Comparison BMJQS (2011) 20(1): 76-86

- Dedicate coordination of care between inpatient and outpatient settings as well as outpatient specialists and primary care physicians and, as an outcomes measure, track improvement in the percent of patients[28] discharged with a primary diagnosis of congestive heart failure who make their scheduled appointment with their primary physician or cardiologist within the specified seven days after discharge.

Expected Results:

- Identify a target Traditional Medicare population – CHF Patients with Signature Medical Group Primary Care Physicians
- Organization of a team to coordinate patient care for congestive heart failure
- Uniformly apply clinical pathways to manage patient care
- Create working partnerships with visiting nurse associations, elder care, palliative care, and hospice services
- Enrolled at least 75% of eligible patients in the program
- 75% of enrolled CHF patients discharged from Signature Healthcare Brockton Hospital will be contacted in 24 hrs (72 hrs for weekend discharge) by the Cardiology Access Coordinator. Where necessary, and if the patient is eligible for VNA, the VNA can serve as an alternative resource to patients during the weekend.
- 75% of Enrolled CHF patients will have a Risk Assessment by the Cardiology Access Coordinator
- Increase the percentage of patients (defined per footnote 9 below) who follow up with their primary physician or cardiologist within seven days of discharge.[29]

The development of the CHF Disease Management Program at Signature Healthcare will also provide a forum for regular collaboration of the entire team of care providers – those within Signature as well as our external partners – to include local visiting nurse associations, nursing homes, skilled nursing facilities, elder care services and palliative and hospice services. Meetings of the multi-disciplinary team will allow for the discussion and enhancement of care plans and protocols, the ability to provide timely assessments of targeted and actual outcomes, the sharing of successful interventions and an on-going methodology towards continuous process improvement where deficiencies are identified.

Related Projects:

Managing this population requires a concerted effort amongst the entire care team. Access (1.1) to primary & Specialty care is critical.
The Chronic Care Model is an organizational approach to caring for people with chronic diseases in a primary care setting. The system is population-based and creates practical, supportive, evidence-based interactions between an informed, activated patient and a prepared, proactive practice team. The Chronic Care Model identifies and engages the essential elements of the health care system and active use of community resources that encourage high-quality chronic disease care. With oversight by the Clinical Documentation analysts (Creation of a comprehensive diagnostic patient profile 3.2) a comprehensive assessment of other co-morbidities may be defined which may help with additional care management support.

---

[28] Medicare patients with a SMG primary physician

[29] Baseline defined as the percent of Medicare patients with a Signature Medical Group primary physician discharged with a primary diagnosis of congestive heart failure that see their primary physician or cardiologist for a scheduled appointment within seven days of discharge prior to the start of the CHF program.

Project 2.2: Development of Congestive Heart Failure (CHF) Disease Management Program **Master Plan Project: 2.1**		
SFY 2012	**SFY 2013**	**SFY 2014**
Milestone: **2.2.1** [**MP-P3]** Develop care protocols, policies and/or procedures to be followed for the target patient population with a chronic disease/condition. Develop care protocols, policies and/or procedures to be followed for the target patient population with a chronic disease/condition ;create Heart Failure Task Force **Metric:** **2.2.1 (1)** [**MP-P3 Metric 1]** SHC Heart Failure Task Force established with regularly scheduled meetings held, identification of resources; and minutes of SHC Heart Failure Task Force. **Data Source:** SHC Cardiology Section Chief, Human Resources **Milestone:** **2.2.2 [MP-P 2]** Develop CHF registry to track CHF patients admitted to Signature Healthcare. The CHF Registry would serve as a data collection warehouse for CHF patients; data elements to be captured in the CHF registry would include: Date of Index Admission, Re-Admission Dates, Principle Diagnosis, Length-of-Stay, Ejection Fraction, Medications on Discharge and Disposition (Home, Home with Services, Placement). **Metric:** **2.2.2 (2) [MP-P 2 Metric 1]** As measured using reports created from the patient registry. **Data Source:** SHC Heart Failure Task Force, Information Systems **Milestone:** **2.2.3** [**MP-I 2]**25% of the targeted population admitted with CHF will be enrolled in the patient registry and followed by the SHC Cardiology Access Coordinator**.** **Metric:** **2.2.3 (3)** [**MP-I 2 Metric 1]** Working registry as evidenced by copy of registry reporting of CHF Admissions and readmissions. **Data Source**: SHC EHR and data warehouse **Milestone:** **2.2.**4 [MP-P13]Develop CHF protocols to be followed in the care of the targeted population **Metric:**	**Milestone:** **2.2.1** [**MP-I 2]**50% of the targeted population admitted with CHF will be enrolled in the patient registry and followed by the SHC Cardiology Access Coordinator. **Metric:** **2.2.1 (8) [MP-I 2 Metric 1]** As measured using reports created from the patient registry for patient. **Data Source:** SHC Heart Failure Task Force, Information Systems **Milestone:** **2.2.2 [MP-P 4]**Heart Failure Task Force will share protocols with community partners to improve care and communication across the continuum **Metric:** **2.2.2 (9) [MP-P 4 Metric 1]** Utilizing the patient registry, develop reports on outcomes as they relate to patients referred to local partners for follow-up. Evidenced by minutes of the Heart Failure Task Force meetings. **Data Source:** SHC Heart Failure Task Force, Community Partners **Milestone:** **2.2.3 [MP-P 5]** Implement a program to schedule follow-up appointments with primary care physicians and/or cardiologists within 7days5days of discharge. **Metric:** **2.2.3 (10) [MP-P 5 Metric 1]** Reports from registry will be created to monitor CHF discharge and the scheduling of follow-up care with the appropriate clinicians. Evidenced by copy of report. **Data Source:** Cardiology Access Coordinator, Heart Failure Task Force **Milestone:** **2.2.4 [MP-I 3]**50% of Enrolled CHF patients will have a Risk Assessment by the Cardiology Access	**Milestone:** **2.2.1 [MP-I 2]** 75% of the targeted population admitted with CHF will be enrolled in the patient registry and followed by the SHC Cardiology Access Coordinator. **Metric:** **2.2.1 (14) [MP-I 2 Metric 1]** As measured using reports created from the patient registry for patients **Data Source:** SHC Heart Failure Task Force, Information Systems **Milestone:** **2.2.2 [MP-I 1]** 75% of enrolled CHF patients discharged from Signature Healthcare Brockton Hospital will be contacted in 24 hrs (72 hrs for weekend discharge) by the Cardiology Access Coordinator. **Metric:** **2.2.2 (15) [MP-I1 Metric 1**] Follow up calls will be documented in the outpatient EHR as evidenced by documentation of a sample of 10 charts. **Data Source:** SHC Cardiology Access Coordinator, Information Systems **Milestone:** **2.2.3 [MP-I 3]**75% of Enrolled CHF patients will have a Risk Assessment by the SHC Cardiology Access Coordinator **Metric:** **2.2.3 (16) [MP-I 3 Metric 1]** Risk assessment documented in patient record and CHF registry to provide appropriate post-discharge services.

