



Cambridge Health Alliance  
**A COMMUNITY OF CARING**

## *CAMBRIDGE HEALTH ALLIANCE*

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

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**Hospital Contact:**

Donna Fox  
Chief Government Affairs Officer  
101 Station Landing, 5<sup>th</sup> Floor  
Medford, MA 02155  
(781) 306-8776  
Email: [dfox@challiance.org](mailto:dfox@challiance.org)

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## I. Introduction

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Cambridge Health Alliance (CHA) is pleased to submit this proposal for Delivery System Transformation Initiatives under the Massachusetts Section 1115 Medicaid Waiver Renewal.

This opportunity holds great promise for demonstrating meaningful and measurable progress in transforming the safety net delivery system for Medicaid populations in preparation for the next phases of Massachusetts and federal health care and payment reform demonstrations.

CHA looks forward to continued collaboration with the Commonwealth of Massachusetts Executive Office of Health and Human Services and the Centers for Medicare and Medicaid Services on this important initiative.

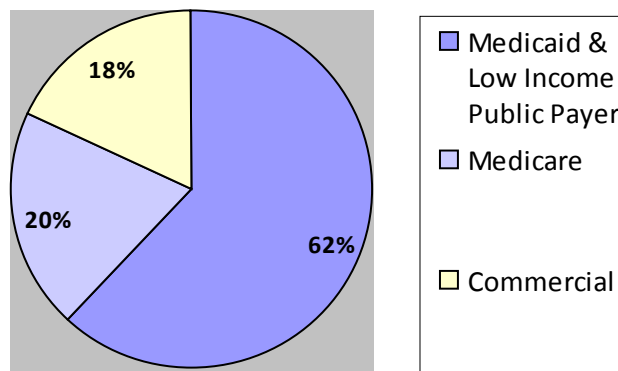
## A. Background

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Cambridge Health Alliance is a major safety net health system, the Commonwealth's only public acute hospital, and an essential part of the Massachusetts health care delivery system for Medicaid and other low-income vulnerable patients.

CHA has the highest concentration of patient care for Medicaid and other low-income public payer populations<sup>1</sup> among Massachusetts hospitals -- 3 times greater than the statewide acute hospital average. CHA also has the largest proportion of patient care to the residually uninsured post-reform, at 13 percent (9 percent of total statewide uninsured care), 4.4 times greater than the statewide acute hospital average.

**Figure 1: CHA Medicaid, Uninsured, and Commonwealth Care Net Patient Service Revenue Payer Mix (FY11)**



CHA has played a pivotal role in the success of health reform's coverage expansions and is a long-term leader and partner in Massachusetts' ongoing health reform efforts. CHA experienced growing Medicaid and low-income public payer volumes under health reform and downward pressure on government reimbursements due to the economic environment.

In response to the economic challenges since 2008, CHA partnered with MassHealth to restructure its clinical services in State Fiscal Years 2009 – 2010 to increase efficiency, consolidate its clinical services footprint, and preserve core services needed by its communities. In collaboration with the state, CHA transitioned from 3 to 2 inpatient hospital facilities, "right-sized" its inpatient and outpatient mental health services, focused more on its primary service area, and consolidated primary care sites and clinics, while retaining the critical essential primary, behavioral health, and acute continuum of care. CHA's reconfiguration was seen not as an

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<sup>1</sup> Medicaid and Low-Income public payer populations include Medicaid fee-for-service, Medicaid managed care, residually uninsured and Commonwealth Care.

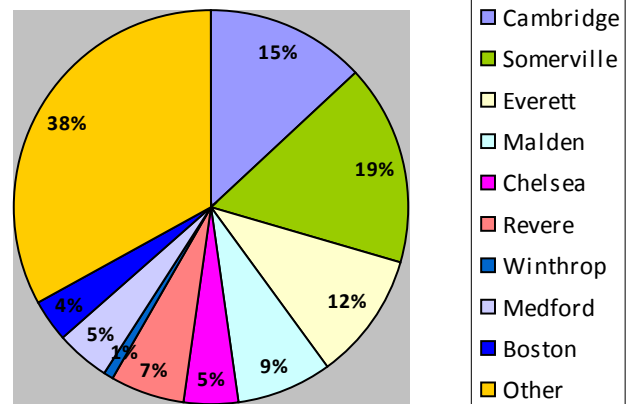
endpoint but as a platform for new health care delivery and payment models that afford sustainability for safety net systems, services, and populations.

### 1. Community Context

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CHA’s primary service area of Cambridge, Somerville, and Boston’s metro-north communities of Malden, Chelsea, Revere, Everett, and Winthrop has a population of 386,462 (2010 census). About 68 percent of CHA’s outpatients come from these primary service area cities and towns. About 32 percent of CHA’s patients come from areas outside of CHA’s primary service area, including the Greater Boston region and other cities.

Figure 2: CHA Outpatients by Town (2011)



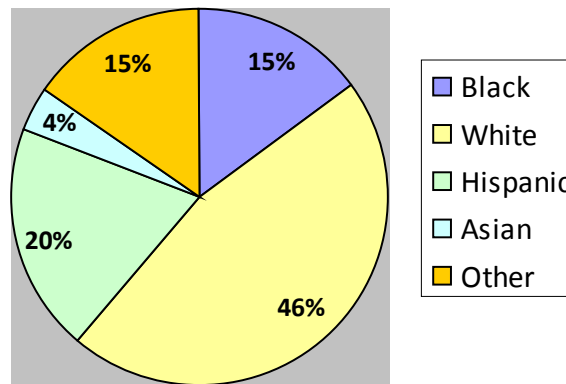
CHA’s primary service area is comprised of densely populated, contiguous, and diverse communities located adjacent to and north of Boston with a wide range of socioeconomic, linguistic, and cultural identities. Many of the cities serve as gateway communities for recent immigrant groups with double the proportion of foreign-born residents (30.8 percent) compared to the rest of the state (14.5 percent) and language spoken at home other than English (39.2 percent) compared to the 21 percent statewide. Overall, these communities also face serious economic and social challenges with nearly 15 percent of residents living below the federal poverty level compared to the statewide 10.5 percent, while some cities such as Chelsea face a 24.2 percent poverty level twice the state average (American Community Survey, 2010). These socioeconomic indicators have a bearing on the health of the population.

These multiple factors all contribute to health status indicators that demonstrate higher rates of obesity, cancer, drug abuse including overdoses, mental illness, HIV, and teen pregnancy. Hospitalizations for cardiovascular disease and diabetes are high compared to state rates and their outcomes are poor, particularly in the minority communities (MA Department of Public Health MassCHIP Health Status Indicators Report and the Behavior Risk Factor Survey, Institute for Community Health 2009).

## 2. Population Description

CHA’s patient population is highly diverse and predominantly low-income. CHA provides high-quality, culturally competent and linguistically appropriate care to a patient population of about 136,000 unique patients. 54 percent are racial or ethnic minorities, and 43 percent speak a primary language other than English. About 77 percent of CHA patients are low-income, disabled, elderly, or uninsured.

**Figure 3: CHA Patients (2011)  
Distribution by Race**

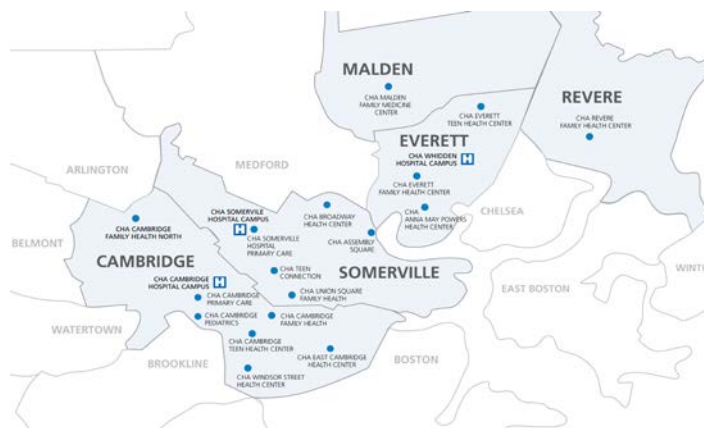


CHA provided nearly 163,000 interpreter encounters in 35 different languages in calendar year 2011. Over 25 percent of all patient care encounters require interpreter services, which is in addition to the services supported by CHA’s multi-lingual staff, which includes a primary care physician staff that is over 50 percent bilingual.

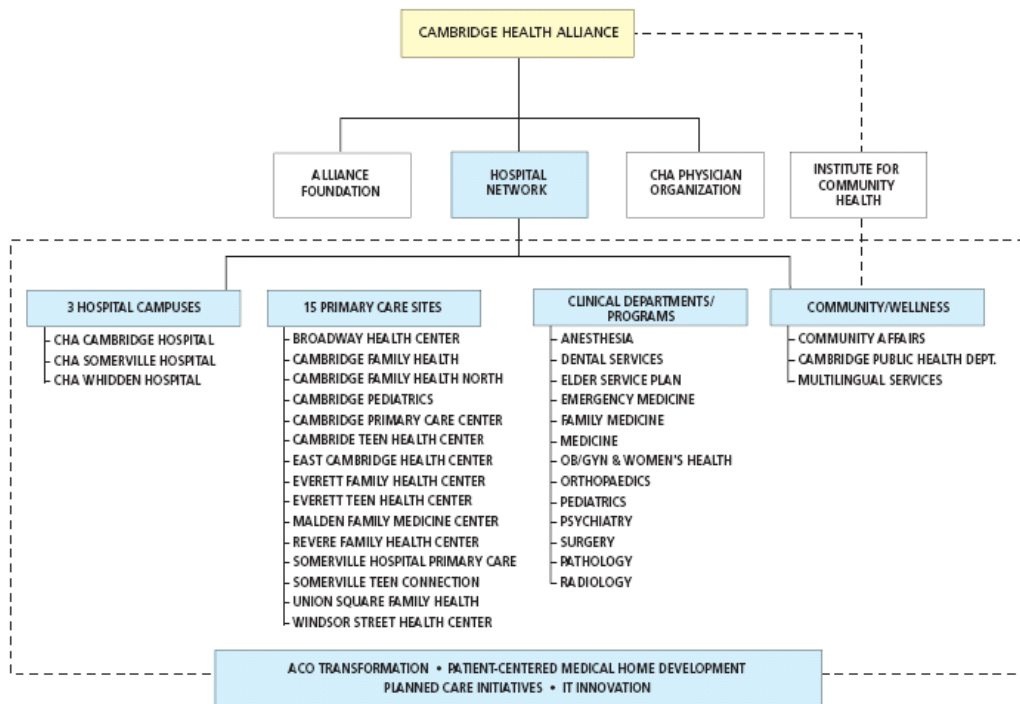
CHA’s patient population has a high prevalence of chronic health conditions, including mental health and substance use disorders, as well as co-occurring chronic medical conditions (such as diabetes, hypertension, and chronic pulmonary disease), and social acuity such as nutrition, housing and income insecurity; lack of social supports; homelessness; and lower high school education rates resulting in lower health literacy. These social determinants of health impact the burden of disease, the way that health care is accessed and its costs, and must be addressed in the design of responsive new delivery models for these low-income public payer populations.

## 3. Health System Description

CHA is a major public, safety net health system recognized as a top 100 most integrated health system.<sup>2</sup> With three hospital campuses, extensive primary care, and a largely employed medical staff, CHA provides high-quality integrated care to a diverse population and is poised for continued innovation and transformation. CHA is a key regional provider, especially for culturally competent primary and ambulatory care and behavioral health services.



<sup>2</sup> CHA was in Top 100 most integrated health systems based on annual survey every year starting in 2004 through 2012. [Verispan (2004-2008), its successor SDI (2009-2011), and its successor IMS Health Inc. (2012)].



This chart illustrates CHA’s public integrated delivery system components:

- Hospital Network,
- Physician Organization,
- Institute for Community Health, and Alliance Foundation (the fundraising arm of CHA).

All are aligned toward health system transformation and Accountable Care and Patient-Centered Medical Home

March 2, 2012

- **Three hospital campuses** (two acute care facilities with secondary inpatient services and a major ambulatory and emergency center). CHA has 244 active inpatient beds (494 licensed), three 24/7 emergency rooms and a dedicated psychiatric emergency service at one campus. CHA provides secondary-level inpatient care services including medical, surgical, maternity, and psychiatric inpatient care for children, adolescents, adults and geriatrics. CHA is a major mental health and substance abuse provider in the state – providing 11 percent of all statewide inpatient mental health care for Medicaid and uninsured patients. Behavioral health services represent 43 percent of CHA’s total inpatient days. CHA provides greater than 12,750 annual discharges and 100,000 emergency room visits, the 5<sup>th</sup> busiest in Massachusetts. Two-thousand, eight-hundred and ninety-six full-time equivalent employees staff CHA’s inpatient and outpatient operations.
- **15 hospital-licensed health centers and ambulatory centers** (including 3 school-based health centers) with nearly 528,000 annual ambulatory care visits, of which over 98,000 are outpatient mental health visits. Two primary care sites have achieved the highest NCQA Level 3 Patient-Centered Medical Home (PCMH) recognition, three more are part of the Massachusetts PCMH Initiative, and another pediatric site is part of Massachusetts pediatric medical home collaborative.
- **Employed Physician Model:** 313 full-time equivalent employed physicians of which 96 are primary care physicians and 67 are psychiatrists, with an integrated physician leadership model to accelerate transformation towards integrated, accountable care.
- **Graduate Medical Education** with 109 full-time equivalent interns and residents focused on community medicine, including primary care, mental health, and dentistry. CHA is a teaching affiliate of Harvard Medical School, Harvard School of Public Health, Harvard

School of Dental Medicine, and Tufts University School of Medicine. CHA is leading innovation in medical education with its nationally-recognized Cambridge Integrated Clerkship, a new model for third year medical education emphasizing continuity of patient care where students follow a panel of patients longitudinally, an important movement toward patient-centered care models.

- **Elder Service Plan (PACE program)** for dual eligible Medicare and Medicaid frail elders.
- **The Cambridge Public Health Department (CPHD)** is an exemplary municipal health agency operated by Cambridge Health Alliance on behalf of the City. It has a mission to improve the quality of life of residents and workers by reducing sickness and injury; encouraging healthy behaviors; and fostering safe and healthy environments. It adheres to the ten essential functions of public health<sup>3</sup> with departments that include school and public health nursing, emergency preparedness, environmental health, and community health. CPHD operates an array of innovative community programs including *the Men's Health League* which focuses on improving men's health and reducing chronic disease disparities, *Healthy Homes* for in-home environmental asthma assessment, domestic violence prevention, *Let's Move* campaign, and health literacy. In addition, CPHD provides infectious disease surveillance and an annual report to monitor the health of the community.
- **CHA's Community Affairs Department** is responsible for improving community health through the development of collaborative relationships externally with the community and internally with CHA services. It provides a broad array of clinical and community health programs targeted for populations at risk for health care disparities. These groups include those who are low-income, immigrants, cultural or linguistic minorities, and/or otherwise at risk because of homelessness or mental illness. Programs include Healthcare for the Homeless, Family Planning, HIV, and the nationally recognized *Volunteer Health Advisor Program*. It also leads community health improvement work in CHA's primary service area in collaboration with the local health departments and other community service provider agencies, collaboratively producing reports on health status indicators.
- **Institute for Community Health** is a community research organization which was founded in 2000 by Cambridge Health Alliance, Mount Auburn Hospital, and Massachusetts General Hospital as a collaborative effort to improve the health of Cambridge, Somerville, and surrounding cities and towns. A catalyst for change, it has worked to evaluate programs and provide data for community health surveillance. It has developed successful partnerships with community coalitions including: the Kid's Council, the Men of Color Task Force, the Healthy Children Task Force in Cambridge, the Somerville Cares about Prevention, Shape up Somerville, and the Immigrant Services Providers Health Group. Work focuses on topics such as obesity and overweight prevention, physical activity promotion, childhood mental health, youth substance abuse, women's health, and community quality assurance.
- **Health Information Technology (HIT) Initiatives Supporting System Transformation:** CHA has leveraged its HIT investments to transform health care delivery, maximize care coordination, and improve overall quality, patient safety and patient experience of care.

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<sup>3</sup> Center for Disease Control and Prevention, "National Public Health Performance Standards Program (NPHSP)." <http://www.cdc.gov/nphsp/essentialServices.html>.

Efforts include full deployment of ambulatory and emergency department electronic medical records consistent with meaningful use requirements; electronic prescribing across all ambulatory sites; implementation of a patient portal; and deployment of initial registries to support population and chronic disease management.

#### **4. Strategic Vision**

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Over the next five years, CHA's vision is to become a high-performing accountable care organization with a Patient-Centered Medical Home model of care for all our patients including our large safety net population in a way that achieves safety net system sustainability.

CHA's Board of Trustees in 2009 endorsed this strategic direction for our organization and our patients, and it is embraced by the organization's leadership and clinicians. Through this direction and the delivery system and payment system transformation work ahead, CHA aspires to achieve the goals consistent with the Triple Aim:

- Achieve and sustain top quartile quality performance
- Significantly improve patient experience of care
- Significantly improve population health and advance robust population health measures as they are further developed
- Contain health care cost growth.

Building on CHA's integrated hospital and health center delivery system, and its employed physician model, CHA plans to further develop its continuum of care for medical and behavioral health by establishing intentional partnerships and formal referral and care coordination relationships for services including post-acute care, home-based care, community-based behavioral health care, and tertiary relationships. By building a strong, comprehensive network of providers, CHA will strive to coordinate care among a continuum of high-value providers while reducing out-migration of care that can be provided more cost-effectively at the community level.

To propel its strategic plan, CHA has made concerted efforts to obtain initial experience with global payment initiatives as well as the patient-centered medical home model to inform its ongoing work to develop organizational capabilities and the infrastructure required. CHA recently dedicated two key personnel toward these efforts with an administrative officer for ACO Development and a physician leader of Patient-Centered Medical Home Development. CHA has established an ACO/PCMH Executive Workgroup with work occurring in 15 clinical and operational domains, such as access and referral redesign, care pathway development, utilization management, and workforce transformation as examples.

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

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Cambridge Health Alliance has proposed distinct Delivery System Transformation Initiatives projects to advance our work in these areas.



As noted in our project narratives, CHA is participating in the Massachusetts Patient-Centered Medical Home Initiative (MA PCMHI) and Massachusetts' Children's Health Insurance Program Reauthorization Act (CHIPRA) medical home collaboratives. CHA's DSTI project to expand the Patient-Centered Medical Home model goes substantially beyond the expectations of the MA PCMHI and CHIPRA collaboratives. Further details are included in the Project 1.1: Expand Patient-Centered Medical Home Model project narrative.

In addition, CHA is participating in a Centers for Disease Control and Prevention (CDC) community transformation grant to facilitate community health improvement in chronic health conditions and to collaborate with our local *Mass in Motion* collaboratives. These activities are distinct from and complement CHA's DSTI Population Health project, which is focused on population health strategies and a tobacco use intervention. More information is included in Project 3.1: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim and Alternative Payment Models.

CHA 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**

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CHA, a major Massachusetts safety net health system and public hospital, has a five year vision to continue the transformation of our safety net health delivery system toward a high-performing Accountable Care Organization with a Patient-Centered Medical Home model of care for all patients including our highly concentrated Medicaid and low-income and underserved population. CHA's Board of Trustees in 2009 endorsed this strategic direction for our organization and our patients.

CHA has a track record of innovation and significant assets on which to build, including a tradition of continuous patient care improvement, innovation, above-benchmark quality patient care services, and an integrated delivery system with an extensive primary care network and employed physicians. CHA has initiated pilots for a range of health care delivery redesign innovations in the recent past; yet, the initiatives are not reimbursed by government or commercial payers in today's fee-for-service payment system. To date, such innovations have been supported by extremely finite internal funding or time-limited grant support. For example, CHA's successful planned care program for pediatric asthma has reduced annual pediatric asthma admissions by 45 percent (2002 – 2009) and related emergency visits by 50 percent (2002 - 2011). Required investments yield a \$4 return for every \$1 invested, but the care coordination work is unfunded in today's fee-for-service system, while the cost savings are all attributed to payers and present opportunities for payment reform alignment. In addition, same language patient navigation pilots have improved rates of colorectal screening by 50 percent; yet, they are unfunded in the current fee-for-service system.

The significant financial constraints and the downward pressure on all payer reimbursements in this economic environment are the reality that safety net hospital systems like CHA face as we embark upon delivery system transformation, preparations for payment reform, and future sustainability of our clinical services for our patients and communities. CHA plans to accelerate the development and deployment of considerable capabilities and infrastructure required for success in new payment models where greater financial responsibilities and risks are transferred to the provider level. In addition to the challenges of government payers and the complexities and social acuity among the

patient population, CHA's services mix is dominated by services that are essential to wellness, including primary care, ambulatory care, behavioral health care, and secondary acute inpatient and emergency services, yet are lower-reimbursing services. A goal for payment reform is recognition of greater reimbursement for these services and a rationalization of the payment system toward new models that will reward primary care services and wellness activities, such as provider-based care management and other services that are not reimbursed today but are essential to good health outcomes and cost-effective care.

CHA does not provide tertiary services or highly complex diagnostic or interventional services and, therefore, must refer patients in need of those services to external higher cost, tertiary facilities. As such, a significant volume and total medical expenditure for CHA's primary care patient panels occurs outside of the CHA delivery system. This brings into focus CHA's need to collaborate with high value providers along the continuum of care going forward.

CHA's program of initiatives for the Delivery System Transformation Initiatives projects detailed in this document represent essential building blocks toward achieving our transformation vision and the Triple Aim goals of better health, better care, and better containment of health care costs. This work will not be possible without new investments afforded through the Delivery System Transformation Initiatives funding that CHA is eligible to earn through transformation metrics we achieve.

CHA's plans to **Expand the Patient-Centered Medical Home Model (Project 1.1)** to six of our primary care sites during the Waiver demonstration period is a foundation of our efforts to develop the capabilities for population health and panel management under evolving alternative payment models. Primary care medical homes are a centerpiece of the new patient-centered care delivery and payment models that move clinical care management and care coordination to the point of care.

Building on this PCMH platform, CHA will newly deploy a **Primary Care-Based System of Complex Care Management for High Risk Patients (Project 2.1)** as the basis of CHA's capabilities to assume the clinical and financial responsibility for its primary care panels of patients as the transition to alternative and new global budget models is phased-in across various payers under Massachusetts payment reform. Experience reveals that a subset of the highest risk patients consumes a large proportion of health care resources. Better coordination of care, management of chronic disease, and patient support will be essential to improving results for the most complex patients.

Especially for Medicaid and other low-income public payer populations with a high prevalence of co-occurring mental health and substance use concerns and chronic health conditions, the **Integration of Primary Care and Behavioral Health (Project 1.2)** is a core initiative to improve care and whole health for patients. As a major provider of behavioral health care, CHA will develop and implement an integrated, collaborative care model for behavioral health integration at two primary care sites.

CHA is also building on its formative work with the Wagner Planned Care<sup>4 5</sup> model to initiate an effective multi-disciplinary team approach to **Improve the Management of Diabetes (Project 2.2)**.

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<sup>4</sup> Wagner EH, Austin BT, and Von Korff M. "Organizing Care for Patients with Chronic Illness." *The Milbank Quarterly* (1996) 74(4):511-44.

<sup>5</sup> Wagner EH, et.al. "A Survey of Leading Chronic Disease Management Programs: Are they Consistent with the Literature?" *Managed Care Quarterly* (1999 Summer) 7 (3):56-66.

CHA will initiate a proactive approach to provide enhanced primary care-based pharmacist-led diabetes management services and nursing-led patient education and self-management coaching to diabetes patients meeting criteria to improve care and clinical indicators relative to good management of diabetes and disease progression.

CHA's initiative to **Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models (Project 3.2)** is directly associated with CHA's initial work to collaborate with payers on alternative payment arrangements, to identify the highest risk patients in those payer cohorts, and to utilize this information for effective management of care and ultimately the costs of care. We are also working to **Develop Capacity to Address the Population Health of the Community associated with the Triple Aim and Preparations for Alternative Payment Models (Project 3.1)** through a project based on the Centers for Disease Control Winnable Battle on tobacco use identification and cessation interventions in primary care that will be a framework for CHA to develop ongoing capabilities and processes to assess, monitor, and eventually improve population health. CHA is currently evaluating options for participating in a **Learning Collaborative (Project 3.3)** in alignment with the goals for the Delivery System Transformation Initiatives and the Triple Aim.

In addition, CHA has selected **hospital-specific Category 4 Population-Focused Improvement** measures that align with its Delivery System Transformation Initiatives for Categories 1, 2, and 3 and overall transformation vision. The majority of these measures are aligned with National Quality Forum measures, including many that have been adopted by the Massachusetts Patient-Center Medical Home initiative. The narrative included in the Category 4 section of this document provides the rationale for each of these population-focused improvement measures and their direct relationship to the transformation initiatives included in CHA's plan.

CHA will also report on a **common set of Category 4 Population-Focused Improvement** measures on which all participating safety net hospitals will report. These measures are organized by the Triple Aim goals of better care, better health, and cost-effective care and are intended to reflect the transformation initiatives and system changes described in Categories 1, 2, and 3 through population-focused objectives.

**Executive Summary Table**

The table below summarizes the projects that are included in CHA’s DSTI proposal.

