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# MassHealth Section 1115(a) Demonstration Waiver 2011-2014 Interim Evaluation Report

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## Acknowledgements

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# Executive Summary

The Centers for Medicare & Medicaid Services (CMS) approved the extension of Commonwealth's Section 1115 Demonstration through June 2014. During this period, the Commonwealth continues its health care reform efforts with four established goals:

1. Maintain near universal coverage for all citizens of the Commonwealth;
2. Continue the redirection of spending from uncompensated care to insurance coverage;
3. Implement delivery system reforms that promote care coordination, person-centered care planning, wellness, chronic disease management, successful care transitions, integration of services, and measurable health outcome improvements; and
4. Advance payment reforms that will give incentives to providers to focus on quality, rather than volume, by introducing and supporting alternative payment structures that create and share savings throughout the system while holding providers accountable for quality care.

EOHHS contracted with the University of Massachusetts Medical School (UMMS) Center for Health Policy and Research (CHPR) to conduct the evaluation. Interim evaluation results suggest progress toward all four Demonstration goals.

### The Economic Context

During the Demonstration period of December 2008-June 2011, the nation experienced the longest and most severe economic recession since the great depression (Hartman, Martin, Benson, Catlin, and the National Health Expenditure Accounts Team, 2013). Unemployment rose to its highest level since 1982, and median household income declined steadily, to its lowest rate in more than 10 years (Department of Labor, 2013; Martin, Lassman, Washington, Catlin, and the National Health Expenditure Accounts Team, 2012).

The recession had a profound effect on health care affordability. More than 11 million people across the United States lost employer-sponsored insurance coverage between 2007 and 2010. Increases in Medicaid enrollment (7.5 million) partially compensated for the loss. Nevertheless, the number of uninsured nationwide grew by 7 million during this period (Hartman et al., 2013).

These national trends continued after the recession officially ended in June 2009, a dynamic that is not unusual following severe economic downturns (Hartman et al., 2013). From 2010 to 2012, public health plan enrollment for persons under 65 years of age grew slightly (Cohen and Martinez, 2013), and employer-sponsored insurance continued its downward slide nationally (Kaiser Family Foundation, 2013). Throughout this period, healthcare costs continued to rise faster than the general inflation rate as families' ability to pay declined (Cuckler et al., 2013).

Consistent with the national experience, economic contraction and slow job growth profoundly influenced trends in private health insurance, Medicaid enrollment, and costs in Massachusetts. From 2009 to 2011, employer-sponsored insurance in the Commonwealth declined. At the same time, consumers saw increases in private health insurance premiums, health insurance deductibles, and other out-of-pocket costs (Center for Health Information and Analysis, 2013), shifting more of the burden of rising health care costs to individuals and families. Higher health care costs for workers came at a time when median household income was declining in Massachusetts (Office of Attorney General Martha Coakley, 2013). Even for workers with insurance, higher out-of-pocket costs may have led to increased reliance on Heath Safety Net (HSN) services. We see indirect evidence of declining wages and the increasing burden of health care costs on working families in MassHealth, where the number of members receiving assistance with the costs of third party coverage (excluding Medicare) rose 19.1% from 2010 to 2013. During the same time period, MassHealth enrollment in programs for people who are long-term unemployed increased by 42.8%, suggesting that the slow employment recovery has continued to affect Massachusetts residents long after the official end of the recession.

**The 1115 Waiver: Key Findings**

The broader economic challenges facing the Commonwealth worked against the objectives of the Demonstration, but despite these external forces, Massachusetts was largely able to maintain the achievements of the Demonstration to date and continue to make incremental progress toward its four primary goals.

Near Universal Health Coverage (Goal 1): The percentage of insured residents from 2010 to 2011 remained relatively stable at 96%, the highest in the nation. In the context of the aftermath of a major recession, this demonstrates an accomplishment for the Commonwealth. From 2011-2012, the number of demonstration eligibles accessing employer sponsored insurance increased 3% from 15,501 to 16,201. During the same period, enrollment in Commonwealth Care rose steadily by 24.5% from 158,805 to 197,777 enrollees. Although Express Lane Eligibility implementation data were not available for inclusion in this interim report, ELE administrators report that from 9/24/2012 to 2/28/2013, a total of 27,618 households were selected to participate in the program. These measures indicate that the Commonwealth is demonstrating progress towards Goal 1.

Redirection of Spending (Goal 2): Variation in supplemental payments to hospitals and Health Safety Net (HSN) payments for uncompensated care from year-to-year make it difficult to discern progress toward redirecting spending. HSN payments remained relatively constant at $271 million from 2010-2012, while the number of individuals accessing the HSN grew by 20%, which likely reflected a greater reliance on the safety net as residents experienced job loss or were unable to afford the cost of employer-sponsored insurance during the recession. Supplemental payments to hospitals rose

from $177 to $322 million over the same period, however this increase included one-time payments to hospitals to provide transitional relief.

Delivery System and Payment Reforms (Goals 3 and 4): The evaluation examined the availability of access to a usual source of medical care as one measure of the Commonwealth's efforts to achieve delivery system reform. Between 2010 and 2011, reported access to a usual source of medical care declined slightly, from 94.3% to 92.3%. While there was a slight decrease, these numbers demonstrate significantly higher access compared to the national average of 86.8% reported in 2011.

Preliminary data from the Delivery System Transformation Initiatives (DSTIs) and Patient Centered Medical Home Initiative (PCMHI), however, suggest progress toward Demonstration goals three and four. Based on the hospital reports from the first year of DSTI, it appears that the hospitals' implementation efforts are on track. Ninety-five percent of metrics across all participating hospitals were achieved in the first year. The first year's DSTI efforts focused heavily on foundational work to put in place the processes, policies and tracking mechanisms for the DSTI initiatives.

Data from the PCMHI Medical Home Implementation Quotient (MHIQ) and patient experience surveys collected during the first 18 months of the PCMHI demonstrate overall progress toward the adoption of "medical homeness" by participating practices. At baseline, practices scored well in the areas of patient-centered care, communication, and customer service. They scored moderately in competencies pertaining to quality assurance, health information technology, and patient-centered care. Lowest adoption was reported for care coordination and care management. Over time, both intervention and comparison practices reported the adoption of additional medical home competencies. Minimum scores of medical homeness rose from 11 to 47 and variations in scores across practices decreased. Care management, access, and patient-centeredness showed the largest improvement.

# 1 Introduction

The Centers for Medicare and Medicaid Services (CMS) authorizes Medicaid Research and Demonstration Waivers under Section 1115(a) of the Social Security Act. Medicaid Waivers allow states to test new approaches, expand existing delivery systems, and modify payment methods while maintaining "budget neutrality", meaning that federal Medicaid expenditures will not exceed those spent without the waiver.[1] CMS awarded The Commonwealth of Massachusetts (the Commonwealth) its first 1115 Demonstration Waiver in July 1997.

On December 22, 2011, CMS approved the fourth extension of the MassHealth Medicaid Section 1115 Demonstration (the Demonstration) through June 30, 2014. The Commonwealth's Executive Office of Health and Human Services (EOHHS) is responsible for evaluating the Demonstration, as described in the Special Terms and Conditions (STC) 84. To accomplish this, EOHHS enlisted the organizations named in Table 1 to conduct specific evaluation studies of six Demonstration initiatives.

**Table 1. Demonstration Initiatives, Evaluation Study Organizations & Leads**

| Demonstration Initiatives | Evaluation Study Organization | Study Leads |
|---|---|---|
| Delivery System Transformation Initiatives (DSTI) | Center for Health Policy & Research (UMMS) | Teresa Anderson<br>Georgia Willis |
| Express Lane Eligibility (ELE) | Center for Health Policy & Research (UMMS) | Teresa Anderson<br>Georgia Willis |
| Massachusetts Children's High-Risk Asthma Bundled Payment Demonstration Program (CHABP) | Center for Health Policy & Research (UMMS) | Wen-Chieh Lin |
| Continued Monitoring of Population Level Measures | Center for Health Policy & Research (UMMS) | Teresa Anderson<br>Georgia Willis |
| The Intensive Early Intervention Services for Children with Autism Spectrum Disorder (IEI) | Massachusetts General Hospital/ Harvard Medical School Center for Child and Adolescent Health Research and Policy | Karen Kuhlthau<br>Milt Kotelchuck |
| The Patient Centered Medical Home Initiative (PCMHI) | Commonwealth Medicine (UMMS) | Ann Lawthers<br>Valerie Konar |

EOHHS has also partnered with the University of Massachusetts Medical School (UMMS) Center for Health Policy and Research (CHPR) to coordinate all of the studies (Table 1) in order to develop the requisite reports detailed in STC 58(g) and 59. This interim evaluation report begins with a background section that provides the context for, and describes the goals of, the current Demonstration period. A findings section, devoted to the six studies, follows. Each study section includes either a description of the evaluation methods and interim findings, or a status update for each of the initiatives. The report concludes with a discussion of the Demonstration's efforts through March 1, 2013.

[1] A description of Section 1115 Demonstrations can be found at, http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/Section-1115-Demonstrations.html, accessed 04/20/2012.

# 2 Background

## 2.1 The Economic Context

During the Demonstration period of December 2008-June 2011, the nation experienced the longest and most severe economic recession since the great depression (Hartman et al., 2013). Unemployment rose to 9.9%, the highest level since 1982 (Department of Labor, 2013), and median household income declined steadily, to its lowest rate in more than 10 years (Martin, 2012).

The recession had a profound effect on health care affordability. More than 11 million people across the United States lost employer-sponsored insurance coverage between 2007 and 2010. Increases in Medicaid enrollment (7.5 million) partially compensated for the loss. Nevertheless, the number of uninsured nationwide grew by 7 million during this period (Hartman et al., 2013).

These national trends continued after the recession officially ended in June 2009, a dynamic that is not unusual following severe economic downturns (Hartman et al., 2013). From 2010 to 2012, public health plan enrollment for persons under 65 years of age grew slightly from 22.0% to 23.5% (Cohen and Martinez, 2013), while employer-sponsored insurance (ESI) continued its downward slide from 59% to 56% nationally (Kaiser Family Foundation, 2013). Throughout this period healthcare costs continued to rise faster than the general inflation rate as families' ability to pay declined (Cuckler et al., 2013).

Several trends within the private health insurance market may have contributed to higher Medicaid and Health Safety Net (HSN) enrollment and costs. From 2010 to 2012, average annual private insurance premiums increased by 5.3% for individuals and 8.1% for families, and health insurance deductibles rose by 19.6% for individuals (Kaiser Family Foundation, 2013) and 18.1% higher for families (Agency for Healthcare Research and Quality, 2013). During this period, enrollment in high-deductible health plans without health savings accounts increased by 2.7% (Cohen and Martinez, 2013). Concurrent with these trends, average out-of-pocket costs rose as well, reflecting higher cost sharing for private health insurance plans,increased enrollment in high-deductible health plans and higher healthcare costs overall (Hartman et al., 2013). All of these factors contribute to an increase in health care costs for individuals and families, which in turn may have led to greater demand for HSN services and higher HSN provider payments.