Project 2.2: Development of Congestive Heart Failure (CHF) Disease Management Program **Master Plan Project: 2.1**		
SFY 2012	**SFY 2013**	**SFY 2014**
2.2.4 (4) [MP-P13 Metric 2] As evidenced by the documentation in the SHC Cardiology Section Meeting minutes of the creation and approval of said protocols. **Data Source:** SHC Cardiology Section Chief, Heart Failure Task Force **Milestone:** **2.2.5 [MP-I 1]**25% of enrolled CHF patients discharged from Signature Healthcare Brockton Hospital will be contacted in 24 hrs (72 hrs for weekend discharge) by the SHC Cardiology Access Coordinator. **Metric:** **2.2.5 (5) [MP-I 1 Metric 1]** Follow up calls will be documented in the outpatient EHR as evidenced by documentation of a sample of 10 charts. **Data Source:** SHC Cardiology Access Coordinator, Information Systems **Milestone:** **2.2.6 [MP-I 3]** 25% of Enrolled CHF patients will have a Risk Assessment by the SHC Cardiology Access Coordinator **Metric:** **2.2.6 (6) [MP-I 3 Metric 1]** Risk assessment documented in patient record and CHF registry to provide appropriate post-discharge services. As evidenced by a copy of the registry. **Data Source:** SHC Cardiology Access Coordinator, SHC Case Management, Information Systems **Milestone**: **2.2.7** [**MP-I 5]** Baseline measurement of percentage of patients (Medicare, with SMG primary physician) discharged for a primary diagnosis of CHF who complete a scheduled post-discharge visit with their PCP or SHC cardiologist within 7 days. **Metric:** **2.2.7 (7) [MP-I 5 Metric 1]**Primary discharge diagnosis CHF and arrived visit at PCP or SHC cardiologist's office within 7 days of discharge documented from arrived visits; patient population as defined above. **Data Source:** Last 25 unique discharges for CHF from Signature Healthcare Brockton Hospital prior to start of CHF program, patient	Coordinator **Metric:** **2.2.4 (11) [MP-I 3 Metric 1]** Risk assessment documented in patient record and CHF registry to provide appropriate post-discharge services. As evidenced by a copy of the registry. **Data Source:** SHC Cardiology Access Coordinator, Case Management, Information Systems **Milestone:** **2.2.5[MP-I 1]** 50% of enrolled CHF patients discharged from Signature Healthcare Brockton Hospital will be contacted in 24 hrs (72 hrs for weekend discharge) by the SHC Cardiology Access Coordinator. **Metric:** **2.2.5 (12) [MP-I 1 Metric 1] Follow** up calls will be documented in the outpatient EHR as evidenced by documentation of a sample of 10 charts. **Data Source:** SHC Cardiology Access Coordinator, SHC Heart Failure Task Force **Milestone:** **2.2.6 [MP-I 5]**Percentage of patients (Medicare, with SMG primary physician) discharged for a primary diagnosis of CHF who complete a scheduled post-discharge visit with their PCP or SHC cardiologist within 7 days increased by 5% from baseline. **Metric:** **2.2.6 (13) [MP-I 5 Metric 1]** Primary discharge diagnosis CHF and arrived visit at PCP or SHC cardiologist's office within 7 days of discharge documented from arrived visits, patient population as defined above. **Data Source:** 25 consecutive unique discharges for CHF from Signature Healthcare Brockton Hospital during SFY 2013, patient population as defined above. Allscripts	Evidenced by a copy of the registry. **Data Source:** SHC Cardiology Access Coordinator, SHC Case Management, Information Systems **Milestone:** **2.2.4 [MP-I 10]** Improve disease self-management by incorporating "teach-back" education methodologies for enrolled CHF inpatients. **Metric:** **2.2.4 (17) [MP-I 10 Metric 1]** The use of the teach back method will be documented as evidenced by a sample of 10 charts. **Data Source:** SHC Cardiology Access Coordinator, SHC Heart Failure Task Force, Nursing Staff **Milestone:** **2.2.5 [MP-I 5]**Percentage of patients (Medicare, with SMG primary physician) discharged for a primary diagnosis of CHF who complete a scheduled post-discharge visit with their PCP or SHC cardiologist within 7 days increased by 10% from baseline. **Metric:** **2.2.5 (18)[MP-I 5 Metric 1]** Primary discharge diagnosis CHF and arrived visit at PCP or SHC cardiologist's office within 7 days of discharge documented from arrived visits, increased by 10% from baseline **Data Source:** 25 consecutive unique discharges for CHF from Signature Healthcare Brockton Hospital during SFY 2014, patient population as defined above.

Project 2.2: Development of Congestive Heart Failure (CHF) Disease Management Program Master Plan Project: 2.1		
SFY 2012	**SFY 2013**	**SFY 2014**
population as defined above; Allscripts or IDX arrived appointment record.	or IDX arrived appointment record.	Allscripts or IDX arrived appointment record.

IV. Category 3 – Ability to respond to statewide transformation to value-based purchasing and to accept alternatives to fee-for-service payments.

Project 3.1: Hospital-Based 360° Patient Care Management Program – the most comprehensive program to identify and manage the most seriously ill members of a defined managed care population

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

Goal:
Design and implement a program to identify and case/disease manage the most seriously ill members of a defined managed care population. We will create a hospital-based managed care team to identify the severely and chronically ill high risk patients in a pre-defined population of risk contract Medicare patients who historically have used an inordinately high percentage of health care resources, and discover the root cause of suboptimal management of seriously ill members of this senior managed care population. We will identify these most seriously ill members in two ways: on presentation to our emergency department and by creating and testing screens to find those who have a high likelihood of presenting, but have not yet presented to the emergency department. This population has unique medical resources available to them as a consequence of their managed care insurance product selection. We will thus skillfully provide and coordinate medical care for these patients to improve outcomes and reduce hospital admissions and hospital days per 1000 covered lives as easily measurable markers of quality care and effectiveness.

We will create a highly sophisticated managed care team, led by a physician/administrator partnership. This team's role will be clinical, organizational, political and financial. The primary focus of the team, which will start "clinical" and gradually expand to "global" will be to evaluate and manage patients either as they present to the Brockton Hospital Emergency Department or are referred for direct admission to Brockton Hospital or are identified as "high risk" via nationally recognized criteria and criteria developed by the managed care team. The members of the team will evaluate and manage these patients through their continuum of care and manage communication and coordination with patient, family, primary physician, appropriate specialists and other support teams (e.g., VNA services) - all in an intensive personalized manner similar to the best 360° Hospital Program medical practices. They will determine via algorithms patients the team will follow, in addition to the primary physician and/or specialists to assure coordination of complex care.

This project is aimed at immediately improving the quality of care and simultaneously decreasing the cost for the highest risk patients in the designated population. By designing the 360° Care Program for smaller volumes per provider, we are enabling more time per patient for face-to-face encounters to enhance the care experience and for better care planning, coordination and integration. This should disrupt a long-entrenched culture of fragmentation of care (not unique to our organization). The changes the managed care team makes that are effective will be considered for expanded use, not only within Signature Healthcare, but by reporting those effective changes to the healthcare plan at provider meetings, potentially expand their use regionally.

Rationale:

- We became aware of our opportunities to improve patient care through insurer-provided data and reports comparing us to their networks at large and individual groups within those networks. Through investigation on reducing the level of admissions per 1000 within the Medicare managed care population, Signature discovered the fragmentation of care between the PCP, specialists and multiple hospitalists impacted the coordination of care for these patients. We believe centralizing the care for the highest utilizers of service among a small number of hospitalists and nurse practitioners with a smaller panel of patients will allow these practitioners to develop consistent and deep knowledge of this subset of patients, their baseline state, their ongoing care needs, and their available community resources. The additional time allocated to these practitioners will be effectively utilized to coordinate care with the patient's PCP, community resources and provide additional support directly to the patient during the important transitions of care. Lessons learned from this project can easily be transferred to other populations as Signature transforms to manage total medical expense for additional groups of patients.
- Current medical literature is flush with ideas and recommendations to improve the quality of care for selected diagnoses (pneumonia, congestive heart failure, acute myocardial infarction and COPD), but short on hard data and proof of effectiveness. A recent article in The New England Journal of Medicine (The Relationship between Hospital Admission Rates and Re-hospitalizations, NEJM, December 15, 2011 Epstein A.M., Jha A.K., Orav E.J.) is one of a few articles documenting a relationship between readmission rates and incentives to hospitalize. Another article contends, with literature references, that unnecessary hospitalization of nursing home patients is not only inappropriate and costly, but also detrimental to patient wellbeing.[30] Other articles suggest patient navigators, nurse coaching at discharge, care coordinators, case managers and disease managers, calls to and electronics in the home, and home visits as beneficial to patients, but the studies are preliminary and many do not show expected benefits.
- We contend that no single process "works." We do contend, however, that an integrated, coordinated, well-structured and run program can improve outcomes as measured by decreased admission and readmission rates.
- Signature Healthcare manages the total medical expense of a Medicare Advantage plan with 1500 lives. Claims data from the managed care organization will provide robust data to track on a frequent, regular, and accurate basis the impact of the program and provide a means to compare our performance against the performance of multiple other organizations. We selected milestones and their related metrics as necessary to the primary outcome (better patient care), hard but possible to achieve, and measurable.
- We targeted three populations identifiable through our risk contracts (numbers approximate as of the time of this submission):
    - Medicaid: BMC Health net – 4700 covered lives
    - Medicare: Tufts Medicare Preferred (TMP) – 1500 covered lives
    - Commercial: HMO Blue (AQC contract) – 9,000 covered lives
- The population we will use for at least the first three years for data acquisition and comparison will be the TMP (Medicare managed care) program. We will not "enroll" patients; rather, all TMP subscribers with a Signature Healthcare Medical Group primary physician will be included for all quality and statistical purposes as well as be the base for identification of the highest risk groups by the definitions above.
- The populations identified have high disease burdens and therefore stand to gain from better application of healthcare interventions.