Project Title	Description	Three Year Goals
<b>Category 1 – Further Development of a Fully Integrated Delivery System:</b>		
1.1 Expand Patient-Centered Medical Home Model (PCMH)	<p>CHA will significantly expand the Patient-Centered Medical Home (PCMH) model of care.</p> <p>CHA will prepare 6 primary care sites for the PCMH model of care in accordance with 2011 standards or more current standards developed by a nationally recognized agency such as the National Committee for Quality Assurance (NCQA). A comprehensive gap assessment for medical home recognition will be accomplished using a proprietary tool from Qualis Health and involving primary care site leadership.</p> <p>CHA will develop and implement criteria to determine patient empanelment to medical home care teams.</p>	<p>By the end of SFY 2014, CHA will have:</p> <ul style="list-style-type: none"> <li>– Undertaken a comprehensive gap assessment for 6 primary care sites for PCMH recognition by a nationally recognized agency (e.g. NCQA 2011 Standards).</li> <li>– Applied for PCMH recognition by a nationally recognized agency (e.g. NCQA 2011 Standards) for 6 primary care sites.</li> <li>– Achieved PCMH recognition by a nationally recognized agency (e.g. NCQA 2011 Standards) for 3 primary care sites applying in SFY 2013.</li> <li>– A total of 6 CHA primary care sites are expected to have applied or achieved PCMH recognition by a nationally recognized agency (e.g. NCQA).</li> <li>– 50,000 patients will be empanelled to care teams in primary care.</li> <li>– Increased the number to at least 4 CHA primary care sites that have engaged patients in practice improvement activities.</li> </ul>
1.2 Integrate Primary Care and Behavioral Health	<p>CHA will develop and implement key approaches to integrate primary care and behavioral health.</p> <p>The first approach is the development and implementation of an integrated, collaborative care model to integrate primary care and behavioral health (BH) at 2 primary care sites with co-located behavioral health services.</p> <p>The second element is the development of recommendations for measures to integrate into all primary care sites for the screening for high prevalence BH conditions, such as depression.</p>	<p>By the end of SFY 2014, CHA will have:</p> <ul style="list-style-type: none"> <li>– Developed and implemented an integrated, collaborative care model that integrates primary care and behavioral health (BH) at 2 primary care sites with co-located behavioral health services, in anticipation of future dissemination of this model.</li> <li>– Increased the number of elements of the collaborative care model it implements across demonstration period.</li> <li>– Trained primary care and BH staff at these two primary care sites on the provision of effective BH care in a primary care context, building on educational strategies learned from the IMPACT /DIAMOND framework.</li> <li>– Increased by 10 percent over the established baseline rate of depression screening for diabetic patients at the initial pilot site.</li> <li>– CHA will develop recommended measures of future integration into all primary care sites to screen for high prevalence BH conditions.</li> </ul>

**Cambridge Health Alliance Delivery System Transformation Initiatives 3-Year Plan – May 11, 2012**

Category 2 – Improved Health Outcomes & Quality:	Description	Three Year Goals
<p>2.1 Implement Primary Care-Based System of Complex Care Management for High Risk Patients</p>	<p>CHA will develop and implement a primary care-based system of complex care management at primary care sites that is highly effective in coordinating and managing care for high risk safety net patients.</p> <p>Over time, the goal of this primary care-based system of complex care management for high risk populations is to reflect improved health outcomes and increased cost effectiveness for the populations managed by CHA primary care teams.</p> <p>CHA is developing a proactive-team based approach and the associated job requirements and competencies for members of the primary care-based care management team.</p>	<p>By the end of SFY 2014, CHA will have:</p> <ul style="list-style-type: none"> <li>– Developed a framework for a primary care-based complex care management model and implemented it for high risk patients in 4 CHA primary care sites in SFY 2013 and 2 additional CHA primary care sites in SFY 2014.</li> <li>– Developed multi-payer reports of high risk patients delivered to participating CHA primary care sites.</li> <li>– Developed and implemented EMR capabilities to designate enrolled patients in complex care management and integrate care plans.</li> <li>– Implemented integrated care plans for patients enrolled in the complex care management program at participating CHA primary care sites.</li> <li>– Increased the number of patients enrolled in complex care across 6 primary care sites over established baseline.</li> </ul>
<p>2.2 Improve Management of Diabetes</p>	<p>CHA will implement a multi-disciplinary and evidence-based approach to improve the management of patients with diabetes in primary care.</p> <p>CHA’s Diabetes Performance Improvement Team recently made recommendations for improvements.</p> <p>CHA is implementing recommendations of evidenced-based diabetes medication management by pharmacists and nursing-led patient diabetes education and self-management coaching in primary care settings.</p>	<p>By the end of SFY 2014, CHA will have:</p> <ul style="list-style-type: none"> <li>– Based on an initial pilot of the pharmacist-led diabetes medication management services and nursing-led patient education and self-management coaching at one primary care site in SFY 2012, CHA will have developed and implement a proactive, multi-disciplinary team approach to improve the management of diabetes in SFY 2013.</li> <li>– Piloted diabetes improvement approach across one additional (two total) primary care sites in SFY 2013 and one additional primary care site in SFY 2014 (three total).</li> <li>– Trained 100 percent of pharmacists and at least 90 percent of registered nurses (RN) providing diabetes education participating in pilot site initiatives.</li> <li>– Measured initial progress of diabetes improvement initiative via process improvements and clinical indicators.</li> <li>– Increased the number of diabetic patients with self-management goals in their medical record.</li> </ul>

<b>Category 3 - Ability to respond to statewide transformation to value-based purchasing and to accept alternatives to fee-for-service payments:</b>	<b>Description</b>	<b>Three Year Goals</b>
<p>3.1 Develop Capacity to Address the Population Health of the Community associated with the Triple Aim and Alternative Payment Models</p>	<p>To develop the capacity to promote the Triple Aim goal of improved population health, CHA proposes this population health initiative to develop the capabilities and processes to assess, monitor, and eventually improve population health in the context of alternative or global payment models.</p> <p>Upon identifying the major morbidities of our total primary care population and its relationship to the population health of the communities in the hospital’s service area, CHA is embarking upon the development and implementation of an evidence-based population health intervention. Tobacco cessation and prevention is currently the targeted intervention.</p>	<p>By the end of SFY 2014, CHA will have:</p> <ul style="list-style-type: none"> <li>– Developed safety net hospital capacity to address population health of the community relative to the Triple Aim.</li> <li>– Created a data tool to report on the hospital’s Primary Care population leading morbidities and social determinants of health.</li> <li>– Prioritized a tobacco prevention and cessation for intervention in collaboration with local public health departments and community partners.</li> <li>– Developed and implemented a plan for intervention at 3 primary care sites to promote progress on tobacco use verification and cessation.</li> <li>– Increased by 10 percent over the established baseline the rate of tobacco use verification for adult patients at the initial pilot site.</li> <li>– Established tobacco use verification as a vital sign across all CHA primary care.</li> <li>– Documented lessons learned and recommendations for future population health work associated with the Triple Aim.</li> </ul>

**Cambridge Health Alliance Delivery System Transformation Initiatives 3-Year Plan – May 11, 2012**

<b>Category 3 - Ability to respond to statewide transformation to value-based purchasing and to accept alternatives to fee-for-service payments:</b>	<b>Description</b>	<b>Three Year Goals</b>
<p>3.2 Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models</p>	<p>CHA, as a core part of its preparations toward accepting alternative payment methods and improving quality and coordination of patient care, will develop the capability to target high-risk patients by collecting accurate patient data and stratifying the patient population by health risk indicators and utilization indicators to assign the high risk patients to care management interventions.</p> <p>The capabilities to utilize the results of risk stratification and predictive modeling are foundational to Accountable Care Organization models both in terms of financial management and care management.</p> <p>CHA is implementing this risk stratification initiative directly in alignment with alternative payment arrangements CHA is undertaking with specific payers. CHA will implement this risk stratification approach across a minimum of 2 payer populations, during SFYs 2012 - 2014.</p>	<p>By the end of SFY 2014, CHA will have:</p> <ul style="list-style-type: none"> <li>– A better understanding of the risk and utilization profile of a minimum of 2 separate payer-specific populations.</li> <li>– Developed long-term capacities in conjunction with payer collaborations to identify the payer-specific criteria for determining the top 3 percent highest risk patients.</li> <li>– Leveraged the results from two payer populations to assign the corresponding patients to primary care-based care management or centralized care management as appropriate.</li> <li>– Increased to a minimum of 2 payers with whom CHA is working toward alternative payment models, for which we are undertaking associated risk stratification and care management interventions.</li> <li>– Improved by 5 percentage points over the established baseline in the total proportion of top 3 percent high risk patients for one payer that have been assigned to primary care-based care management or centralized care management.</li> <li>– Reported on the total cost changes (estimated costs avoided) due to interventions for patients stratified in the top 3 percent.</li> </ul>
<p>3.3 Participate in Learning Collaborative</p>	<p>CHA is evaluating options for participating in a Learning Collaborative that will reinforce the DSTI goals and learning.</p>	<p>By the end of SFY 2014, CHA will be actively participating in the learning collaborative identified and report on lessons learned.</p>

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Category 4 - Population Focused Improvements	Measure	Reporting Period
4.1	Care Transitions Measure Set (CTM-3)	Report Measure in FY14
4.2	Patients who reported that staff "Always" explained about medicines before giving it to them. <i>HCAHPS Composite (Questions 16 &amp; 17)</i>	Report Measure in FY13 and FY14
4.3	Patients at each hospital who reported that YES, they were given information about what to do during their recovery at home. <i>HCAHPS Composite (Questions 19 &amp; 20)</i>	Report Measure in FY13 and FY14
4.4	ED Wait Time: Door to Diagnostic Evaluation by a Qualified Medical Personnel <i>CMS IQR measure (OP-20)</i>	Report Measure in FY13 and FY14
4.5	Pneumonia Immunization. <i>CMS IQR/Joint Commission measure IMM-1a</i>	Report Measure in FY13 and FY14
4.6	Influenza Immunization (seasonal measure). <i>CMS IQR/Joint Commission measure IMM-2</i>	Report Measure in FY13 and FY14
4.7	Percent of discharged patients under age 75 who were hospitalized for Chronic Obstructive Pulmonary Disease (Ambulatory Sensitive-Condition Admissions Measure). <i>Modified AHRQ PQI-5: denominator modified to include only discharged hospital inpatients</i>	Report Measure in FY13 and FY14
4.8	Percent of discharged patients under age 75 who were hospitalized for Congestive Heart Failure (Ambulatory Sensitive-Condition Admissions Measure). <i>Modified AHRQ PQI-8; denominator modified to include only discharged hospital inpatients</i>	Report Measure in FY13 and FY14
4.9	Low Birth Weight Rate: number of low birth weight infants per 100 births. <i>AHRQ PQI-9</i>	Report Measure in FY13 and FY14
4.10	Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for all patients 18 and older. <i>See CMS IQR Readmissions Measures (AMI, CHF, and Pneumonia) for a list of standard exclusions, including: 1) index admissions for patients with an in-hospital death, 2) patients transferred from the index facility to another acute care facility, and 3) patients discharged against medical advice.</i>	Report Measure in FY13 and FY14
4.11	Percent of Emergency Department visits for children age 18 or less with a primary diagnosis of asthma--Ambulatory Sensitive-Condition. <i>See AHRQ PDI-14 for numerator specification. Denominator specification includes children ages 2 to 17 with an ED visit</i>	Report Measure in FY13 and FY14
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. <i>MassHealth Maternity Measure-3</i>	Report Measure in FY13 and FY14
4.13	ID: PCMH 0033: IHI Improving Primary Care Access Measure.	Report Measure in FY13 and FY14
4.14	ID: Customization of Patient Continuity of Care: IHI Primary Care Team Member / Patient Continuity measure.	Report Measure in FY13 and FY14
4.15	ID: Customized Measure on Patients Started on an Anti-Depressant Medication Improvement in Adults with New Episode of Depression and Started on an Anti-Depressant Medication.	Report Measure in FY13 and FY14
4.16	ID: PCMH 0012: Primary Care Follow-up Post-hospitalization Measure.	Report Measure in FY13 and FY14
4.17	ID: PCMH 0013: Primary Care Follow-up Post-Emergency Room Utilization for Patients with Chronic Illness.	Report Measure in FY13 and FY14
4.18	ID: NQF 0575: Adult Diabetes Measure: Good Control of Blood Sugar Levels (HbA1c).	Report Measure in FY13 and FY14
4.19	ID: NQF 0059: Adult Diabetes Measure: Poor Control of Blood Sugar Levels (HbA1c).	Report Measure in FY13 and FY14
4.20	ID: NQF 0061: Adult Diabetes Measure: Hypertension/Blood Pressure Control.	Report Measure in FY13



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		and FY14
4.21	ID: NQF 0055: Adult Diabetes Measure: Percent of adult patients with diabetes (type 1 or type 2) who had eye exam	Report Measure in FY13 and FY14
4.22	ID: NQF 0062: Adult Diabetes Measure: Percent of adult patients with diabetes (type 1 or type 2) who had micro-albumin screening.	Report Measure in FY13 and FY14
4.23	ID: NQF 0028a: Adult Tobacco Use Screening Measure.	Report Measure in FY13 and FY14
4.24	ID: NQF 0028b: Adult Tobacco Use Cessation Intervention Measure.	Report Measure in FY13 and FY14
4.25	ID: Customized Measure: Measure of costs avoided due to interventions triggered by top 3 percent high-risk stratification identification.	Report Measure in FY13 and FY14

## **II. Category 1 – Further Development of an Integrated Delivery System**

### **Project 1.1: Expand Patient-Centered Medical Home Model (PCMH)**

#### Master Plan Project 1.1

- **Goal:** The PCMH is a foundation for the ability to accept alternative payments under payment reform. As EOHHS has observed, “PCMHs can be seen as the hub of the integrated care system,”<sup>6</sup> and “the medical home model supports fundamental changes in primary care service delivery and payment reforms, with the goal of improving health care quality.”<sup>7</sup> It has also been shown as an effective mechanism of achieving the Triple Aim, including improvements in quality and cost-effectiveness.<sup>8 9</sup>

In examining the needs of a safety net patient population, where the entire population is at extraordinary risk of poor Triple Aim outcomes and shows Medicaid utilization levels as high as 947.2 emergency department visits per 1000 persons<sup>10</sup>, CHA has made the ambitious decision to empanel its entire primary care patient population in its patient-centered medical home model of care over a five year period of time. This is a much more substantive undertaking than simply accomplishing medical home transformation for patients with one or two chronic diseases.

NCQA recognition is considered the gold standard for PCMH recognition. NCQA Level 3 recognition is a substantial achievement and represents the existence of robust practice infrastructure far beyond what currently exists in routine primary care, especially in the safety net. Competencies a practice must demonstrate to achieve Level 3 recognition include: access for same day appointments, development of team based care that is effective in panel and population management, care plans for patients with important conditions as well as for high risk patients, robust patient engagement in improvement activities, effective care transitions, substantial training of staff to support patients in self-management, care management of high risk patients, and development of HIT systems that can offer care team members information in an actionable way to improve population health outcomes.

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<sup>6</sup> Commonwealth of Massachusetts Executive Office of Health and Human Services, Office of Medicaid. “Stage Demonstration to Integrate Care for Dual Eligible Individuals.” *Proposal to the Center for Medicare and Medicaid Innovation*. (Dec 7, 2011) page 7.

<sup>7</sup> Commonwealth of Massachusetts Executive Office of Health and Human Services, Office of Medicaid. “Overview of PCMH.” *Massachusetts Patient Centered Medical Home Initiative*. 2012. Available at <http://www.mass.gov/eohhs/gov/commissions-and-initiatives/healthcare-reform/pcmhi/>

<sup>8</sup> Cosway R et al. “Analysis of Community Care of North Carolina Cost Savings.” *Milliman, Inc*. 2011.

<sup>9</sup> Grumbach K and Grundy P. “Outcomes of Implementing Patient Centered Medical Home Interventions: A Review of the Evidence from Prospective Evaluation Studies in the United States.” *Patient-Centered Primary Care Collaborative*. Nov 16 2010.

<sup>10</sup> Tang, N. et al. “Trends and Characteristics of U.S. Emergency Department Visits, 1997-2007.” *JAMA*. (2010) 304(6): 664-670.

We will be building on our work in the Massachusetts Patient-Centered Medical Home Initiative (MA PCMHI) and Massachusetts' Children's Health Insurance Program Reauthorization Act (CHIPRA) medical home collaboratives to substantially expand the number of sites that function as Level 3 medical homes in a way that achieves improved patient and population health outcomes. However, our approach goes far above and beyond both expectations from the MA PCMHI initiative (which expects practices to apply for Level 1 recognition) and CHIPRA (which has no expectations of medical home recognition). The number of **incremental** NCQA gaps the average CHA primary care site has to close to get to Level 3 recognition is 44 out of a total of 149 NCQA factors. This requires substantial transformation that far outpaces the small amount of total funding received by two of our sites from MA PCMHI public payers.<sup>11</sup>

Many systems, in order to achieve these goals, have chosen to only focus on a small number of patients to empanel in the medical home. However, review of our safety net population suggests that while specific disease-based approaches can be useful as building blocks, a whole patient (with often multiple medical and social issues) and a whole population approach is more appropriate in a safety net patient population that has as high a prevalence of high risk conditions (such as behavioral health concerns, homelessness) and behaviors (substance abuse, high emergency department utilization, difficulty managing one's own health).

- **Rationale:** CHA's approach involves whole practice redesign in the following areas:
  - development of a model of team based care for population management
  - development of population health/panel management capacity, tools, and workflows
  - effective care management
  - establishment of mechanisms of advanced access, including open access systems, expanded hours, patient portal access
  - supporting continuity of care with a primary care team that is functioning at the top of its license
  - service excellence and inclusion of consumers in the design of care
  - patient activation in managing their own health
  - connection of patients with community based resources
  - Electronic Medical Record (EMR) deployment in ways that support population health and coordination of 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. During the demonstration period, 50,000 patients will be

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<sup>11</sup> Two CHA primary care sites are participating in the MA PCMHI and receiving modest levels of public payer support through that initiative (\$36,180/year for FY12-FY14 + \$30,000 one-time payment for FY12). CHA has one pediatric primary care site participating in the CHIPRA initiative, which entails \$13,800/year for FY12-FY13).

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empanelled to care teams, and CHA's goal is to roll out empanelment and team-based care over our entire primary care patient population over the next five years.

A core element of PCMH transformation is the active engagement of consumers in the redesign of care to assure that PCMH transformation achieves patient-centered outcomes. During the demonstration period, we will create a framework for patient engagement and actively engage patients as partners into our transformation teams at 4 primary care sites.

Level of medical home achievement is recognized by the National Committee for Quality Assurance (NCQA), a nationally recognized agency, in a rigorous application process. Two of our primary care sites have achieved NCQA level 3 recognition (the highest level) but with the 2008 NCQA standards. In SFY 2013, CHA will apply for PCMH recognition by a nationally recognized agency (e.g. NCQA) for at least 3 additional primary care sites. In SFY 2014, CHA will apply for PCMH recognition by a nationally recognized agency (e.g. NCQA) for at least one additional primary care site and reapply for NCQA recognition for the initial two sites with the new 2011 NCQA standards or more current standards in effect. CHA's five-year goal is to achieve NCQA Level 3 PCMH recognition throughout its primary care system.

In order to prepare for PCMH recognition by a nationally recognized agency such as NCQA, CHA must perform a comprehensive and detailed gap assessment, develop a work plan involving Primary Care Site Leadership Teams, undertake extensive stakeholder education on the elements of PCMH, and deploy action plans to address gaps identified through the gap assessment undertaken against NCQA medical home recognition criteria.

The 6 standards for 2011 NCQA PCMH recognition are: 1) Enhance Access and Continuity, 2) Identify and Manage Patient Populations, 3) Plan and Manage Care, 4) Provide Self-Care & Community Support, 5) Track and Coordinate Care, and 6) Measure and Improve Performance. Each standard is composed of between 2-7 elements and then several factors within each element. CHA's Patient-Centered Medical Home leadership in tandem with primary care site leadership teams are using a proprietary tool to document whether a required standard has been met and the required documentation. In the event that a factor, element, or standard has not yet been met, it becomes part of the work plan with assigned next steps noted in the gap assessment tool. CHA plans to incorporate learning from our first 2 NCQA recognized medical home sites and the gap assessment for 3 additional primary care sites currently working on medical home readiness to create a system-wide plan for gap closure in key NCQA elements over the subsequent 2 years.

It is our expectation to have a total of 3 primary care sites PCMH recognized by a nationally recognized agency (e.g. NCQA) by the end of SFY 2014 (three newly approved based on their application during SFY 2013 based on 2011 NCQA standards), with another 3 sites having applied or reapplied based on the 2011 or the current NCQA standards in effect during SFY 2014. Our five year vision is to

transform all of CHA's 12 primary care practices to a Patient-Centered Medical Home model of care (exclusive of its school-based health centers).

- **Expected Results:** At the end of 3 years, CHA will have:
  - Undertaken a comprehensive gap assessment against PCMH recognition standards by a nationally recognized agency (e.g. NCQA) at 6 primary care sites;
  - Applied for PCMH recognition by a nationally recognized agency (e.g. NCQA) for 4 new primary care sites and reapplied based on 2011 standards or those currently in effect for two CHA primary care sites (that received NCQA Level 3 recognition in 2010 and must recertify based on new NCQA standards in 2013);
  - A total of 6 CHA primary care sites are expected to have applied for or achieved PCMH recognition by a nationally recognized agency (e.g. NCQA);
  - 50,000 patients will be empanelled to care teams in their Patient-Centered Medical Home; and
  - Patients will be actively engaged as partners in practice redesign at least 4 primary care sites in alignment with the development of the PCMH model at primary care sites undergoing medical home transformation.
- **Relation to other Projects:** This project functions in relation to 1.2 Integrate Primary Care and Behavioral Health, 2.1 Implement Primary Care-Based Complex Care Management, 2.2 Improvement of Patients with Chronic Disease, 3.2 Risk Stratification, and Category 4 Population-Focused Improvement Measures 4.13 (Access to Care: Time to third next available appointment measure), and 4.14 (Patient Continuity of Care). The PCMH model of care is central to achieving the Triple Aim goals of better health, better care and improved cost-effectiveness and is foundational to efforts to improve the way care is managed and delivered for a primary care panel of patients. Based in primary care, CHA is also building capacity through the related Project 2.1 to implement complex care management initiatives for high risk patients, including those identified through Project 3.2 on risk stratification. Related initiatives in Project 1.2 to improve the integration of primary care and behavioral health and in Project 2.2 to improve diabetes care build on the evolving PCMH primary care model and multi-disciplinary teams organized to improve patient care and wellness.