Economic contraction and slow job growth profoundly influenced trends in private health insurance and Medicaid enrollment and costs in Massachusetts. In 2011, 62% of Massachusetts residents received health care coverage through their employers, representing a 5% decline in ESI since 2009 (Center for Health Information and Analysis, 2013). From 2009 to 2011, worker premiums rose 9.7%, while benefit levels (average actuarial value of insurance policies) declined 5.1% (Center for Health Information and Analysis, 2013). In 2011, the average annual private health insurance premium was 19.1% of the median single-person household income and 17.5% of family income (Schoen, Lippa, Collins, and Radley, 2012). Concurrently, average worker deductibles grew by more than 40% and out-of-pocket costs increased as well (Center for Health Information and Analysis, 2013). In addition, enrollment in high deductible

health plans increased by 10% between 2008 and 2010 (Office of Attorney General Martha Coakley, 2013). Consistent with the national experience, higher health care costs for workers came at a time when median household income was declining in Massachusetts (Office of Attorney General Martha Coakley, 2013). Even for workers with insurance, higher out-of-pocket costs may have led to increased reliance on HSN services. From July 1, 2010 to June 30, 2013, the percentage of Medicaid members with third party coverage, excluding those with Medicare, increased by 19.1% (D. Bearce, personal communications, September 17 and 26, 2013). During the same time period, MassHealth enrollment in programs for long-term unemployed individuals increased by 42.8% (D. Bearce, personal communication, September 17, 2013), suggesting that the slow employment recovery has continued to affect Massachusetts residence long after the official end of the recession.

## 2.2 The 1115 Waiver and Massachusetts Health Reform

Under the 1115 Waiver, the Commonwealth redirected spending from uncompensated care to insurance coverage through the creation of the Safety Net Care Pool (SNCP) in 2005. The Waiver also allowed the Commonwealth to expand Medicaid (MassHealth) enrollment, paving the way for Chapter 58 of the Acts of 2006 (Chapter 58), the health care legislation that served as the model for the federal Patient Protection and Affordable Care Act of 2010 (ACA).

During the Demonstration period of December 2008-June 2011, the Commonwealth and CMS continued their health care reform efforts to advance the goals of expanding health insurance coverage, redirecting spending from uncompensated care towards insurance, containing costs, and improving care access and quality. By December 2011, an estimated 98.1% of Massachusetts' 6.4 million residents were insured. The Commonwealth's expansion of insurance coverage was intended not only to contain the volume and costs of uncompensated care, but also to enable access to quality care and to improve the health of low-income residents (Anderson, Cabral, Ellingwood, Lang, and Posner, 2012).

The Commonwealth realized that successful expansion of health coverage and access to primary care would be threatened without further cost containment efforts. Two laws enacted between 2008 and 2010[2] provided for greater scrutiny and transparency of payer and provider cost trends, regulation of insurance premiums, reporting of medical expenses and standardized quality outcome measures, and recommendations for more uniform payment methods.

In 2011, Governor Patrick proposed further cost control measures, and on August 6, 2012 he signed into law a sweeping cost containment bill, Chapter 224 of the Acts of 2012.[3] This latest effort in the Commonwealth's trajectory of health reform initiatives expands upon the two previous laws by setting annual statewide spending targets, establishing the independent Health Policy Commission to oversee health care system performance, and requiring MassHealth to

[2] Chapter 305 of the Acts of 2008, and Chapter 288 of the Acts of 2010.
[3] Chapter 224 of the Acts of 2012, an Act Improving the Quality of Health Care and Reducing Costs Through Increased Transparency, Efficiency and Innovation. The law became effective November 5, 2012.

shift an increasing percentage of its enrollees to coverage that uses alternative payment methods (Mechanic, Altman, and McDonough, 2012).

The following goals of the current Demonstration period continue and expand upon the Commonwealth's ongoing commitment to health care reform through its partnership with CMS.

Goal 1: Maintain near universal health care coverage for all citizens of the Commonwealth and reduce barriers to coverage (Near Universal Health Coverage);

Goal 2: Continue the redirection of spending from uncompensated care to insurance coverage (Redirection of Spending);

Goal 3: Implement delivery system reforms that promote care coordination, person-centered care planning, wellness, chronic disease management, successful care transitions, integration of services, and measurable health outcome improvements (Delivery System Reforms); and

Goal 4: Advance payment reforms that will give incentives to providers to focus on quality, rather than volume, by introducing and supporting alternative payment structures that create and share savings throughout the system while holding providers accountable for quality care (Payment Reform).

The Demonstration's initiatives support the "triple aim" to improve population health and individuals' experience (access, quality, etc.) of the health care system, while reducing costs. Table 2 presents the Demonstration goals advanced by each of the six initiatives in Table 1 (see page 1).

**Table 2. Demonstration Initiative and Goals**

| Demonstration Initiative | Near Universal Health Coverage | Redirection of Spending | Delivery System Reforms | Payment Reforms |
|---|---|---|---|---|
| Delivery System Transformation Initiatives (DSTI) | | | X | X |
| Express Lane Eligibility (ELE) | X | | | |
| Massachusetts Children's High-Risk Asthma Bundled Payment Demonstration Program (CHABP) | | | X | X |
| Continued Monitoring of Population Level Measures | X | X | X | |
| Intensive Early Intervention Services for Children with Autism Spectrum Disorder (IEI) | | | X | |
| Patient Centered Medical Home Initiative (PCMHI) | | | X | X |

In its approval of the current Demonstration renewal (Tavenner, 2011), CMS acknowledged the Commonwealth's "two-pronged approach" of advancing health system and payment transformation (DSTI, PCMHI) and promoting health care coverage for children and adults (IEI,

CHABP, ELE). The following section presents interim evaluation findings for the six Demonstration initiatives.

# 3 Interim Evaluation Findings of the MassHealth 1115 Demonstration

## 3.1 Delivery System Transformation Initiatives (DSTI)

### 3.1.1 DSTI Background

CMS and MassHealth offer performance-based incentive payments to seven participating safety net hospital organizations. The incentive payments encourage and reward these hospital systems for making investments in healthcare delivery initiatives that support Demonstration Goals 3 and 4, Delivery System Reforms and Payment Reforms.

The seven safety net hospital systems are:

1. Boston Medical Center
2. Cambridge Health Alliance
3. Holyoke Medical Center
4. Lawrence General Hospital
5. Mercy Medical Center
6. Signature Healthcare Brockton Hospital
7. Steward Carney Hospital

Each hospital organization has its unique structure and community context in which to implement its specific CMS-approved DSTI plan, based on the DSTI master plan. Individual hospital DSTI plans include at least one project selected from a menu within the following categories:

DSTI Category 1: Development of a Fully Integrated Delivery System. Category 1 projects employ the concepts of the patient centered medical home (PCMH) model to increase delivery system efficiency and capacity.

DSTI Category 2: Health Outcomes and Quality. Category 2 projects develop, implement or expand innovative care models to improve care management and patient experience and to contain costs.

DSTI Category 3: Ability to Respond to Statewide Transformation to Value-Based Purchasing and to Accept Alternatives to Fee-For-Service Payments that Promote System Sustainability. Projects enhance performance improvement and reporting capabilities.

Each category may require significant investments of time and money by hospital systems in order to achieve the desired outcomes. For example, preliminary reports suggest that transforming traditional primary care practices into patient centered medical homes often requires freeing staff time for training in the skills necessary to implement the model effectively, developing or improving quality measurement systems, and coordinating care for patients with complex needs.

The Demonstration authorizes DSTI incentive payments through the Commonwealth's SNCP, which is administered by MassHealth. The incentives are allocated based on the relative volume of MassHealth patients that each hospital sees, as measured by patient service revenue. Incentive payments are distributed contingent on a hospital's meeting the metrics defined for each project in its specific DSTI plan.

The hospitals submit a DSTI Semi-Annual Report for Payment and a Summary Report for Payment to MassHealth. These reports describe and document progress made for each project milestone and metric, along with requests for incentive payment. DSTI funds are available as incentive payments based on the hospital successfully achieving and self-reporting the metrics associated with the CMS approved projects. These reports serve as the basis for authorizing payment. The STCs, Attachment I, specifies the proportional allowance of available DSTI funds for each provider. EOHHS determines the actual payment in accordance with the CMS approved Master DSTI Plan (Attachment J), Section VIII, Disbursement of DSTI Funds. For 2012, the annual total available amount was $209.3 million.

DSTI Evaluation Study Aims

The specific DSTI study aim addressed in this interim evaluation report is:

1. Describe each hospital organization's plan for care delivery system transformation and performance at DSTI inception on specific projects during SFY 2012 (STC 49(c)(4); STC 52) (baseline qualitative):

   a. Describe the key implementation processes and improvements planned with identified measures (baseline quantitative)

   b. Identify the organizational units directly involved;

   c. Identify the incentive payment amounts associated with each initiative project.

### 3.1.2 DSTI Evaluation Methods

The DSTI evaluation is a descriptive study using qualitative methods. The evaluation relies primarily on the following documents: 1) CMS approved Master DSTI plan; 2) the seven CMS approved hospital-specific DSTI plans; 3) the seven DSTI Semi-Annual Reports for Payment (July, 2012); 4) the seven DSTI Year End Reports (July, 2012); and 5) the seven Semi-Annual Request for Payment forms (July, 2012).

### 3.1.3 DSTI Interim Findings

The nature of DSTI projects is such that the outcomes are relatively long term. After just one year, evaluating progress against any measure beyond implementation of the DSTI projects would be premature. Based on hospital reports from the first year of DSTI, it appears that the hospitals' implementation efforts are on track. Ninety-five percent of metrics across all participating hospitals were achieved in the first year. The first year's DSTI efforts focused heavily on foundational work to put in place the processes, policies and tracking mechanisms for the DSTI initiatives. More information will be available to inform the DSTI evaluation at the final evaluation stage. A detailed summary of each hospital-specific plan is in Appendix A.

## 3.2 Express Lane Eligibility Program (ELE)

Express Lane Eligibility (ELE) renewal advances Demonstration Goal 1 by reducing barriers to continued coverage. Churning (moving in and out of Medicaid) has long been a problem within Medicaid (Fairbrother, Emerson, and Partridge, 2007; Short and Graefe, 2003). Forty-three percent of newly enrolled adults lose Medicaid coverage within twelve months (Sommers, 2009). Losing Medicaid coverage adversely affects access (Long, Coughlin, and King, 2005), continuity of care (Fairbrother, Emerson, and Partridge, 2007; Weissman, Witzburg, Linov, and Campbell, 1999), ambulatory care use (Carlson, DeVoe, and Wright, 2006), and health care costs (Rimsza, Butler, and Johnson, 2007).