---

[30] Reducing Unnecessary Hospitalizations of Nursing Home Residents from The New England Journal of Medicine September 29, 2011, Ouslander J.G. and Berenson R.A., N Engl J Med 2011; 365:1165 – 1167

- Baseline data are supplied by third parties and are derived by methodology accepted as accurate by the Commonwealth and the federal government. Subsequent data will be supplied both by the same third parties (insurers) and Signature Healthcare.
- We – even an organization comprising both hospital and medical group – cannot achieve the desired results alone. We will create working partnerships with neighborhood resources such as VNA services, elder care, palliative care and hospice to enhance and improve at-home services for the patients who stand to benefit from their expertise.

Expected Results: Two measurable outcomes will be:

- a higher rate of arrived post-discharge scheduled primary care visits compared to baseline[31]
- a reduction in admissions/1000 covered lives in the identified population by the end of SFY 2014.

- Achieving these goals will reflect better coordination of healthcare to the patients in the identified populations and substantially reduce the cost of healthcare to those patients.
- Finally, we intend to use the lessons learned in proactive management of this high risk population and apply the pathways, protocols, processes and use of resources to broader population bases. This will be reflected in the following milestones.

Relation to other Projects:

The motto used by the Physicians in this program is “"Everything the patient needs, nothing the patient doesn't need, all provided at the right time in the right place.” This project relies heavily on our Development of Congestive Heart Failure (CHF) Disease Management Program, (2.2) Apply process improvement methodology to improve quality and efficiency in primary care offices (2.1) Improved access to care - improving primary care access (1.1) and Creation of a comprehensive diagnostic patient profile (3.2).

---

[31] Defined as the projected rate of arrived post-discharge visits for the six month period prior to the start of the 360° program.

Project 3.1: Hospital-Based 360° Patient Care Management Program – the most comprehensive program to identify and manage the most seriously ill members of a defined managed care population
Master Plan Project: 3.2

SFY 2012	SFY 2013	SFY 2014
Milestone: **3.1.1 [MP-P 1]**Hire start-up team of one physician and one nurse practitioner and train team in patient interviewing, examination, triage, evaluation, management, service and communication consistent with the six goals of the IOM and our higher level standards. Develop coverage schedule of five days a week, 10 hours per day. Create a process to identify Tufts Medicare Preferred (TMP) patients with a Signature Healthcare Medical Group primary as part of the emergency department registration. **Metric:** **3.1.1 (1) [MP-P 1 Metric 1]** Start-up team of one physician and one nurse practitioner hired. **Data Source:** hire or transfer documentation, job description, start date confirmation **Milestone:** **3.1.2** Develop coverage schedule of five days a week, 10 hours per day. **Metric:** **3.1.2 (2) [MP-P 1 Metric 4]** Team schedule reflects five days per week 10 hours per day coverage **Data Source:** Department of Medicine Schedule **Milestone:** **3.1.3** Create a process to identify Tufts Medicare Preferred (TMP) patients with a Signature Healthcare Medical Group primary as part of the emergency department registration. **Metric:** **3.1.3 (3) [MP-P 1 Metric 3]** Process for identifying target patients upon ED registration created, tested and operative, evidenced by blinded sample of Emergency Department patient tracker. **Data Source:** Emergency department chart **Milestone:** **3.1.4 [MP-P 1]**Create a to support covering hospitalists with direct access to team member on call	**Milestone:** **3.1.1 [MP-P 2]** Extend coverage by hiring a second nurse practitioner. **Metric**: **3.1.1 (8) [MP-P 2 Metric 1]** Second nurse practitioner hired **Data Source:** Human Resources Announcement of second NP and seven day per week coverage. **Milestone:** **3.1.2 [MP-P 2]** Initiate seven days per week hospital coverage **Metric**: **3.1.2 (9) [MP-P 2 Metric 2]** Coverage schedule reflects 7 day coverage. **Data Source**: Human Resources **Milestone:** **3.1.3 [MP-P 2]** Develop outpatient follow-up visit process for certain discharged patients based on severity and complexity of illness. **Metric**: **3.1.3 (10) [MP-P 2 Metric 3]** One month log documenting patients with outpatient management by the 360° Care Program's hospital-based team **Data Source:** 360° Care Program Hospitalist **Milestone:** **3.1.4 [MP-P 2]** Develop process to coordinate care with SNF rounder, VNA, palliative care, hospice, primary and specialist physicians **Metric**: **3.1.4 (11) [MP-P 2 Metric 4**] Summary of case notes from 10 charts demonstrating the team's coordination with community resources **Data Source**: • Human resources • Call coverage schedule • Sample ambulatory arrived visit notes (absent	**Milestone:** **3.1.1 [MP-P 3]** Create a process to contact and engage the identified patients for risk evaluation screening. **Metric**: **3.1.1 (13) [MP-P 3 Metric 3]** Documented process and list of patients contacted **Data Source**: 360° Care Program hospital-based team documentation. **Milestone:** **3.1.2 [MP-P 4]** Create a pathway to evaluate and proactively intervene on patients deemed high risk by the evaluation screening process **Metric**: **3.1.2 (14) [MP-P 4 Metric 1]** List of patients evaluated and documentation of interventions for the identified population **Data Source**: 360 ° Care Program Hospital Team. Excel spreadsheet log of patients approached, patients screened, and patients getting intervention. **Milestone:** **3.1.4 [MP-I 3]** Percentage of TMP patients with SMG PCP discharged from SHC/ BH who complete the scheduled post-discharge visit with their PCP or specialist increased by 10% from baseline. **Metric:** **3.1.4 (15) [MP-I 3 Metric 1]** Percent of arrived scheduled post-discharge from SHC/ BH visit at PCP or specialist's office. **Data Source:** 25 consecutive discharges for patients in the population specified from Signature Healthcare Brockton Hospital during SFY 2013; Allscripts or IDX arrived appointment record

Project 3.1: Hospital-Based 360° Patient Care Management Program – the most comprehensive program to identify and manage the most seriously ill members of a defined managed care population Master Plan Project: 3.2		
SFY 2012	**SFY 2013**	**SFY 2014**
Metric: **3.1.4 (4)** [**MP-P 1 Metric 5]** Call schedule for after-hours guidance and consultation for 360° Care Program hospital-based team with contact information. **Data Source:** 360° Care Program call schedule sample **Milestone:** **3.1.5 [MP-P 1]** Create a regular meeting schedule to review members of the target population "of interest" such as inpatients, SNF patients, high risk patients, etc. **Metric:** **3.1.5 (5) [MP-P 1 Metric 8]** Minutes of sample meetings. **Data Source**: 360° Care Program meeting minutes sample with patient identification data blacked out. **Milestone:** **3.1.6 [MP-P 1]** Create a lean balanced scorecard for the program **Metric**: **3.1.6 (6) [MP-P 1 Metric 9]]** Documentation of goals for the program and measurement of goal activity. **Data Source**: Sample scorecard **Milestone**: **3.1.7 [MP-P 5]** Baseline measurement of percentage of TMP patients with SMG primary physician discharged from SHC/ BH who complete a scheduled post-discharge visit with their PCP or specialist. **Metric:** **3.1.7 (7)** [**MP-P 5 Metric 1]** Arrived visit at PCP or specialist's office as scheduled, documented from chart sample. **Data Source:** Last 25 TMP discharges from Signature Healthcare Brockton Hospital prior to start of 360° Care Program; Allscripts or IDX arrived appointment record.	patient identifiers) • Care coordination documentation in meeting minutes **Milestone:** **3.1.5** [**MP-P 5]** Percentage of TMP patients with SMG PCP discharged from SHC/ BH who complete the scheduled post-discharge visit with their PCP or specialist increased by 5% from baseline. **Metric:** **3.1.5 (12)** [**MP-P 5 Metric 1]** Arrived scheduled post-discharge from SHC/ BH visit at PCP or specialist's office documented from chart sample. **Data Source:** 25 consecutive discharges for patients in the population specified from Signature Healthcare Brockton Hospital during SFY 2013; Allscripts or IDX arrived appointment record	