**Project 1.1: Expand Patient-Centered Medical Home Model (PCMH) (Master Plan Project 1.1)**

SFY 2012	SFY 2013	SFY 2014
<p><b>1.1.1 Milestone</b> 1. Conduct gap assessment of 3 primary care sites against criteria from a nationally recognized agency (e.g. NCQA).</p> <p><b>1.1.1 Metrics:</b> <b>1.1.1 (1) (MP-P 4 bullet 5)</b> Develop and implement a workplan to complete gap assessment against NCQA medical home recognition criteria. <b>1.1.1 (2) (MP-P 4 bullet 1)</b> Documentation of a completed comprehensive and detailed gap assessment for medical home recognition based on 2011 NCQA criteria for 3 primary care sites. <b>1.1.1 (3) (MP-P 4 bullet 3)</b> Based on learning from the gap assessments in 1.1.1 above, document the identification of system-wide opportunities for PCMH readiness steps that can be taken for roll-out across additional primary care sites.</p> <p><b>1.1.1 Data Sources:</b> <b>1.1.1 (1)</b> Documentation of workplan for gap assessment. <b>1.1.1 (2)</b> Documentation of gap assessment. <b>1.1.1 (3)</b> Documentation of report of findings for system-wide applicability of gap assessment findings and readiness steps that can be taken.</p> <p><b>1.1.2 Milestone:</b> Create criteria to determine patient empanelment to medical home care teams.</p> <p><b>1.1.2 Metrics:</b> <b>1.1.2 (4) (MP-P 7)</b> Establish criteria for medical home assignment and empanelment.</p>	<p><b>1.1.1 Milestones:</b> 1. Identify physician champion to support PCMH practice transformation. 2. Identify primary care sites to transform into PCMHs through the gap assessment activities to be undertaken in SFY 2013. 3. Establish site-specific working group(s) for the primary care sites identified in #2 above for PCMH transformation. 4. Educate stakeholders on the elements of PCMH, its rationale and CHA vision.</p> <p><b>1.1.1. Metrics:</b> <b>1.1.1 (7) (MP-P1)</b> Identify and deploy physician champion to support PCMH practice transformation. <b>1.1.1. (8) (MP-P9)</b> Identify 3 additional primary care sites to enter the PCMH transformation process through gap assessment to be undertaken in SFY 2013. <b>1.1.1 (9) (MP-P3, bullet 1)</b> Document the creation of primary-care site specific working group(s) for PCMH transformation for the sites identified in metric 1.1.1 (8). <b>1.1.1 (10) (MP-P2 bullet 1)</b> Documentation of attendance at educational program(s) on the elements of PCMH. <b>1.1.1. (11) (MP-P2 bullet 2)</b> Documentation of educational materials developed and</p>	<p><b>1.1.1 Milestones:</b> 1. Identify additional primary care sites to enter the PCMH transformation process. 2. Establish site-specific working group(s) for the primary care sites identified in #1 above for PCMH transformation. 3. Educate stakeholders on the elements of PCMH, its rationale, and CHA vision.</p> <p><b>1.1.1 Metrics:</b> <b>1.1.1. (18) (MP-P9)</b> Identify at least 2 additional primary care sites to enter the PCMH transformation process. <b>1.1.1 (19) (MP-P3, bullet 1)</b> Document the creation of primary-care site specific working group(s) for PCMH transformation for the sites identified in metric 1.1.1 (18). <b>1.1.1 (20) (MP-P2 bullet 1)</b> Documentation of attendance at educational program(s) on the elements of PCMH. <b>1.1.1. (21) (MP-P2 bullet 2)</b> Documentation of educational materials developed and distributed on PCMH.</p> <p><b>1.1.1. Data Sources:</b> <b>1.1.1. (18)</b> Documentation of the selection of additional primary care sites to enter the PCMH transformation process. <b>1.1.1 (19)</b> Internal hospital records/ documentation and meeting minutes.</p>

**Project 1.1: Expand Patient-Centered Medical Home Model (PCMH) (Master Plan Project 1.1)**

SFY 2012	SFY 2013	SFY 2014
<p><b>1.1.2 (5) (MP-P 8)</b> Reports developed for panel size per provider/care team.</p> <p><b>1.1.2 Data Sources:</b></p> <p><b>1.1.2 (4)</b> Document submission of empanelment criteria</p> <p><b>1.1.2 (5)</b> Document submission of panel productivity report.</p> <p><b>1.1.3 Milestone: Patient engagement in care redesign</b> Develop an approach and toolkit to identify and engage patients in practice improvement activities.</p> <p><b>1.1.3 Metric:</b></p> <p><b>1.1.3 (6) (MP-P 10)</b> Document submission of patient engagement approach and toolkit to assist practices to identify and engage patients effectively in practice improvement activities.</p> <p><b>1.1.3 Data Source:</b></p> <p><b>1.1.3 (6)</b> Document submission of patient engagement framework and toolkit.</p>	<p>distributed on PCMH.</p> <p><b>1.1.1. Data Sources:</b></p> <p><b>1.1.1 (7)</b> Internal hospital records.</p> <p><b>1.1.1 (8)</b> Documentation of the selection of 3 additional primary care sites to enter the PCMH transformation process.</p> <p><b>1.1.1 (9)</b> Internal hospital records/documentation and meeting minutes.</p> <p><b>1.1.1 (10)</b> Internal hospital records/documentation of attendance and educational content.</p> <p><b>1.1.1 (11)</b> Internal hospital records/documentation of distribution of education materials.</p> <p><b>1.1.2 Milestones:</b></p> <ol style="list-style-type: none"> <li>1. Prioritize PCMH readiness gaps for the 3 primary care sites with gap assessment completed in SFY 2012 and applying for NCQA recognition in SFY 2013.</li> <li>2. Apply for medical home recognition by a nationally recognized agency (e.g. NCQA) for 3 CHA primary care sites undertaking the PCMH gap assessment in SFY 2012.</li> <li>3. Conduct gap assessment based on 2011 NCQA criteria for 3 additional primary care sites identified in 1.1.1 (8) above.</li> <li>4. Close two system wide gaps identified in the system wide gap assessment completed in FY12.</li> </ol>	<p><b>1.1.1 (20)</b> Internal hospital records/documentation of attendance and educational content.</p> <p><b>1.1.1 (21)</b> Internal hospital records/documentation of distribution of educational materials.</p> <p><b>1.1.2 Milestones:</b></p> <ol style="list-style-type: none"> <li>1. Achieve PCMH recognition for 3 primary care sites from a nationally recognized agency (e.g. NCQA) based on those sites applying during SFY 2013.</li> <li>2. Prioritize PCMH readiness gaps for the 3 primary care sites applying for NCQA recognition in SFY 2014.</li> <li>3. Apply/reapply for medical home recognition by a nationally recognized agency (e.g. NCQA) for the 3 primary care sites identified for gap assessment in SFY 2013.</li> <li>4. Close two additional system wide gaps identified in the system wide gap assessment completed in SFY12.</li> </ol> <p><b>1.1.2 Metrics</b></p> <p><b>1.1.2 (22) (MP-I 4)</b> Evidence of medical home recognition for 3 primary care sites that applied in SFY 2013.</p> <p><b>1.1.2 (23) (MP-P 5)</b> Develop action plan to address gaps identified in the gap assessment for the 3 primary care sites applying for NCQA recognition in SFY 2014.</p>

Project 1.1: Expand Patient-Centered Medical Home Model (PCMH) (Master Plan Project 1.1)

SFY 2012	SFY 2013	SFY 2014
	<p><b>1.1.2 Metrics:</b></p> <p><b>1.1.2 (12) (MP-P 5)</b> Develop action plan to address gaps identified in the gap assessment for the 3 primary care sites applying for NCQA recognition in SFY 2013.</p> <p><b>1.1.2 (13) (MP-I 2)</b> Apply for medical home recognition for 3 CHA primary care sites completing gap assessment in SFY 2012.</p> <p><b>1.1.2 (14) (MP-P 4 bullet 1)</b> Documentation of a completed gap assessment for 3 additional primary care sites for application or reapplication based on 2011 or current NCQA recognition standards.</p> <p><b>1.1.2 (15) (MP-I 9 bullet 1)</b> Documentation that 2 system-wide PCMH readiness gaps have been closed, based on those identified in SFY 2012 metric 1.1.1 (3).</p> <p><b>1.1.2 Data Sources:</b></p> <p><b>1.1.2 (12)</b> Documentation of action plan.</p> <p><b>1.1.2 (13)</b> Documentation of application to nationally recognized agency (e.g. NCQA).</p> <p><b>1.1.2 (14)</b> Completed gap assessments.</p> <p><b>1.1.2 (15)</b> Documentation demonstrating the closure of PCMH system-wide readiness gaps.</p> <p><b>1.1.3 Milestone:</b> Develop patient empanelment to care teams for 30,000 patients.</p> <p><b>1.1.3 Metric:</b></p> <p><b>1.1.3 (16) (MP-I 5)</b> Submission of team structure and team panel size report for total of</p>	<p><b>1.1.2 (24) (MP-I 2)</b> Apply/reapply for medical home recognition for 3 additional primary care sites completing gap assessment in SFY 2013.</p> <p><b>1.1.2 (25) (MP-I 9 bullet 1)</b> Documentation that 2 additional system-wide PCMH readiness gaps have been closed, based on those identified in SFY 2012 metric 1.1.1 (3).</p> <p><b>1.1.2 Data Sources:</b></p> <p><b>1.1.2 (22)</b> PCMH recognition confirmation letter from nationally recognized agency (e.g. NCQA) for 3 primary care sites that submitted applications in SFY 2013.</p> <p><b>1.1.2 (23)</b> Documentation of action plan.</p> <p><b>1.1.2 (24)</b> Documentation of application to nationally recognized agency (e.g. NCQA).</p> <p><b>1.1.2 (25)</b> Documentation demonstrating the closure of PCMH system-wide readiness gaps.</p> <p><b>1.1.3 Milestone:</b> Expand patient empanelment to medical home care teams for 50,000 patients.</p> <p><b>1.1.3 Metric:</b></p> <p><b>1.1.3 (26) (MP-I 5)</b> Submission of team structure and team panel size report for total of 50,000 patients. PCMHI 0035: Panel size for the primary care practice at implemented PCMH sites.</p> <p><b>Measure:</b> The sum of each provider’s unduplicated number of patients in the provider panel.</p>



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**Project 1.1: Expand Patient-Centered Medical Home Model (PCMH) (Master Plan Project 1.1)**

SFY 2012	SFY 2013	SFY 2014
	<p>30,000 patients.                      PCMH 0035: Panel size for the primary care practice at implemented PCMH sites with accompanying document showing the team structure to support this panel of patients.  <b>Measure:</b> The sum of each provider’s unduplicated number of patients in the provider panel.</p> <p><b>1.1.3 Data Source:</b>  <b>1.1.3 (16)</b> Document submission of care team structure for 30,000 patients. Hospital EMR.</p> <p><b>1.1.4 Milestone:</b>                      Engage patients in practice improvement activities at least two primary care sites.</p> <p><b>1.1.4 Metrics:</b>  <b>1.1.4 (17) (MP-I 6)</b> Patients engaged in practice improvement activities at 2 primary care sites.</p> <p><b>1.1.4 Data Source:</b>  <b>1.1.4 (17)</b> Document submission of minutes of practice improvement activities including patients from two additional primary care sites.</p>	<p><b>1.1.3 Data Source:</b>  <b>1.1.3 (26)</b> Document submission of care team structure for 50,000 patients. Hospital EMR.</p> <p><b>1.1.4 Milestone:</b>                      Engage patients in practice improvement activities in at least 2 additional primary care sites.</p> <p><b>1.1.4 Metrics:</b>  <b>1.1.4 (27) (MP-I 6)</b> Patients engaged in practice improvement activities at 2 additional primary care sites.</p> <p><b>1.1.4 Data Source:</b>  <b>1.1.4 (27)</b> Document submission of minutes of practice improvement activities including patients from two additional primary care sites.</p>

**Project 1.2: Integrate Primary Care and Behavioral Health**

Master Plan Project 1.2

- **Goal:** The goal of this initiative is to integrate effective management of behavioral health into primary care.
- **Rationale:**

Caring effectively for patients with behavioral health (BH) disorders is a strategic priority for Cambridge Health Alliance (CHA). Patients with BH issues experience two-fold to four-fold higher risk of mortality and poor health outcomes, largely due to a lack of preventative health services and poorly controlled co-morbid medical disease.<sup>12</sup> Our extensive experience caring for patients with behavioral health conditions (BH = mental health and substance abuse disorders) has shown us that these patients often have complex medical and social issues such as multiple chronic health conditions, low income, housing insecurity, social isolation, and social dis-coordination that severely impact their health and social functioning. Because these factors put them at high risk for poor health, they frequently engage the health care system, but in ways that are haphazard, episodic, often irrelevant to their underlying BH issues and ineffective in managing their chronic conditions. Many patients with BH disorders do not regularly engage within the specialty mental health systems but do often engage in primary care settings for their medical and behavioral issues.

Primary care teams that engage these patients are usually ill-prepared to skillfully address the underlying BH concerns in their treatment plans. According to a recent study released by the Robert Wood Johnson Foundation, only 33 percent of patients with BH conditions (24 percent of the adult population) receive adequate treatment.<sup>13</sup> The result is that these patients are frequent users of high cost services with little benefit to them. CHA data from our three safety net emergency departments<sup>14</sup> reveals that BH conditions serve as the primary diagnosis for 19.6 percent of emergency department visits within the CHA system and are a significant contributor to over 60 percent of medical emergency room visits and hospitalizations. Caring for this population requires a comprehensive, whole person approach within an integrated system prepared to care for the medical, BH, and social conditions faced by safety net patient populations. Our ability to achieve the Triple Aim for low income, public payer patients depends fundamentally on our ability to better recognize, engage, support and coordinate care for persons with mental health and substance abuse disorders and to integrate this care with physical health care.

CHA is in the process of developing a collaborative and integrated approach to caring for patients with BH disorders in the primary care setting. Our collaborative care approach will involve a system of “Stepped Care.” “Stepped Care” involves a methodology of

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<sup>12</sup> Druss, B. and Reisinger Walker, E. (2011). Mental Disorders and Medical Co-Morbidity. *Robert Wood Johnson Foundation, The Synthesis Project: Issue 21.*

<sup>13</sup> Druss, B. and Reisinger Walker, E. (2011). Mental Disorders and Medical Co-Morbidity. *Robert Wood Johnson Foundation, The Synthesis Project: Issue 21.*

<sup>14</sup> CHA internal data from July through October 2011.

assessing the complexity of the patient’s BH problem and attempting to match the level of complexity with the appropriate level/intensity of care.<sup>15</sup> Simple (routine) BH issues will be handled by the PCP and the medical team, using community supports (Alcoholics Anonymous, family etc). More complex cases will involve consultation with a BH specialist onsite and the most complex cases might involve ongoing specialized BH care. The BH social worker would provide onsite therapeutic support and facilitate handoff to higher levels of care where indicated.

One effective evidence-based strategy that has been shown to improve Triple Aim outcomes in patients with depression, the most prevalent BH disorder, is the DIAMOND<sup>16</sup>/IMPACT<sup>17</sup> model of care. Among the key elements of these care models: screening for high prevalence mental health conditions, co-location of BH clinicians into primary care settings, collaborative meetings held by primary care and BH team members to discuss cases, training of primary care and BH staff on effective screening and collaborative care, the presence of tracking systems and registries to support effective monitoring of patients, the “Stepped Care” approach for appropriate level of treatment, care management for the highest risk patients with mental health and substance abuse disorders, and relapse prevention among others.<sup>18</sup>

CHA’s goal is to apply lessons learned from the DIAMOND/IMPACT model and the “Stepped Care” approach to the management of subpopulations of patients with highly prevalent mental health or substance use disorders. This represents adaptation and spread of an existing evidence-based innovation to a safety net patient population across multiple conditions.

CHA has studied best practices and lessons from hospital systems that have implemented primary care/behavioral health integration such as at University of Washington, Seattle; McMaster University, Hamilton, Ontario; and the Multnomah County Health Department for IMPACT; and the DIAMOND Collaborative of Minnesota, among others. Based on this, CHA will develop an integrated, collaborative care model for BH conditions that leverages learning and the framework from the DIAMOND/IMPACT model of depression management. In addition, it will be incorporated into training for behavioral health clinicians, social workers, and primary

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<sup>15</sup> Institute of Medicine Report: *Committee on Crossing the Quality Chasm: Adaptation to Mental Health and Addictive Disorders*. Improving the Quality of Health Care for Mental and Substance-Use Conditions. National Academies Press, Washington, DC, 2006.

<sup>16</sup> Katon W, Robinson P, Von Korff M, Lin E and Bush T. “A multifaceted intervention to improve treatment of depression in primary care.” *Arch Gen Psychiatry*. 1996.

<sup>17</sup> Unützer J, Katon WJ, Williams JW, Callahan CM, Harpole L, Hunkeler EM, Hoffing M, Areán PA, Hegel MT, Schoenbaum M, Oishi SM, Langston CA. Improving primary care for depression in late life: the design of a multi-center randomized trial. *Medical Care*. 2001; 39:785-799.

<sup>18</sup> The Diamond Model is based on the Collaborative Care Model for depression by Wayne Katon, MD and the IMPACT Study by Jurgen Unutzer, MD as well as numerous other controlled trials from Institute for Clinical Systems Improvement and Minnesota Family Health Services presentation to the Institute for HealthCare Improvement Annual Forum, Dec 2010.

care teams about effective management of BH issues in primary care settings. This evidence-based model has been tested in multiple healthcare settings and been found to improve BH outcomes and reduce costs.<sup>19 20 21</sup>

Using this model, CHA will co-locate mental health and addictions staff skilled in behavioral health into primary care settings, and employ a proactive, team approach to care manage high risk patients with a BH concern.<sup>22</sup> In a staged process, we will implement four foundational elements of CHA's collaborative care model, which includes best practices from the DIAMOND/IMPACT model, at one primary care site in SFY 2013 and add two additional elements in SFY 2014 to build on those foundational elements. We will, in addition, initiate these same four foundational elements of this model at a second primary care site in SFY 2014.<sup>23</sup> Potential model elements to implement include: training for mental health providers, training for primary care teams, co-location, at least monthly meetings to discuss cases together between primary care and mental health providers, care management for patients with acute depression, evidence of shared care/development for at least one high prevalence mental health/addictions condition, universal screening for depression in the practice population, registry development, more open access scheduling, care management for all patients with highest risk BH conditions, and improved care transitions for BH patients. Effectiveness of the model will be assessed through a variety of process and outcome metrics to be determined by the planning team in SFY 2013 .

- **Expected Results:** By the end of SFY 2014, CHA will:
  - Develop and implement an integrated, collaborative care model to integrate primary care and behavioral health at two primary care sites with co-located behavioral health services, in anticipation of spreading this model to additional sites in the future.
  - Co-locate primary care and behavioral health staff at these two primary care sites will receive training about ways to provide effective BH care in a primary care context, building on educational strategies learned from the IMPACT /DIAMOND framework. CHA's initial experience with co-location of behavioral health providers indicates that significant organizational capabilities and supports must be developed in order to change and integrate the practice of both behavioral health practitioners and primary care staff in order to accomplish a collaborative care model. CHA has elected a roll-out of this initiative that will allow us to

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<sup>19</sup> Reiss-Brennan B, Briot PX, Savitz LA, Cannon W, Stahell R. " Cost and quality impact of Intermountain's mental health integration program." *J Health Management* (2010) Mar-Apr; 55(2):97-113.

<sup>20</sup> Watts BV, Shiner B, Pomerantz A, Stender P, Weeks WB. "Outcomes of a quality improvement project integrating mental health into primary care." *Qual Saf Health Care* (2007) Oct; 16(5):378-81.

<sup>21</sup> Veer-Tazelaar PV, Smit F, Hout H, Oppen PV, Horst H, Beekman A, Marwijk H. "Cost-effectiveness of a stepped care intervention to prevent depression and anxiety in late life: a randomized trial." *Brit J Psych* (2010) 196, 319-325, doi:10.1192/bjp.bp109.069617.

<sup>22</sup> High risk patients are defined as patients who have a poorly controlled chronic disease (medical or BH), patients who have recent inpatient admissions and/or emergency department use, or have been identified by payors or risk stratification criteria as highest risk. For this Primary Care-Behavioral Health Integration Initiative patients will have a BH concern.

<sup>23</sup> As CHA implements the integrated, collaborative care model across new pilot sites, the same four foundational elements will be implemented in the initial phase.

further develop the collaborative care model, the training and practice support needed to support true clinical integration, and to foster management of patients with multiple medical and behavioral health conditions, and to evaluate progress to inform future dissemination within CHA.

- Increase by 10 percent over the established baseline rate of depression screening for diabetic patients at the initial pilot site. This initiative will work to overcome barriers for a multi-cultural safety net population in completing screening tools, which CHA is deploying in at least nine languages.
- Develop recommendations for measures, such as screening for high prevalence behavioral health conditions, to integrate into future primary care processes.
- **Relation to other Projects:** This project functions in relation to 1.1 Patient-Centered Medical Home deployment, 2.1 Primary Care-Based Complex Care Management, 2.2 Improved Management of Diabetes, 3.2 Risk Stratification, and Category 4 Population-Focused Improvement Measure 4.15 (Depression Improvement in Adult Patients with New Episode of Depression and Anti-Depressant Medication).

This project to integrate primary care and behavioral health is a key priority given CHA's patient population and goals to promote overall health. It builds on the PCMH model of care under development in primary care in Project 1.1, as this integration effort is based in primary care settings with co-located behavioral health services. This project will deploy resources to screen diabetic patients for depression as part of effective care planning, and may inform the work in the separate Project 2.2 to improve the care of patients with diabetes. It is likely that some of the high risk patients identified through Project 2.1 to implement complex care management initiatives for high risk patients and those identified through Project 3.2 on risk stratification may have behavioral health concerns that could benefit from the integrated collaborative care model envisioned in this project.

**Project 1.2: Integrate Primary Care and Behavioral Health (Master Plan Project 1.2)**

SFY 2012	SFY 2013	SFY 2014
<p><b>1.2.1 Milestone:</b> Conduct an analysis of the behavioral health population at CHA.</p> <p><b>1.2.1 Metric:</b> <b>1.2.1 (1) (MP-P 1)</b> Baseline analysis of behavioral health patient population including patient demographics, utilization of emergency room and inpatient services, most common sites of mental health care, most prevalent diagnoses, co-morbidities.</p> <p><b>1.2.1 Data source:</b> <b>1.2.1 (1)</b> Submission of document on baseline population level and site level analysis of our patient population with BH disorders.</p> <p><b>1.2.2 Milestone:</b> Develop a model for an integrated, collaborative care for behavioral health patients at primary care sites with co-located Behavioral Health services using the Stepped Model and DIAMOND/IMPACT model as a framework.</p> <p><b>1.2.2 Metric:</b> <b>1.2.2 (2) (MP-P 2)</b> Submission of</p>	<p><b>1.2.1 Milestone:</b> Implement at least 4 elements of the integrated, collaborative care model developed in SFY12 1.2.2 (1) at one (the 1<sup>st</sup>) primary care site with co-located Behavioral Health services.</p> <p><b>1.2.1 Metrics:</b> <b>1.2.1 (4) (MP-I 1 bullet 1)</b> Submission of documents demonstrating the # of primary care team members and the # of behavioral health team members trained at the 1<sup>st</sup> primary care site on the model developed in SFY12 1.2.2. <b>1.2.1 (5) (MP-I 1 bullet 2)</b> Submission of meeting dates documenting collaborative meetings to review patient cases between primary care and mental health staff at the 1<sup>st</sup> primary care site. <b>1.2.1 (6) (MP-I 1 bullet 3)</b> Scheduling documentation demonstrating co-location of Behavioral Health staff at the 1<sup>st</sup> primary care site. <b>1.2.1 (7) (MP-I 1 bullet 4)</b> Document baseline rates for depression screening at the 1<sup>st</sup> pilot site using the following measure: percent of patients 18 years of age and older receiving depression screening through the use of PHQ-2 or other</p>	<p><b>1.2.1 Milestone:</b> Assess outcomes of the integrated, collaborative care model at the first primary care site with co-located Behavioral Health services based on activities through SFY 2013.</p> <p><b>1.2.1 Metric:</b> <b>1.2.1 (10) (MP-I 2)</b> Submission of written report evaluating collaborative care model at 1<sup>st</sup> primary care site, based on activities through FY 2013. Report will include # of consultations or visits for BH conditions completed by co-located behavioral health clinicians.</p> <p><b>1.2.1 Data Source:</b> <b>1.2.1 (10)</b> Internal records/documentation.</p> <p><b>1.2.2. Milestone:</b> Increase the implementation of the number of collaborative care model elements by 2 elements (of those developed in SFY12 1.2.2 (2) at the 1<sup>st</sup> pilot site initiated in SFY13 1.2.1.</p> <p><b>1.2.2 Metrics:</b> <b>1.2.2 (11) (MP-I 3)</b> Submission of evidence of implementation of the 2 additional collaborative care model elements at the 1<sup>st</sup> pilot site.</p> <p><b>1.2.2 Data Source:</b> <b>1.2.2 (11)</b> Internal documents.</p> <p><b>1.2.3 Milestone:</b> Implement at least 4 elements of the integrated, collaborative care model developed in SFY12 1.2.2 (2) at a 2<sup>nd</sup> primary care site with co-located behavioral health services.</p> <p><b>1.2.3 Metrics:</b> <b>1.2.3 (12) (MP-I 1 bullet 1)</b> Submission of documents demonstrating the # of primary care team members trained and the # of behavioral health team members trained at the 2<sup>nd</sup> primary care site on the model</p>

**Project 1.2: Integrate Primary Care and Behavioral Health (Master Plan Project 1.2)**

SFY 2012	SFY 2013	SFY 2014
<p>document describing model for collaborative, integrated care for behavioral health patients at primary care sites with co-located Behavioral Health services.</p> <p><b>1.2.2. Data source:</b>  <b>1.2.2 (2)</b> Internal documents</p> <p><b>1.2.3 Milestone:</b>                      Establish baseline rates of adult diabetes depression screening in primary care at 1<sup>st</sup> pilot site. Measure is linked to NQF 0575. percent of patients 18–75 years of age with diabetes (type 1 or type 2) who were screened for depression using PHQ-2 or other approved screening instruments during the measurement period at initial primary care pilot site.</p> <p><b>1.2.3 Metric:</b>  <b>1.2.3 (3) (MP-P 4)</b> Document baseline rates of adult diabetes depression screening at 1st pilot site:</p> <p><b>Numerator:</b> count(s) of patients 18–75 years of age with diabetes (type 1 or type 2) screened for depression using PHQ-2 or other approved screening instruments in the past 12 months.</p>	<p>approved screening instruments during the measurement period.</p> <p><b>Numerator:</b> # of patients 18 years and older who were screened for depression using PHQ-2 or other approved screening instruments in the past 12 months.</p> <p><b>Denominator:</b> All patients 18 years and older who received an annual physical exam in the last 12 months at a CHA primary care site.</p> <p><b>1.2.1 Data source:</b>  <b>1.2.1 (4-7)</b> Internal documents and data.</p> <p><b>1.2.2 Milestone:</b>                      1. Develop recommendation for additional measure(s) to be deployed in SFY 2014 at the initial primary care and behavioral health integration pilot site, such as screening for high prevalence conditions such as substance abuse disorder.</p> <p><b>1.2.2 Metric:</b>  <b>1.2.2 (8) (MP-P 3)</b> Submission of recommended measure(s) and metric(s) to track behavioral health integration in primary care at initial pilot site in SFY 2014.</p> <p><b>1.2.2 Data source:</b>  <b>1.2.2 (8)</b> Internal documents, such as</p>	<p>developed in SFY12 1.2.2 (1).</p> <p><b>1.2.3 (13) (MP-I 1 bullet 2)</b> Submission of meeting dates documenting collaborative meetings to review patient cases between primary care and mental health staff at the 2<sup>nd</sup> Primary care site.</p> <p><b>1.2.3 (14) (MP-I 1 bullet 3)</b> Scheduling documentation demonstrating co-location of Behavioral Health staff at the 2<sup>nd</sup> primary care site.</p> <p><b>1.2.3 Data source:</b>  <b>1.2.3 (12 – 14)</b> Internal documents.</p> <p><b>1.2.4 Milestones:</b>                      Monitor adult depression screening at 1<sup>st</sup> pilot site and establish baseline rates for adult depression screening at 2<sup>nd</sup> pilot site. Implement additional metric for additional high prevalence condition such as substance abuse disorders at 1<sup>st</sup> pilot site.</p> <p><b>1.2.4 Metrics:</b>  <b>1.2.4 (15) (MP-I 1 bullet 4)</b></p> <p>Report on adult depression screening at the 1<sup>st</sup> pilot site and document baseline rates for adult depression screening at the 2<sup>nd</sup> pilot site using the following measure:</p> <p>percent of patients 18 years of age and older receiving depression screening through the use of PHQ-2 or other approved screening instruments during the measurement period.</p> <p><b>Numerator:</b> # of patients 18 years and older who were screened for depression using PHQ-2 or other approved screening instruments in the past 12 months.</p> <p><b>Denominator:</b> All patients 18 years and older who received an annual physical exam in the last 12 months at the primary care site.</p> <p>Report initial metric developed in SFY13 1.2.2 for an additional high prevalence condition such as substance abuse disorder at the 1<sup>st</sup> pilot</p>