Massachusetts' interest in implementing an ELE process resulted from its participation in the Robert Wood Johnson Foundation's "Maximizing Enrollment" grant program. One of the primary goals of the Maximizing Enrollment grant program is to increase enrollment and retention of children in Medicaid and the Children's Health Insurance Program (CHIP).

ELE is a streamlined application and renewal process, authorized by the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA), intended to increase eligible children's enrollment and retention in Medicaid and CHIP. Through ELE, states are authorized to rely on findings from an approved Express Lane Agency, such as the Supplemental Nutrition Assistance Program (SNAP), to conduct simplified eligibility determinations. In so doing, ELE reduces paperwork submission requirements that are known to be a barrier to members' benefit re-determination and a burden for Medicaid enrollment center staff.

Since Massachusetts determines eligibility for subsidized insurance plans by looking at an entire family group, the Commonwealth requested Section 1115 Waiver Demonstration authority to expand Express Lane to parents and caretaker relatives. The STCs give Massachusetts such authority (Section IV). MassHealth utilizes Express Lane renewal for a select group of households who are receiving both subsidized insurance plan benefits and SNAP benefits. Subsequent to obtaining authority to include parents and caretaker relatives in an Express Lane renewal process, Massachusetts also received both Medicaid and CHIP State Plan Amendment (SPA) approval to include children in the process. The objective of this evaluation is to assess the ELE process' early implementation and to determine its impact on member re-determination and re-enrollment. The study's specific aims are:

1. Describe the adult and child populations using Express Lane renewal procedures for renewal including demographic characteristics such as gender, age and the adults' status as parents or caretakers.

2. Describe MassHealth staff experience with the Express Lane renewal process including factors that facilitate and inhibit program implementation.

3. Determine early progress in completing eligibility renewal for families.

### 3.2.1 ELE Methods

The evaluation used mixed quantitative and qualitative methods. Following Express Lane renewal implementation on September 24, 2012, CHPR reviewed project documents and

secured permission to use MassHealth and CommCare enrollment data for the period 7/1/2012-6/30/2014. However, the data transfer did not occur immediately. There was not sufficient time for analysis and the inclusion of results here. Therefore, for this interim report, the findings reported are limited to reports from ELE program staff.

### 3.2.2 ELE Interim Findings

For the period from 9/24/2012 to 2/28/2013, ELE administrators reported that 27,618 households have been selected for the Express Lane renewal.

## 3.3 Massachusetts Children's High-Risk Asthma Bundled Payment Demonstration Program (CHABP)

### 3.3.1 Children's High-Risk Asthma Pilot Program Background

The Massachusetts Children's High-Risk Asthma Bundled Payment Demonstration Program[4] uses a bundled payment for care provided to high-risk pediatric asthma patients (ages 2-18) enrolled in selected MassHealth Primary Care Clinician Plan (PCCP) sites.

This pilot program includes two phases. During Phase I, participating practice sites will receive per person per month bundled payments to fund required and optional services that are not traditionally covered by Medicaid and will allow for a comprehensive, multi-faceted approach to asthma management as determined by the practice site. Medically necessary services traditionally covered by Medicaid will continue to be reimbursed on a fee-for-service basis. Pending the results of Phase I and CMS approval, during Phase II the bundled payments to each site will be increased to cover certain medically necessary services as well as the new services provided during Phase I.

Once CMS approves Massachusetts' protocols for pilot program and bundled payment methodology and the project is underway, the evaluation will examine the degree to which the program affects health care delivery, health outcomes and cost of care for high-risk pediatric asthma patients. The evaluation will include three components: a qualitative analysis of changes in how providers deliver services to program participants and how participants self-manage their asthma; a quantitative analysis of changes in health care utilization, quality of care, and MassHealth expenditures; and a synthesis of the quantitative and qualitative findings.

## 3.4 Continued Monitoring of Population Level Measures (PLM)

### 3.4.1 PLM Background

In accordance with STC 84(a), the evaluation of the Demonstration also addresses these six domains of focus:

- Decrease the number of uninsured
- Increase demonstration eligibles with ESI coverage
- Maintain enrollment in the Commonwealth Care Program
- Reduce uncompensated care and supplemental payments to hospitals

[4] CHABP is referred to in the STCs as the Pediatric Asthma Pilot Program.

- Reduce the number of individuals accessing the HSN Trust Fund
- Increase the availability of access to primary care providers

EOHHS and CHPR associated the six domains with the three of the four Demonstration Goals and established six population level measures (PLM) to monitor progress towards these goals. Table 3 presents the six PLM, the associated Demonstration Goals (see Table 2, page 4), and the data sources for the PLM.

**Table 3. Population Level Measures by Demonstration Goal and Data Source**

| PLM per STC 84(a) | Near Universal Health Coverage | Redirection of spending | Delivery system reforms | Data Source |
|---|---|---|---|---|
| 1. The number of uninsured in the Commonwealth [yearly] | X | | | The Massachusetts Health Insurance Survey (MHIS) and National Health Interview Survey (NHIS) |
| 2. The number of Demonstration eligibles with Employer Sponsored Insurance (ESI) coverage [monthly] | X | | | Premium Assistance and Enhanced Coordination of Benefits unit, UMMS Center for Healthcare Financing |
| 3. Enrollment in the Commonwealth Care Program [monthly] | X | | | Monthly Health Connector Summary Reports |
| 4. Uncompensated care and supplemental payments to hospitals [yearly] | | X | | MassHealth, including Health Safety Net Office |
| 5. The number of individuals accessing the Health Safety Net Trust Fund [yearly] | | X | | Health Safety Net Office |
| 6.Access to primary care providers [yearly] | | | X | The Massachusetts Health Insurance Survey (MHIS) and National Health Interview Survey (NHIS) |

### 3.4.2 PLM Methods

For PLMs 1 and 6, the study population consists of MA residents of all ages. Demonstration enrollees who had or have access to ESI are the population enumerated for PLM 2 and 3. Safety net hospitals and clinics are counted for PLM 4. Uninsured individuals receiving health care covered by the Health Safety Net Trust are enumerated for PLM 5. The analytic approach for monitoring each measure varies with the data source available as described below.

PLM 1: The number of uninsured in the Commonwealth [yearly]

The CHIA Massachusetts Health Insurance Survey (MHIS) and National Health Interview Survey (NHIS) provide weighted proportional estimates of the proportion of individuals not covered by health insurance for the Massachusetts population. Historically, the primary data source for the number of uninsured in Massachusetts has been the MHIS. This survey was not administered in 2012. We therefore report percentages from both the MHIS and the NHIS for 2010 and 2011, and from the NHIS only for 2012. In future reports, only the NHIS will be the data source for this measure.

PLM 2: The number of Demonstration eligibles with employer sponsored insurance coverage [monthly]

For this interim report, data was provided by the Premium Assistance and Enhanced Coordination of Benefits group within the UMMS Center for Healthcare Financing.

PLM 3: Enrollment in the Commonwealth Care (CommCare) Program [monthly]

CommCare, administered by the Commonwealth Health Insurance Connector Authority (Health Connector), is a commercial insurance-based premium assistance program[5] for nonelderly adults (age 19-64) with income up to 300% FPL who are not eligible for MassHealth. For this interim report, CommCare enrollment data was retrieved from Summary Reports, which are posted on the Health Connector website.

PLM 4: Uncompensated care and supplemental payments to hospitals [yearly]

For this interim report, annual summary statistics are reported from STC Attachment E, Safety Net Care Pool Payments, Chart B1.

PLM 5: The number of individuals accessing the Health Safety Net Trust Fund [yearly]

CHIA provided the aggregate number of individuals whose care was reimbursed by the Health Safety Net Trust fund in its Health Safety Net 2011 Annual Report issued in September, 2012.

PLM 6: Access to medical care providers [yearly]

The CHIA MHIS and the NHIS provide weighted proportional estimates of the proportion of Massachusetts residents who have reported a usual source of medical care.

[5] MassHealth Medicaid Section 1115 Demonstration, Centers for Medicare & Medicaid Services Standard Terms and Conditions #36. December 20, 2011.

### 3.4.3 PLM Interim Findings

#### 3.4.3.1 Near Universal Health Care Coverage

PLM 1: The number of uninsured in the Commonwealth

As seen in Table 4 on the next page, the MHIS and the NHIS yield slightly different estimates. The difference is due to a number of reasons including the population sampled, survey mode, survey fielding period, and method of handling missing data.

Both data sets show that less than 4% of the total Massachusetts population reported being uninsured when they were surveyed in 2011. In 2012, the NHIS data show a slight increase in the percentage of people uninsured to 4.8% (see Table 4). The rise in the number of uninsured is likely a result of the slow economic and employment recovery that persists in Massachusetts. In sharp contrast, at the national level (data not shown in Table 4) the percentage of people uninsured (all ages) declined slightly in 2011 from its recession peak but remained more than three times greater (14.7%) than in Massachusetts (Cohen and Martinez, 2013).

**Table 4. PLM 1: Number of Uninsured in Massachusetts (All Ages), 2010-2012**

| Measure | 2010 | 2011 | 2012 |
|---|---|---|---|
| Number of uninsured from NHIS*, (%) | 4.0%** | 3.9%*** | 4.8%[+] |
| Number of uninsured from MHIS[++]*, (%) | 1.9% | 3.1%[§] | N/A[‡‡‡] |

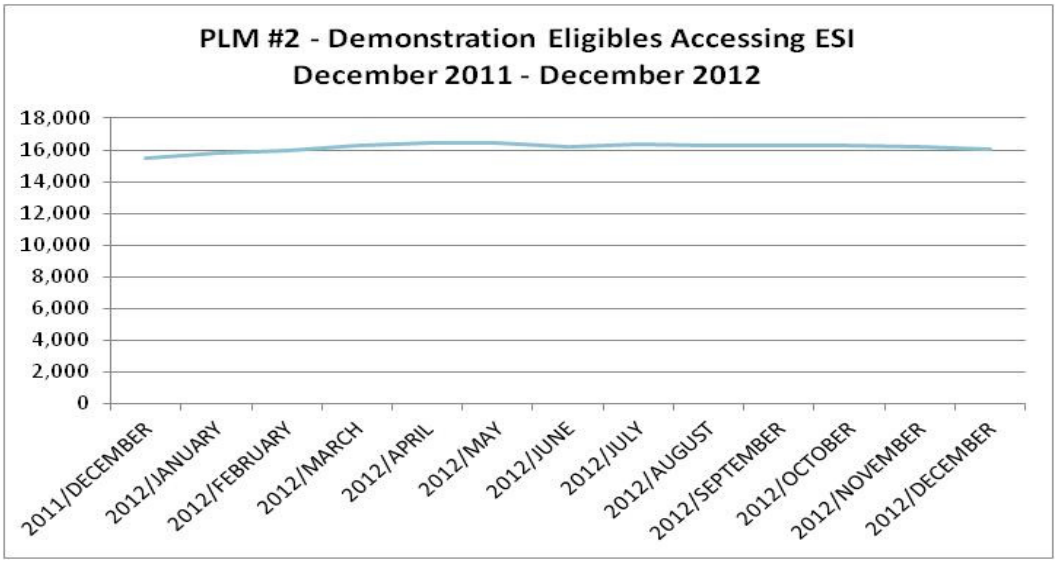
*Uninsured status at time of interview.
**Source: Cohen RA, Ward BW, and Schiller JS. *Health insurance coverage: Early release of estimates from the National Health Interview Survey, 2010.* National Center for Health Statistics. June 2011.
***Source: Cohen RA and Martinez ME. *Health insurance coverage: Early release of estimates from the National Health Interview Survey, 2011.* National Center for Health Statistics. June 2012.
[+] Source: Cohen RA and Martinez ME. *Health insurance coverage: Early release of estimates from the National Health Interview Survey, 2012.* National Center for Health Statistics, June 2013.
[++]Source: Center for Health Information and Analysis. *Massachusetts household and employer insurance surveys: Results from 2011.* January 2013.
[§]Differences between 2010 and 2011 are not statistically significant, suggesting uninsured rates have changed only slightly.
[‡‡‡]Survey was not conducted in 2012.