Project 3.2: Creation of a Comprehensive Diagnostic Patient Profile

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

Goal:
The goal of this project is to improve the assessment of clinical severity, level of risk, and projected resource utilization of a defined population of risk contract patients: Tufts Medicare Preferred (with a Signature Healthcare Medical Group primary physician). Implicit in this definition is the ability to predict outcomes from a given intervention based on preexisting illness or the severity of intervention. The usefulness of any risk stratification system arises from how the system links severity to a specific outcome.[32]

Based on our experience with existing population management agreements, Signature hypothesizes that the risk adjustment factors being established by the managed care plans do not accurately reflect the level of illness of the panel of patients covered by these risk contracts. In establishing this hypothesis, Signature presumes that the primary care physician may not be aware of and therefore may not be actively managing all co-morbidities and chronic conditions for their existing patients. Providers do not always document the diagnosis when documenting their findings. The key is to ensure that provider documentation completely and accurately maps to a diagnosis coded with precise descriptors rather than those that are unspecified. Signature patients may be treated by physicians other than their primary care physician and gaps exist in communication between non-Signature specialists and the primary care physician regarding all of a patient's current and prior illnesses. This gap in communication and management is thus reflected in the risk adjustment factor generated by the managed care organization. This also represents an opportunity for Signature primary care physicians to improve their quality of care for patients with multiple chronic illnesses, if the hypothesis is correct that these gaps exist. Since these risk models are external to Signature and are based on claims from Signature and all other health providers (physician and facility) developing baselines and measuring concurrent impact from intervention become difficult.

Using dedicated resources to mine historic organization and payer claims data we aim to assist primary care physicians in developing a comprehensive diagnostic patient profile. Absent of a regional, let alone a national comprehensive health information exchange, this payor claim data likely reflects the most comprehensive listing of all illnesses that have been diagnosed and treated by any provider (Signature and non-Signature) during the past three years. Signature will hire two documentation specialists and develop a process to audit patient's current Allscripts (EMR) problem list (including ICD-9 codes) in comparison with comprehensive historical billing data. Measurement of severity of illness is required to evaluate diagnostic efficiency of physicians, assess quality of care and understand utilization of health services. The documentation specialists will meet with the PCPs to review their findings and suggest opportunities to incorporate the additional diagnoses and co-morbidities to coordinate the care of patients more closely. They will share data on chronic illness documented from the billing data that are not in the current problem lists of patients and discuss opportunities to improve PCP documentation.

---

[32] Risk Stratification and Co morbidity: Historical Perspectives and the Purpose of Outcome Assessment: Nightingale Codman, and Cochrane Cardiac Surgery in the Adult, 3rd Edition (2003) pp187-224

Additionally, we will track our Medicare Advantage members to assure they have scheduled at least annual PCP visits to assess all chronic conditions. Our organizational goal of managing total medical expense and having our PCPs function as our patients' medical home will be addressed if this project assists in assuring patients are receiving annual visits and that high risk patients are being managed by their PCP.

Rationale:
Signature manages the total medical expense for patients in three managed care plans, and has electronic medical records for 17 specialties within Signature Medical Group and Brockton Hospital. These provide for a significant amount of care coordination when patients are cared for within the Signature System. However, many patients receive care from specialists and providers outside of the Signature system, and often the information from other providers is not reflected in the patient's PCP notes, problem list or care plan. In the absence of a regional health information exchange with this comprehensive data, the provider claims data from health plans is the most comprehensive source of data on the care being provided by non-Signature providers, and Signature believes mining this billing data should provide opportunities to improve the coordination of care by the system's PCPs. A review of the average risk adjustment factor for Tufts Medicare Preferred patients over a three year period shows a continued decline in the risk scoring of the average Tufts Medicare Preferred patient. However, utilization and cost of care for these patients has not decreased. Risk Adjustment methodology:

- Uses information from the current year to establish anticipated cost of care per patient for the following year
- Each patient has a Risk Adjustment Factor
- Assumes a lower Risk Adjustment Factor score indicates a healthier member
- Chronic conditions that impact medical management need to be submitted to CMS every year

The hypothesis of this project is this decline has several potential causes: either the PCPs are not documenting care each year for all of the co-morbidities of their patients; that patients are seen by specialists and diagnosed with chronic conditions that are not known by the PCP's and thus not addressed during their routine visits; or that chronically ill patients are not coming in to see their PCP on an annual basis so that the PCP can assist them in managing their chronic illness. There may be other causes Signature is not currently aware of but may lead to costly and catastrophic admissions that could be avoided with better coding and documentation of chronic illnesses.

We believe that if these opportunities are addressed the chronically ill patients will be better managed through their PCP and supporting disease management. Additionally, documentation and billing will improve, and the risk adjustment factor within the health plans will more accurately reflect the average risk of the current panel of patients.

As a starting point Signature has established a data file with three years of history of hierarchical condition categories coding from a managed risk plan's billing data. Signature plans to start the project using this data as a baseline for comparison with the current EMR and payer claims data.

Expected Results:
Signature's documentation specialists will develop a process to compare the historical billing data with patient's current Allscripts EMR information. The documentation specialists will develop a process to conduct chart reviews on our 1500 Medicare Managed Care members and review their findings with the PCPs. This is a new project for Signature and the team is unaware of any other similar project, therefore at this time there is little comparative information on how the progress from this project will be measured. Signature does not have a baseline for performance or improvement with this project. Measuring and comparing risk adjustment factor scores or hierarchical condition categories from one year to the next is complicated by changes in coding convention from year to year, and the fact that some codes such as cancer that is believed to be cured are not expected to be repeated each year. Signature will attempt to develop reports during the three years that may be indirectly indicative of improvements from this project. Using the managed care portal to identify members of the PCP panel the documentation specialists will work with clinical staff to assure members who do not have appointments with their PCP are outreached. With continuous oversight and education by the Clinical Documentation specialists we expect to develop more comprehensive care plans for our patients with chronic illnesses.

We expect to implement better and more cost effective treatment by finding problems sooner for more effective intervention. By effectively analyzing our data we can determine and quantify the real needs of our patients, identify health trends in our patient populations and help guide our quality improvement processes.

Relation to other Projects:
This project relates to the following transformational projects: improving patient access, development of congestive heart failure (CHF) disease management, and the 360° Care Program.
Population health management goes beyond treating only those patients in need of immediate care; it helps physicians assess their entire population and stratify it into various stages across the spectrum of health:

- Those who are well need to stay well by getting preventive tests completed
- Those who have health risks need to change their health behaviors so they don't develop the conditions they're at risk for
- Those who have chronic conditions need to prevent further complications by closing care gaps and also working on health behaviors

Overall, population health management strengthens the physician-patient relationship because it provides for numerous opportunities for the care team and the patient to interact. From a patient satisfaction perspective, patients with the strongest relationships to specific primary care physicians are more likely to receive recommended tests and preventive care.