**Project 1.2: Integrate Primary Care and Behavioral Health (Master Plan Project 1.2)**

SFY 2012	SFY 2013	SFY 2014
<p><b>Denominator:</b> count(s) of all patients 18–75 years of age with diabetes (type 1 or type 2) who received an annual exam in the last 12 months at the primary care site.</p> <p><b>1.2.3 Data source:</b>  <b>1.2.3 (3)</b> Internal data, EMR.</p>	<p>minutes from Ambulatory Performance Improvement meeting, Ambulatory Department Quality Goals, and Mental Health Department Quality Goals.</p> <p><b>1.2.3 Milestone:</b>                      Improve rates of adult diabetes depression screening at 1<sup>st</sup> primary care pilot site. Measure is linked to NQF 0575.                      percent of patients 18–75 years of age with diabetes (type 1 or type 2) who were screened for depression using PHQ-2 or other approved screening instruments during the measurement period at initial pilot site.</p> <p><b>1.2.3 Metric:</b>  <b>1.2.3 (9) (MP-I 4)</b> Document improvement of 5 percent over SFY 2012 baseline rates of adult diabetes depression screening at 1<sup>st</sup> pilot site.</p> <p><b>Numerator:</b> count(s) of patients 18–75 years of age with diabetes (type 1 or type 2) screened for depression using PHQ-2 or other approved screening instruments in the past 12 months.</p> <p><b>Denominator:</b> count(s) of all patients 18–75 years of age with diabetes (type 1 or type 2) who received an annual exam in the last 12 months at the primary care site.</p>	<p>site.</p> <p><b>1.2.4 (15)</b> Internal data/documentation, EMR.</p> <p><b>1.2.5 Milestones:</b>                      Establish baseline rates of adult diabetes depression screening at 2<sup>nd</sup> primary care pilot site. Improve rates of adult diabetes depression screening at 1<sup>st</sup> primary care pilot site. Measure is linked to NQF 0575. percent of patients 18–75 years of age with diabetes (type 1 or type 2) who were screened for depression using PHQ-2 or other approved screening instruments during the measurement period at the primary care pilot site.</p> <p><b>1.2.5 Metrics:</b>  <b>1.2.5 (16) (MP-P 4)</b> Document baseline rates of adult diabetes depression screening at 2nd pilot site:  <b>Numerator:</b> count(s) of patients 18–75 years of age with diabetes (type 1 or type 2) screened for depression using PHQ-2 or other approved screening instruments in the past 12 months.  <b>Denominator:</b> count(s) of all patients 18–75 years of age with diabetes (type 1 or type 2) who received an annual exam in the last 12 months at the primary care site.</p> <p><b>1.2.5 (17) (MP-I 4)</b> Document improvement of 10 percent over SFY 2012 baseline rates of adult diabetes depression screening at 1<sup>st</sup> pilot site.  <b>Numerator:</b> count(s) of patients 18–75 years of age with diabetes (type 1 or type 2) screened for depression using PHQ-2 or other approved screening instruments in the past 12 months.  <b>Denominator:</b> count(s) of all patients 18–75 years of age with diabetes (type 1 or type 2) who received an annual exam in the last 12 months at the primary care site.</p> <p><b>1.2.5 Data source:</b>  <b>1.2.5 (16-17)</b> Internal data, EMR.</p>



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**Project 1.2: Integrate Primary Care and Behavioral Health (Master Plan Project 1.2)**

SFY 2012	SFY 2013	SFY 2014
	<p><b>1.2.3 Data source:</b>  <a href="#">1.2.3 (9)</a> Internal data, EMR.</p>	<p><b>1.2.6 Milestone:</b>                      Develop recommendations for measures to be used across all CHA primary care sites toward behavioral health integration in primary care, such as screening for high prevalence conditions such as depression or substance abuse disorder.</p> <p><b>1.2.6 Metric:</b>  <a href="#">1.2.6 (18) (MP-P 3)</a> Submission of recommended measures and metrics to track behavioral health integration in primary care.</p> <p><b>1.2.6 Data source:</b>  <a href="#">1.2.6 (18)</a> Internal documents, such as minutes from Ambulatory Performance Improvement meeting, Ambulatory Department Quality Goals, and Mental Health Department Quality Goals.</p>

### III. Category 2 – Health Outcomes and Quality

#### Project 2.1: Implement primary care-based system of complex care management

##### Master Plan Project 2.5

- **Goal:** Development of a primary care-based system of care management that is highly effective in coordinating and managing care for high risk safety net patients as demonstrated by improved health outcomes and reduced costs of care for the populations managed by CHA primary care teams.
- **Rationale:** Development of a primary care-based system of care management is a core strategy for CHA to improve health outcomes and reduce unnecessary costs. A number of studies have demonstrated substantial improvements in quality and cost when care management has been implemented as part of medical home implementation.<sup>24</sup>

CHA has learned a great deal about how to effectively manage care for a complex safety net patient population through its initial effort to introduce complex care management in collaboration with a Medicaid managed care payer and its participation in the Massachusetts Department of Public Health's Care Coordination Program, both of which were time-limited or grant funded and have concluded or are in the process of concluding. There is no overlap between DSTI and this complex care initiative.

In addition to traditional activities of care management such as medication management for high risk patients, our initial experience has demonstrated that effective care management for a safety net population also needs to include helping patients who have difficulty engaging or navigating effectively with the health care system; supporting patients with mental health issues especially during high risk episodes, and empowering patients to engage in improving their own health.

These patients are dynamic in their risk, depending on social factors, and difficult to engage at times, based on the status of their social determinants and behavioral health issues. Safety net patients have utilization behaviors that far exceed expected patterns in the commercial population. Tang *et al* found that in 2007 the emergency department (ED) utilization rate was 947.2 visits/1000 patients in Medicaid compared with 188.7/1000 in the commercial and 413.3/1000 in the Medicare populations.<sup>25</sup> Our own internal data reflects this trend and indicates that underlying behavioral health conditions are an important factor in safety net patient population utilization patterns and outcomes. Standard risk adjustment and stratification criteria are unfortunately only partially predictive (about 50-67 percent predictive) for this population as they do not account fully for behavioral health issues or for social determinants of health.

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<sup>24</sup> Cosway R *et al*. "Analysis of Community Care of North Carolina Cost Savings." *Milliman, Inc.* 2011.

<sup>25</sup> Tang, N. et al. "Trends and Characteristics of U.S. Emergency Department Visits, 1997-2007." *JAMA* (2010) 304(6): 664-670.

Without the new resources afforded through the Delivery System Transformation Initiatives funding that can be achieved through metrics, CHA has not had the resources to be able to create a robust system for complex care management for high risk patients, as these important activities are not presently funded in today's fee-for-service system.

Based on our assessment of risk in our patient population and in preparation for our ACO journey, we are developing a primary care team-based proactive approach to complex care management for high-risk members of this patient population. We have defined the highest risk patients for primary care-based care management as “patients who are being discharged from the hospital, patients who are visiting the emergency room, patients identified by payers as highest risk based on utilization and risk stratification, patients with a poorly controlled chronic disease (medical and behavioral).”

CHA has begun developing proactive rather than reactive mechanisms of identifying the highest risk patients across payers, including the development of multi-payer reports and notification systems for emergency and inpatient visits. As CHA acquires the required complex care management personnel and capabilities (which are not presently in place), we plan to phase-in the complex care management program which will identify high risk patients stratified based on risk and clinical criteria, and enroll patients based on the patient's willingness to engage with the complex care management team. This is aligned with the Commonwealth of Massachusetts' framework for the Massachusetts Patient-Centered Medical Home Initiative (MA PCMHI).

An important part of this work will be to develop infrastructure to rapidly identify patients who are highest risk for their health conditions or at a “highest risk” moment in their lives across payers. This is particularly important because of the high rate of insurance churn that exists in our safety net patient population. The development of multi-payer reports that identify patients who might be candidates for care management for rapid use by the care manager is an important part of the solution. In addition, this allows our care managers to see activity beyond the CHA system and to rapidly identify patients who may be utilizing higher cost venues of care outside of the CHA system.

Once enrolled, the complex care manager will work with the patient to identify goals and risks, address barriers including social determinants of health, support medication management and connection with healthcare and community resources, education about and navigation through the health system, as needed. Each patient will have an individualized care plan that they have had a role in creating which will form the basis of their care management intervention. Patients will be supported for up to a six month period of time to move forward in their goals for health as well as in their treatment goals, before being transitioned back to their Planned Care team for routine care management.

### **How this Project Refines Innovations**

CHA is innovating in applying the model of complex care in a primary care setting to safety net populations that have recognized additional health risk factors associated with eligibility churn and social acuity. Several new innovations we will be trying as part of our

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complex care management roll-out based on our early results with the integration of community health workers and patient navigators are:

- 1) the integration of community health workers as care managers for patients with primarily social issues leading to high risk behavior (e.g., homelessness leading to frequent ED utilization in the winter);
- 2) the integration of licensed clinical social workers on the complex care management team who are primarily responsible for behavioral health care management, as this both represents a high risk cohort in our patient population and predicts for substantially poorer health and utilization outcomes;
- 3) a proactive team-based approach to care management for CHA's highest risk safety net population including:
  - a planned care team to provide core panel management led by the team nurse for the majority of patients in this group;
  - community health workers/patient navigators to engage patients and provide basic care coordination and connection with community resources (assistance with insurance, food, housing, appointments, patient activation);
  - a licensed care manager or clinician to provide the most complex case management, medication management and supportive management of care transitions for the highest risk medical patients; and
  - a social worker/mental health clinician assisting in the management of patients with behavioral health issues.

It is envisioned over time that the teams will coordinate with inpatient, emergency department (ED), and post-acute care management systems to facilitate a seamless care transition experience for medical and behavioral health patients. CHA has presented its design of care management integrating planned care management and complex care management at the Institute for Healthcare Improvement 13<sup>th</sup> Annual International Summit on "Improving Patient Care in the Office Practice and the Community" (March 18-20, 2012 in Washington, D.C.) and have historically worked with the MA PCMHI, National Association of Public Hospitals, and the Harvard Medical School as well as other organizations to disseminate findings. CHA plans to continue its internal and external engagement to disseminate findings.

- **Expected Results:** By the end of SFY 2014, CHA will:
  - Develop a framework for a primary care-based complex care management model and implement it for high risk patients in 4 CHA primary care sites in SFY 2013 and 2 additional CHA primary care sites in SFY 2014.
  - Develop job requirements and competencies for members of the primary care-based complex care management team.
  - Train members of the complex care management team.

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- Develop multi-payer reports of high risk patients delivered to participating CHA primary care medical home sites. Develop and implement EMR capabilities to designate high risk patients enrolled in complex care management as well as integrate care plans and patient action plans.
- As CHA deploys required complex care management personnel and capabilities, implement integrated care plans for high risk patients enrolled in the complex care program at the participating CHA primary care sites.
- Increase the number of patients enrolled in complex care at 6 primary care sites over established baseline.<sup>26</sup>
- **Relation to other Projects:** This project functions in relation to 1.1 Patient-Centered Medical Home, 1.2 Integrated Primary Care and Behavioral Health, 2.2 Improved Management of Patients with Chronic Diseases, 3.2 Risk Stratification, and Category 4 Population-Focused Improvement Measures 4.16 (Primary Care Follow-up Post-Hospitalization Measure) and 4.17 (Primary Care Follow-up Post-Emergency Room Utilization for Patients with Chronic Illness Measure).

The complex care initiative builds on the PCMH model of care under development in Project 1.1. The complex care initiative for high-risk patients is based in primary care, with the goal of deploying new teams to manage the care for complex patients on respective primary care panels. Some of the high risk patients will be identified through the risk stratification Project 3.2, while others will be identified by primary care teams. As previously noted, some of the most complex patients will have behavioral health concerns and potentially co-occurring chronic health conditions, such as diabetes. Therefore, we will look for synergies with those separate projects, including 1.2 for Integrated Primary care and Behavioral Health and 2.2 Improved Management of Diabetes.

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<sup>26</sup> The target for the number of patients enrolled in the complex care management initiative will be established in SFY13 in Metric 2.1.2 (8) after a baseline is established. The complex care initiative is a new initiative and baseline enrollment will be established in SFY 2013, at which time a target for increase in SFY 2014 will be set.

**Project 2.1: Implement primary care-based complex care management system (Master Plan Project 2.5)**

SFY 2012	SFY 2013	SFY 2014
<p><b>2.1.1 Milestone:</b> Develop primary care-based complex care management program for high risk patients.</p> <p><b>2.1.1 Metric:</b> <b>2.1.1 (1) (MP-P 1)</b> Develop a multidisciplinary framework for a primary care-based complex care management program for high risk patients.</p> <p><b>2.1.1 Data Source:</b> <b>2.1.1 (1)</b> Submission of care management workgroup minutes and recommendations.</p> <p><b>2.1.2 Milestone:</b> Develop multi-payer reports of high risk patients based on Massachusetts Patient-Centered Medical Home Initiative (MA PCMHI) payer reports and deliver these in a timely way to primary care-based care management staff.</p> <p><b>2.1.2 Metric:</b> <b>2.1.2 (2) (MP-P 2)</b> Submission of sample</p>	<p><b>2.1.1 Milestone:</b> Phased-in implementation of primary care-based complex care management program for high risk patients at 4 CHA primary care sites, as CHA deploys required complex care management personnel and capabilities which are not presently in place. Increase number of primary care sites participating in the complex care management program over the course of the year.</p> <p><b>2.1.1 Metrics:</b> <b>2.1.1 (4) (MP-I 1 bullet 1)</b> Create a way to designate high risk patients in the EMR for CHA primary care sites participating in the complex care management initiative.</p> <p><b>2.1.1 (5) (MP-I 2)</b> Increase number of primary care sites participating in the complex care management program for high risk patients to the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> CHA primary care sites.</p> <p><b>2.1.1 (6) (MP-I 1 bullet 2)</b> Enroll high risk patients into the complex care management program at 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> CHA primary care sites as complex care management personnel and capabilities are deployed.</p> <p><b>2.1.1 (7) (MP-I 1 bullet 4)</b> Create a report to identify the # of patients enrolled in the complex care management program across the participating primary care sites.</p> <p><b>2.1.1 Data Sources:</b> <b>2.1.1 (4)</b> Submission of EMR screen shot illustrating patient identified as receiving complex care management. <b>2.1.1 (5)</b> Internal records documenting 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> CHA primary care sites have developed complex care management capacity with documentation of patient assignments to care managers. <b>2.1.1 (6-7)</b> EMR reports.</p> <p><b>2.1.2 Milestone:</b> Establish baselines for the # of patients enrolled in the complex care program and the percent of those patients who have a documented care plan during the measurement period at the 4 CHA primary</p>	<p><b>2.1.1 Milestone:</b> Spread primary care-based complex care management program for high risk patients to 2 additional CHA primary care site as required complex care management personnel and capabilities are deployed.</p> <p><b>2.1.1 Metrics:</b> <b>2.1.1 (9) (MP-I 2)</b> Increase number of primary care sites participating in the complex care management program for high risk patients to the 5<sup>th</sup> and 6<sup>th</sup> CHA primary care sites.</p> <p><b>2.1.1 (10) (MP-I 1 bullet 2)</b> Enroll high risk patients into the complex care management program at the 5<sup>th</sup> and 6<sup>th</sup> CHA primary care sites as complex care management personnel and capabilities are deployed.</p> <p><b>2.1.1 Data Sources:</b> <b>2.1.1 (9)</b> Internal records documenting 5<sup>th</sup> and 6<sup>th</sup> CHA primary care sites have developed complex care management capacity with documentation of patient assignments to care managers. <b>2.1.1 (10)</b> EMR report.</p> <p><b>2.1.2 Milestone:</b> Monitoring of care management plans developed for high risk patients enrolled in the complex care management program across the 6 participating primary care sites.</p> <p><b>2.1.2 Metric:</b></p>

**Project 2.1: Implement primary care-based complex care management system (Master Plan Project 2.5)**

SFY 2012	SFY 2013	SFY 2014
<p>multi-payer report delivered to participating primary care sites.</p> <p><b>2.1.2 Data Source:</b>  <b>2.1.2 (2)</b> Internal records that incorporate payer data.</p> <p><b>2.1.3 Milestone:</b> Develop job requirements and/or identify competencies for members of the primary care complex care management team (community health workers, RN clinical care managers, social workers).</p> <p><b>2.1.3 Metric:</b>  <b>2.1.3 (3) (MP-P 3)</b> Submission of revised job descriptions and/or competencies for community health worker, nurse and social worker with integration of care management competencies.</p> <p><b>2.1.3 Data Source:</b>  <b>2.1.3 (3)</b> Internal job descriptions.</p>	<p>care sites participating in the complex care program.</p> <p><b>2.1.2 Metric:</b>  <b>2.1.2 (8) (MP-I 1 bullet 4)</b> Create baseline report for:                      a) the # of patients enrolled in the complex care management program and                      b) the percent of patients in the complex care management program who have a documented care plan during the measurement period at 4 CHA primary care sites participating in the complex care program.</p> <p><b>Numerator:</b> Number of patients enrolled in the complex care management program with care plans.</p> <p><b>Denominator:</b> Number of patients enrolled in the complex care management program.</p> <p>And establish a target for a defined percent increase in the number of patients enrolled in the complex care management program in SFY 2014 across the 6 participating primary care sites in SFY 2014.</p> <p><b>2.1.2 Data Source:</b>  <b>2.1.2 (8)</b> Care management report from EMR.</p>	<p><b>2.1.2 (11) (MP-I 4)</b> # and percent of patients in the complex care management program that have a care plan that has been developed by the Care Manager with input from the care team during the measurement period.</p> <p><b>Numerator:</b> Number of patients enrolled in the complex care management program with care plans.</p> <p><b>Denominator:</b> Number of patients enrolled in the complex care management program.</p> <p><b>2.1.2 Data Source:</b>  <b>2.1.2 (11)</b> Care Management Report from EMR.</p> <p><b>2.1.3 Milestone:</b> Increase the number of patients enrolled in the complex care management program by X percent over the baseline established in SFY 2013 metric 2.1.2 (8) across the 6 participating primary care medical home sites. (X percent increase determined in SFY 2013 metric 2.1.2 (8)).</p> <p><b>2.1.3 Metric:</b>  <b>2.1.3 (12) (MP-I 3)</b> Increase # of patients enrolled in the complex care management program across the 6 participating primary care medical home sites.</p> <p><b>2.1.3 Data Source:</b>  <b>2.1.3 (12)</b> Care management report from EMR.</p>

**Project 2.2: Improve management of patients with chronic diseases – Diabetes Improvement Initiative**

Master Plan Project 2.1

- **Goal:** Cambridge Health Alliance (CHA) has identified improved management of patients with diabetes as a priority for our safety net population which has a high prevalence of multiple chronic conditions.
  - Currently, Cambridge Health Alliance has over 5300 patients in the Diabetes Registry. CHA has been nationally recognized for its work in improving care processes for patients with chronic disease through its adoption of the Wagner Chronic Care model<sup>27</sup>, implementation of registries, and formation of Planned Care teams.<sup>28</sup> However, there remains significant opportunity for improvement in diabetes outcomes in our safety net patient population.
  - In 2011, CHA Ambulatory Care formed a multi-disciplinary Diabetes Performance Improvement Team (co-chaired by a primary care physician, endocrinologist, and quality improvement leader) with the purpose of evaluating the current state of efforts around diabetes care at CHA and developing recommendations for improvement, which were adopted in May 2011 by the Ambulatory Performance Improvement Team. In SFY 2012, CHA Ambulatory Care leadership, building on these recommendations, is currently in the process of launching initial pilot work on two of these recommendations toward the development of a more effective, team-based multi-disciplinary approach in a primary care setting to improve the health of patients with diabetes through: 1) evidenced-based diabetes medication management by pharmacists and 2) improved diabetes education and patient self-management of their condition by nurses. This higher level of patient care role development, including pharmacists and registered nurses, within the multi-disciplinary team is emblematic of CHA’s Patient-Centered Medical Home approach.<sup>29 30 31</sup>
  - During SFY 2012, CHA is piloting two initiatives for improved diabetes disease management in the primary care setting to which patients are referred by primary care clinicians:
    1. Pharmacist-led diabetes medication management services, which were developed in accordance with American Diabetes Association, Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7),

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<sup>27</sup> Wagner EH, Austin BT, and Von Korff M. “Organizing Care for Patients with Chronic Illness.” *The Milbank Quarterly* (1996) 74(4):511-44. and Wagner EH, et.al. “A Survey of Leading Chronic Disease Management Programs: Are they Consistent with the Literature?” *Managed Care Quarterly* (1999 Summer) 7 (3):56-66.

<sup>28</sup> Bodenheimer, T, MD. “Building Teams in Primary Care: 15 Case Studies” *California HealthCare Foundation*. July 2007.

<sup>29</sup> Smith M, Bates DW, Bodenheimer T, Cleary P. “Why pharmacists belong in the medical home.” *Health Affairs* (2010) 29(5):906–913.

<sup>30</sup> Patient-Centered Primary Care Collaborative Medication Management Task Force. “Integrating Comprehensive Medication Management to Optimize Patient Outcomes.” *Patient-Centered Primary Care Collaborative*. 2010.

<sup>31</sup> Giberson S, et al. “Improving Patient and Health System Outcomes through Advanced Pharmacy Practice. A Report to the U.S. Surgeon General.” *Office of the Chief Pharmacist. U.S. Public Health Service*. Dec 2011.



and National Cholesterol Education Program guidelines and enable pharmacists to work in collaborative practice with the primary care team to optimize metabolic control, prevent disease progression, prevent and manage complications and maximize the patient's quality of life. With patient specific goals established by the team and the patient, the pharmacist incorporates them into a plan of longitudinal education about the disease, healthy lifestyle and self-management techniques. Maximizing the benefit of medication therapies while reducing unwarranted side effects is one of the Diabetes Medication Management Service's areas of focus while reinforcing their other elements of care.

2. Protocols developed in accordance with the American Diabetes Association standards for diabetes self-management education to allow the ambulatory registered nurse to take an active role in diabetes treatment, care management and patient care management, supported by pharmacists.<sup>32</sup> Motivational interviewing and behavioral change techniques are incorporated into the registered nurse diabetes education training. Facilitating positive self-care behaviors directed at successful diabetes self management was formally adopted as a desired outcome of Diabetes Self-Management Education and Training in 2002.<sup>33</sup>
  - CHA will leverage the SFY 2012 pilot of the pharmacist-led diabetes medication management service and the nursing-led patient diabetes education and self-management coaching as the basis for assessment and development of a multi-disciplinary proactive team approach and plan that CHA will develop in early SFY 2013. This multi-disciplinary team and population management approach will be a significant enhancement. First, it will integrate initial pilot activities being tested separately at a single primary care site in SFY 2012 by pharmacists and nurses and create a multi-disciplinary team approach for effective care. Second, the initiative will include a population management component where proactive outreach is made to diabetic patients who meet certain criteria.<sup>34</sup> The pilot occurring in SFY 2012 is largely based on patients who receive a referral for enhanced diabetes services from their primary care team. In addition, CHA will implement proactive diabetes disease management functions as part of ambulatory nursing activities at the participating primary care sites, thereby expanding its role as part of the fabric of day-to-day care giving within primary care. CHA will implement this diabetes improvement approach at two primary care sites in SFY 2013 and an additional third primary care site in SFY 2014.
- **Rationale:** 25.8 million people in the US suffer from diabetes and 79 million more are estimated to have prediabetes. Diabetes is the 7<sup>th</sup> leading cause of death in the United States. 67 percent of patients with diabetes experience substantial medical illness from cardiovascular co-morbidities related to diabetes, including high blood pressure, high cholesterol, heart disease, and stroke. Diabetes

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<sup>32</sup> Funnell, MM, ADA. "Task Force. National Standards for Diabetes Self Management Education" *Diabetes Care* (Jan 2011). Vol 35 S.

<sup>33</sup> "AADE Guidelines for the Practice of Diabetes Self-management Education." *American Association of Diabetes Educators*, Chicago Illinois. 2009 Revised Nov 2010.

<sup>34</sup> The criteria for the proactive multi-disciplinary outreach to diabetic patients will be defined in SFY 2013 metric 2.2.2 (8).

costs the US over \$174 billion in direct and indirect costs.<sup>35</sup> The total cost of diabetes for people in Massachusetts in 2006 was estimated at \$4,321,000,000. This estimate includes excess medical costs of \$3,028,000,000 attributed to diabetes, and lost productivity valued at \$1,293,000,000.<sup>36</sup>

Diabetes management is challenging because of the complexity of the condition and its associated co-morbidities. Many patients with diabetes have additional risk factors such as high blood pressure, high cholesterol in addition to blood glucose levels which can lead to vascular and other complications. Poor control of risk factors can be relative to a number of root causes including lack of patient adherence to prescribed medication and self management of their condition as well as gaps in care coordination and pharmacotherapy.<sup>37</sup> Diabetes is the leading cause of kidney failure and limb amputations in the United States. The economic consequences are significant as well, as the cost of providing health care for those with diabetes is 2.3 times higher than those without diabetes.<sup>38</sup>

### **How this Project Refines Innovations**

CHA provides care to a complex, diverse and often high risk patient population. Recent reports<sup>39</sup> suggest that patient populations such as ours are at greater risk of medication errors, adverse drug events, and sub-optimal chronic disease management outcomes. Building on its successful pharmacotherapy clinics for anticoagulation management, CHA plans to partner clinical pharmacists with existing primary care patient care teams to enhance diabetes medication management services. Two years ago, the American Society of Health-System Pharmacists initiated the Pharmacy Practice Model Initiative (PPMI)<sup>40</sup> to significantly advance the health and well being of patients by developing and disseminating a futuristic practice model that supports the most effective use of pharmacists as direct patient care providers. In 2011, MA became the 48th state to issue collaborative practice regulations enabling the pharmacist to become a mid-level provider. The impact of this regulation<sup>41</sup> is that pharmacists will now become formal providers of direct patient care services. The CHA's Diabetes Management Service pharmacists will meet with patients directly and collaborate with the

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<sup>35</sup> Centers for Disease Control and Prevention. "National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011." *Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.* 2011.