PLM 2: The number of demonstration eligibles with ESI coverage

Employers are the primary source of health insurance in Massachusetts and the nation. In 2011, 62% of Massachusetts residents received health care coverage through their employers, representing a 5% decline in ESI since 2009 (Center for Health Information and Analysis, 2013). From January to December 2012, ESI among demonstration eligibles increased slightly in Massachusetts (see

Figure **1** on next page). ESI enrollment rose from 15,501 eligible members in December 2011 to a high of 16,460 in May 2012, a 6% increase, then ended with 16,021 members in December 2012 for a 3% net gain in members accessing ESI in the 13-month period.

**Figure 1. PLM 2: Demonstration Eligibles with Employer Sponsored Insurance (ESI) Coverage**



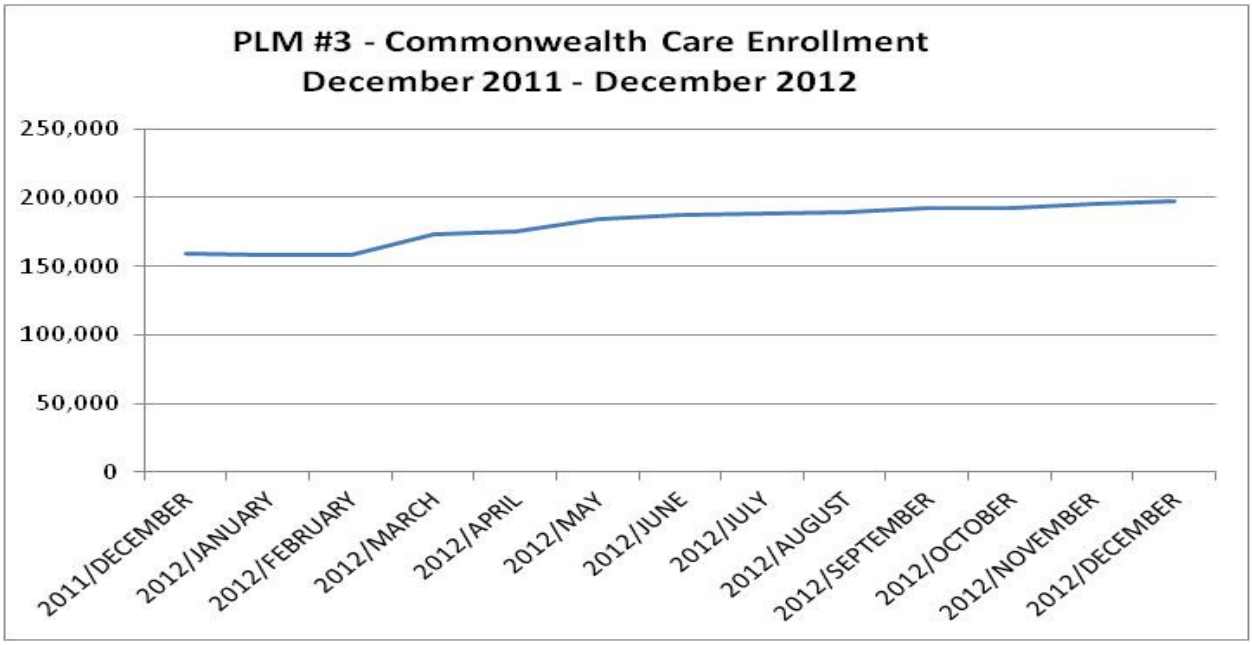

Source: Email communication from Premium Assistance and Enhanced Coordination of Benefits unit, University of Massachusetts Medical School, Center for Healthcare Financing, April 23, 2013.

PLM 3: Enrollment in the CommCare Program

Enrollment in the CommCare program rose 24.5% during the first year of the current Demonstration period, from 158,805 to 197,777 enrollees (see Figure 2 on next page). The increase is attributed in part to the re-instatement of 22,868 Aliens with Special Status (AWSS), who had lost eligibility in the program in 2009.[6] The FY2013 open enrollment occurred between June 1 and June 22, 2012 with 187,377 members eligible to participate, including the AWSS members.

[6] Massachusetts does not currently receive federal reimbursement for AWSS; however, their coverage will be eligible for federal subsidies under national reform in 2014 (Source: Massachusetts Health Connector 2012 Progress Report).

**Figure 2. PLM 3: Enrollment in the Commonwealth Care (CommCare) Program**




Source: Commonwealth Health Connector Authority, *Monthly Health Connector Summary Reports*, 2006-2012 Board Meeting Archives, https://www.mahealthconnector.org/portal/site/connector/menuitem.be34eb79b090a7635734db47e6468a0c/?fiShown=default. Accessed on March 12, 2013.

### 3.4.3.2 Redirection of Spending

PLM 4: Uncompensated Care and Supplemental Payments

As mentioned in the background section of the report, the slow economic and employment recovery has influenced trends in private health insurance and Medicaid enrollment and costs, both in Massachusetts and nationwide. From 2009 to 2013, dual trends occurred, with a substantial increase in health care costs for individuals and families, and a decline in median household income. In Massachusetts, there is evidence that these trends may have increased utilization of HSN services and HSN provider payments. From July 1, 2009 to June 30, 2013, the number of Medicaid members with third party coverage rose from 152,357 to 178,984, a 17.5% increase (D. Bearce, personal communication, September 17, 2013). This may partially explain the slight increase in HSN uncompensated care payments seen in Table 5. It is likely that the recession contributed to the increase in utilization of HSN services and HSN provider payments among individuals with inadequate private insurance coverage.

Examination of supplemental payments suggests an upward trend in payments from 2010 to 2011, and then a downward trend from 2011 to 2012 (see Table 5 on next page). Following the 2010 Waiver amendment, supplemental payments previously agreed to in the 2008-2011 Waiver renewal increased. Cambridge Health Alliance's Public Service Hospital Safety Net Care payment increased from $125.5 million to approximately $341.3 million to align with state legislative authority, as granted in Section 119 of Chapter 27 of the Massachusetts Acts of 2009

and the FY 2011 state budget. Additionally, supplemental payments for transitional relief to private hospitals were approved in the 2010 Waiver amendment, authorizing up to $270 million in payments. The Transitional Relief payments were only authorized for 2011, thus accounting for an increase in SNCP supplemental payments in 2011 that did not carry forward into 2012 (see Table 5).

**Table 5. PLM 4: Uncompensated Care and Supplemental Payments for 2010-2012 (in millions)**

| Payment Type | 2010 | 2011 | 2012 |
|---|---|---|---|
| HSN payments for uncompensated care | $272.1* | $268* | $271* |
| SNCP supplemental payments to all acute hospitals | $177.5** | $637.9** | $332.0*** |

* Source: R. Balder, personal communication, February 28, 2013.
** Source: Demonstration Special Terms and Conditions, Attachment E (Safety Net Care Pool Pay), 54, Amended September 30, 2010; Approved January 19, 2011.
***Source: Demonstration Special Terms and Conditions, Attachment E (Safety Net Care Pool Pay), 103-104, Approved December 20, 2011.

PLM 5: Number of Individuals Accessing the HSN Trust Fund

The number of individuals accessing HSN increased from 316,000 in 2010 to 326,000 in 2011 to 380,000 in 2012, a 20% increase over the three year period (see Table 6). Trends discussed earlier in the report could result in an increase in the number of people accessing the HSN. These trends include increases in health care costs and declines in median household income, which may lead to an increase in the number of people accessing HSN for health care services they cannot afford.

**Table 6. PLM 5: Number of Individuals Accessing the Heath Safety Net Trust Fund (HSN) for Federal Fiscal Years 2010-2012**

| | FFY10 | FFY11 | FFY12 |
|---|---|---|---|
| HSN Total Users, (n) | 316,000*‡‡ | 326,000**‡‡ | 380,000**‡‡ |

* Source: Division of Health Care Finance and Policy. *Health Safety Net 2011 Annual Report*. September 2012. Accessed March 12, 2013 from: http://www.mass.gov/chia/docs/r/pubs/11/hsn11-ar.pdf.

‡‡Reporting period is for 10/1-9/30 of each fiscal year. Users receiving services in more than one type of setting (e.g., community health center, hospital, or emergency room) are counted only once.
**Source: R. Balder, personal communication, February 1, 2013.

### 3.4.3.3 Delivery System Reform

PLM 6: Access to Usual Source of Medical Care

Historically, the data source for this measure was the MHIS. As previously mentioned, this survey was not administered in 2012. In its absence, the NHIS was used to provide data for the

measure. For transitional purposes, we report data from both the MHIS and NHIS. Between 2010 and 2011, there was a slight decrease in access to usual source of medical care in Massachusetts (94.3% to 92.3%, respectively) (see Table 7).

Despite this decrease, access to usual souce of medical care is higher in Massachusetts than for the nation. On the national level (data not shown in Table 7), the percentage of people who reported a usual source of medical care in 2010 was 85.8%, which was lower than the Massachusetts estimate of 94.3%. In 2011, the national estimate was 86.8% compared to 92.3% in Massachusetts.

**Table 7. Population-Level Measure 6: Access to Usual Source of Medical Care for All Ages in Massachusetts, 2010-2012**

| | 2010 | 2011 | 2012 |
|---|---|---|---|
| Access to usual source of care from NHIS*, (%) | 94.3% | 92.3% | N/A[+] |
| Access to usual source of care from MHIS[++], (%) | 92.9% | 90.9% | N/A‡ |

* Source: R. Cohen, personal communication, January 23, 2013.