Project 3.2: Creation of a Comprehensive Diagnostic Patient Profile **Master Plan Project: 3.1**		
FY 2012	**SFY 2013**	**SFY 2014**
Milestone: **3.2.1 [MP-P 3]** Develop organizational plan to improve accuracy in hierarchical condition categories data submissions to accurately reflect the health status of at risk Medicare advantage beneficiaries. [33] **Metric:** **3.2.1 (1) [MP-P 3 Metric 1]** Approved Organizational audit tool to assess compliance with documentation practices across Signature Healthcare. **Data Source:** Managed Care Portal reports on findings , SHC Documentation Protocol **Milestone:** **3.2.2** [**MP-P 4]** Hire documentation specialists to review medical records, ensuring complete and accurate capturing of chronic conditions. **Metric:** **3.2.2 (2) [MP-P 4 Metric1]** Documentation Specialist to be hired in SFY 2012 **3.2.2 (3)** [**MP-P 4 Metric2]** # Charts reviewed by Documentation Specialist **3.2.2 (4)** [**MP-P 4 Metric3]** # additional hierarchical condition categories Diagnoses codes identified in EMR as evidenced by log of hierarchical condition categories codes identified **3.2.2 (5)** [**MP-P 5 Metric1**] # PCP Education sessions aimed at reviewing risk status of members and care management plan; as evidenced by Education log, departmental minutes, Managed Care Portal educational summaries **3.2.2 (6)** [**MP-P 1 Metric1]** Build Managed Care Portal capabilities to identify patients not seen by their PCP as evidenced by submission of PCP panel lists generated by the portal **3.2.2 (7)** [**MP-P 2 Metric1]** # Patients identified	**Milestone:** **3.2.1** [**MP-I 1]** Use data from SFY 2012 to develop reports for each Primary care physician identifying patients who have not had an office visit in prior year. **Metric:** **3.2.1 (9)** [**MP-I 4 Metric1]** 25% of patients identified as not seeing PCP in past 12 months will be outreached and scheduled for PCP visit **Data Source:** • Payer Data • SHC Data Warehouse • Medical Record • Managed Care portal report of patients who arrived for PCP visit in past 12 month **Milestone:** **3.2.2 [MP-P 4]** Documentation Specialists to establish protocols and standards for accuracy of documentation **Metric:** **3.2.2 (10) [MP-P 4 Metric2]** # Charts reviewed by Documentation Specialist **3.2.2 (11)** [MP-P 4 Metric33 Metric1] # additional hierarchical condition categories Diagnoses codes identified in EMR as evidenced by log of hierarchical condition categories codes identified **3.2.2 (12) [MP-P5 Metric1]** # PCP Education sessions aimed at reviewing risk status of members and care management plan; as evidenced by Education log, departmental minutes, Managed Care Portal educational summaries **3.2.2 (13) [MP-I 2 Metric1]** Documentation of templates developed in EMR to improve accuracy in documentation. **Data Source:** • Payer Data	**Milestone:** **3.2.1** [**MP-P 2I 1]** Develop reports for each primary care physician that identifies patients who have not had an office visit in prior year. **Metric**: **3.2.1 (15)** [**MP-I 4441 Metric 1]** 35% of patients identified as not seeing PCP in past 12 months will be outreached and scheduled for PCP visit/ annual risk assessment **Data Source:** Data from SFY 2013 reports **Milestone:** **3.2.3 [MP-I 3]** Use patient management report to prioritize the patients with high-cost case identification. **Metric:** **3.2.3 (16) [MP-I 3 Metric 1]** Identification of patients who require monitoring for diabetes mellitus. **Data Source:** • Payer Data • Baseline Risk Adjustment factor • Signature Healthcare Data Warehouse • Medical Record

[33] All patients, "members", and other descriptives of the covered population are defined as enrollees of Tufts Medicare Preferred Plan with a Signature Healthcare Medical Group primary physician

<table>
<tr><th colspan="3">Project 3.2: Creation of a Comprehensive Diagnostic Patient Profile
Master Plan Project: 3.1</th></tr>
<tr><th>FY 2012</th><th>SFY 2013</th><th>SFY 2014</th></tr>
<tr><td>from the PCP panel list that have not seen PCP in the12 months prior to the screen.
3.2.2 (8) [MP-P 6 Metric1] Use patient management report to establish baseline data on # patients with a diagnosis of diabetes mellitus who require hemoglobin A1C testing.
Data Source:
• Payer Data
• Log of charts reviewed by documentation analyst
• 4 month progress reports on findings
• Signature Healthcare Data Warehouse with HEDIS data for Providers
• CMS hierarchical condition categories submission file
• Managed Care Portal reports on findings</td><td>• Log of charts reviewed by documentation analyst
• Sample of template(s) used by providers
• Signature Healthcare Data Warehouse with HEDIS data for Providers
• CMS hierarchical condition categories submission file
Managed Care Portal reports on findings

Milestone:
3.2.3 [MP-I 1] Using baseline data on patients with diagnosis of diabetes mellitus in SFY12 identify patients who are in need of hemoglobin A1c testing.
Metric
3.2.3 (14) [MP-I 1 Metric 1]Managed Care Portal report indicating # Diabetics in need of Hemoglobin A1c
Data Source:
• Payer Data
• Baseline Risk Adjustment factor
• SHC Data Warehouse
• Medical Record
• Log of patients enrolled in care management programs</td><td></td></tr>
</table>

Project 3.3: Participate in a Learning Collaborative

Master Plan Project: 3.9 Participate in Learning Collaborative

Goal:
Collectively, the DSTI projects proposed in Categories 1, 2 and 3 of this plan have the potential to significantly transform the care experience for Massachusetts residents served by eligible safety net hospitals. As important as individual hospital efforts will be, there is even greater potential value in leveraging the hospitals' efforts for delivery system transformation through the sharing of best practices. Participation in 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 1 below.

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. Report on lessons learned from participation in learning collaborative as they relate to the hospital's delivery system transformation goals under DSTI.

A learning collaborative format allows shared learning to occur within and between facilities and groups of people, allowing best practices, challenges, ideas, and successes to be shared thereby utilizing resources to their fullest capacity.

Learning collaboratives:

- Produce rapid change,
- Provide scalable and accelerated change among participants,
- Empower critical staff members,
- Foster peer-to-peer learning, and
- Allow adaptation of interventions.

By participating in a learning collaborative, we envision bringing the Safety Net Hospitals together to share and learn from each other.

Project 3.3: Participate in a Learning Collaborative **Master Plan Project: 3.9**		
SFY 2012	**SFY 2013**	**SFY 2014**
Milestone: **3.3.1[MP P1]** Explore existing and/or potential new opportunities for participation in learning collaborative. **Metric:** **3.3.1 (1) [MP P1 Metric 1]** Hospital meeting minutes and/or documentation of research findings on learning collaborative. **3.3.1 Data Source** Internal hospital documentation	**Milestone**: **3.3.1[MP P5]** Participate actively in learning collaborative. **Metric:** **3.3.1 (2) [MP P5 Metric 1]** Documentation of attendance at and/or participation in learning collaborative activities. **Data Source(s):** Internal hospital documentation and/or learning collaborative documents Choice of one of the following options for Project Element B (select a learning collaborative in which to participate): Option 1 of Project Element B: **Milestone:** **3.3.2** [**MP P 2]** Select and join an existing learning collaborative (if selecting option 1 of Project Element B). **Metric:** **3.3.2 (3) [MP P 2 Metric 1]** Documentation of hospital joining learning collaborative. **Data Source:** Internal hospital documentation and/or learning collaborative documents OR: Option 2 of Project Element B: **Milestone:** **3.3.2 [MP P 3]** Develop a new learning collaborative structure (if selecting option 2 of Project Element B). **Metric:** **3.3.2 (3) [MP P 3 Metric 1]** Documentation of new learning collaborative goals, structure and membership and/or signed agreement with facilitator of new learning collaborative (if applicable). **Data Source(s):** Learning collaborative documents and/or agreement	**Milestone:** **3.3.1 [MP P5]** Participate actively in learning collaborative. **Metric:** **3.3.1 (4) [MP P5 Metric 1]** Documentation of attendance at and/or participation in learning collaborative activities. **Data Sources(s):** Internal hospital documentation and/or learning collaborative documents **Milestone:** **3.3.2 [MP P6]** Report on lessons learned from participation in learning collaborative as they relate to the hospital's delivery system transformation goals under DSTI. **Metric**: **3.3.2 (5) [MP P6 Metric 1]** Hospital report on lessons learned. **Data Source:** Hospital report

V. Category 4 - Population-Focused Improvements ("Pay for Reporting")

The hospital shall elect at least one Category 4 hospital-specific measure per project (a minimum of 6 Category 4 hospital-specific measures total) and no more than 15 Category 4 hospital-specific measures overall .This section includes a menu of Category 4 measures related to population-focused improvements. The purpose of Category 4 is to evaluate the impact of the investments and system changes described in Categories 1, 2 and 3 through population-focused measures. Category 4 metrics shall recognize that the population-focused objectives do not guarantee outcomes but result in learning, adaptation, and progress. Signature Healthcare will measure and report on selected measures but will not have milestones associated with the achievement of specific improvements. Signature will commence reporting a subset of Category 4 common measures starting in Demonstration Year 15 (SFY 2012) and the balance of Category 4 measures starting in Demonstration Year 16 (SFY 2013), or in Demonstration Year 17 (SFY2014) for any hospital-specific measures that may require development or new data capture.