<sup>36</sup> "The Estimated Prevalence and Cost of Diabetes in Massachusetts." *American Diabetes Association.* 2011. Available at <http://www.diabetesarchive.net/advocacy-and-legalresources/cost-of-diabetes-results.jsp?state=Massachusetts&district=0&DistName=Massachusetts+%28Entire+State%29>

<sup>37</sup> O'Donovan DO, Bryne S, Sahm L. "The role of pharmacists in control and management of type 2 Diabetes Mellitus; a review of the literature." *J Diabetology.* (2011); 1:5:1-16.

<sup>38</sup> National Diabetes Statistics. 2011. Available at: <http://diabetes.niddk.nih.gov/DM/PUBS/statistics/>

<sup>39</sup> The Commonwealth Fund. "National Scorecard on Health System Performance, 2011. National Healthcare Quality and Disparities Reports." *Agency for Healthcare Quality and Research.* 2010.

<sup>40</sup> <http://www.ashp.org/PPMI/AboutPPMI.aspx>. Accessed April 11, 2012.

<sup>41</sup> 247 CMR 16.00: Collaborative Drug Therapy Management

multidisciplinary team to optimize care based on evidence-based medication management protocols. The clinical pharmacy department intends to continue its engagement to disseminate findings through organizations such as the Institute for Healthcare Improvement and the American College of Clinical Pharmacy.

Concurrently, beginning in SFY 2012, we are implementing training for the ambulatory nursing staff to better engage and educate patients with poorly controlled diabetes including patient education and self management coaching. Initial results from a primary care site are showing improved registered nurse confidence in managing patients with diabetes and increasing patient engagement in their care. Findings from the initial nursing pilot have been or will be shared recently by nursing leadership at the Institute for Healthcare Improvement 13<sup>th</sup> Annual International Summit on “Improving Patient Care in the Office Practice and the Community” (March 18-20, 2012 in Washington, D.C.), in the National Scientific Sessions of the American Diabetes Association international conference (June 8-12, 2012 in Philadelphia, PA), and the National Medical Home Summit (February 27-29, 2012 in Philadelphia, PA). Continued engagement to share learning on the overall initiative both internally and externally is expected. We are also developing diabetes medication management protocols designed to allow the ambulatory registered nurse to take an active role in the treatment and care management of diabetic patients that are newly starting insulin therapy.<sup>42</sup>

- **Expected Results:** CHA expects to accomplish the following improvements in the management of patients with chronic diabetes care:
  - Initial pilot of two diabetes care improvement initiatives (pharmacist-led diabetes medication management services and nursing-led patient education) at one primary care site in SFY 2012.
  - Development of multi-disciplinary team approach to improve the management of diabetes in SFY 2013, leveraging the report of CHA’s Diabetes Performance Improvement Team and the initial pilots undertaken in SFY 2012.
  - Pilot diabetes improvement approach across 1 additional (2 total) primary care sites in SFY 2013 and 1 additional primary care site in SFY 2014 (3 total).
  - Train 100 percent of pharmacists and at least 90 percent of registered nurses providing diabetes education participating in pilot site initiatives.
  - Develop tools to track patient self-management goals in the patient’s record.
  - Establish baselines for the number of patients with diabetes with self-management goals at 2 primary care pilot sites in SFY 2013, and increase the number of patients with diabetes with self-management goals at those 2 pilot sites in SFY 2014.
  - Evaluate progress and lessons learned through SFY 2013 to incorporate into diabetes improvement plan.
  - Measure initial progress of diabetes improvement initiative in terms of process improvements and clinical indicators.
  - Increase the number of diabetic patients with self-management goals in their medical record.

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<sup>42</sup> Henske J.A., Griffith M.L, Fowler M.J. “Initiating and titrating insulin in patients with type 2 diabetes.” *Clinical Diabetes* (Nov 2009) Vol 27, number 2: 72- 76.

- **Relation to other Projects:** This project functions in relation to 1.1 Expand Patient Centered Medical Home, 1.2 Integrate Primary Care and Behavioral Health, 2.1 Implement Primary Care-Based Complex Care Management, 3.1 Develop Intervention to Address the Population Health of the Community, 3.2 Risk Stratification, and Category 4 Population-Focused Improvement Measures 4.18 (Adult Diabetes Measure: Good Control of Blood Sugar Levels (HbA1c)), 4.19 (Adult Diabetes Measure: Poor Control of Blood Sugar Levels (HbA1c)), 4.20 (Adult Diabetes Measure: Hypertension/Blood Pressure Control), 4.21 (Adult Diabetes Measure: Percent of adult patients with diabetes who had eye exam), and 4.22 (Adult Diabetes Measure: Percent of adult patients with diabetes who had micro-albumin screening).

This project aims to improve the care of patients with diabetes through a multi-disciplinary approach tapping pharmacists and nursing in the primary care setting. Therefore, this project is related to the separate project on primary care PCMH development in Project 1.1. and the separate project to integrate primary care and behavioral health in Project 1.2. There will likely be lessons learned from the work in Project 1.2 to improve depression screening in diabetic patients as well as the work in Project 3.1 on tobacco use verification and interventions that will be meaningful to the overall care of patients with diabetes. Some but not all patients with diabetes may be identified as high risk through the complex care (Project 2.1) or risk stratification (Project 3.2) initiatives.

**Project 2.2: Improve management of patients with chronic diseases – Diabetes Improvement Initiative (Master Plan Project 2.1)**

SFY 2012	SFY 2013	SFY 2014
<p><b>2.2.1 Milestone:</b> Pilot the following 2 recommendations from the Diabetes Performance Improvement Team toward the improved management of patients with diabetes at 1<sup>st</sup> primary care site</p> <ol style="list-style-type: none"> <li>1. Initiate nursing-led patient education initiative.</li> <li>2. Initiate pharmacist-led diabetes medication management services.</li> </ol> <p><b>2.2.1 Metrics:</b></p> <p><b>2.2.1 (1) (MP-P 13, bullet 1)</b> Copy of Diabetes Medication Management Service Protocol implemented for patients referred at 1<sup>st</sup> pilot primary care site.</p> <p><b>2.2.1 (2) (MP-P 13 bullet 2)</b> Schedule of pharmacist patient care sessions at 1<sup>st</sup> pilot primary care site and documentation from Ambulatory Nursing of schedule of patient education sessions led by nurses at 1<sup>st</sup> primary care site.</p> <p><b>2.2.1 Data Source:</b></p> <p><b>2.2.1 (1-2)</b> Internal records.</p> <p><b>2.2.2 Milestone:</b> Develop Diabetes Education Training Program for Primary Care Nurses and Implement Training Program at 1<sup>st</sup> primary care pilot site.</p>	<p><b>2.2.1 Milestone:</b> Assess pilot initiatives for nursing-led patient education and self-management coaching and pharmacist-led diabetes medication management services that were piloted based on primary care clinician referral at 1<sup>st</sup> primary care site during milestone SFY12 2.2.1.</p> <p><b>2.2.1. Metrics:</b></p> <p><b>2.2.1 (7) (MP-P 19)</b> Written report(s) with assessment and updates to protocols/programs as necessary</p> <p><b>2.2.1 Data Source:</b></p> <p><b>2.2.1 (7)</b> Internal documentation.</p> <p><b>2.2.2 Milestone:</b> Based on assessment in 2.2.1 above, develop integrated, proactive multi-disciplinary team diabetes care management approach and plan for the improved management of patients with diabetes, which will include criteria for patient referral and proactive outreach to diabetes nursing education and self-management coaching and pharmacist medication management.</p> <p><b>2.2.2 Metric:</b></p> <p><b>2.2.2 (8) (MP-P 3 bullet 2)</b> Copy of approved plan.</p> <p><b>2.2.2 Data Source:</b></p> <p><b>2.2.2 (8)</b> Internal documentation.</p> <p><b>2.2.3 Milestone:</b> Roll-out diabetes improvement approach to 2<sup>nd</sup> primary care site in addition to 1<sup>st</sup> initial pilot primary care site initiated in SFY 2012. Report on the # of diabetic patients in the pilot sites accessing enhanced services, including nursing-led patient education and self-management coaching and pharmacist-led medication management services.</p> <p><b>2.2.3 Metrics:</b></p> <p><b>2.2.3 (9) (MP-I 7 bullet 1)</b> Copy of training program for multi-</p>	<p><b>2.2.1 Milestone:</b> Incorporate lessons learned from SFY 2013 into Diabetes Management Plan and revise plan as necessary.</p> <p><b>2.2.1 Metrics:</b></p> <p><b>2.2.1 (13) (MP-P 19)</b> Progress report and assessment of process improvements and clinical indicators, and updates to protocols/programs as necessary based on activities through SFY 2013.</p> <p><b>2.2.1 Data Source:</b></p> <p><b>2.2.1 (13)</b> Internal records, EMR.</p> <p><b>2.2.2 Milestone:</b> Spread diabetes improvement approach to 3<sup>rd</sup> primary care site.</p> <p><b>2.2.2 Metrics:</b></p> <p><b>2.2.2 (14) (MP-I 7 bullet 1)</b> Copy of training program for multi-disciplinary care team at the additional 3<sup>rd</sup> primary care site.</p> <p><b>2.2.2 (15) (MP-I 9)</b> At least 90 percent of registered nurses providing diabetes education at 3<sup>rd</sup> primary care pilot site will receive Advanced Ambulatory RN Diabetes Self-Management Training and 100 percent of pharmacists participating in 3<sup>rd</sup> primary care pilot site initiatives will receive training</p> <p><b>2.2.2 Data Source:</b></p> <p><b>2.2.2 (14)</b> Internal records /documentation.</p> <p><b>2.2.2 (15)</b> Records documenting training has occurred.</p> <p><b>2.2.3 Milestone:</b> Monitor and report on active</p>

Project 2.2: Improve management of patients with chronic diseases – Diabetes Improvement Initiative (Master Plan Project 2.1)

SFY 2012	SFY 2013	SFY 2014
<p><b>2.2.2 Metrics:</b>  <b>2.2.2 (3) (MP-P 12 bullet 1)</b> Copy of educational materials and training program.  <b>2.2.2 (4) (MP-P 12 bullet 2)</b> Records of number of staff trained.  <b>2.2.2 Data Source:</b>  <b>2.2.2 (3-4)</b> Internal Records.  <b>2.2.3 Milestone:</b> Development of protocol, policies and procedures to support team-based care for patients with diabetes.  <b>2.2.3 Metrics:</b>  <b>2.2.3 (5) (MP-P 3 bullet 2)</b> Copy of policy for standing orders for patients with diabetes and submission of copy of Nursing Insulin Initiation and Titration Protocol for Type 2 Diabetes.  <b>2.2.3. Data Source:</b>  <b>2.2.3 (5)</b> Internal documents.  <b>2.2.4 Milestone:</b> Development of tool for documenting the patient self-management goals in patient record for patients with diabetes.  <b>2.2.4 Metrics:</b>  <b>2.2.4 (6) (MP-P 11)</b> Documentation of tool.  <b>2.2.4 Data Source:</b>  <b>2.2.4 (6)</b> Internal documents, EMR.</p>	<p>disciplinary care team at 1<sup>st</sup> and 2<sup>nd</sup> pilot primary care sites.  <b>2.2.3 (10) (MP-I 9)</b> At least 90 percent of registered nurses providing diabetes education at 1<sup>st</sup> and 2<sup>nd</sup> primary care pilot sites will receive Advanced Ambulatory RN Diabetes Self-Management Training and 100 percent of pharmacists participating in 1<sup>st</sup> and 2<sup>nd</sup> primary care pilot site initiatives will receive training.  <b>2.2.3 (11) (MP-I 10)</b> # of patients meeting referral criteria at pilot sites receiving enhanced diabetes management services, including nursing-led patient education and self-management coaching and pharmacist-led medication management services.  <b>2.2.3. Data Sources:</b>  <b>2.2.3 (9)</b> Internal records/documentation.                  2.2.3 (10) Records documenting training has occurred.  <b>2.2.3 (11)</b> Internal data, EMR.  <b>2.2.4 Milestone:</b> Patients with self-management goals in patient record for patients with diabetes at two pilot sites.  <b>2.2.4 Metrics:</b>  <b>2.2.4 (12) (MP-P 11 bullet 1)</b> Documentation of baseline of patients with self-management goals in patient record for patients with diabetes at two pilot sites and establish a target for X percent increase in the number of patients with self-management goals in patient record for patients with diabetes at two pilot sites for SFY 2014.  <b>2.2.4 Data Source:</b>  <b>2.2.4 (12)</b> Internal data, EMR.</p>	<p>diabetes care team engagement with patients meeting referral criteria.  <b>2.2.3 Metric:</b>  <b>2.2.3 (16) (MP-I 10)</b> # of patients meeting diabetes referral criteria at 1<sup>st</sup> and 2<sup>nd</sup> pilot sites receiving enhanced diabetes management services, including diabetes nursing-led education/ self-management coaching and pharmacist-led medication management.  <b>2.2.3. Data Source:</b>  <b>2.2.3 (16)</b> Internal data, EMR.  <b>2.2.4 Milestone:</b> Report on increase in number of patients with self-management goals in patient record for patients with diabetes at two pilot sites.  <b>2.2.4 Metric:</b>  <b>2.2.4 (17) (MP-I 6)</b> Report on increase in number of patients with self-management goals in patient record for patients with diabetes at two primary care pilot sites over SFY 2013 baseline, based on target established in SFY 2013 2.2.4 (12).  <b>2.2.4 Data Source:</b>  <b>2.2.4 (17)</b> Internal data, EMR.</p>

**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: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim and Alternative Payment Models**

Master Plan Project 3.7

- **Goal:** The goal of this project is to develop the capacity to promote the Triple Aim goal of improved population health. CHA proposes a population health initiative to develop the capabilities and processes to assess, monitor, and eventually improve population health.
  - In order to prepare to accept alternative or global payment models, hospitals and health systems need to understand their overall patient population in the context of the communities they serve. State and federal policymakers have expressed interest in developing indicators of progress for how new accountable care organizations and integrated care models are charting the course for improvements in the Triple Aim in this regard. One area that has been identified is the “measurement of and fixed accountability for the health status and health needs of designated populations.”<sup>43</sup> It is recognized that “the ‘actual’ causes of mortality in the United States lie in the behavior that the individual health care system addresses unreliably or not at all, such smoking, violence, physical inactivity, poor nutrition, and unsafe choices.”<sup>44 45</sup> Hospitals undertaking this population health initiative need to build the functionality to understand their overall population, morbidities, and compare what is learned to the public health indicators of the population in our target communities. Thus, a more system-level approach is developed in addition to the panel management of patients managed under accountable care arrangements.
  - To best address the needs of our patient population, CHA intends to develop the capacity to assess and monitor the health of the general hospital patient population (identified as patients on its primary care panels) and its relationship to the population health of communities within the hospital’s service area. To meet this goal, CHA is first identifying the major morbidities of our total primary care population. Secondly, CHA is comparing these co-morbidities with data available on public and community health indicators from our service areas and discuss these findings with community public health leaders and better understand concurrent programs that are operating in our communities. Finally, based on our work in SFY 2012, CHA is using the data to cross-map priority areas for intervention among our patient population. Following this process, tobacco use identification and cessation is being selected for this project intervention based on an analysis of data and criteria that includes prevalence of the condition in our patient population, community partner’s input and collaboration, available evidence-based practices, and

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<sup>43</sup> Berwick, D M., Nolan, TW., Whittington, J. " The Triple Aim: Care, Health, and Cost," *Health Affairs* (May/June 2008) 27 3: 759-769.

<sup>44</sup> Berwick, D M., Nolan, TW., Whittington, J. " The Triple Aim: Care, Health, and Cost," *Health Affairs* (May/June 2008) 27 3: 759-769.

<sup>45</sup> McGinnis, J.M. and Foege, W.H., "Actual Causes of Death in the United States," *Journal of the American Medical Association* (1993) 270, no. 18: 2207-2212; and Mokdad, A.H. et al, "Actual Causes of Death in the United States, 2000," *Journal of the American Medical Association* (2004) 291, no. 10: 1238-1245.

potential for return on investment and prevention gains based on the literature. Details of this selection process will be available in SFY 2013 Metric 3.1.3. This work will help us develop our ongoing capacity for population based risk assessment and monitoring and is aimed at making foundational and meaningful progress toward the Triple Aim goal of improving the health of the community. During the three year period, we will be able to evaluate the lessons learned to inform our future population health agenda.

- Through our analysis and prioritization process, CHA is working with leaders in local health departments who have recently been awarded Mass in Motion initiatives. Together, we have identified tobacco prevention and cessation as our first target for intervention to improve the health of the hospital’s patient population, which would link to the separate Mass in Motion efforts in local communities. We will embark on the development and implementation of a population based intervention at three primary care sites. Recognizing the need to address tobacco use, particularly in vulnerable populations such as the mentally ill, we will adapt evidence based practices to effectively serve this population. CHA is uniquely poised to make contributions on population health due to its longstanding role in public and community health and its history of community collaboration. We intend to connect our work within the delivery system to the larger public health agenda to achieve these goals.
- CHA is dedicated to improving the health of the communities that we serve. In order to achieve this goal, we have historically worked with community institutions (health departments, school departments, housing authorities) and community based agencies throughout our targeted communities to improve the health of the population. In this population health initiative, we are working collaboratively with four local health departments and several anti-poverty agencies to identify our population priorities and assess the needs of the population overall. As we implement our project, we will continue these relationships and intend to also work closely with local housing authorities as these are major residences of our patient population. These relationships are instrumental in achieving our transformation goals. An example of CHA’s community focused work is its participation in a Centers for Disease Control and Prevention community transformation grant (\$30,000) to facilitate community health improvement in chronic health conditions and to collaborate with local *Mass in Motion* collaboratives. These activities are distinct from and complement CHA’s DSTI Population Health project, which is focused on population health strategies and a tobacco use intervention.
- **Rationale:**
  - As we move towards alternative and global payment arrangements, the need to understand the epidemiology of the patient population we serve is imperative. Keeping this population healthy will require enhancing our capacity to assess, monitor and prioritize lifestyle risk factors that unduly impact our patient’s health outcomes. Interventions focused on lifestyle risk behaviors such as tobacco abuse for the hospital’s primary care patient population will be important contributors to improving health at the patient and community level. In addition, aligning the safety net hospital efforts with the public health priorities at the state and



federal level such as those identified by the Centers for Disease Control and Prevention’s Winnable Battles, the U.S. Department of Health and Human Services and Massachusetts Department of Public Health (tobacco control and obesity prevention), will lead to improved overall community health indicators.<sup>46</sup> By developing initial capabilities to address these population health issues in our patient population, we intend to support health change in the population health of communities within the hospital’s service area (particularly where our patient panels largely reside) and work collaboratively with organizations in the communities that have launched related, existing efforts.

- Specifically, related to this population health initiative focused on tobacco use verification and cessation interventions, CHA will use this evidence based practice and aim to improve the numbers of people who are assessed for smoking and then improve the numbers of smokers that receive a referral to any type of cessation (prescriptions, counseling). While cessation has been a covered benefit for MassHealth<sup>47</sup> we know that not all our patients have taken advantage of this option. By making smoking assessment a vital sign, we will systematically assess each patient at each visit, and we will assist patients in getting the help that they require. Safety net hospitals have not always addressed smoking in this type of systematic way and due to the challenges of their patient population; patients do not always request support, nor access existing resources. This project will target smoking in all patients, and provide referral to community based resources as well as onsite resources to enhance the benefits of cessation programs and achieve results for a broad cohort of the population of smokers served.
- By developing initial capabilities to address these population health issues in its patient population, CHA will develop an ongoing capacity for population-based risk assessment and monitoring, aimed at making foundational and meaningful progress toward the Triple Aim goal of improving the health of the community.
- **Expected Results:** CHA will accomplish the following during the 3-year period:
  - Develop safety net hospital capacity to address population health of the community as it relates to the Triple Aim and alternative payment models.
  - Create a data tool for reporting on the hospital’s Primary Care population morbidities and social determinants of health.
  - Identify the leading morbidities in the primary care population.
  - Prioritize a tobacco prevention and cessation initiative for intervention in collaboration with local public health departments and community partners including our Committee on Community and Public Health and our Community Advisory Committee.

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<sup>46</sup> These “winnable battles” are those leading public health challenges and causes of death and disability that have large-scale impact and known, effective strategies to combat them such as tobacco use identification and cessation, obesity and physical activity, nutrition, and global immunization. Centers for Disease Control and Prevention, Winnable Battles, <http://www.cdc.gov/winnablebattles/>, retrieved on May 11, 2012.

<sup>47</sup> Land T, Rigotti NA, Levy DE, Paskowsky M, Warner D, et al. “A Longitudinal Study of Medicaid Coverage for Tobacco Dependence Treatments in Massachusetts and Associated Decreases in Hospitalizations for Cardiovascular Disease.” *PLoS Med* (2010) 7(12):e1000375. doi:10.1371/journal.pmed.1000375

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- Develop and implement a plan for intervention at 3 primary care sites to promote progress on tobacco prevention and cessation.
  - Increase by 10 percent over the established baseline the rate of tobacco use verification for adult patients at the initial pilot site. Understanding that many of our patients have co-morbid conditions, including co-occurring tobacco use with mental health and substance abuse concerns, we expect to make ongoing gains in SFY13 and SFY14.
  - Establish tobacco use identification and cessation as an institutional priority and vital sign within primary care.
  - Document lessons learned, including about community collaboration, and application/recommendations for future population health work associated with the Triple Aim and alternative payment models.
- **Relation to other Projects:** This project functions in relation to the 1.1 Expand Patient Centered Medical Home, 2.1 Implement Primary Care-Based Complex Care Management, 2.2 Improve Management of Patients with Chronic Diseases, but with a focus specifically on lifestyle risk behaviors, and the prevention of chronic disease, and Category 4 Population-Focused Improvement Measures: 4.23 (Adult Tobacco Use Screening Measure) and 4.24 (Adult Tobacco Use Cessation Intervention Measure).

Because this population health initiative is based in primary care, it is related to the separate PCMH initiative in Project 1.1 and the complex care initiative in Project 2.1. Given the risk factors for patients with chronic disease such as diabetes, this effort focused on tobacco use verification and cessation interventions may have useful linkages both from a prevention and progression of chronic disease standpoint.

**Project 3.1: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim and Alternative Payment Models (Master Plan Project 3.7)**

SFY 2012	SFY 2013	SFY 2014
<p><b>3.1.1 Milestone:</b> Convene population health workgroup.</p> <p><b>3.1.1 Metric:</b> <b>3.1.1 (1) (MP-P 1)</b> Documentation of formation and implementation of Population Health workgroup as evidenced by workgroup charter, meeting minutes, and roster or participants.</p> <p><b>3.1.1 Data Source:</b> <b>3.1.1 (1)</b> Internal records.</p> <p><b>3.1.2 Milestone:</b> Design and develop initial data tool for reporting on the hospital’s Primary Care population morbidities and social determinants of health.</p> <p><b>3.1.2 Metric:</b> <b>3.1.2 (2) (MP-P 2)</b> Data analytic tool developed that can be used to assess and report on the morbidities of the patient population. This tool will draw from the hospital’s data warehouse in real time.</p> <p><b>3.1.2 Data Source:</b></p>	<p><b>3.1.1 Milestone:</b> Develop intervention to address tobacco use.</p> <p><b>3.1.1 Metrics:</b> Documentation of intervention plan with the following components:</p> <p><b>3.1.1 (5) (MP-P 4 bullet 1)</b> The number of tobacco users in CHA’s primary care population, as measured by the percent of primary care patients 18 years of age and older with tobacco use presenting at primary care sites.</p> <p><b>3.1.1 (6) (MP-P 4 bullet 2)</b> Develop criteria for remaining identification of primary care sites for intervention and choose sites based on those criteria.<sup>48</sup></p> <p><b>3.1.1 (7) (MP-P 4 bullet 3)</b> Develop tobacco verification and counseling workflow for primary care so that tobacco use is verified at primary care visit as a vital sign.</p> <p><b>3.1.1 (8) (MP-P 4 bullet 4)</b> Develop tools in the Electronic Medical Record</p>	<p><b>3.1.1 Milestone:</b> Implement tobacco use intervention at two additional primary care sites.</p> <p><b>3.1.1 Metrics:</b> <b>3.1.1 (11) (MP-I 1 bullet 1)</b> Documentation that the 2<sup>nd</sup> and 3<sup>rd</sup> additional primary care site’s appropriate staff and providers have been trained on the protocol for identifying and documenting the specified at-risk population.</p> <p><b>3.1.1 (12) (MP-I 1 bullet 2)</b> Establish baseline measure of tobacco status verification at the 2<sup>nd</sup> and 3<sup>rd</sup> additional pilot site as measured by:</p> <p><b>Numerator:</b> number of primary care visits for patients 18 and older where tobacco use status verified.</p> <p><b>Denominator:</b> total number of primary care visits for patients 18 and older, seen at primary care site during the previous month (This is an adjustment to NQF 0028a to allow for monthly snapshots of tobacco status verification for patient care operations purposes).</p> <p><b>3.1.1 Data Sources:</b> <b>3.1.1 (11)</b> Internal data, email instructions. <b>3.1.1 (12)</b> Internal data, EMR report.</p> <p><b>3.1.2 Milestone:</b> Increase tobacco status verification screening rate at 1st pilot site by additional 5 percent improvement over SFY 2012</p>

<sup>48</sup> The 1<sup>st</sup> pilot site is being selected during SFY 2012 as part of the population health work group and community process in identifying the priority area for intervention. The 1<sup>st</sup> pilot primary care site, located proximate to a large public housing development in which a large CHA patient population resides, creates an opportunity for clinical practice and community synergy on this intervention. To expand the program we need to examine other sites against the selection criteria.