[+]Data not available.

[++]Source: Division of Health Care Finance and Policy. *Access to Health Care in Massachusetts: Results from the 2008-2010 Massachusetts Health Insurance Surveys for Non-Elderly Adults (Ages 19-64)*. 2011.

‡Data not available.

## 3.5 Intensive Early Intervention Evaluation (IEI)

### 3.5. IEI Background

Starting with the current Demonstration period, the Demonstration supports early intervention services for children with autism who are not otherwise eligible through the Commonwealth's currently approved Section 1915(c) home and community-based services waiver because the child has not been determined to meet institutional level of care requirements (STC40). Known as Intensive Early Intervention (IEI), this initiative is an innovative program to promote children's health which advances Demonstration Goal 3, the integration of services.

The IEI implementation team includes representatives from the Massachusetts General Hospital (MGH), the Massachusetts Department of Public Health, and MassHealth Community Services. The MGH team is conducting the IEI evaluation. The evaluation's objective is to understand "the benefits and cost savings of the 1115 waiver covering specific early intervention services for demonstration eligible children with autism."

### 3.5.1 IEI Methods

The evaluation team will employ a descriptive design with quantitative and qualitative methods. To strengthen their quantitative analyses of how costs and service use changed overall for the eligible group (from a time prior to the Waiver to the time of the Waiver), the evaluators will employ a comparison group of children who would be eligible based on diagnosis but are not covered by MassHealth. The evaluation will also include qualitative interviews of families and

providers. Finally, the team will collaborate with the Department of Public Health's Early Intervention (EI) evaluation team to examine the EI measures of the children's functional status.

### 3.5.2 IEI Interim Findings

IEI services are being provided to eligible children by the Department of Public Health. However, the implementation of evaluation activities including quantitative analysis of the IEI dataset and subject recruitment for interviews was delayed due to pending IRB approval from the Massachusetts Department of Public Health. On May 21, 2013, the IEI evaluation project was granted IRB approval. Since receiving IRB approval, recruiting and scheduling in preparation for the qualitative interviews has begun.

## 3.6 Patient Centered Medical Home Initiative (PCMHI)

### 3.6.1 PCMHI Background

In 2009, EOHHS partnered with UMMS and Bailit Health Purchasing to implement the Massachusetts Patient Centered Medical Home Initiative (MA-PCMHI) (STC 41c). MA-PCMHI is a multi-payer initiative to transform selected primary care practice sites into Patient Centered Medical Homes. As a participating payer, MassHealth assumes responsibility for enrollees in both its PCCP and its contracted Managed Care Organizations. The MA-PCMHI practices must meet (1) reporting requirements on clinical and operational measures and (2) benchmarks to indicate continued progress towards medical home transformation. A large multi-stakeholder Advisory Committee planned the three-year initiative prior to its March, 2011 inception.

MA-PCMHI advances Demonstration Goal 3, an integrated delivery system, and Goal 4, reformed payment models (Table 2, see page 4). Specifically, the Advisory Committee expects that the selected practices will transform to mature medical homes delivering patient-centered care that is coordinated across the care continuum. Further, the practices are expected to transition from fee-for service towards payment alternatives based on care quality. In order to monitor progress towards these goals, the MA-PCMHI evaluation collects information on the initiative's activities, outputs and outcomes. The Interim Report of the Patient-Centered Medical Home Evaluation, completed in January 2013, found that the PCMHI practices are making progress towards medical home adoption. The evaluation report's Executive Summary is included as Appendix B.

# 4 Discussion

In the Demonstration extension period, the Commonwealth and CMS continue their health reform efforts to advance the goals of maintaining near universal health care coverage (Goal 1), redirecting spending to insurance coverage (Goal 2), implementing delivery system reforms to advance the "triple aim" (Goal 3), and advancing payment reforms that incentivize care quality over volume (Goal 4). The evaluation examined how six Demonstration initiatives contribute to the attainment of one or more Demonstration goal (Table 2, see page 4) and reports interim findings from the four studies currently underway.

Regarding Goal 1, two sets of survey data indicate that the Commonwealth maintained near universal health insurance. These survey results, combined with CommCare enrollment and ESI access support the continued success of Chapter 58 in achieving near universal health coverage.

The Commonwealth advanced Goal 1 through its continued participation in the Robert Wood Johnson Foundation's "Maximizing Enrollment" grant program for children, and implementation of the Express Lane Eligibility program for parents or adult caretakers of children living in households with Supplemental Nutrition Assistance Program (SNAP) benefits. These two efforts eliminate paperwork submission requirements that are known to be a barrier to members' benefit re-determination and a burden for MassHealth enrollment center staff.

With respect to the Commonwealth's efforts to redirect spending towards insurance coverage (Goal 2), the evaluation examined uncompensated care and supplemental payments to hospitals. Supplemental care payments from the Safety Net Care Pool decreased from $637.9 million in 2011 to $332 million in 2012. Uncompensated care payments, however, increased from $268 million in 2011 to $271 million in 2012. The number of individuals who accessed payment from the Health Safety Net Trust increased by 64,000 during the period from 2010 to 2012. This increase may indicate a rise in uncompensated care payments. Further, the increase may reflect challenges to universal coverage experienced in this Demonstration extension period but originating in the 2009 nationwide economic recession that occurred in the previous Demonstration period (2008-2011). It is likely that the recession contributed to the increase in utilization of HSN services and the associated HSN provider payments.

In this Demonstration extension period, the Commonwealth implemented multiple efforts transforming the delivery system, (Demonstration Goal 3) while adopting sustainable alternative payment systems (Demonstration Goal 4). Evaluations of the Delivery System Transformation Initiatives and the Patient Centered Medical Home Initiative (PCMHI) suggest progress on Goal 3. Specifically, interim findings from the Patient Centered Medical Home Initiative indicate that the selected practices are adopting the core medical home competencies, improving care access and coordinating care to assist high risk patients in managing their chronic disease. Improvements to care access within PCMHI practices are particularly important in light of 2011 survey results that revealed a slight decrease from 2010 in population access to a usual source of medical care. Access to a usual source of medical care is higher in Massachusetts than in the nation. Improved patient access to high quality, primary care achieved via PCMHI is a more positive indicator of the advancement of the Commonwealth's delivery system reform and cost containment efforts begun with Chapter 58 in 2006.

The patient centered medical home model forms the foundation of the seven projects specified in the Commonwealth's Delivery System Transformation Initiatives (DSTI) Master Plan Category 1, Development of a Fully Integrated Delivery System. These projects include the integration of behavioral health care (1.2), specialty care (1.3) and the acute-post acute care continuum (1.7) as well as adoption of the patient centered medical home primary care model (1.1). Four DSTI hospitals successfully implemented patient centered medical home model projects (1.1), achieving all their CMS approved measures and metrics. Of these four, two DSTI hospitals,

Boston Medical Center and Cambridge Health Alliance, have primary care affiliates active in the Patient Centered Medical Home Initiative. Synergies across the PCMHI and DSTI Demonstration projects exemplify the Commonwealth's strategy to advance statewide reforms to the delivery system (Goals 3 & 4).

Finally, Demonstration Goal 4 advances payment reforms that seek to control costs through payment alternative structures, including bundled payments, global payments and targeted incentives. Three Demonstration projects address Goal 4. The Pediatric Asthma Program, once underway, will pilot bundled payments for care given to high-risk children enrolled in the Primary Care Clinician (PCC) Plan. Further, the PCMHI, which enrolled PCC Plan or MCO contracted practices, will ultimately assess the outcomes of three practice groups, one of which will receive this extra per-member-per month payments and, potentially, shared savings. Notably, one PCMHI interim result indicates that fee-for-service payment actually hinders practices' adoption of the patient centered medical home model.

Study Limitations

This interim report presents the progress that the Commonwealth and CMS made in their efforts to advance the Demonstration's four goals. The report is limited in several ways. First, results could not be presented for the Children's High-Risk Asthma Bundled Payment Pilot Program, nor for the Intensive Early Intervention Services for Children with Autism Spectrum Disorder, as the respective evaluations have yet to begin. Both evaluation studies will be underway and reporting results in 2014. A further limitation involves the DSTI results, which rely on data reported by the seven hospitals based on the first year's progress in a long term process.

# 5 Conclusion

During the remainder of this Demonstration extension through 2014, CMS and the Commonwealth plan to continue and expand progress towards the four goals of the 2011-14 Demonstration. Successful efforts towards maintaining near universal health care coverage and redirecting spending will continue. EOHHS will continue the delivery systems reforms (DSTI, Pedi Asthma, IEI and MA-PCMHI) and advance payment reforms (DSTI, Pedi Asthma, MA-PCMHI). With cost containment oversight from the Health Policy Commission, the Commonwealth will continue its health reform efforts.

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# Appendix A DSTI Hospital Baseline Summaries (SFY12)

The tables below presents a summary of the findings for DSTI evaluation Study Aim 1 - the implementation processes, planned improvements, achievement of identified metrics, and the organization units involved for each hospital's DSTI plan for the first year of the Demonstration (SFY12).

## Appendix A.1 Boston Medical Center DSTI SFY12

| **Category 1 Project: Contribute to a fully integrated delivery system by expanding the PCMH model; and instituting a practice support center** | | | |
|---|---|---|---|
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **1.1 Patient Centered Medical Home (Master Plan 1.1)**<br>•<br>• Spread of PCMH model across all PC practices | Form PCMH work group; Perform gap analysis | √ | √ |
| **1.2 Practice Support Center (Master Plan 1.5)** | Establish infrastructure; hiring staff | √ | √ |
| **Units involved**: Geriatric Internal Medicine (GIM) Primary Care Practice; Family Medicine (FM) Primary Care Practice, IT | | | |
| **Incentives**: Category 1 **Total $ 16,568,532 :** 1.1 $8,284,265 1.2 $8,284,264 | | | |
| | | | |
| **Category 2 Project: Improve health outcomes and quality by implementing care management interventions for patients with diabetes; establishing a Re-Engineered Discharge (RED) Process; and the developing a simulation center** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **2.1 BMC Simulation and Nursing Education Center**<br><br>**(Master Plan 2.6)** | Identify space; develop curriculum | n/a | √ |
| **2.2 Rapid Diabetes Referral and Follow-up (Master Plan 2.1)** | Design system to ID high-risk diabetic pts; Identify staff involved in diabetes care;<br><br>Engage community partners & assess resources | n/a | √ |