- Common measures: Signature Healthcare will develop plans to report on a core set of Category 4 measures that are included below.
- Hospital-specific measures: Signature Healthcare will report on the investments and transformation changes learned in Categories 1-3 beginning in DY 16. Additionally, SHC will participate in a Learning Collaborative which will not have associated Category 4 hospital-specific measures.

Common measures
All participating safety net hospitals will develop plans to report on a core set of Category 4 measures pursuant to Section X.D of Attachment J. 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.[34] 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.

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

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

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

Better Health: Improve the health of the population by supporting proven interventions and enhancing the quality of care delivered. Many of today's individual health care processes are designed to respond to the acute needs of individual patients, rather than to anticipate and shape patterns of care for important subgroups. Population health focuses on segmenting the population, perhaps according to health status, level of support from family or others, and socioeconomic status, to facilitate efficient and appropriate care delivery. The Category 4 common

measures share a focus on examining population dynamics. Two measures report on proven immunization interventions that can improve the health of hospitalized populations following discharge—preventing subsequent care interventions. Two other ambulatory- sensitive measures examine acute admissions for chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF) patients—two patient populations of particular concern given their chronic care needs. A fifth measure looks at maternal and child health—examining the incidence of low-birth weight children, a leading determinant of newborn health especially important for Medicaid populations.

Better Health Common Measures	**SFY 2013 Measurement Period**	**SFY 2013 Reporting Date(s) to EOHHS**	**SFY 2014 Measurement Period**	**SFY 2014 Reporting Date(s) to EOHHS**
4.5: Pneumonia Immunization *CMS IQR/Joint Commission measure* *IMM-1a* [35] *Data Source: Hospital Compare*	01/01/12 – 06/30/12	01/31/13	07/01/12 – 06/30/13	01/31/14
4.6: Influenza Immunization (seasonal measure) *CMS IQR/Joint Commission measure* *IMM-2* [36] *Data Source: Hospital Compare*	01/01/12 - 03/30/12	01/31/13	10/01/12- 03/30/13	01/31/14
4.7: Percent of discharged patients under age 75 who were hospitalized for Chronic Obstructive Pulmonary Disease (Ambulatory Sensitive-Condition Admissions Measure) *Modified AHRQ PQI-5: denominator modified to include only discharged hospital inpatients* *Data Source: Hospital billing data*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14
4.8: Percent of discharged patients under age 75 who were hospitalized for Congestive Heart Failure (Ambulatory Sensitive-Condition Admissions Measure) *Modified AHRQ PQI-8; denominator modified to include only discharged hospital inpatients* *Data Source: Hospital billing data*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14
4.9: Low Birth Weight Rate: number of low birth weight infants per 100 births[37] *AHRQ PQI-9* *Data Source: Hospital records*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14

[35] CMS and the Joint Commission began collecting this measure effective with January 1, 2012 discharges. IMM-1a includes all inpatients.
[36] CMS and the Joint Commission began collecting this measure effective with January 1, 2012 discharges. IMM-2 includes all inpatients.
[37] Hospitals without maternity services are exempted from this measure.

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 looking at hospital care indicators that are ambulatory-sensitive and that have the potential for better care coordination or care venues. Preventable readmissions are an area of nationwide focus, both for their cost and health implications, but also because many readmissions are the result of poor care hand-offs and lack of care coordination post discharge. Similarly, many pediatric asthma emergency department visits are potentially avoidable with concerted outpatient management and care plans; therefore, an ambulatory-care sensitive pediatric asthma measure, relevant to Medicaid populations, has been included. Lastly, a measure of early elective delivery examines a practice of care for which the evidence-base suggests can lead to unnecessary newborn complications and health care costs.

Cost-Effective Care Common Measures	SFY 2013 Measurement Period	SFY 2013 Reporting Date(s) to EOHHS	SFY 2014 Measurement Period	SFY 2014 Reporting Date(s) to EOHHS
4.10: Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for all patients 18 and older (not risk adjusted) *See CMS IQR Readmissions Measures (AMI, CHF, and Pneumonia) for a list of standard exclusions, including: 1) index admissions for patients with an in-hospital death, 2) patients transferred from the index facility to another acute care facility, and 3) patients discharged against medical advice.*[38] *Data Source: Hospital billing data*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14
4.11: Percent of Emergency Department visits for children age 18 or less with a primary diagnosis of asthma--Ambulatory Sensitive-Condition *See AHRQ PDI-14 for numerator specification. Denominator specification includes children ages 2 to 17 with an ED visit* *Data Source: Hospital ED billing data*	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14
4.12: Percent of patients with elective vaginal deliveries or elective cesarean sections at greater than or equal to 37 weeks and less than 39 weeks of gestation completed[39] *MassHealth Maternity Measure-3* *Data Source: MassHealth Quality Exchange(MassQEX)*	07/01/11-06/30/12	1/31/13	07/01/12-06/30/13	1/31/14

Hospital-Specific Measures

[38] 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.

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

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 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.[40]

In the case of some DSTI projects, the program of activities does not lend itself to standard measures. In other cases, such measures are not a fit with the specific transformation goals of the project and/or reporting capabilities of the hospital based on the data available to them. Therefore, the menu of hospital-specific measures includes a blend of nationally recognized measures and hospital-specific customized measures. In many cases, the hospital-specific measures are customized to the nature of the transformation project, the patient population, available payer-specific data, the measurement period, and/or hospital data capabilities including whether hospital systems include employed physicians or ambulatory care. Additionally, customized measures provide feasible data collection opportunities while providing valuable evaluative information on transformation goals. Each hospital, in their hospital-specific plan, will include a narrative on the hospital-specific Category 4 measures it has elected and the rationale for how that measure fits with evaluating the impact of the transformation project being undertaken by the hospital.

Signature Healthcare Hospital-specific Measures

4.1: **Improved Access to Care by Improving Primary Care Access**

Poor access to primary care has created a widespread workaround negatively impacting healthcare delivery to large numbers of patients. Unable to see their own PCP in reasonable time frames, or unable to secure a PCP at all, patients turn to emergency rooms for an expanding role in their health care. Patients may put off addressing issues until they become severe and warrant an emergency room visit: CHF and COPD exacerbations, dehydration, cellulitis, uncontrolled diabetes. They may see the emergency room as their only venue for healthcare and present with complaints best served in a PCP office: viral illnesses, headache, minor injuries. This system results in care that is both more expensive and of lower quality and efficacy than a system with adequate PCP access and processes. Medication reconciliation, care coordination, preventative medicine, and proper screening all becomes more difficult in the current system.

In its category 1 access project, Signature Healthcare will improve PCP access across its system creating the capacity and processes to provide comprehensive longitudinal care and same day access to address acute episodic care. The development of daytime urgent care access within our largest medical office building provides a unique opportunity to improve the care of our patients. Patients will be seen across the system according to their clinical needs in a system with the capacity and coordination to provide that care consistently. Patients unable to be seen in a PCP office will still be seen in the medical office setting by providers with access to their ambulatory record and have their care coordinated with their PCP office without overusing the time and resources of the emergency department.

---

[40] 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.

With expanded primary care capacity, more patients will have access to primary care which in turn will lead to improvement in the quality of preventive care service. We will measure and report on that change in healthcare delivery patterns for Signature Healthcare patients.

Hospital-specific measures	**SFY 2012**	**SFY 2013**	**SFY 2014**
4.1 Improved access to Care by Improving Primary Care: measure compliance with colorectal cancer screening for Signature Medical Group patients *Colorectal Cancer Screening (NQF 0034)* *Data Source: SHC Data Warehouse*	N/A	**Report measure** Measure and report the number of patients eligible for colorectal screening who underwent colonoscopy	**Report measure** Measure and report the number of patients eligible for colorectal screening who underwent colonoscopy

4.2: **Improve PCP Compliance with Preventative Testing Leveraging EHR Adoption and Data Warehouse**
In the fast-paced environment of a primary care physician, the inability to have key clinical information at the physician's fingertips results in multiple defects of care. Repetition of tests and missed opportunities for getting required testing completed are some of the obvious errors. However, the overall inefficiency of the PCP and their staff in tracking down data exacerbates the overall "Access" problem. In a competitive environment where Signature Healthcare only "owns" 20-40% of the data for its PCP panel, creating a process and tool to aggregate and report on data is imperative.