**Project 3.1: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim and Alternative Payment Models (Master Plan Project 3.7)**

SFY 2012	SFY 2013	SFY 2014
<p><b>3.1.2 (2)</b> Screen shot of the data tool.</p> <p><b>3.1.3 Milestone:</b> Review and Analyze Population Health data and health indicators of local communities. Select an intervention for implementation.</p> <p><b>3.1.3 Metric:</b> <b>3.1.3 (3) (MP-P 3)</b> Criteria for potential intervention documented, findings from the analysis, identification of tobacco prevention and cessation as area for intervention.</p> <p><b>3.1.3 Data Source:</b> <b>3.1.3 (3)</b> Internal data, minutes from meetings, report on data from target communities.</p> <p><b>3.1.4 Milestone:</b> Establish baseline measure of tobacco status verification at 1<sup>st</sup> pilot site.</p> <p><b>3.1.4 Metrics:</b> <b>3.1.4 (4) (MP-P 4 bullet 1)</b> Establish baseline measure of tobacco status verification at 1<sup>st</sup> pilot site as measured by: <b>Numerator:</b> number of primary care visits for patients 18 and older where tobacco use status verified. <b>Denominator:</b> total number of primary care visits for patients 18 and older, seen</p>	<p>(EMR) for support of intervention.</p> <p><b>3.1.1 Data Sources:</b> <b>3.1.1 (5-8)</b> Internal data, records and EMR report.</p> <p><b>3.1.2 Milestone:</b> Implement the population health pilot intervention at 1<sup>st</sup> primary care site.</p> <p><b>3.1.2 Metrics:</b> <b>3.1.2 (9) (MP-I 1 bullet 1)</b> Documentation that the 1<sup>st</sup> pilot primary care site’s appropriate staff and providers have been trained on the protocol for identifying and documenting the specified at-risk population.</p> <p><b>3.1.2 Data Source:</b> <b>3.1.2 (9)</b> Internal data; email instructions.</p> <p><b>3.1.3 Milestone:</b> Increase tobacco status verification screening rate at 1<sup>st</sup> pilot site by 5 percent improvement over SFY 2012 baseline established in SFY 2012’s metric 3.1.3.(4).</p> <p><b>3.1.3 Metric:</b> <b>3.1.3 (10) (MP-I 2)</b> Measure of 5 percent improvement over SFY 2012 baseline tobacco status verification at</p>	<p>baseline established in SFY 2012’s metric 3.1.3.(4).</p> <p><b>3.1.2. Metric:</b> <b>3.1.2 (13) (MP-I 2)</b> Measure of additional 5 percent improvement over SFY 2012 baseline of tobacco status verification at 1<sup>st</sup> pilot site as measured by: <b>Numerator:</b> number of primary care visits for patients 18 and older where tobacco use status verified. <b>Denominator:</b> total number of primary care visits for patients 18 and older, seen at primary care site during the previous month. (This is an adjustment to NQF 0028a to allow for monthly snapshots of tobacco status verification for patient care operations purposes).</p> <p><b>3.1.2 Data Source:</b> <b>3.1.2 (13)</b> Internal data, EMR report.</p> <p><b>3.1.3 Milestone:</b> Establish tobacco prevention and cessation as an institutional improvement measure.</p> <p><b>3.1.3 Metrics:</b> <b>3.1.3 (14) (MP-I 3 bullet 1)</b> Reports on tobacco status verification documented for all primary care sites. <b>Numerator:</b> number of primary care visits for patients 18 and older where tobacco use status verified <b>Denominator:</b> total number of primary care visits for patients 18 years of age and older, seen at primary care site during the previous month. (This is an adjustment to NQF 0028a to allow for monthly snapshots of tobacco status verification for patient care operations purposes).</p> <p><b>3.1.3 (15) (MP-I 3 bullet 2)</b> Establish baseline data on smoking</p>

**Project 3.1: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim and Alternative Payment Models (Master Plan Project 3.7)**

SFY 2012	SFY 2013	SFY 2014
<p>at primary care site during the previous month. Baseline will be established as of February 2012. (This is an adjustment to NQF 0028a to allow for monthly snapshots of tobacco status verification for patient care operations purposes).</p> <p><b>3.1.4 Data Source:</b> <b>3.1.4 (4)</b> Internal data: EMR report.</p>	<p>1<sup>st</sup> pilot site as measured by: <b>Numerator:</b> number of primary care visits for patients 18 and older where tobacco use status verified.</p> <p><b>Denominator:</b> total number of primary care visits for patients 18 and older, seen at primary care site during the previous month. (This is an adjustment to NQF 0028a to allow for monthly snapshots of tobacco status verification for patient care operations purposes).</p> <p><b>3.1.3 Data Source:</b> <b>3.1.3 (10)</b> Internal data, EMR report.</p>	<p>cessation intervention measure across all primary care sites to inform future improvement work. percent of patients 18 years and older, identified as tobacco users, who received cessation intervention in the past 24 months, using the NQF 0028b and MA PCMHI measure (PCMHI 0028b).</p> <p><b>Numerator:</b> patients 18 and older who are tobacco users who received a tobacco cessation intervention, including counseling, diagnosis, referral, and/or medication intervention in past 24 months.</p> <p><b>Denominator:</b> patients 18 years and older, who have been seen either for one visit to a CHA primary care location or at least two office visits at CHA and have a CHA PCP, within 24 months.</p> <p><b>3.1.3 Data Source:</b> <b>3.1.3 (14-15)</b> Internal data, EMR report.</p> <p><b>3.1.4 Milestone</b> Evaluate the population health process and report on lessons learned and application/recommendations for future and ongoing population health work associated with the Triple Aim. Lessons learned about related collaborations with community partners will be included.</p> <p><b>3.1.4 Metric</b> <b>3.1.4 (16) (MP-P 5)</b> Documentation of recommendations from first three years of work on population health.</p> <p><b>3.1.4 Data Source:</b> <b>3.1.4 (16)</b> Internal documents and report.</p>

### **Project 3.2: Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models**

#### Master Plan Project 3.1

- **Goal:** In direct relationship to CHA’s collaboration with payers to move toward and adopt alternative payment models, CHA plans to develop the capability to target high-risk patients in those payer-specific populations by utilizing risk scores supplied by payers or collecting accurate patient and claims data and stratifying the patient population by health risk indicators and utilization indicators.
  - The development of risk stratification capabilities has been identified by health care experts and learning collaboratives, such as the American Hospital Association and Brookings-Dartmouth Accountable Care Organization (ACO) Learning Network, as integral to accepting alternative payment models and impacting the Triple Aim goals.<sup>49 50</sup> As a core part of preparations toward accepting alternative payment methods and improving quality and coordination of patient care, hospitals need to develop the capabilities for risk stratification and/or the development of comprehensive diagnostic patient profiles. Capabilities to utilize the results of risk stratification and predictive modeling are foundational to ACOs both in terms of financial management and care management. In order to accurately develop global budgets in concert with payers, ACOs must incorporate adjustment for the risk of the population under management. Similarly, when managing population health and costs under global and other alternative payment arrangements, ACOs must understand the predicted cost and care needs of individual patients on the payer-specific panel in order to align care management resources with potential improvements in care delivery and cost-effectiveness.
  - CHA is implementing this risk stratification initiative directly in alignment with efforts toward alternative payment arrangements with specific payers. CHA is developing capabilities through this initiative to work both with payers to obtain accurate data exchange, risk stratification data and information, and to develop the capability internally to develop risk stratification data, tools, processes, and personnel to effectively develop and work with such information for deployment in care management interventions. Both approaches require significant investments of time and resources, and both approaches will be critical to our success managing population health and accepting greater financial responsibilities under alternative payment models.

Based on our initial experience with the first payer population on which we are collaborating on risk stratification activities under an alternative payment arrangement, there are significant mutual efforts and initiatives to be undertaken. During SFY 2012, CHA is collaborating with the first payer to develop and obtain accurate risk stratification results. This requires significant data exchange and sophistication in working with complex data by both parties. There are numerous important details to this process to ensure meaningful risk stratification outputs, monthly execution of accurate risk scores to enable usage of this information for

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<sup>49</sup> Accountable Care Organization Learning Network Toolkit. Engelberg Center for Health Care Reform | The Dartmouth Institute and The Brookings Institution, January 2011.

<sup>50</sup> American Hospital Association. (2011) *The Work Ahead: Activities and Costs to Develop An Accountable Care Organization*.

effective care management interventions. In addition, there are data integrity requirements associated with any new and ongoing data transfer process, which is magnified by the complexity of the type of data being exchanged.

CHA expects to also develop risk stratification results internally over the course of the 3-year demonstration, and this will also require a significant collaboration with payers to obtain accurate, complete and timely claims and enrollment data to use in the risk stratification system we operate. Acquisition, training and use of this toolset will require a considerable development of our internal capacity. Since there may be advantages and restrictions on whether it will be best to obtain risk stratification results directly from a payer or generate the results internally, developing the dual capabilities is important.

- As noted above, in an initial effort to develop risk stratification capabilities, CHA has created a shared data mart with one Medicaid and Commonwealth Care health insurer to better understand the health risk indicators, utilization trends, patterns, quality and costs of the shared patients and members in the context of a global payment arrangement.
- CHA is undertaking significant activities to develop the long-term capacities to work with risk stratification information and improve the underlying data from which it is based, including data connectivity to ensure real-time access to data including risk scores and rankings, development of automated reports for use by CHA and its care managers, and regular updates to risk scores and rankings so that data used by care managers is current, and collaboration with the payer to use risk stratification model results, such as those based on DxCG and Chronic Illness & Disability Payment System (CDPS) and the payer’s proprietary weights, increase the model’s predictive value.
- During the first year (SFY 2012), CHA plans to leverage this risk stratification information from one payer specific to the payer’s Medicaid and Commonwealth Care insured-population for identification of the top 3 percent high risk patients. During the second year (SFY 2013), CHA will report on SFY 2012 initial activities based on the assignment of the top 3 percent high risk patients from that initial payer population to primary care site-based care management or centralized care management care managers. This will be measured by the total number or percent of the top 3 percent cohort of patients for that payer that have been assigned to primary care site-based care management or centralized care management. Assignment means that a care manager has been notified that a high risk member has been added to his/her caseload.
- During the second and third years (SFYs 2013 and 2014), CHA will also expand upon its first year initiative by obtaining, or developing internally, additional payer-specific population risk analysis data so that in SFY 2014 CHA has a total of a minimum of 2 payer-specific populations under active risk stratification and related care management activities. In SFY 2014, CHA will implement or continue the assignment of the 2 payer-specific cohorts of the top 3 percent high risk patients to primary care site-based care management or centralized care management.

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- In order to achieve these results, CHA will either obtain risk scores from payers or develop risk scores internally after receiving necessary data from payers. High risk is defined by the predictive modeling software used by payer partners and/or CHA. Generally, predictive models estimate high risk and expected costs primarily based on diagnoses, demographics, and claims information. Through this initiative, CHA will begin to gain important experience and longer-term capabilities to perform risk stratification activities and care management interventions.
- **Rationale:** The development of risk stratification capabilities will allow better understanding of population health needs, allow for design of interventions to improve health and contain cost, assist with better care coordination, facilitate clinical relationships and, in so doing, will position CHA with capabilities to better manage under alternative payment methodologies. Risk stratification, in general, is not a new field, but its application by providers to manage a population under an alternative payment arrangement is a very new endeavor. These capabilities are essential to the hospital's ongoing development of population management functionality as part of our transformation toward new delivery system and payment models.
- **Expected Results:** CHA will have a better understanding of the risk and utilization profile of 2 separate payer-specific populations with distinct risk profiles that will comprise approximately 15 percent-25 percent of CHA's total primary care patient panel, will develop capacity in conjunction with payer collaborations to identify the payer-specific criteria for determining the top 3 percent highest risk patients, and then leverage the results from 2 payer populations to assign the corresponding patients to primary care-based care management or centralized care management as appropriate.<sup>51</sup>
  - Determined by the fact that a small proportion of total members account for a high proportion of costs and by the capacity to perform care management activities, an initial target for CHA to identify the top 3 percent high risk population within a specific payer cohort and to assign them to care management activities is a healthy approach, taking into account the literature and the

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<sup>51</sup> The words "insurer" and "payer" are used interchangeably. Therefore, two different payer populations means two different insurers' covered lives in terms of CHA's primary care panels. Given that each insurer/payer sometimes has more than one product line it is likely that there will be more than 2 products covered under this initiative. For example, CHA's initial insurer/payer collaboration under alternative payment arrangement covers 2 populations: Medicaid managed care and a similar expansion population, Commonwealth Care. It is estimated that the populations covered under this initiative will encompass approximately 15-25 percent of CHA's primary care population of approximately 93,000. The second population is not yet finalized, but is likely to be either a Dual Eligible senior population or a commercial population. Since the risk stratification initiative relies on having access to the total medical expenditures and complete claims files at CHA and external providers, it is only possible to undertake such initiatives when the insurer/payer provides the complete data set for the primary care panel of patients for whom we are responsible. This typically occurs in the context of alternative payment arrangements between the provider and insurer/payer.



initial starting place of providers newly undertaking these activities and responsibilities in tandem with alternative payment models.<sup>52</sup>

- Learning will occur about how to use available data and methodologies effectively to develop risk profiles that can be successfully utilized for care management interventions. While the current state-of-the-art in terms of risk stratification does not adequately identify social and behavioral health risk factors, other data such as cost data may be shown to enrich the risk stratification process. Once the top 3 percent highest risk patients have been identified, they will be assigned to primary care-based or centralized care management based on criteria under development, including whether a primary-care complex care management team is in place and how engaged the patient already is in primary care.
- Increase to a minimum of 2 payers with whom CHA is working toward alternative payment models, for which we are undertaking associated risk stratification and care management interventions.
- Achieve an improvement of 5 percentage points over the established baseline in the total proportion of top high risk patients (from the top 3 percent cohort of patients) for one payer that have been assigned to primary care-based care management or centralized care management.<sup>53</sup>
- **Relation to other Projects:** This project functions in relation to 1.1 Expand Patient Centered Medical Home, 2.1 Implement Primary Care-Based Complex Care Management, and Category 4 Population-Focused Improvement Measure 4.25 (Measure of costs avoided due to interventions triggered by top 3 percent high-risk stratification identification).

**This project has linkages to the separate complex care management initiative for high risk patients in primary care (Project 2.1) and the PCMH model of care (Project 1.1). The risk stratification initiative will serve as one source of identification and referral of high risk patients to primary care-based complex care efforts.**

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<sup>52</sup> Verisk high cost case identification modelers often attempt to predict the most expensive 0.05 percent to 1 percent of high risk members. A report on the under 65 insured populations by the IMS Institute for Healthcare Informatics showed 1 percent of the privately insured population accounts for 25 percent of overall health costs and 5 percent accounts for 50 percent of overall health costs. Source: Healthcare Spending Among Privately Insured Individuals Under Age 65. The IMS Institute for Healthcare Informatics, Feb 2012.

<sup>53</sup> About 400-800 of CHA's highest risk patients are expected to be identified through our risk stratification efforts in this initiative. This represents a significant improvement in our ability to intervene effectively under global payment arrangements. A high level of assignment of patients identified through risk stratification is anticipated to centralized or site-based care management. Therefore, a 5 percent improvement will likely be off of a high base level of assignment, which accordingly provides the rationale for the percentage increase. Providing effective care management for this population has required us to develop site-based and centralized care management resources to manage these complex patients. An industry average for caseload size for this type of complex patient population ranges from 50-100. We are building significant teams that include nurses, social workers and community health workers to address the complex medical, psychological and social needs of the populations we serve.

**Project 3.2: Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models (Master Plan Project 3.1)**

SFY 2012	SFY 2013	SFY 2014
<p><b>3.2.1 Milestone:</b> Obtain risk stratification information from 1<sup>st</sup> payer.</p> <p><b>3.2.1 Metrics:</b> <b>3.2.1 (1) (MP-P 1 bullet 1)</b> Documentation that risk stratification information has been obtained from 1st payer.</p> <p><b>3.2.1 (2) (MP-P 1 bullet 2)</b> Document 1<sup>st</sup> payer-specific criteria for identification of top 3 percent high-risk patients and obtain top 3 percent high risk patients from payer applying the risk stratification methodology.<sup>54</sup></p> <p><b>3.2.1 Data Sources:</b> <b>3.2.1 (1)</b> Hospital data reports that list actual risk rankings for high-risk members. <b>3.2.1 (2)</b> Internal records that describe in detail the way risk stratification is generated on a payer-specific basis.</p>	<p><b>3.2.1 Milestone:</b> Obtain risk stratification information from a 2<sup>nd</sup> payer.</p> <p><b>3.2.1 Metrics:</b> <b>3.2.1 (3) (MP-P 1 bullet 1)</b> Documentation that risk stratification information has been obtained from a 2<sup>nd</sup> payer.</p> <p><b>3.2.1 (4) (MP-P 1 bullet 2)</b> Document 2<sup>nd</sup> payer-specific criteria for identification of top 3 percent high-risk patients and obtain top 3 percent high risk patients from payer or CHA applying the risk stratification methodology.</p> <p><b>3.2.1 Data Sources:</b> <b>3.2.1 (3)</b> Hospital data reports that list actual risk scores/rankings for high-risk members. <b>3.2.1 (4)</b> Internal records that describe the way risk stratification is generated on a payer-specific basis.</p> <p><b>3.2.2 Milestone:</b> Report on SFY 2012</p>	<p><b>3.2.1 Milestone:</b> Obtain, develop, and/or update risk stratification information for all patients to achieve a minimum of 2 payer-specific populations under active risk stratification activities.</p> <p><b>3.2.1 Metrics:</b> <b>3.2.1 (6) (MP-P 1 bullet 1)</b> Documentation that risk stratification information has been obtained, updated, or developed from data for 2 payer-specific populations.</p> <p><b>3.2.1 (7) (MP-P 1 bullet 2)</b> Document payer-specific criteria for 2 payer-specific populations for identification of top 3 percent high-risk patients and identify or obtain top 3 percent high risk patients for each payer-specific population by applying the risk stratification methodology.</p> <p><b>3.2.1 Data Sources:</b> <b>3.2.1 (6)</b> Hospital data reports that list actual risk scores/rankings for high-risk members. <b>3.2.1 (7)</b> Internal records that describe the way risk stratification is generated by payer or by CHA.</p> <p><b>3.2.2 Milestone:</b> Implement plan to assign the top 3 percent highest risk patients for 2 payer cohorts to primary care based care management or centralized care management.</p> <p><b>3.2.2 Metrics:</b> <b>3.2.2 (8) (MP-I 3 bullet 1)</b> Assignment of the top 3 percent highest risk</p>

<sup>54</sup> The source for the 3 percent cutoff is best practice from many organizations and the literature. Other provider organizations are focusing their initial complex care management efforts on this top 3 percent population. Additionally, as referenced in the previous footnote 52, industry leaders have also suggested a focus on an even smaller cohort of patients. The top 3 percent of the first payer population CHA will focus on covers about 21 percent of total medical expenditures for the entire payer population, or about \$14 million annually. We estimate the top 3 percent of the first payer population to cover about 400 patients. This is a significant number of the most complex patients for us to assign to care management in order to intervene effectively to improve the quality and cost of their health care.

Project 3.2: Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models (Master Plan Project 3.1)

SFY 2012	SFY 2013	SFY 2014
	<p>initial activities from 1<sup>st</sup> payer-specific cohort to assign the top 3 percent highest risk patients to primary care-based care management or centralized care management.</p> <p><b>3.2.2 Metric:</b>  <b>3.2.2 (5) (MP-I 3 bullet 1)</b> Total number and percent of the top 3 percent cohort of patients for 1st payer that were assigned to primary care-based care management or centralized care management.</p> <p><b>Numerator:</b> number of patients that have been assigned to centralized or site-based care management</p> <p><b>Denominator:</b> total number of patients that are included in the top 3 percent high risk patient cohort</p> <p><b>3.2.2 Data Source:</b>  <b>3.2.2 (5)</b> Internal CHA snapshot report that will indicate the number of patients in the top 3 percent of risk stratification results and the number of patients that have been assigned to a care manager on that snapshot report.</p>	<p>patients from 2 payer-specific cohorts to primary care site-based care management or centralized care management as appropriate. This will be measured by the total number or percent of the top 3 percent cohort of patients for that payer that have been assigned to primary care based care management or centralized care management for payer-specific population.</p> <p><b>Numerator:</b> number of patients that have been assigned to centralized or site-based care management</p> <p><b>Denominator:</b> total number of patients that are included in the top 3 percent high risk patient cohort</p> <p><b>3.2.2 Data Source:</b>  <b>3.2.2 (8)</b> Internal CHA snapshot report that will indicate the number of patients that have been in the top 3 percent of risk stratification results and the number of patients that have been assigned to a care manager on that snapshot report.</p> <p><b>3.2.3 Milestone:</b> Increase in the number of patients identified through risk stratification processes assigned to primary care-based care management or centralized care management.</p> <p><b>3.2.3 Metrics:</b>  <b>3.2.3 (9) (MP-I 3 bullet 2)</b> Improvement of 5 percentage points over the established baseline in the total proportion of top high risk patients (from the top 3 percent cohort of patients) for one payer that have been assigned to primary care-based care management or centralized care management.</p> <p><b>Numerator:</b> number of patients that have been assigned to site-based care management or centralized care management in FY14.</p> <p><b>Denominator:</b> total number of patients that is included in the top 3 percent high risk patient cohort for a specific-payer in FY14.</p> <p><b>Comparator:</b> The FY14 proportion of top high risk patients (from the top 3 percent payer-specific cohort of patients) assigned to a care manager</p>

**Project 3.2: Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models (Master Plan Project 3.1)**

SFY 2012	SFY 2013	SFY 2014
		<p>must be 5 percentage points higher than the FY13 proportion of top high risk patients (from the top 3 percent payer-specific cohort of patients) assigned to care manager. If the FY13 percentage is 95 percent or above, 100 percent assignment in FY14 will qualify for meeting 5 percent improvement target.</p> <p><b>3.2.3 Data Source:</b>  <b>3.2.3 (9)</b> Internal CHA snapshot report that will indicate the number of patients that have been in the top 3 percent of risk stratification results and the number of patients that have been assigned to a care manager on that snapshot report.</p>

**Project 3.3: Participate in a Learning Collaborative**

Master Plan Project 3.9

- **Goal:** Collectively, the DSTI projects proposed in Categories 1, 2 and 3 of this plan have the potential to significantly transform the care experience for Massachusetts residents served by eligible safety net hospitals. As important as individual hospital efforts will be, there is even greater potential value in leveraging the hospitals' efforts for delivery system transformation through the sharing of best practices.
- **Rationale:** Participation in learning collaborative will provide a forum for eligible DSTI safety net providers to learn from other providers that share similar goals and to capitalize on potential synergies in their efforts.
- **Expected Results:** Through this project, CHA 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.
- Potential project elements Include (All DSTI hospitals must select from among the following project elements):
  - A. Explore existing and/or potential new opportunities for participation in learning collaborative whose goals align with the Triple Aim and DSTI transformation objectives.
  - B. Select a learning collaborative in which to participate, which may consist of either:<sup>55</sup>
    1. Identifying and joining an existing learning collaborative whose goals align with the Triple Aim and DSTI objectives; OR
    2. Developing a new learning collaborative structure designed to support the hospital's delivery system transformation goals and to align with the Triple Aim and DSTI objectives.
  - C. In the case that a hospital elects to develop a new learning collaborative, establish and implement a new learning collaborative designed to support the hospital's delivery system transformation goals under DSTI and to align with the Triple Aim and DSTI objectives.
  - D. Participate actively in the selected or new learning collaborative.
  - E. Report on lessons learned from participation in learning collaborative as they relate to the hospital's delivery system transformation goals under DSTI.

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<sup>55</sup> CHA plans to select a learning collaborative option during early SFY 2013.

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- **Relation to Other Projects:** The learning collaborative model supports the development of a shared culture of continuous improvement and innovation, which will facilitate and enhance the individual hospitals’ efforts to advance the Triple Aim through their DSTI projects.