| | | | |
|---|---|---|---|
| **2.3 Project RED**<br><br>• Re-engineered Discharge (RED) Program for Adult (18-65) MH, CommCare BMCHP members admitted to BMC (pts.) (Master Plan 2.4) | Develop & implement Project RED for 500 pts. | √ | √ |
| **Units involved**: Surgery; Anesthesiology; Nursing; Pediatrics; Medicine; Ob/Gyn: ED: Outpatient: Endocrinology Clinic: Family Medicine | | | |
| **Incentives**: Category 2 **Total $ 24,852,798:** 2.1 $8,284,264 2.2 $8,284,265 2.3 $8,284,269 | | | |
| | | | |
| **Category 3 Project: Prepare for payment reform and alternative payment models by developing governance, administrative and operational capacities; and participating in a learning collaborative** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **3.1 ACO Development**<br><br>**(Master Plan 3.3)**<br><br>• ACO delivery system including BMC, 6 BNH-affiliated CHCs, 22 BMC physician practice plans) | Create/convene ACO Steering Committee; estimate # of PCP pts; prepare ACO concept paper | √ | √ |
| **3.2 Learning Collaborative**<br><br>**(Master Plan 3.9)** | | n/a | √ |
| **Units involved**: BMC; BHN CHCs; BMC physician practices; BMCHP | | | |
| **Incentives**: Category 3 **Total $10,355,332:** 3.1 $8,284,265 3.2 $2,071,066 | | | |

n/a: Not applicable

# Appendix A.2 Cambridge Health Alliance DSTI SFY12

| **Category 1 Project: Contribute to a fully integrated delivery system by expanding the PCMH model; and integrating physical and behavioral health** | | | |
|---|---|---|---|
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **1.1 Expand PCMH Model (Master Plan 1.1)**<br>• Gap assessment, work plans<br>• Assign pt. population to panel; Identify high-risk patients | -Complete gap assessment for NCQA MH recognition<br><br>-Criteria selected for patient empanelment | n/a | √ |
| 1.2 **Integrate Primary Care and Behavioral Health (Master Plan 1.2**)<br>• Develop integrated PC & BH model | Developed model for co-located, integrated, collaborative PC/BH | √ | √ |
| **Units involved**: CHA's Patient-Centered Medical Home leadership, CHA's primary care site leadership team, Behavioral Health, Primary Care | | | |
| **Incentives**: Category 1 **Total $7,176,533 :** 1.1 $3,588,264 1.2 $3,588267 | | | |
| | | | |
| **Category 2 Project: Improve health outcomes and quality by implementing care management interventions for Patients with Diabetes; and implementing a primary care based system of complex care management for high risk population.** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **2.1 Implement primary care-based system of complex care management (Master Plan 2.5)**<br><br>• Develop PC complex care management team-hire & train staff<br>• Develop multi-payer high risk patient reports | -Framework for complex-care management program complete<br><br>-Sample multi-payer report | n/a | √ |
| **2.2 Improve management of patients with chronic disease-Diabetes improvement initiative**<br><br>**(Master plan 2.1)**<br><br>• Develop protocol, policies & procedures for team-based diabetes care | Key protocols developed and used for Pharmacy-led diabetes management Service and Nurse-led patient education & self - management coaching conducted at 1 site | n/a | √ |
| **Units involved**: Community Health Workers, Complex Care Management Team, ED, Inpatient Department, Post-acute care, CHA Ambulatory Care Department | | | |
| **Incentives**: Category 2 **Total $7,176,533** 2.1 $3,588,267 2.2 $3,588,264 | | | |

| | | | |
|---|---|---|---|
| **Category 3 Project: Prepare for payment reform and alternative payment models by developing risk stratification capabilities for patient populations and alternative payment models; developing capacity to address the population health of the community associated with the Triple aim and alternative payment models; and participating in learning collaborative.** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **3.1 Develop capacity to Address the Population Health of the community associated with the Triple Aim and Alternative Payment Models (Master Plan 3.7)**<br><br>• Form workgroup with local health depts. & community agencies<br>• develop reporting tool on PC population<br>• Analyze health data; select intervention | Intervention plan for tobacco use verification and cessation developed with data analytic tool. | √ | √ |
| **3.2 Develop Risk Stratification Capabilities toward Participation in Alternative Payment Models (Master Plan 3.1)**<br><br>• Collaborate with payers | Risk stratification collaboration with MassHealth & Commonwealth Care [t] payers; identified top 3% high-risk patients for care management. | n/a | √ |
| **3.3 Participate in Learning Collaborative**<br><br>**(Master Plan 3.9)** | Examined 4 options for LC participation. | n/a | √ |
| **Units involved**: Committee on Community and Public Health, Community Advisory Committee, Population Health Workgroup | | | |
| **Incentives**: Category 3 **Total $8,073,600** 3.1 $3,588,268 3.2 $3,588,266 3.3 $897,067 | | | |

n/a: Not applicable

# Appendix A.3 Holyoke Medical Center DSTI SFY12

| **Category 1 Project: Contribute to a fully integrated delivery system by expanding the PCMH model; and establishing health data exchange capability** | | | |
|---|---|---|---|
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **1.1 Develop a PCMH for HMC Affiliated PC practices (Master Plan 1.1)**<br>• Educate leadership re: PCMH<br>• Gap analysis and action plans re: readiness for PCMH<br>• Measure Western MA Physician Associate's compliance with NCQA 2011 standards | • Assessed readiness to implement PCMH model | √ | √ |
| **1.2 Establish a HIE between HMC and affiliated providers (Master Plan 1.4)**<br>• Governance committee<br>• ID stakeholders<br>• Education re: benefits of HIE<br>• Connectivity exchange of HIE | • Governance and HIE infrastructure established.<br>• Communication network will deliver lab & radiology results in real time | √ | √ |
| **Units involved**: WMPA Physicians, HMC Administration & Staff, IT Department | | | |
| **Incentives**: Category 1 **Total =$ 1,304,533;** 1.1=$652,267 1.2= $652,267 | | | |
| | | | |
| **Category 2 Project: Improve health outcomes and quality by establishing a chronic disease registry and implementing care management (HF/COPD)** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **2.1 Establish a Chronic Disease Registry (Master Plan 2.2)**<br><br>• Assess functionality of existing EHR systems | • Established manual registry<br>• Assessed existing IT systems for their capacity as registries | √ | √ |
| **2.2A -Improve management of patients with Heart Failure/Expand Chronic Disease Care Management Models (Master Plan 2.1)**<br><br>• Identify discharged HF patients | Established follow-up program.<br><br>• Pharmacist Medication Mgmt. for 25% of HF pts.<br>• Teach Back Method used with 25% of HF pts. | √ | √ |

| | | | |
|---|---|---|---|
| **2.2B -Improve management of patients with COPD/Expand Chronic Disease Care Management Models (Master Plan 2.1)**<br><br>• Identify discharged COPD patients | • Multi-Disciplinary team organized | √ | √ |
| **Units involved**: WMPA sites; STAAR (cross continuum) team; VNA; Respiratory therapists, RNs, Hospitalists, Pharmacy | | | |
| **Incentives**: Category 2 **Total = $ 1,956,800;** 2.1=$652,267 2.2A=$652,267 2.2B=$652,267 | | | |
| | | | |
| **Category 3 Project: Prepare for payment reform and alternative payment models by establishing an enterprise-wide strategy for information management and business intelligence; and participating in learning collaborative.** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **3.1 Establish enterprise-wide strategy for Data Management and Analysis (Master Plan 3.6)**<br><br>• Conduct Gap analysis<br>• Identify Value Based Purchasing and Key Performance Indicators data field requirements<br>• Document requirements for data warehouse and business intelligence s/w | • Gap analysis completed | n/a | √ |
| **3.2 Participate in a Learning Collaborative (Master Plan 3.9**) | • Explore existing and/or potential for new LC opportunities | n/a | √ |
| **Units involved**: Medical Staff office; Heads of clinical departments; HR; Programmer Analyst | | | |
| **Incentives**: Category 3 **Total = $ 815,334;** 3.1=$652,267 3.2=$163,067 | | | |

n/a: Not applicable

# Appendix A.4 Lawrence General DSTI SFY12

| **Category 1 Project: Contribute to a fully integrated delivery system by expanding the PCMH model; and further developing an integrated primary/specialty care network** | | | |
|---|---|---|---|
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **1.1 Hospital/PCMH Practice System Integration (Master Plan 1.1)**<br>• Establish Joint Care Management Team (LGH, GLHFC) to conduct gap analysis, Identify existing data<br>• Determine priorities for care management & coordination<br><br>for DM, CHF, COPD patients | Explored shared data exchange<br><br>• Data agreement for IT infrastructure<br>• Agree on critical data elements to track DM, CHF, COPD pts. | √ | √ |
| **1.2 PCP, Specialty Care and Provider Care Expansion & Development (Master Plan 1.3)**<br>• Gap analysis via interviews with referral staff and care coordinators, re: PC & Spec. care coverage in community | Report developed on PC, Spec. care access issues in community<br><br>• Identify the need for primary and specialty care services based on national benchmarks | n/a | √ |
| **Units involved**: Hospital Director of Integrated Services, LGH Care Management Team, ED, Clinical Services, Care Managers, Diabetes Educators | | | |
| **Incentives:** Category 1 **Total = $2,309,334;** 1.1=$1,154,665 1.2=$1,154,666 | | | |
| | | | |
| **Category 2 Project: Improve health outcomes and quality by implementing improvements in care transitions; and providing an alternative care setting for patients who seek non-emergent department care.** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **2.1 Identify Opportunities to Develop & Implement Care Transition Interventions that lead to fewer Unplanned Readmissions (Master Plan 2.3)**<br><br>• Interview key staff<br>• Analyze 30-day all cause readmission data<br><br>• Hire care transitions expert | Encouraged use of PC in lieu of ER care for non-emergent complaints<br><br>• Develop screening (assessment) tool to ID pts. at risk for readmission<br>• Implement assessment tool for pts. with SA and BH issues | √ | √ |
| 2.2 **Develop and Co-locate a PCMH PC site on the Hospital campus as an alternative for** | • Designed Screening tool for Non-emergent Care | n/a | √ |

| | | | |
|---|---|---|---|
| **non-emergent ER complaints (Master Plan 2.8)**<br><br>• Analyze data on non-emergent patient complaints | • Establish GLFHC (PCMH PC) site on hospital campus | | |
| **Units involved**: Social Work, Inpatient, PCMH practices, ER | | | |
| **Incentives:** Category 2 **Total = $2,309,333**; 2.1=$1,154,664 2.2=$1,154,667 | | | |
| | | | |
| **Category 3 Project: Prepare for payment reform and alternative payment models by developing governance, administrative and operational capacities; developing an integrated care organization; and participating in a learning collaborative** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **3.1 Develop organizational infrastructure to enhance capacity to respond to alternative payment systems (Master Plan 3.4)** | Restructure/redesign current Physician Hospital Organization to create an ICO<br><br>• Incorporate, create by-laws, establish Governing Board<br>Support clinical integration<br><br>• Continue implementation of EHR in community practices<br>• Pilot delivery of hospital lab results to 1 physician practice | n/a | √ |
| **3.2 Develop information management capabilities in preparation for accepting alternative payment methodologies (Master Plan 3.3)**<br>• Meet with commercial payers and Medicaid re: obtaining data<br>• Educate providers re: health care transformation | Assessed current utilization and costs, and available tools to control costs and improve quality | n/a | √ |
| **3.3 Participate in a Learning Collaborative (Master Plan 3.9)** | Explore existing and/or potential new opportunities for participation in LC | n/a | √ |
| **Units involved**: Care managers, data analysts, Admin. staff, HR, PHO Board, ICO Board | | | |
| **Incentives**: Category 3 **Total = 2,597,999;** 3.1=$1,154,665 3.2=$1,154,667; 3.3=$288,667 | | | |