In its Category 1 data aggregation project, Signature Healthcare will create an electronic data warehouse allowing aggregation and reporting on the most common PCP USPHTF screening guidelines. From this, Signature Healthcare will be able to report on PCP compliance with recommended guidelines regardless of payer. In SFY 2012, Signature Healthcare will report on baseline compliance. In SFY 2013 Signature Healthcare will report on 1 (one) PCPs
ability to reduce the # of missing screening for a particular test.

Hospital-specific measures	**SFY 2012**	**SFY 2013**	**SFY 2014**
4.2 Improve PCP compliance with Preventative Testing, Leveraging EHR Adoption and Data Warehouse	N/A	**Report measure** The number of pts age 18-85 with dx of HTN whose most recent BP is adequately controlled during the measurement year - SBP<140 AND DBP < 90 divided by the #	**Report measure** The number of pts age 18-85 with dx of HTN whose most recent BP is adequately controlled during the measurement year - SBP<140 AND DBP < 90 divided by the

U.S. Preventive Services Task Force (USPSTF) *Data Source: SHC Data Warehouse*		of patients age 18-85 diagnoses with HTN	# of patients age 18-85 diagnoses with HTN

4.3 **Process Improvement Methodology to Improve Quality and Efficiency in Primary Care Practices**
Transitioning primary care physicians from episodic care to a medical home environment will take more time in each visit, and require processes to be improved within the practices. To sustain improvement in the care of patients in the primary care office, the systems and processes utilized in the office need to be standardized and combined with effective measurements and a continuous improvement culture engaging the staff in improvements. Lean management provides the theory, skills, cultural transformation and management system to improve process within the practices and sustain improvement over time. At the heart of Lean is continuous process improvement. We plan to apply the lessons learned from the kaizen activities and apply Lean processes to the way in which we manage hypertensive patients. It is the nature of process improvement that initial gains are not always sustained and that variability is to be expected. Rigorous adherence to PDCA (Plan-Do-Check-Act) cycles will make such variability visible in a timely manner and allow for early intervention to correct the process and help sustain the improvement.

Hospital-specific measures	**SFY 2012**	**SFY 2013**	**SFY 2014**
4.3 Apply process improvement methodology to improve quality and efficiency in primary care practices: Look at a single Primary Care practice and report on the percentage of eligible patients with a diagnosis of hypertension whose blood pressure was adequately controlled. *NQF 0013 Hypertension: Blood Pressure Measurement* *Data Source: SHC Data Warehouse*	N/A	**<u>Report measure</u>** Percentage of patients aged 18 through 85 who had a diagnosis of hypertension in the Quality Measurement Period and whose blood pressure was adequately controlled (<140/90) during the Quality Measurement Period.	**<u>Report measure</u>** Percentage of patients aged 18 through 85 who had a diagnosis of hypertension in the Quality Measurement Period and whose blood pressure was adequately controlled (<140/90) during the Quality Measurement Period.

4.4: **Development of Congestive Heart Failure (CHF) Disease Management Program**
A review of the literature related to interventions resulting in improved outcomes and reduced costs include those related to the management of Congestive Heart Failure (CHF). Research consistently shows a positive return on investment in the care management of CHF patients as this patient population represents an opportunity to reduce the high costs related to the treatment of chronically ill patients. Although some would argue the evidence shows mixed results, the lack of consensus can be attributable to the variation in interventions in different populations in different settings using different methodologies.

However, mixed results is not the same as “no evidence” (HMA, Chronic Disease Management, Meyer and Smith).

A number of case studies point to care management that includes continuous monitoring of patients. Self-monitoring, following prescribed medication regimens, reporting on conditions and learning to recognize and act on danger signs have all been identified as important components of an intricate system of care management.

Hospital-specific measures	**SFY 2012**	**SFY 2013**	**SFY 2014**
4.4 Development of Congestive Heart Failure (CHF) *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.*[41] *Data Source: Hospital Billing Data*	N/A	**Report measure** % of the targeted population readmitted (all-cause) within 30 days of the index admission for CHF	**Report measure** % of the targeted population readmitted (all-cause) within 30 days of the index admission for CHF

4.5: **Hospital-Based 360° Patient Care Management Program**

This critical outcome measurement will reflect the quality of care, depth of patient oversight, breadth of the hospital support systems we engage, effectiveness of case management, effectiveness of disease management, and the robust nature of the processes followed by the 360° Care Program team when a patient comes to our emergency department. The outcome measure, admissions per 1000 covered lives in our senior managed care plan (Tufts Medicare Preferred), is reported by the Health Plan at regular intervals with a delay necessitated by their data collection methodology. We anticipate (see Category 3, Project 3.1) a measurable reduction in admits/1000 for this population.

Hospital-Specific measures	**SFY 2012**	**SFY 2013**	**SFY 2014**
4.5 Hospital-Based 360° Patient Care Management Program: We will report admits/1000 for Tufts Medicare Preferred clients/patients (Signature Healthcare Brockton Hospital - SHC/ BH) on an annual basis or at any other time as requested with the most recent data available from the Health Plan as of 60 days prior to the request to allow Signature Healthcare's team to review and validate the data. *Custom Measure* *Data Source: SHC Data Warehouse*	N/A	**Report measure** Admits/1000 for Tufts Medicare Preferred Members (SHC/ BH) for the six month period ending December 31, 2012.	**Report measure** Admits/1000 for Tufts Medicare Preferred Members (SHC/ BH) for the six month period ending December 31, 2013.

[41] 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.

4.6: **Creation of a Comprehensive Patient Profile**

Almost 75 percent of the elderly (age 65 and over) have at least one chronic illness. About 50 percent have at least two chronic illnesses. Chronic conditions can lead to severe and immediate disabilities, such as hip fractures and stroke, as well as progressive disability that slowly erode the ability of elderly people to care for themselves. According to the Agency for Healthcare Research and Quality's 1996 Medical Expenditure Panel Survey (MEPS), about 14.3 percent of people age 65 and over—4.5 million elderly Americans—require assistance with bathing, dressing, preparing meals, or shopping. We anticipate a measurable increase in Hemoglobin A1c testing in the TMP members.

Hospital-specific measures	**SFY 2012**	**SFY 2013**	**SFY 2014**
4.6 Creation of a Comprehensive Diagnostic Patient Profile: TMP Cost and Utilization Data *AHRQ=Agency for Healthcare Research and Quality; AMA, NCQA HEDIS Specification* *Data Source: SHC Data Warehouse*	N/A	**Report measure** Measure and report the number of patients eligible for Hemoglobin A1c testing who had testing within the reporting period	**Report measure** Measure and report the number of patients eligible for Hemoglobin A1c testing who had testing within the reporting period

Appendix A

Metric Funding Allocation Table

Hospital Name: Signature Healthcare Brockton Hospital

STI Proportional Allotment Factor: 0.079841

DY 15/SFY12		
Cat 1: Integration		
Annual Metric Base Value		$3,349,333
Metric Base Value Adjusted for Proportional Allotment Factor		$267,413
Project/ Metric	Optional Adjustment (%)	Metric Value
Project 1.1 Improved Access to Care		
Metric Base Value Adjusted for # Metrics		$267,413
Metric 1.1.1 (1)		$334,267
Metric 1.1.2 (2)		$334,267
Metric 1.1.2 (3)		$334,267
Metric 1.1.2 (4)		$334,267
Project Subtotal		**$1,337,067**

DY 16/SFY13		
Cat 1: Integration		
Annual Metric Base Value		$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		$401,120
Project/ Metric	Optional Adjustment (%)	Metric Value
Project 1.1 Improved Access to Care		
Metric Base Value Adjusted for # Metrics		$401,120
Metric 1.1.1 (5)		$334,267
Metric 1.1.1 (6)		$334,267
Metric 1.1.2 (7)		$334,267
Metric 1.1.2 (8)		$334,267
Metric 1.1.3 (9)		$334,267
Metric 1.1.3 (10)		$334,267
Project Subtotal		**$2,005,600**

DY 17/SFY14		
Cat 1: Integration		
Annual Metric Base Value		$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		$401,120
Project/ Metric	Optional Adjustment (%)	Metric Value
Project 1.1 Improved Access to Care		
Metric Base Value Adjusted for # Metrics		$401,120
Metric 1.1.1 (11)		$334,267
Metric 1.1.1 (12)		$334,267
Metric 1.1.1 (13)		$334,267
Metric 1.1.2 (14)		$334,267
Metric 1.1.2 (15)		$334,267
Metric 1.1.3 (16)		$334,267
Project Subtotal		**$2,005,600**