<b>Project 3.3: Participate in a Learning Collaborative</b>		
<b>SFY 2012</b>	<b>SFY 2013</b>	<b>SFY 2014</b>
<p><b>3.3.1 Milestone:</b> Explore existing and/or potential new opportunities for participation in learning collaborative.</p> <p><b>3.3.1 Metric:</b> <b>3.3.1 (1) (MP-P 1)</b> Hospital meeting minutes and/or documentation of research findings on learning collaboratives.</p> <p><b>3.3.1 Data Source</b> <b>3.3.1 (1)</b> Internal hospital documentation</p>	<p><b>3.3.1 Milestone:</b> Participate actively in learning collaborative.</p> <p><b>3.3.1 Metric:</b> <b>3.3.1 (2) (MP-P 5)</b> Documentation of attendance at and/or participation in learning collaborative activities.</p> <p><b>3.3.1 Data Source(s):</b> <b>3.3.1 (2)</b> Internal hospital documentation and/or learning collaborative documents</p> <p><b><u>Choice of one of the following options for Project Element B (select a learning collaborative in which to participate):</u></b></p> <p><u>Option 1 of Project Element B:</u></p> <p><b>3.3.2 Milestone:</b> Select and join an existing learning collaborative (if selecting option 1 of Project Element B).</p> <p><b>3.3.2 Metric:</b> <b>3.3.2 (3) (MP-P 2)</b> Documentation of hospital joining learning collaborative.</p> <p><b>3.3.2 Data Source</b> <b>3.3.2 (3)</b> Internal hospital documentation and/or learning collaborative documents</p> <p><b>OR:</b></p>	<p><b>3.3.1 Milestone:</b> Participate actively in learning collaborative.</p> <p><b>3.3.1 Metric:</b> <b>3.3.1 (4) (MP-P 5)</b> Documentation of attendance at and/or participation in learning collaborative activities.</p> <p><b>3.3.1 Data Sources(s):</b> <b>3.3.1 (4)</b> Internal hospital documentation and/or learning collaborative documents</p> <p><b>3.3.2 Milestone:</b> Report on lessons learned from participation in learning collaborative as they relate to the hospital’s delivery system transformation goals under DSTI.</p> <p><b>3.3.2 Metric:</b> <b>3.3.2 (5) (MP-P 6)</b> Hospital report on lessons learned.</p> <p><b>3.3.2 Data Source:</b> <b>3.3.2 (5)</b> Hospital report</p>

	<p><u>Option 2 of Project Element B:</u></p> <p><b>3.3.2 Milestone:</b> Develop a new learning collaborative structure (if selecting option 2 of Project Element B).</p> <p><b>3.3.2 Metric:</b> <b>3.3.2 (3) (MP-P 3)</b> Documentation of new learning collaborative goals, structure and membership and/or signed agreement with facilitator of new learning collaborative (if applicable).</p> <p><b>3.3.2 Data Source(s):</b> <b>3.3.2 (3)</b> Learning collaborative documents and/or agreement</p>	
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#### **Category 4 – Population Focused Improvements**

Pursuant to Section X of Attachment J to the Massachusetts Section 1115 Demonstration Special Terms and Conditions, the purpose of Category 4 is to evaluate the impact of the investments and system changes described in Categories 1, 2 and 3 through population-focused measures. Category 4 metrics recognize that the population-focused objectives do not guarantee outcomes but result in learning, adaptation, and progress. As such, eligible safety net hospitals will measure and report on selected measures but will not have milestones associated with the achievement of specific improvements. Hospitals shall commence reporting Category 4 measures starting in Demonstration Year 16 (SFY 2013).

#### **Common Measures**

All participating safety net hospitals will develop plans to report on a core set of Category 4 measures pursuant to Table 1 of Section X.D of Attachment J. Hospitals shall report on 11 Common Measures in Demonstration Year 16 (SFY 2013) and report on one additional Common Measure in Demonstration Year 17 (SFY 2014), for a total of 12 Common Measures in Demonstration Year 17. Because this category involves evaluating the initiatives and system changes described in Categories 1, 2, and 3 through population-focused objectives, the common measure set is organized around the Triple Aim:

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

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

Given the importance of examining patient care transitions and their effect on patient outcomes, three Common Measures, utilizing patient experience of care measures from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey focus on whether patients' felt they had a good understanding of their medications and care needs post-discharge. Medication adherence and errors are a leading source of unnecessary emergency and acute care; therefore, it is an area of shared focus.<sup>56</sup> Included within the HCAHPS measures is the Three-Item Care Transition Measure (CTM-3). This measure set has recently been added as a voluntary option to the HCAHPS survey.

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<sup>56</sup> Forster AJ, Murff HJ, et al. "The Incidence and Severity of Adverse Events Affecting Patients after Discharge from the Hospital." *Ann Intern Med.* (2003) 138:161-167.



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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.

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

**Better Health:** Improve the health of the population by supporting proven interventions and enhancing the quality of care delivered. Many of today’s individual health care processes are designed to respond to the acute needs of individual patients, rather than to anticipate and shape patterns of care for important subgroups. Population health focuses on segmenting the population, perhaps according to health status, level of support from family or others, and socioeconomic status, to facilitate efficient and appropriate care delivery. The Category 4 common measures share a focus on examining population dynamics. Two CMS Inpatient Quality Reporting/Joint Commission measures report on proven immunization interventions that can improve the health of hospitalized populations following discharge—preventing subsequent care interventions.<sup>57</sup> Two other ambulatory- sensitive measures examine acute admissions for chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF) patients—two patient populations of particular concern given their chronic care needs. A fifth measure looks at maternal and child health—examining the incidence of low-birth weight children, a leading determinant of newborn health especially important for Medicaid populations.

<b>Better Health Common Measures</b>	<b>DY 16 Measure-ment Period</b>	<b>DY 16 Reporting Date(s) to EOHHS</b>	<b>DY 17 Measure-ment Period</b>	<b>DY 17 Reporting Date(s) to EOHHS</b>
4.5: Pneumonia Immunization  <i>CMS IQR/Joint Commission measure IMM-1a</i> <sup>58</sup>  <i>Data Source: Hospital Compare</i>	01/01/12 – 06/30/12	01/31/13	07/01/12 – 06/30/13	01/31/14
4.6: Influenza Immunization (seasonal measure)  <i>CMS IQR/Joint Commission measure IMM-2</i> <sup>59</sup>  <i>Data Source: Hospital Compare</i>	01/01/12 - 03/30/12	01/31/13	10/01/12- 03/30/13	01/31/14

<sup>57</sup> See Specifications Manual for National Hospital Inpatient Quality Measures for selected references on clinical effectiveness of immunizations. Available at <http://www.qualitynet.org>

<sup>58</sup> CMS and the Joint Commission began collecting this measure effective with January 1, 2012 discharges. IMM-1a includes all inpatients.

<sup>59</sup> CMS and the Joint Commission began collecting this measure effective with January 1, 2012 discharges. IMM-2 includes all inpatients.

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<b>Better Health Common Measures</b>	<b>DY 16 Measure-ment Period</b>	<b>DY 16 Reporting Date(s) to EOHHS</b>	<b>DY 17 Measure-ment Period</b>	<b>DY 17 Reporting Date(s) to EOHHS</b>
4.7: Percent of discharged patients under age 75 who were hospitalized for Chronic Obstructive Pulmonary Disease (Ambulatory Sensitive-Condition Admissions Measure) <i>Modified AHRQ PQI-5: denominator modified to include only discharged hospital inpatients</i> <i>Data Source: Hospital billing data</i>	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) <i>Modified AHRQ PQI-8; denominator modified to include only discharged hospital inpatients</i> <i>Data Source: Hospital billing data</i>	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 <sup>60</sup> <i>AHRQ PQI-9</i> <i>Data Source: Hospital records</i>	10/01/11 – 9/30/12	01/31/13	10/01/12 – 09/30/13	01/31/14

**Cost-Effective Care:** Improve cost-effectiveness of care through improved care delivery for individuals, families, employers, and the government. Measures that provide insights both into improved opportunities for health care delivery and health care cost-effectiveness are an area of particular focus in the Triple Aim. Many of the DSTI Category 1-3 projects include a specific focus on improving population health outside of the walls of the hospital (e.g. Primary Care Medical Homes, Health Information Exchanges, ACO development, etc.); therefore, it will be important to examine measures within the Category 4 Common Measures that look at hospital care indicators that are ambulatory-sensitive and that have the potential for better care coordination or care venues. Preventable readmissions are an area of nationwide focus, both for their cost and health implications, but also because many readmissions are the result of poor care hand-offs and lack of care coordination post discharge. Similarly, many pediatric asthma emergency department visits are potentially avoidable with concerted outpatient management and care plans; therefore, an ambulatory-care sensitive pediatric asthma measure, relevant to Medicaid populations, has been included. Lastly, a measure of early elective delivery examines a practice of care for which the evidence-base suggests can lead to unnecessary newborn complications and health care costs.<sup>61</sup>

<sup>60</sup> Hospitals without maternity services are exempted from this measure.

<sup>61</sup> Clark, S., Miller, D., Belfort, M., Dildy, G., Frye, D., & Meyers, J. (2009). Neonatal and maternal outcomes associated with elective delivery. [Electronic Version]. *Am J Obstet Gynecol.* 200:156.e1-156.e4.

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<b>Cost-Effective Care Common Measures</b>	<b>DY 16 Measure-ment Period</b>	<b>DY 16 Reporting Date(s) to EOHHS</b>	<b>DY 17 Measure-ment Period</b>	<b>DY 17 Reporting Date(s) to EOHHS</b>
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) <i>See CMS IQR Readmissions Measures (AMI, CHF, and Pneumonia) for a list of standard exclusions, including: 1) index admissions for patients with an in-hospital death, 2) patients transferred from the index facility to another acute care facility, and 3) patients discharged against medical advice.<sup>62</sup></i> <i>Data Source: Hospital billing data</i>	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 <i>See AHRQ PDI-14 for numerator specification. Denominator specification includes children ages 2 to 17 with an ED visit</i> <i>Data Source: Hospital ED billing data</i>	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 <sup>63</sup> <i>MassHealth Maternity Measure-3</i> <i>Data Source: MassHealth Quality Exchange(MassQEX)</i>	07/01/11-06/30/12	1/31/13	07/01/12-06/30/13	1/31/14

**Hospital-Specific Measures**

In addition to the common measures listed in above, hospitals must select hospital-specific measures on which to report according to the projects they have selected in Categories 1-3. Hospitals must select for reporting in Category 4 a minimum of one measure per project up to a total of 15 Category 4 hospital-specific measures for projects selected in Categories 1-3. Project

<sup>62</sup> In addition, if a patient has one or more admissions within 30 days of discharge from the index admission, only one is counted as a readmission. No admissions within 30 days of discharge from an index admission are considered as additional index admissions. The next eligible admission after the 30-day time period following an index admission will be considered another index admission.

<sup>63</sup> Hospitals without maternity services are exempted from this measure.

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.<sup>64</sup>

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<sup>64</sup> Hospitals must ensure that sampling procedures consistently produce statistically valid and useful data. If a hospital's denominator population for a given measure is not sufficiently large to produce statistically valid data, then hospitals shall not be required to report the data under Category 4 measures.

### **Hospital-specific measures**

For each project a hospital selects in its individual DSTI plan, the hospital shall elect at least one measure per project in Categories 1, 2, and 3 up to a maximum total of 15 Category 4 hospital-specific measures on which the hospital will include a plan to report, selected from the list included in Table 2 of Section X.D of Attachment J. Master DSTI Plan Project 3.9 (CHA's Project 3.3): Participate in a Learning Collaborative will not have associated Category 4 hospital-specific measures.

#### **4.13 Related to Project 1.1: Expand Patient-Centered Medical Home (PCMH) Home:**

CHA will report on a key access to care measure (Master DSTI Plan Project 1.1, ID: PCMH 0033) developed by the Massachusetts Patient-Centered Medical Home Initiative (MA PCMH), which has also been endorsed by the Institute for Healthcare Improvement.

An essential component of care to patients in a Patient-Centered Medical Home is timely access to care. This is geared at ensuring preventive care as well as timely attention to health conditions to prevent complications and more costly care settings. The measure, time to third next available appointment, has been adopted by the MA Patient-Centered Medical Home Initiative as a key access to care measure. It measures the average length of time in days between the day a patient makes a request for an appointment with a primary care clinician and the third available appointment.

The Institute for Healthcare Improvement (IHI), in its *Improving Primary Care Access work*, recommends the third next available appointment measure as a “sensitive reflection of true appointment availability” because it eliminates the effect of chance occurrences such as cancellations.<sup>65</sup>

#### **4.14 Related to Project 1.1: Customization of Patient Continuity of Care:**

CHA will report (Master DSTI Plan Project 1.1, ID: Customization of Patient Continuity of Care) on visit continuity for patients with their primary care physician or the primary care physician and the primary care team. This measures the number of times patients visited their CHA primary care site and saw their primary care physician or the primary care physician and the primary care team as a percentage of total patient visits to a CHA primary care site. Continuity of care builds patient trust in the availability of their physician or the primary care physician and/or the primary care team.<sup>66</sup>

#### **4.15 Related to Project 1.2: Integrate Primary Care and Behavioral Health:**

CHA will report (Master DSTI Plan Project 1.2, ID: Customized Measure on Patients Started on an Anti-Depressant Medication) on a customized measure for adult patients with a new episode of depression and their outcomes after initiation of an anti-depressant medication in primary care.

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<sup>65</sup> <http://www.ihl.org/knowledge/Pages/Measures/ThirdNextAvailableAppointment.aspx>

<sup>66</sup> “Continuity of physician care is associated with more positive [patient] assessments of the visit and appears to be particularly important for more vulnerable patients” including less educated patients, Medicaid patients, and patients with a number of chronic conditions was the conclusion of a study: Nutting PA, Goodwin MA, Flocke SA, Zyzanski SJ, Stange KC. “Continuity of primary care: to whom does it matter and when?” *Ann Fam Med*. 2003 Sep-Oct; 1(3):149-55.

This measure assesses the percentage of adult patients, with a new episode of depression and started on an anti-depressant medication in primary care, that have a 50 percent reduction in their PHQ-9 score during the 16 week acute phase.

“Depression is the leading cause of disability in the United States and depressed medical patients have increased disability, health-care utilization, and mortality from suicide and other causes, as well as reduced productivity and health-related quality of life”.<sup>67</sup> Identifying patients with depression through consistent clinical screening and devising appropriate treatment plans is central to CHA’s primary care and behavioral health integration initiative.

#### **4.16 Related to Project 2.1: Implement Primary Care-Based System of Complex Care**

##### **Management:**

CHA will report (Master DSTI Plan Project 2.5, ID: PCMHI 0012) on two Category 4 hospital-specific measures related to its project to implement a complex care management program for high risk patients in primary care medical homes sites. The first measure is on primary care follow-up post-hospitalization which has been developed by MA PCMHI. The measure tracks the percentage of hospitalized patients who have clinical, telephonic, or face-to-face follow-up interaction with the care team within two days of hospital discharge during the measurement period.

Research has shown that the transition between the inpatient and outpatient setting is a high-risk period for patients. The presence and role of the primary care provider is critical during this transition, and the absence of timely primary care follow-up can result in increased readmissions.<sup>68</sup> CHA has defined high-risk patients for the complex care management program to include patients who are discharged for inpatient care. This measure is therefore a key indicator of the complex care management program as well as to improve care transitions.

#### **4.17 Related to Project 2.1: Implement Primary Care-Based System of Complex Care**

##### **Management:**

In addition, CHA will report (Master DSTI Plan Project 2.5, ID: PCMHI 0013) on a second Category 4 hospital-specific measure for its primary care-based complex care management program. This measure is for primary care follow-up post-emergency room utilization with a documented chronic illness problem. This measure has been developed by MA PCMHI and focuses on clinical, telephonic, or face-to-face follow-up within two days of the emergency room visit during the measurement period.

“A qualitative study by the Center for Studying Health System Change examined emergency and primary care physicians’ ability—and willingness—to communicate and coordinate care, finding that haphazard communication and poor coordination often exist. This discontinuity undermines effective care through duplicative treatment and misapplied treatment. In addition, primary care physicians lose opportunities to educate their patients about when it is appropriate to use emergency departments. This can be even more critical for patients with

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<sup>67</sup> Agency for Healthcare Research and Quality, National Quality Measures Clearinghouse. Available at <http://www.qualitymeasures.ahrq.gov/content.aspx?id=32471&search=depression+screening> accessed on Mar 26, 2012.

<sup>68</sup> Misky GJ, Wald HL, Coleman EA. “Post-hospitalization transitions: Examining the effects of timing of primary care provider follow-up.” *Journal of Hospital Medicine*. 2010.

chronic illnesses who may have complex medical histories.”<sup>69</sup> Primary Care follow-up post-emergency room utilization is also part of CHA’s on-going quality program to encourage appropriate emergency services use.

**4.18 – 4.22 Related to Project 2.2: Improve Management of Chronic Disease - Diabetes Initiative:**

CHA has identified three measures of improved management of diabetes for consideration in its Category 4 metrics related to its project to improve adult diabetes management. These measures have all been endorsed by the MA PCMHI collaborative and are direct matches to the NQF measures with the exception of adjustments to the measurement period. Two of the measures focus on good control (direct match to NQF 0575) (Master DSTI Plan Project 2.1, ID: NQF 0575) and poor control (direct match to NQF 0059) of blood sugar levels (HbA1c) (Master DSTI Plan Project 2.1, ID: NQF 0059) respectively.

The third adult diabetes measure is for hypertension/blood pressure control, which is a direct match to NQF 0061 (Master DSTI Plan Project 2.1, ID: NQF 0061), except for a changed measurement period.

Both epidemiological studies and clinical trials strongly underscore that blood sugar levels (HbA1c) and blood pressure control are predictors of significant clinical outcomes in diabetes and related interventions have the greatest potential to extend life and sustain quality of life for adults with diabetes.<sup>70</sup> Clinical strategies that simultaneously control blood sugar and blood pressure may yield multiplicative benefits. For example, one such diabetes clinical trial showed that simultaneous intensification of care across these clinical domains reduced major cardiovascular events by 50 percent over an 8-year period.”<sup>71</sup> These measures are key clinical indicators of improved care management and health for adult patients with diabetes sought through CHA’s primary care-based multi-disciplinary diabetes approach including pharmacist-led diabetes medication management services and nursing-led patient education and self-management services.

The fourth and fifth adult diabetes measures are for eye exam and micro-albumin (urine protein) screening, a direct match to NQF 0055 (PCMHI 0055) (Master DSTI Plan Project 2.1, ID: NQF 0055) and NQF 0062 (Master DSTI Plan Project 2.1, ID: NQF 0062) respectively. These ambulatory care-sensitive measures of short-term and long-term complications are essential to identifying conditions and disease progression that may result from chronic diabetes and form the basis for treatment plans.

**4.23 – 4.24 Related to Project 3.1: Develop Capacity to Address the Population Health of the Community Associated with the Triple Aim and Alternative Payment Models:**

CHA will report on two measures related to its population health initiated focused on tobacco use screening and cessation intervention, both of which have been endorsed by the MA PCMH collaborative and are a direct match to NQF 0028a (Master DSTI Plan Project 3.7, ID: NQF

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<sup>69</sup> <http://www.nihcr.org/ED-Coordination.html>

<sup>70</sup> O’Connor P. “Improving Diabetes Care by Combating Clinical Inertia” *Health Services Research* (Dec 2006) v40 (6 Pt 1),

<sup>71</sup> Gaede P., et.al. “Multifactorial intervention and cardiovascular disease in patients with type 2 diabetes” *New England Journal of Medicine*. (2003) Jan 30;348(5):383-93.



0028a) and b (Master DSTI Plan Project 3.7, ID: NQF 0028b), except for changed measurement period.

“Tobacco use is the most important and frequent cause of death, morbidity, and healthcare costs, causing 435,000 deaths in the United States, or 18.1 percent of the total in 2000.”<sup>72</sup> Identifying patients who use tobacco through consistent clinical screening and repeated clinical tobacco-cessation interventions has been identified as one of the three most important and cost-effective preventive services that can be provided in medical practice.<sup>73</sup> The U.S. Preventive Services Task Force (USPSTF) recommends that clinicians screen all adults for tobacco use and provide tobacco-cessation interventions for those who use tobacco products. The USPSTF found “good evidence that brief smoking cessation interventions, including screening, brief behavioral counseling (less than 3 minutes), and pharmacotherapy delivered in primary care settings, are effective in increasing the proportion of smokers who successfully quit smoking and remain abstinent after one year.”<sup>74</sup>

Furthermore, the 2000 Public Health Service guideline confirms that identifying smokers and providing them with brief advice and cessation assistance in clinical practice are both effective and cost effective.<sup>75</sup>

CHA plans to incorporate tobacco use screening as a vital sign into primary care practice and to make cessation intervention as a priority. These measures will report on these population-focused improvements within CHA’s participating primary care practices.

#### **4.25 Related to Project 3.2: Develop Risk Stratification Capabilities for Patient Populations and Alternative Payment Models:**

CHA will report (Master DSTI Plan Project 3.1, ID: Customized Measure) on a customized measure of costs avoided due to interventions triggered by top 3 percent high-risk stratification identification. CHA’s initiative to develop risk stratification capabilities is related to alternative payment arrangements it is undertaking. CHA will report on estimated costs avoided due to interventions triggered by top 3 percent high-risk stratification identification for a payer-specific population. In SFY 2013, CHA will report on these changes related to its first payer-specific population, and in SFY 2014, CHA will report on results from two payer-specific population.

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<sup>72</sup> Arias E. “United States life tables, 2000 “ *Natl Vital Stat Rep.* (2002); 51:1–38.

<sup>73</sup> Solberg LI, MD, Maciosek MV, PhD, Edwards NM, MS, Khanchandani HS, MPH, Goodman MJ, PhD. “Repeated Tobacco-Use Screening and Intervention in Clinical Practice Health Impact and Cost Effectiveness.” *Am J Prev Med.* (2006); 31(1):62–71).

<sup>74</sup> U.S. Preventive Services Task Force. Counseling to prevent tobacco use and tobacco-caused disease. Nov 2003.

<sup>75</sup> Centers for Disease Control and Prevention. “Smoking attributable mortality, morbidity, and economic costs.” (SAMMEC). Available at: <http://apps.nccd.cdc.gov/sammec/>. Accessed June 13, 2005.

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Hospital-specific measures	SFY 2012	SFY 2013	SFY 2014
<p><b>Measures in any fiscal year are reported for implemented sites, such as implemented PCMH sites, implemented primary care pilot sites, primary care sites with implemented complex care management, or other pilot sites directly engaged in an initiative.</b></p>			
<p><b>4.13</b> Related to Project 1.1: Expand Patient-Centered Medical Home (PCMH) Home – Access Measure. IHI Improving Primary Care Access Measure: (Master DSTI Plan Project 1.1, ID: PCMHI 0033) Average third next available appointment (wait time) for the practice at implemented PCMH sites. <b>Numerator:</b> The sum of all primary care providers’ days to the 3<sup>rd</sup> next available appointment. <b>Denominator:</b> The number of provider FTEs at that primary care site.</p>	N/A	<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012 <b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b> January 1, 2013 – December 31, 2013 <b>Report Date:</b> January 31, 2014</p>
<p><b>4.14</b> Related to Project 1.1: Expand Patient-Centered Medical Home (PCMH) Home – Customization of Patient Continuity of Care, IHI Primary Care Team Member / Patient Continuity measure: (Master DSTI Plan Project 1.1, ID: Customization of Patient Continuity of Care) Continuity of Care Measure: measures visit continuity for patients with their primary care physician or the primary care physician and the primary care team.</p>	N/A	<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012 <b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b> January 1, 2013 – December 31, 2013 <b>Report Date:</b> January 31, 2014</p>
<p><b>4.15</b> Related to Project 1.2: Integrate Primary Care and Behavioral Health – Improvement in Adults with New Episode of Depression and Started on an Anti-Depressant Medication. Customized Measure (Master DSTI Plan Project 1.2, ID: Customized Measure on Patients Started on an Anti-Depressant Medication) <b>Numerator:</b> # of patients 18 years and older with a new episode of depression alone and started on an anti-depressant in primary care, who have had a 50 percent reduction in their PHQ9 score during the 16 week acute phase defined at pilot site(s) in the past 12 months. <b>Denominator:</b> All patients 18 years and older with a new episode of depression alone and started on an anti-depressant in primary care at defined at pilot site(s), who received an annual physical exam in the last 12 months at a participating CHA primary care pilot site.</p>	N/A	<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012 <b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b> January 1, 2013 – December 31, 2013 <b>Report Date:</b> January 31, 2014</p>
<p><b>4.16</b> Related to Project 2.1: Implement Primary Care-Based System of Complex Care Management – Primary Care Follow-up Post-hospitalization Measure developed by MA PCMHI. (Master DSTI Plan Project 2.5, ID: PCMHI 0012) PCMHI 0012: Percent of hospitalized patients who have clinical, telephonic or face-to-</p>	N/A	<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012 <b>Report Date:</b> January</p>	<p><b>Measurement Period:</b> January 1, 2013 – December 31, 2013 <b>Report Date:</b> January</p>

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Hospital-specific measures	SFY 2012	SFY 2013	SFY 2014
<p>face follow-up interaction with the care team within 2 days of discharge during the measurement period at primary care sites with implemented complex care management.</p> <p><b>Numerator:</b> the number of medically hospitalized inpatients at CHA with a CHA PCP, who the provider has been notified about and who have clinical, telephonic or face-to-face follow-up interaction with care team within 2 business days of discharge.</p> <p><b>Denominator:</b> the number of medically hospitalized patients with a CHA PCP discharged to home from a CHA hospital and that the provider has been notified about.</p>		31, 2013	31, 2014
<p><b>4.17</b> Related to Project 2.1: Implement Primary Care-Based System of Complex Care Management – Primary Care Follow-up Post-Emergency Room Utilization for Patients with Chronic Illness Measure developed by MA PCMHI. (Master DSTI Plan Project 2.5, ID: PCMHI 0013)</p> <p>PCMHI 0013: Percent of patients who have been seen in the Emergency Room with a documented chronic illness problem, who have clinical telephonic or face-to-face follow-up interaction with the care team within 2 days of ER visit during the measurement period at primary care sites with implemented complex care management.</p> <p><b>Numerator:</b> the number of CHA primary care panel patients seen in a CHA Emergency Room with a documented chronic illness problem (COPD, Diabetes, Asthma, CHF, or Depression), who have clinical, telephonic or face to face follow-up interaction with the care team within 2 business days of the ER visit.</p> <p><b>Denominator:</b> The number of CHA primary care panel patients seen in a CHA Emergency Room with a documented chronic illness problem (COPD, Diabetes, Asthma, CHF, or Depression). CHA primary care patients are those patients at participating primary care complex care management sites who have had at least one primary care visit at CHA during the past 2 years.</p>	N/A	<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012</p> <p><b>Report Date:</b> January 31, 2012</p>	<p><b>Measurement Period:</b> January 1, 2013 – December 31, 2013</p> <p><b>Report Date:</b> January 31, 2014</p>
<p><b>4.18</b> Related to Project 2.2: Improve Management of Chronic Disease - Diabetes Initiative – Adult Diabetes Measure: Good Control of Blood Sugar Levels (HbA1c). Direct match to NQF 0575, except for changed measurement period. (Master DSTI Plan Project 2.1, ID: NQF 0575)</p> <p>Percent patients 18-75 years of age with diabetes (type 1 or type 2) who had HbA1c &lt;8.0 percent during the measurement period at implemented primary care pilot sites.</p> <p><b>Numerator:</b> count(s) of patients 18–75 years of age with diabetes (type 1 or type 2)</p>	N/A	<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012</p> <p><b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b> January 1, 2013 – December 31, 2013</p> <p><b>Report Date:</b> January 31, 2014</p>