n/a: Not applicable

# Appendix A.5 Mercy Medical Center DSTI SFY12

| **Category 1 Project: Contribute to a fully integrated delivery system by integrating physical health and behavioral health: and further developing an integrated care network for primary and specialty care** | | | |
|---|---|---|---|
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **1.1 Enhance Primary Care Access and Capacity (Master Plan 1.3)**<br>• Establish Mercy Primary Care Committee<br>• Hire vendor to conduct data & process analysis, and analyze region's MD supply | • Infrastructure Capacity Assessment of Physical Space<br>• PCP clinical services building expansion plan<br>• Affiliation agreement with UMMS for 4th yr. Clerkship | √ | √ |
| **1.2 Integrate Physical and Behavioral Health Care in Mercy Medical Center ED (Master Plan 1.2)**<br>• Vendor conducts ED site visit<br>• MH/SA case mgr. in ED<br>• Obtain DPH approval for ED Psych Pod | • Vendor report with recommendations to improve treatment and costs of MH/SA pts. in ED<br>• Establish Mercy ED BH Psych Pod | √ | √ |
| **Units involved**: Mercy Emergency Department | | | |
| **Incentives**: Category 1 **Total = $2,434,133;** 1.1=$1,217,067 1.2=$1,217,067 | | | |
| | | | |
| **Category 2 Project: Improve health outcomes and quality by implementing improvements in care transitions; and implementing process improvement methodologies to improve safety quality and efficiency** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| 2.1 **Align New Organizational Structures, Human Systems and IT Infrastructure to Improve Health Outcomes and Quality (Master Plan 2.7)**<br>• Sr. Leadership adopts new pt. management model | Integrate departmental and hospital workflows ("airport control tower")<br><br>• Implement Care Logistics™ Model | n/a | √ |
| 2.2 **Develop Patient-Centered Care Transitions for Patients at the Highest Risk of Readmission (Master Plan 2.3)**<br>• Establish Health System Care Cross Continuum Team<br>• Analyze < 30-day readmission data | Re-engineered hospital discharge process based on STAAR<br><br>• High Risk Tool & Discharge Checklist | √ | √ |
| **Units involved**: All Mercy Departments | | | |
| **Incentives**: **Category 2 Total = $2,434,133;** 2.1=$1,217,067 2.2=$1,217,067 | | | |
| | | | |
| **Category 3 Project: Prepare for payment reform and alternative payment models by developing governance, administrative and operational capacities; developing administrative, organizational and clinical capacities to manage** | | | |

| **the care for complex patients; and participating in a learning collaborative** | | | |
|---|---|---|---|
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **3.1 Develop Governance, Administrative and Operational Capacities to Accept Global Payments/Alternative Payments (Master Plan 3.3)**<br><br>• Create legal entity to support ACO<br>• Select HIT platform (Master Plan 3.3) | • HIE implementation plan | √ | √ |
| **3.2 Develop Administrative, Organizational and Clinical Capacities to Manage the Care of Complex Patient Populations (Master Plan 3.5)**<br><br>• Select new site for care of complex pts., conduct<br><br>engineering study<br><br>• Analyze existing IT, care coordination and accounting systems | Implementation plan for new HIT, care coordination and billing systems<br><br>• Analysis report<br>• Policies & procedures for new care mgmt. program for dual-eligibles | n/a | √ |
| **3.3 Participate in Learning Collaborative (Master Plan 3.9)** | Explore existing and/or potential new opportunities for participation in LC. | n/a | √ |
| **Units involved**: Cardiology, Pulmonology, Oncology, Orthopedics, General surgery/GYN; Providence Board of Trustees | | | |
| **Incentives**: Category 3 **Total = $2,738,400;** 3.1=$1,217,067 3.2=$1,217,067 3.3=$304,267 | | | |

n/a: Not applicable

# Appendix A.6 Signature Health DSTI SFY12

| **Category 1 Project: Contribute to a fully integrated delivery system by further developing integrated care network for primary and specialty care; and establishing a health data exchange capability to facilitate integrated patient care** | | | |
|---|---|---|---|
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| • **1.1 Improved Access to Care by Improving Primary Care (Master Plan 1.3)**<br>• Develop PCP Access Plan | ○ Assessed Current PCP capacity<br>○ Use non-PCPs & mid-levels for evening/weekend hrs.; Reconfigure space<br>○ Protocols and baseline measures for same-day access | n/a | √ |
| **1.2 Improve PCP Compliance with Preventative, Testing, Leveraging EHR Adoption and Data Warehouse (Master Plan 1.4)** | • Piloted a paper template & establish baseline compliance data for 6 preventative tests based on USPSTF recommendations | √ | √ |
| **Units involved**: Physicians, Specialists, NPs, | | | |
| **Incentives**: Category 1 **Total = $2,674,133**; 1.1=$1,337,068 1.2=$1,337,066 | | | |
| | | | |
| **Category 2 Project: Improve health outcomes and quality by implementing care management interventions for patients with CHF; and implementing process improvement methodologies to improve safety quality and efficiency** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **2.1-Apply process improvement methodology to improve quality and efficiency in primary care offices (Master Plan 2.7)**<br><br>• Conduct LEAN training and implement LEAN system development | • Skills training<br>• Implement LEAN process in Practice A | √ | √ |
| **2.2 Development of CHF Disease Management Program (Master plan 2.1)**<br><br>; | • Established Registry for CHF pts.<br>• Follow-up protocol by Cardiology Access Coordinator<br>• Established Task Force | √ | √ |
| **Units involved**: PC practices; Cardiology, IS, Case Management | | | |
| **Incentives**: Category 2 **Total = 2,674,133;** 2.1=$1,337,068 2.2=$1,337,070 | | | |

| | | | |
|---|---|---|---|
| **Category 3 Project: Prepare for payment reform and alternative payment models by developing risk stratification capabilities for patient populations and alternative payment models; designing and implementing a hospital-based 360 degree patient care program; and participating in learning collaborative** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **3.1 Hospital-based 360$^0$ Patient Care Management Program (Master Plan 3.2)**<br><br>• For Tufts Medicare Preferred pts. | Infrastructure for PCMP<br><br>• Physician/nurse team<br>• Schedule for after-hours<br>• % of TMP pts who complete post- discharged scheduled PC visit | √ | √ |
| **3.2 Creation of a Comprehensive Diagnostic Patient Profile (Master Plan 3.1)**<br><br>• For Tufts Medicare Preferred pts.<br>• Hire Documentation Specialists | • Organizational Plan<br>• Managed Care Portal to ID pts. not seen by PCP<br>• Chart review, pt. report | √ | √ |
| **3.3 Participate in Learning Collaborative (Master Plan 3.9)** | | n/a | √ |
| **Units involved**: ED; SHC PCPs | | | |
| **Incentives**: Category 3 **Total=$3,008,400;** 3.1=$1,337,070 3.2=$1,337,064 3.3=$334,267 | | | |

n/a: Not applicable

# Appendix A.7 Steward Carney DSTI SFY12

| **Category 1 Project: Contribute to a fully integrated delivery system by implementing a patient navigation services; and developing an integrated acute and post-acute network across the continuum of care** | | | |
|---|---|---|---|
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **1.1 Implement Patient Navigation Services (Master Plan 1.6)**<br>• Develop the Community Health Worker Program | CHWS assist patients with cross-provider communication to get 'the right care at the right time'. | n/a | √ |
| **1.2 Develop Integrated Acute and Post-Acute Network Across the Continuum of Care (Master Plan 1.7)**<br>• Develop an Integrated Acute-Post Acute Network connecting SCH with 7 Skilled Nursing Facilities | Post-Acute Care Transition (PACT) Committee established<br><br>APRN and MD communication and workflows across facilities established. | √ | n/a |
| **Units involved**: Emergency Department; Steward Primary Care; Inpatient Clinical; Dietary, Pharmacy, Physical Therapy | | | |
| **Incentives**: Category 1 **Total $1,024,896 1.1 $512,448 1.2 $512,448** | | | |
| | | | |
| **Category 2 Project: Improve Health Quality Outcomes through by implementing improvement in care transitions; implementing process improvement methodologies to improve safety, quality and efficiency; and reducing variations in care for patients with high risk conditions.** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **2.1 Enhance Patient Transitions (Master Plan 2.3)**<br><br>• SCH and SNFs use the Interventions to Reduce Acute Care Transfers (INTERACT) Tool (Master Plan 2.3) | Patient Care Experience Council (PCEC) formed.<br><br>PACT reviews INTERACT use. | √ | √ |
| **2.2 Implement Process Improvement Methodologies to Improve Safety, Quality & Efficiency (Master Plan 2.7)**<br><br>• Adopt Nurses Improving Care for Health (system) Elders (NICHE) | Four Nurse Leaders complete NICHE training.<br><br>Carney receives NICHE designation.<br><br>Falls Committee developed. | √ | √ |
| **2.3 Reduce Variations in Care (Master Plan 2.9)**<br><br>• Develop condition specific Clinical Care | Clinical Care Maps for Congestive Heart Failure (CHF) are developed and introduced to staff and patients. | **Carried Forward** | √ |

| | | | |
|---|---|---|---|
| Maps guide patients and families through inpatient care, discharge and post-hospital care. | | **2.3.6** | |
| **Units involved**: Emergency Department | | | |
| **Incentives**: Category 2 **Total $1,464,137** 2.1 $ 512,448 2.2 $512,448 **[2.3 $439,242 (2.3.6 $0)]** | | | |
| | | | |
| **Category 3 Project: Prepare for payment reform and alternative payment models by implementing global payments; and participating in learning collaborative.** | | | |
| **Implementation Process**<br><br>**(DSTI Master Plan Project #)** | **2012 Planned Improvements** | **Metric Achievement Summary** | |
| | | **Quantitative** | **Qualitative** |
| **3.1 Implement Global Payment Pilot (Master Plan 3.8)**<br><br>• Align physician reimbursement to provide most appropriate care | Identify and engage payers including MassHealth. | n/a | √ |
| **3.2 Participate in Learning Collaborative (Master Plan 3.9)**<br><br>• | Participated in Pioneer ACO Learning Collaborative | n/a | √ |
| **Units involved**: None | | | |
| **Incentives**: Category 3 **Total $ 640,560** 3.1 $512,448 3.2 $128,112 | | | |

n/a: Not applicable

# Appendix B Interim Report of the Patient-Centered Medical Home Evaluation - Executive Summary

Interim Report of the Patient-Centered Medical Home Evaluation

Executive Summary

January 2013

The Massachusetts Patient-Centered Medical Home Initiative
www.mass.gov/hhs/medicalhome

**Table of Contents**

# *Executive Summary*

## Background

In 2009, the MA Executive Office of Health and Human Services (EOHHS) partnered with the University of Massachusetts Medical School (UMMS) and Bailit Health Purchasing to implement the Massachusetts Patient-Centered Medical Home Initiative (MA-PCMHI). A two-year planning process preceded the kick-off of the initiative in March of 2011, during which time Secretary of EOHHS, Dr. JudyAnn Bigby, convened a large multi-stakeholder Advisory Committee to oversee the planning work of Bailit Health Purchasing, UMMS and EOHHS.