Project 1.2 Improve PCP Compliance with Preventative Testing Leveraging EHR adoption and Data Warehouse		
Metric Base Value Adjusted for # Metrics		$267,413
1.2.1 (1)		$668,532
1.2.2 (2)		$668,532
Project Subtotal		**$1,337,067**
CAT 2: Innovations		
Annual Metric Base Value		$3,349,333
Metric Base Value Adjusted for Proportional Allotment Factor		$267,413
Project/ Metric	Optional Adjustment (%)	Metric Value
Project 2.1 Quality and efficiency in primary care practices through the implementation of Lean Healthcare		
Metric Base Value Adjusted for # Metrics		$267,413
2.1.1 (1)		$334,267
2.1.2 (2)		$334,267
2.1.3 (3)		$334,267
2.1.3 (4)		$334,267
Project Subtotal		**$1,337,067**

Project 1.2 Improve PCP Compliance with Preventative Testing Leveraging EHR adoption and Data Warehouse		
Metric Base Value Adjusted for # Metrics		$401,120
1.2.1 (3)		$668,533
1.2.2 (4)		$668,533
1.2.3 (5)		$668,533
Project Subtotal		**$2,005,600**
CAT 2: Innovations		
Annual Metric Base Value		$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		$401,120
Project/ Metric	Optional Adjustment (%)	Metric Value
Project 2.1 Quality and efficiency in primary care practices through the implementation of Lean Healthcare		
Metric Base Value Adjusted for # Metrics		$401,120
2.1.1 (5)		$501,400
2.1.1 (6)		$501,400
2.1.1 (7)		$501,400
2.1.2 (8)		$501,400
Project Subtotal		**$2,005,600**

Project 1.2 Improve PCP Compliance with Preventative Testing Leveraging EHR adoption and Data Warehouse		
Metric Base Value Adjusted for # Metrics		$401,120
1.2.1 (6)		$ 1,002,800
1.2.2 (7)		$ 1,002,800
Project Subtotal		**$2,005,600**
CAT 2: Innovations		
Annual Metric Base Value		$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		$401,120
Project/ Metric	Optional Adjustment (%)	Metric Value
Project 2.1 Quality and efficiency in primary care practices through the implementation of Lean Healthcare		
Metric Base Value Adjusted for # Metrics		$401,120
2.1.2 (9)		$2,005,600
Project Subtotal		**$2,005,600**

Project 2.2 Development of Congestive Heart Failure (CHF) Disease Management Program		
Metric Base Value Adjusted for # Metrics		$267,413
2.2.1 (1)		$191,010
2.2.2(2)		$191,010
2.2.3 (3)		$191,010
2.2.4 (4)		$191,010
2.2.5 (5)		$191,010
2.2.6 (6)		$191,010
2.2.7 (7)		$191,010
Project Subtotal		**$1,337,067**
CAT 3: Payment Reform		
Annual Metric Base Value		$3,349,333
Metric Base Value Adjusted for Proportional Allotment Factor		$267,413
Project/ Metric	Optional Adjustment (%)	Metric Value
Project 3.1		
Metric Base Value Adjusted for # Metrics		$267,413
3.1.1 (1)		$191,010
3.1.2 (2)		$191,010
3.1.3 (3)		$191,010
3.1.4 (4)		$191,010
3.1.5 (5)		$191,010
3.1.6 (6)		$191,010
3.1.7 (7)		$191,010
Project Subtotal		**$1,337,067**

Project 2.2 Development of Congestive Heart Failure (CHF) Disease Management Program		
Metric Base Value Adjusted for # Metrics		$401,120
2.2.1 (8)		$334,267
2.2.2 (9)		$334,267
2.2.3 (10)		$334,267
2.2.4 (11)		$334,267
2.2.5 (12)		$334,267
2.2.6 (13)		$334,267
Project Subtotal		**$2,005,600**
CAT 3: Payment Reform		
Annual Metric Base Value		$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		$
Project/ Metric	Optional Adjustment (%)	Metric Value
Project 3.1		
Metric Base Value Adjusted for # Metrics		$401,120
3.1.1 (8)		$401,120
3.1.2 (9)		$401,120
3.1.3 (10)		$401,120
3.1.4 (11)		$401,120
3.1.5 (12)		$401,120
Project Subtotal		**$2,005,600**

Project 2.2 Development of Congestive Heart Failure (CHF) Disease Management Program		
Metric Base Value Adjusted for # Metrics		$401,120
2.2.1 (14)		$401,120
2.2.2 (15)		$401,120
2.2.3 (16)		$401,120
2.2.4 (17)		$401,120
2.2.5 (18)		$401,120
Project Subtotal		**$2,005,600**
CAT 3: Payment Reform		
Annual Metric Base Value		$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		$
Project/ Metric	Optional Adjustment (%)	Metric Value
Project 3.1		
Metric Base Value Adjusted for # Metrics		$401,120
3.1.1 (13)		$ 668,533
3.1.2 (14)		$ 668,533
3.1.4 (15)		$ 668,533
Project Subtotal		**$2,005,600**

Project 3.2 Creation of a Comprehensive Diagnostic Patient Profile		
Metric Base Value Adjusted for # Metrics		$267,413
3.2.1 (1)		$167,133
3.2.2 (2)		$167,133
3.2.2 (3)		$167,133
3.2.2 (4)		$167,133
3.2.2 (5)		$167,133
3.2.2 (6)		$167,133
3.2.2 (7)		$167,133
3.2.2 (8)		$167,133
Project Subtotal		**$1,337,067**
Project 3.3: Learning Collaborative		
Learning Collaborative Annual Metric Base Value		$837,333
Metric Base Value Adjusted for Proportional Allotment Factor		$66,854
Metric Base Value Adjusted for # Metrics		$334,267
	Optional Adj. (%)	
3.3.1 (1)		$334,267
Project Subtotal		$334,267
CAT 4: Population Health		
Annual Metric Base Value		N/A
Metric Base Value Adjusted for Proportional Allotment Factor		N/A
Metric Base Value Adjusted for # Metrics		N/A

Project 3.2 Creation of a Comprehensive Diagnostic Patient Profile		
Metric Base Value Adjusted for # Metrics		$401,120
3.2.1 (9)		$334,267
3.2.2 (10)		$334,267
3.2.2 (11)		$334,267
3.2.2 (12)		$334,267
3.2.2 (13)		$334,267
3.2.3 (14)		$334,267
Project Subtotal		**$2,005,600**
Project 3.3: Learning Collaborative		
Learning Collaborative Annual Metric Base Value		$1,256,000
Metric Base Value Adjusted for Proportional Allotment Factor		$100,280
Metric Base Value Adjusted for # Metrics		$250,270
	Optional Adj. (%)	
3.3.1 (2)		$250,700
3.3.2 (3)		$250,700
Project Subtotal		$501,400
CAT 4: Population Health		
Annual Metric Base Value		$3,078,431
Metric Base Value Adjusted for Proportional Allotment Factor		$232,130
Metric Base Value Adjusted for # Metrics		$245,784

Project 3.2 Creation of a Comprehensive Diagnostic Patient Profile		
Metric Base Value Adjusted for # Metrics		$401,120
3.2.1 (15)		$1,002,800
3.2.3 (16)		$1,002,800
Project Subtotal		**$2,005,600**
Project 3.3: Learning Collaborative		
Learning Collaborative Annual Metric Base Value		$1,256,000
Metric Base Value Adjusted for Proportional Allotment Factor		$100,280
Metric Base Value Adjusted for # Metrics		$250,700
	Optional Adj. (%)	
3.3.1 (4)		$250,700
3.3.2 (5)		$250,700
Project Subtotal		$501,400
CAT 4: Population Health		
Annual Metric Base Value		$2,907,407
Metric Base Value Adjusted for Proportional Allotment Factor		$232,130
Metric Base Value Adjusted for # Metrics		$232,130

# Measures Reported	N/A
Category 4 Subtotal	**$0**
Plan Approval (50% total annual allotment)	$8,356,669
Annual Target Total	$16,713,38

# Measures Reported	17
Category 4 Subtotal	$4,178,333
Annual Target Total	$16,713,333

# Measures Reported	18
Category 4 Subtotal	$4,178,333
Annual Target Total	$16,713,333