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Hospital-specific measures	SFY 2012	SFY 2013	SFY 2014
<p>who had HbA1c &lt;8.0 percent.  <b>Denominator:</b> active patients in the diabetes registry between 18–75 years of age with diabetes (type 1 or type 2). Exclusions: patients with gestational diabetes, steroid-induced diabetes, and polycystic ovaries.</p>			
<p><b>4.19</b> Related to Project 2.2: Improve Management of Chronic Disease – Diabetes Initiative – Adult Diabetes Measure: Poor Control of Blood Sugar Levels (HbA1c). Direct match to NQF 0059, except for changed measurement period. (Master DSTI Plan Project 2.1, ID: NQF 0059)                      Percent patients 18-75 years of age with diabetes (type 1 or type 2) who had HbA1c &gt;9.0 percent during the measurement period at implemented primary care pilot sites.  <b>Numerator:</b> count(s) of patients 18–75 years of age with diabetes (type 1 or type 2) who had HbA1c &gt;9.0 percent.  <b>Denominator:</b> active patients in the diabetes registry between 18–75 years of age with diabetes (type 1 or type 2). Exclusions: patients with gestational diabetes, steroid-induced diabetes, and polycystic ovaries.</p>	N/A	<p><b>Measurement Period:</b>                      January 1, 2012 – December 31, 2012  <b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b>                      January1, 2013 – December 31, 2013  <b>Report Date:</b> January 31, 2014</p>
<p><b>4.20</b> Related to Project 2.2: Improve Management of Chronic Disease - Diabetes Initiative – Adult Diabetes Measure: Hypertension/Blood Pressure Control. Direct match to NQF 0061, except for changed measurement period. (Master DSTI Plan Project 2.1, ID: NQF 0061)                      Percent patients 18-75 years of age with diabetes (type 1 or type 2) who had BP &lt;140/90 mmHg during the measurement period at implemented primary care pilot sites.  <b>Numerator:</b> count(s) of patients 18–75 years of age with diabetes (type 1 or type 2) who had BP &lt;140/90 mmHg.  <b>Denominator:</b> active patients in the diabetes registry between 18–75 years of age with diabetes (type 1 or type 2). Exclusions: patients with gestational diabetes, steroid-induced diabetes, and polycystic ovaries.</p>	N/A	<p><b>Measurement Period:</b>                      January 1, 2012 – December 31, 2012  <b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b>                      January1, 2013 – December 31, 2013  <b>Report Date:</b> January 31, 2014</p>

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Hospital-specific measures	SFY 2012	SFY 2013	SFY 2014
<p><b>4.21</b> Related to Project 2.2: Improve Management of Chronic Disease - Diabetes Initiative – Adult Diabetes Measure: Percent of adult patients with diabetes (type 1 or type 2) who had eye exam at least once during the measurement period at implemented pilot sites. (Master DSTI Plan Project 2.1, ID: NQF 0055) NQF0055: Percentage of adult patients with diabetes aged 18-75 years who received an eye screening for diabetic retinal disease during the measurement year <b>Numerator:</b> count(s) of patients 18–75 years of age with diabetes (type 1 or type 2) who had eye exam. <b>Denominator:</b> active patients in the diabetes registry between 18–75 years of age with diabetes (type 1 or type 2). Exclusions: patients with gestational diabetes, steroid-induced diabetes, and polycystic ovaries.</p>		<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012 <b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b> January1, 2013 – December 31, 2013 <b>Report Date:</b> January 31, 2014</p>
<p><b>4.22</b> Related to Project 2.2: Improve Management of Chronic Disease - Diabetes Initiative – Adult Diabetes Measure: Percent of adult patients with diabetes (type 1 or type 2) who had micro-albumin screening at least once during the measurement period at implemented pilot sites. (Master DSTI Plan Project 2.1, ID: NQF 0062) NQF0062: Percentage of adult diabetes patients aged 18-75 years with at least one test for microalbumin during the measurement year or who had evidence of medical attention for existing nephropathy (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria). <b>Numerator:</b> count(s) of patients 18–75 years of age with diabetes (type 1 or type 2) who had micro-albumin screening. <b>Denominator:</b> active patients in the diabetes registry between 18–75 years of age with diabetes (type 1 or type 2). Exclusions: patients with gestational diabetes, steroid-induced diabetes, and polycystic ovaries.</p>		<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012 <b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b> January1, 2013 – December 31, 2013 <b>Report Date:</b> January 31, 2014</p>
<p><b>4.23</b> Related to Project 3.1: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim and Alternative Payment Models – Adult Tobacco Use Screening Measure. Direct match to NQF 0028a, except for changed measurement period. (Master DSTI Plan Project 3.7, ID: NQF 0028a) Percent of patients 18 years and older who were queried about tobacco use in the past 24 months at implemented primary care pilot site(s). <b>Numerator:</b> # of patients 18 years and older who have been seen for at least two office visits at CHA, who were queried about tobacco use one or more times in the past 24 months.</p>	N/A	<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012 <b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b> January1, 2013 – December 31, 2013 <b>Report Date:</b> January 31, 2014</p>

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Hospital-specific measures	SFY 2012	SFY 2013	SFY 2014
<p><b>Denominator:</b> patients 18 years and older, who have been seen either for one visit to a CHA primary care location or at least two office visits at CHA and have a CHA PCP, within 24 months.</p>			
<p><b>4.24</b> Related to Project 3.1: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim and Alternative Payment Models – Adult Tobacco Use Cessation Intervention Measure. Direct match to NQF 0028b, except for changed measurement period. (Master DSTI Plan Project 3.7, ID: NQF 0028b) Percent of patients 18 years and older, identified as tobacco users, who received cessation intervention in the past 24 months at implemented primary care pilot site(s). <b>Numerator:</b> # of patients 18 years and older, identified as tobacco users within the past 24 months and have been seen for at least two primary care visits at CHA, who received cessation intervention. <b>Denominator:</b> patients 18 years and older, who have been seen either for one visit to a CHA primary care location or at least two office visits at CHA and have a CHA PCP, within 24 months.</p>	N/A	<p><b>Measurement Period:</b> January 1, 2012 – December 31, 2012 <b>Report Date:</b> January 31, 2013</p>	<p><b>Measurement Period:</b> January 1, 2013 – December 31, 2013 <b>Report Date:</b> January 31, 2014</p>
<p><b>4.25</b> Related to Project 3.2: Develop Risk Stratification Capabilities – Measure of costs avoided due to interventions triggered by top 3 percent high-risk stratification identification. CHA customized measure. (Master DSTI Plan Project 3.1, ID: Customized Measure) Report of estimated costs avoided due to interventions triggered by top 3 high risk identification and related care management interventions for payer-specific population(s).</p> <ul style="list-style-type: none"> <li>• Estimate expected annualized cost based on members’ experience prior to care management</li> <li>• Estimate costs avoided due to care management by the difference in actual claims at the end of the enrollment period and expected claims, triggered by top 3 percent high risk identification through risk stratification.</li> </ul>	N/A	<p><b>Report on Initial Results from SFY 2012 Activities</b></p>	<p><b>Report on Results from Two Payer Populations</b></p>

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Appendix A

Massachusetts Delivery System Transformation Initiatives (DSTI) SFY12-14  
Metric Funding Allocation Table

Hospital Name: Cambridge Health Alliance  
DSTI Proportional 0.2143

DY 15/SFY12			DY 16/SFY13			DY 17/SFY14		
CATEGORY, PROJECT, METRIC	Optional Adjustment (%)	Metric Value	CATEGORY, PROJECT, METRIC	Optional Adjustment (%)	Metric Value	CATEGORY, PROJECT, METRIC	Optional Adjustment (%)	Metric Value
<b>Cat 1 Integration</b>			<b>Cat 1 Integration</b>			<b>Cat 1 Integration</b>		
Annual Metric Base Value		\$3,349,333	Annual Metric Base Value		\$5,024,000	Annual Metric Base Value		\$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		\$717,653	Metric Base Value Adjusted for Proportional Allotment Factor		\$1,076,480	Metric Base Value Adjusted for Proportional Allotment Factor		\$1,076,480
<b>Project 1.1: Expand Patient-Centered Medical Home (PCMH)</b>			<b>Project 1.1: Expand Patient-Centered Medical Home (PCMH)</b>			<b>Project 1.1: Expand Patient-Centered Medical Home (PCMH)</b>		
Metric Base Value Adjusted for # Metrics		\$598,044	Metric Base Value Adjusted for # Metrics		\$489,309	Metric Base Value Adjusted for # Metrics		\$538,240
1.1.1 (1)	1.00	\$598,044	1.1.1 (7)	1.20	\$587,171	1.1.1 (18)	1.20	\$645,888
1.1.1 (2)	1.00	\$598,044	1.1.1 (8)	1.20	\$587,171	1.1.1 (19)	1.20	\$645,888
1.1.1 (3)	1.00	\$598,044	1.1.1 (9)	1.20	\$587,171	1.1.1 (20)	1.20	\$645,888
1.1.2 (4)	1.00	\$598,044	1.1.1 (10)	1.10	\$538,240	1.1.1 (21)	1.20	\$645,888
1.1.2 (5)	1.00	\$598,044	1.1.1 (11)	1.10	\$538,240	1.1.2 (22)	0.80	\$430,592
1.1.3 (6)	1.00	\$598,044	1.1.2 (12)	0.80	\$391,447	1.1.2 (23)	0.80	\$430,592
			1.1.2 (13)	0.80	\$391,447	1.1.2 (24)	0.80	\$430,592
			1.1.2 (14)	0.80	\$391,447	1.1.2 (25)	0.80	\$430,592
			1.1.2 (15)	0.80	\$391,447	1.1.3 (26)	1.00	\$538,240
			1.1.3 (16)	1.00	\$489,309	1.1.4 (27)	1.00	\$538,240
			1.1.4 (17)	1.00	\$489,309			
Project Subtotal		\$3,588,267	Project Subtotal		\$5,382,400	Project Subtotal		\$5,382,400
<b>Project 1.2: Integrate Primary Care and Behavioral Health</b>			<b>Project 1.2: Integrate Primary Care and Behavioral Health</b>			<b>Project 1.2: Integrate Primary Care and Behavioral Health</b>		
Metric Base Value Adjusted for # Metrics		\$1,196,089	Metric Base Value Adjusted for # Metrics		\$897,067	Metric Base Value Adjusted for # Metrics		\$598,044
1.2.1 (1)	1.00	\$1,196,089	1.2.1 (4)	1.00	\$897,067	1.2.1 (10)	1.00	\$598,044
1.2.2 (2)	1.00	\$1,196,089	1.2.1 (5)	1.00	\$897,067	1.2.2 (11)	1.00	\$598,044
1.2.3 (3)	1.00	\$1,196,089	1.2.1 (6)	1.00	\$897,067	1.2.3 (12)	1.00	\$598,044
			1.2.1 (7)	1.20	\$1,076,480	1.2.3 (13)	1.00	\$598,044
			1.2.2 (8)	1.00	\$897,067	1.2.3 (14)	1.00	\$598,044
			1.2.3 (9)	0.80	\$717,653	1.2.4 (15)	0.80	\$478,436
						1.2.5 (16)	1.20	\$717,653
						1.2.5 (17)	0.80	\$478,436
						1.2.6 (18)	1.20	\$717,653
Project Subtotal		\$3,588,267	Project Subtotal		\$5,382,400	Project Subtotal		\$5,382,400
<b>CAT 2: Innovations</b>			<b>CAT 2: Innovations</b>			<b>CAT 2: Innovations</b>		
Annual Metric Base Value		\$3,349,333	Annual Metric Base Value		\$5,024,000	Annual Metric Base Value		\$5,024,000
Metric Base Value Adjusted for Proportional Allotment Factor		\$717,653	Metric Base Value Adjusted for Proportional Allotment Factor		\$1,076,480	Metric Base Value Adjusted for Proportional Allotment Factor		\$1,076,480
<b>Project 2.1: Implement Primary Care-Based System of Complex Care Management</b>			<b>Project 2.1: Implement Primary Care-Based System of Complex Care Management</b>			<b>Project 2.1: Implement Primary Care-Based System of Complex Care Management</b>		
Metric Base Value Adjusted for # Metrics		\$1,196,089	Metric Base Value Adjusted for # Metrics		\$1,076,480	Metric Base Value Adjusted for # Metrics		\$1,345,600
2.1.1 (1)	1.00	\$1,196,089	2.1.1 (4)	1.20	\$1,291,776	2.1.1 (9)	1.00	\$1,345,600
2.1.2 (2)	1.00	\$1,196,089	2.1.1 (5)	0.80	\$861,184	2.1.1 (10)	1.00	\$1,345,600
2.1.3 (3)	1.00	\$1,196,089	2.1.1 (6)	0.80	\$861,184	2.1.2 (11)	1.00	\$1,345,600
			2.1.1 (7)	1.20	\$1,291,776	2.1.3 (12)	1.00	\$1,345,600
			2.1.2 (8)	1.00	\$1,076,480			
Project Subtotal		\$3,588,267	Project Subtotal		\$5,382,400	Project Subtotal		\$5,382,400
<b>Project 2.2: Improve Management of Chronic Disease - Diabetes Initiative</b>			<b>Project 2.2: Improve Management of Chronic Disease - Diabetes Initiative</b>			<b>Project 2.2: Improve Management of Chronic Disease - Diabetes Initiative</b>		
Metric Base Value Adjusted for # Metrics		\$598,044	Metric Base Value Adjusted for # Metrics		\$897,067	Metric Base Value Adjusted for # Metrics		\$1,076,480
2.2.1 (1)	1.00	\$598,044	2.2.1 (7)	1.20	\$1,076,480	2.2.1 (13)	1.20	\$1,291,776
2.2.1 (2)	1.00	\$598,044	2.2.2 (8)	1.20	\$1,076,480	2.2.2 (14)	1.20	\$1,291,776
2.2.2 (3)	1.00	\$598,044	2.2.3 (9)	1.00	\$897,067	2.2.2 (15)	1.00	\$1,076,480
2.2.2 (4)	1.00	\$598,044	2.2.3 (10)	1.00	\$897,067	2.2.3 (16)	0.80	\$861,184
2.2.3 (5)	1.00	\$598,044	2.2.3 (11)	0.80	\$717,653	2.2.4 (17)	0.80	\$861,184
2.2.4 (6)	1.00	\$598,044	2.2.4 (12)	0.80	\$717,653			
Project Subtotal		\$3,588,267	Project Subtotal		\$5,382,400	Project Subtotal		\$5,382,400

**Cambridge Health Alliance Delivery System Transformation Initiatives 3-Year Plan – May 11, 2012**

CAT 3: Payment Reform			CAT 3: Payment Reform			CAT 3: Payment Reform		
Annual Metric Base Value		\$3,349,333	Annual Metric Base Value		\$5,024,000	Annual Metric Base Value		\$5,024,000
for Proportional Allotment Factor		\$717,653	for Proportional Allotment Factor		\$1,076,480	for Proportional Allotment Factor		\$1,076,480
Project 3.1: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim			Project 3.1: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim			Project 3.1: Develop Capacity to Address the Population Health of the Community associated with the Triple Aim		
Metric Base Value Adjusted for # Metrics		\$897,067	Metric Base Value Adjusted for # Metrics		\$897,067	Metric Base Value Adjusted for # Metrics		\$897,067
3.1.1 (1)	1.00	\$897,067	3.1.1 (5)	1.00	\$897,067	3.1.1 (11)	0.80	\$717,653
3.1.2 (2)	1.00	\$897,067	3.1.1 (6)	1.20	\$1,076,480	3.1.1 (12)	1.20	\$1,076,480
3.1.3 (3)	1.00	\$897,067	3.1.1 (7)	1.00	\$897,067	3.1.2 (13)	0.80	\$717,653
3.1.4 (4)	1.00	\$897,067	3.1.1 (8)	1.00	\$897,067	3.1.3 (14)	1.00	\$897,067
			3.1.2 (9)	1.00	\$897,067	3.1.3 (15)	1.00	\$897,067
			3.1.3 (10)	0.80	\$717,653	3.1.4 (16)	1.20	\$1,076,480
Project Subtotal		\$3,588,267	Project Subtotal		\$5,382,400	Project Subtotal		\$5,382,400
Project 3.2: Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models			Project 3.2: Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models			Project 3.2: Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models		
Metric Base Value Adjusted for # Metrics		\$1,794,133	Metric Base Value Adjusted for # Metrics		\$1,794,133	Metric Base Value Adjusted for # Metrics		\$1,345,600
3.2.1 (1)	1.00	\$1,794,133	3.2.1 (3)	1.00	\$1,794,133	3.2.1 (6)	1.20	\$1,614,720
3.2.1 (2)	1.00	\$1,794,133	3.2.1 (4)	1.00	\$1,794,133	3.2.1 (7)	1.20	\$1,614,720
			3.2.2 (5)	1.00	\$1,794,133	3.2.2 (8)	0.80	\$1,076,480
						3.2.3 (9)	0.80	\$1,076,480
Project Subtotal		\$3,588,267	Project Subtotal		\$5,382,400	Project Subtotal		\$5,382,400
Project 3.3: Learning Collaborative			Project 3.3: Learning Collaborative			Project 3.3: Learning Collaborative		
Learning Collaborative Annual Metric Base Value		\$837,333	Learning Collaborative Annual Metric Base Value		\$1,256,000	Learning Collaborative Annual Metric Base Value		\$1,256,000
Metric Base Value Adjusted for Proportional Allotment Factor		\$179,413	Metric Base Value Adjusted for Proportional Allotment Factor		\$269,120	Metric Base Value Adjusted for Proportional Allotment Factor		\$269,120
Metric Base Value Adjusted for # Metrics		\$897,067	Metric Base Value Adjusted for # Metrics		\$672,800	Metric Base Value Adjusted for # Metrics		\$672,800
3.3.1.(1)	1.00	\$897,067	3.3.1.(2)	1.00	\$672,800	3.3.1 (4)	1.00	\$672,800
			3.3.2 (3)	1.00	\$672,800	3.3.2 (5)	1.00	\$672,800
Project Subtotal		\$897,067	Project Subtotal		\$1,345,600	Project Subtotal		\$1,345,600
CAT 4: Population Health			CAT 4: Population Health			CAT 4: Population Health		
Annual Metric Base Value		N/A	Annual Metric Base Value		\$3,078,431	Annual Metric Base Value		\$2,907,407
Metric Base Value Adjusted for Proportional Allotment Factor		N/A	Metric Base Value Adjusted for Proportional Allotment Factor		\$659,608	Metric Base Value Adjusted for Proportional Allotment Factor		\$622,963
Metric Base Value Adjusted for # Metrics		N/A	Metric Base Value Adjusted for # Metrics		\$467,222	Metric Base Value Adjusted for # Metrics		\$448,533
# Measures Reported		N/A	# Measures Reported	24		# Measures Reported	25	
Category 4 Subtotal		\$0	Category 4 Subtotal		\$11,213,333	Category 4 Subtotal		\$11,213,333
Annual Target Total		\$22,426,667	Annual Target Total		\$44,853,333	Annual Target Total		\$44,853,333
Payment for Plan Approval		\$22,426,667			\$0			\$0
Total SFY Claiming		\$44,853,333			\$44,853,333			\$44,853,333



## Cambridge Health Alliance Delivery System Transformation Initiatives 3-Year Plan – May 11, 2012

<b>Rationale for Any Optional Adjustment to Metric Values Incorporated Above</b>			
<b>Rationale Key:</b>			
1. Differences in quality infrastructure.			
2. Differences in external supports for improvements.			
3. Differences in patient populations.			
4. Differential levels of metric goals (e.g. larger scope vs. smaller scope).			
5. Differences versus process metrics and improvement metrics.			
<b>DY15/SFY 2012</b>			
<b>Metric:</b>	<b>Adjustment</b>	<b>Key Reason</b>	<b>Brief Narrative Explaining Rationale for Adjustment.</b>
N/A			
<b>DY16/SFY 2013</b>			
<b>Metric:</b>	<b>Adjustment</b>	<b>Key Reason</b>	<b>Brief Narrative Explaining Rationale for Adjustment.</b>
1.1.1 (7)	1.20	5.	This metric is a key step toward building organizational capacity for PCMH leadership and practice transformation.
1.1.1 (8)	1.20	5.	This metric is a process step to identify primary care practices and leadership teams to enter the PCMH process.
1.1.1 (9)	1.20	5.	This metric is a key process step necessary to engage primary care practices actively in PCMH transformation.
1.1.1 (10)	1.10	5.	This metric is essential to transforming care delivery toward the PCMH model.
1.1.1 (11)	1.10	5.	This metric is essential to transforming care delivery toward the PCMH model.
1.1.2 (12)	0.80	5.	This metric relates to substantial PCMH transformation steps across multiple primary care sites.
1.1.2 (13)	0.80	4.	This metric significantly expands the scale of PCMH transformation at CHA.
1.1.2 (14)	0.80	4.	This metric significantly expands the scale of PCMH transformation at CHA.
1.1.2 (15)	0.80	5.	This improvement metric relates to substantial system-wide PCMH transformation progress.
1.2.1 (7)	1.20	1.	This adult depression screening metric in primary care has an existing reporting capability, reliant on ambulatory quality improvement.
1.2.3 (9)	0.80	5.	This improvement target for depression screening in diabetic patients at a primary care and behavioral health integration pilot site is a new initiative for CHA.
2.1.1 (4)	1.20	5.	This metric is a key process step to capture high risk patients in the EMR.
2.1.1 (5)	0.80	4.	This metric relates to scaling the complex care initiative across multiple sites.
2.1.1 (6)	0.80	4.	This metric relates to scaling the complex care initiative across multiple sites.
2.1.1 (7)	1.20	1.	This metric establishes baseline complex care enrollment data, reliant on ambulatory quality improvement.
2.2.1 (7)	1.20	1.	This metric requires an assessment of pilot diabetes initiatives to inform development of an integrated, multi-disciplinary diabetes care model.
2.2.2 (8)	1.20	1.	This metric will incorporate findings from pilot diabetes initiatives and best practices into a new care model which relies on quality infrastructure capabilities.
2.2.3 (11)	0.80	4.	This metric is reflective of expanded scale of the diabetes improvement initiative.
2.2.4 (12)	0.80	4.	This metric is reflective of expanded scale of the diabetes improvement initiative.
3.1.1 (6)	1.20	1.	This metric to establish criteria for identification of primary care sites for the tobacco intervention will be based on data available within the CHA primary care system, population health data, and population morbidity information, reliant on quality infrastructure.
3.1.3 (10)	0.80	5.	This improvement target for tobacco status verification at a primary care site is a new initiative for CHA.
<b>DY17/SFY 2014</b>			
<b>Metric:</b>	<b>Adjustment</b>	<b>Key Reason</b>	<b>Brief Narrative Explaining Rationale for Adjustment.</b>
1.1.1 (18)	1.20	5.	This metric is a process step to identify primary care practices and leadership teams to enter the PCMH process.
1.1.1 (19)	1.20	5.	This metric is a key process step necessary to engage primary care practices actively in PCMH transformation.
1.1.1 (20)	1.20	5.	This metric is essential to transforming care delivery toward the PCMH model.
1.1.1 (21)	1.20	5.	This metric is essential to transforming care delivery toward the PCMH model.
1.1.2 (22)	0.80	4.	This metric significantly expands the scale of PCMH transformation at CHA.
1.1.2 (23)	0.80	5.	This metric relates to substantial PCMH transformation steps across multiple primary care sites.
1.1.2 (24)	0.80	4.	This metric significantly expands the scale of PCMH transformation at CHA.
1.1.2 (25)	0.80	5.	This improvement metric relates to substantial system-wide PCMH transformation progress.
1.2.4 (15)	0.80	4.	This metric is reflective of expanded scale of behavioral health screening in primary care.
1.2.5 (16)	1.20	1.	This metric establishes baseline adult diabetes depression screening, reliant on quality infrastructure.
1.2.5 (17)	0.80	5.	This improvement target for depression screening in diabetic patients at a primary care and behavioral health integration pilot site is a new initiative for CHA.
1.2.6 (18)	1.20	1.	This metric establishes recommended measures to track behavioral health integration in primary care, reliant on quality infrastructure.
2.2.1 (13)	1.20	1.	This metric requires an assessment of process improvements, clinical indicators, and lessons learned for future application. This will require differences in quality infrastructure.
2.2.2 (14)	1.20	5.	This metric builds on prior year activities.
2.2.3 (16)	0.80	4.	This metric relates to scaling the initiative across multiple sites.
2.2.4 (17)	0.80	5.	This improvement target is a new initiative for CHA.
3.1.1 (11)	0.80	4.	This metric expands the scale of the population health initiative.
3.1.1 (12)	1.20	1.	This metric establishes baseline tobacco status verification data, reliant on ambulatory quality improvement.
3.1.2 (13)	0.80	5.	The improvement target for tobacco status verification at a primary care site is a new initiative for CHA.
3.1.4 (16)	1.20	1.	This metric requires an evaluation of the population health process and reporting on lessons learned and application for future population health work associated with the Triple Aim. This will require differences in our quality infrastructure to accomplish this metric in order to advance overall population health goals in a global manner.
3.2.1 (6)	1.20	2.	This metric requires collaboration with external payers engaged in risk stratification activities related to alternative payment models between the payer and CHA.
3.2.1 (7)	1.20	2.	This metric requires collaboration with external payers engaged in risk stratification activities related to alternative payment models between the payer and CHA.
3.2.2 (8)	0.80	4.	This metric expands the scale of the risk stratification initiative and its care management activities.
3.2.3 (9)	0.80	5.	This improvement target is a new initiative for CHA.