The Advisory Committee, facilitated by Bailit Health Purchasing, identified twelve initial core competencies of a medical home practice and focused the planning on these competencies. The thirteenth competency, behavioral health integration was added later. Recognizing that transformation takes time, the Advisory Committee marked seven of the thirteen competencies as high priority (Table E- 1).

**Table E- 1: Core Competencies of a Medical Home**[1]

1. Patient/family-centeredness
2. Multi-disciplinary team-based approach to care*
3. Planned visits and follow-up care*
4. Population-based tracking and analysis with patient-specific reminders*
5. Care coordination across settings, including referral and transition management
6. Integrated care management focused on high-risk patients*
7. Patient and family education
8. Self-management support by all members of the practice team
9. Involvement of the patient in goal setting, action planning, problem solving and follow-up*
10. Evidence-based care delivery, including stepped care protocols
11. Integration of quality improvement strategies and techniques
12. Enhanced access*
13. Integration of behavioral health care into primary practice*

* High priority competency as designated by PCMH Council

### Theory Behind the Initiative

The initiative designed by the Advisory Committee and EOHHS employed several key strategies to enable practices to change in the way primary care was delivered. The strategies selected for Massachusetts included a Learning Collaborative (described below) and financial incentives. These strategies, it was hypothesized, would assist practices to adopt the core competencies listed in Table E- 1. Acquiring the core competencies in turn would produce improved care delivery processes including management of chronic conditions, changes in patient behavior (including how they access care and manage their own health), and yield system changes including fewer emergency department visits, fewer hospitalization and slowed cost growth.

The stakeholders backing and developing the PCMHI theorized that if Massachusetts trained primary care practices in specific medical home competencies and offered financial incentives for participation in the initiative, the practices would actively engage in transformation activities. Active engagement was expected to lead to the adoption of the core medical home competencies. To the extent that practices successfully adopted the core competencies, then care processes would improve with the first 18 months of the demonstration, especially for the initially-targeted conditions of diabetes and asthma. Other expected outcomes at 18 months included improved access to care and improved delivery of preventive services. By 18 months, it was also expected that patients would begin to perceive improvements in the care experience.

By the end of the three-year demonstration, stakeholders expect participating practices to become mature medical homes delivering fully patient-centered care. Patients are expected to perceive that they are partners in their care; clinical outcomes for patients with chronic conditions are expected to improve. Stakeholders expect fewer emergency department visits and hospitalizations for patients in medical homes. And perhaps most importantly for stakeholders, the rate of growth in healthcare costs is expected to have slowed.

## Structure of Initiative

### *Recruiting Practices*

EOHHS solicited prospective participants in the MA-PCMHI by issuing a Request for Response (RFR) in June 2010. Following the receipt of 82 applications, a procurement committee reviewed the submissions and selected 48 practices for participation in the demonstration in October of 2010. Two practices subsequently declined to participate, leaving 46 practices in the initiative.

Practices were selected to participate at two levels. Thirty-two practices, including 14 community health centers who had participated in an earlier medical home initiative sponsored by the Commonwealth Fund,[1] were selected to receive technical assistance as well as incentive payments. This group became known as the Technical Assistance Plus (TAP) group. Fourteen additional practices were chosen to receive technical assistance without incentive payments and became known as the Technical Assistance Only (TAO) group.

### *Learning Collaborative*

The three-year Learning Collaborative for the practices included periodic one to two day-long Learning Sessions, monthly hour-long conference calls or webinars participation in on-line courses and submission and review of practice-level performance data through a web portal. Medical home facilitators employed by UMMS and the Massachusetts League of Community Health Centers work one-on-one with practice teams to achieve transformation goals and track progress. All of the practices are working to achieve recognition as NCQA Level 1 Medical Homes.

### *Financial Incentives*

Practices in the TAP group received some start-up funding towards a care manager position and receive a per-member-per-month payment based on their panel size. TAP practices are also eligible for shared savings.

## Overview of the Evaluation Design

The evaluation of the Massachusetts Patient-Centered Medical Home Initiative collects information on the activities, outputs and outcomes of the initiative so that different stakeholder groups may assess its value.

The evaluation asks three broad questions:

Question 1: To what extent do practices transform to become medical homes?

Question 2: To what extent and in what ways do patients become active partners in their health care?

Question 3: What is the initiative's impact on service use, clinical quality, and patient and provider outcomes?

The answer to each question requires multiple sources of data. The principal data collection activities for Question 1 include: (1) the administration of the TransforMED Medical Home Implementation Quotient (MHIQ) survey tool at three points in time (spring 2011, fall 2012 and spring 2014); (2) conducting interviews and focus groups with medical home facilitators and site visits at selected practices; and (3) using responses from a patient experience survey (PES) to assess patient-centered aspects of care. For Question 2, the principle data collection tool is the PES. The survey used was the PCMH-CAHPS-CG, administered at three points in time (fall 2011, spring 2013 and spring 2014). Question 3 relies on data collected for Question 1 and Question 2 as well as an analysis of claims data from the Massachusetts All-payer Claims Database (APCD). Question 3 data collection also includes a survey of practice staff to assess their experience with practice transformation. The staff survey is being administered in the fall of 2011, spring of 2013 and spring of 2014 (see Table E- 2).

**Table E- 2: Data Availability at 18 Months**

| Question | Data Source | Data Collection Timing | Data Available at 18 Months |
|---|---|---|---|
| Question 1: To what extent do practices transform to become medical homes? | MHIQ * | Time 1: Spring 2011<br>Time 2: Fall 2012<br>Time 3: Spring 2014 | Time 1 and Time 2 |
| | Medical Home Facilitator interviews | Time 1: Spring 2011<br>Time 2: Fall 2011<br>Time 3: Summer 2012 | All |
| | Practice site visits | Spring 2013 | None |
| Question 2: To what extent and in what ways do patients become active partners in their health care? | Patient Experience Survey (PES) * | Time 1: Fall 2011<br>Time2: Spring 2013<br>Time 3: Spring 2014 | Time 1 |
| Question 3: What is the initiative's impact on service use, clinical quality, and patient and provider outcomes? | Staff survey * | Time 1: Fall 2011<br>Time 2: Spring 2013<br>Time 3: Spring 2014 | Time 1, Time 2 |
| | PES | Time 1: Fall 2011<br>Time2: Spring 2013<br>Time 3: Spring 2014 | Time 1 |
| | APCD ** | Time 1: Spring 2013<br>Time 2: Spring 2014 | None |

* Comparison practice data available **Comparison group data available

The design of the evaluation includes two comparison groups. The first comparison group participates in the MHIQ, patient experience survey, and staff survey data collection activities. The second comparison group will be selected using statistical matching based on patient and other characteristics of the intervention practices and will be drawn using the APCD. The second comparison group will be used for Question 3 analyses.

For the first comparison group, the initial design called for a group of 30 primary care practices with characteristics similar to those of the intervention practices. The design also called for offering practices monetary incentives to encourage participation in the project. To allow all Massachusetts providers an equal opportunity to apply for the funding, the Evaluation Team conducted a public procurement for comparison sites. The solicitation, which closed on June 10, 2011, and two subsequent solicitations produced 24 applicants, 22 of whom met the minimum qualifications for a comparison site. As of November 2011, 22 comparison sites had completed contracts with the University. Three sites subsequently withdrew from the study, leaving 19 comparison sites for analysis..

## Findings at 18 Months

### Medical Homeness - Findings from the MHIQ

To provide a means of quantitatively assessing the movement of practices toward "medical homeness", the TransforMED Medical Home Implementation Quotient (MHIQ) was chosen as the survey instrument to be used by practice staff to assess the medical homeness of the practice. The MHIQ was selected because its nine modules (see below) corresponded well with the 13 core competencies identified by the PCMHI Advisory Committee.

The MHIQ consists of questions in nine modules plus a calculated total score:

- Access to Care and Information (Access)
- Practice Management (PMgmt)
- Practice-Based Services (Svcs)
- Patient-Centered Medical Home (PCMH)
- Practice-Based Care Team (Team)
- Quality and Safety (Quality)
- Health Information Technology (HIT)
- Care Coordination (Coord)
- Care Management (Care Mgt)
- Total across all modules (Total – calculated)

#### *Methods*

Each practice was asked to have three staff members (one physician, one nurse, and one administrator) complete the MHIQ at baseline (shortly before any Learning Sessions occurred in March, 2011) and at the mid-point of the demonstration project (18 months after the initiation of the Learning Collaborative) in September-December, 2012). The scores from staff members who completed the survey were averaged to determine the summary practice score.

#### *Findings*

At baseline, 58 practices and 138 staff members completed the MHIQ. At the mid-point data collection, 59 practices and 112 staff members completed the MHIQ.

At baseline, the Access module had the lowest score among the practices, with a mean score of 38%. The average scores for the other modules are closely grouped in the 60-75% range. There was

marked variability between practices in several modules: practice management, practice-based services, health information technology, and coordination of care. At baseline, there were no significant differences among the three groups of practices (TAP, TAO, and comparison) in any of the modules. Overall, the practices are reporting a moderate level of "medical homeness" with an average total score of 66% (median of 69%). The total score for the practices ranges from a low of 11% to a high of 89%.

At 18 months, the Access module is still the lowest scoring module, with an average score of 47% (median of 46%), compared to the other modules with average scores ranging from 71% (Care Coordination: Coord) to 82% (Practice-based Care Team: Team). The variability is much less than observed at baseline, where there were several modules with variability that spanned the entire range of 0-100%. The most variable module is Quality and Safety (Quality) which spans a range of 30-98%. The total score has an average of 71% (median of 75%) at the mid-point, with a range from 47-91%, an absolute 5% higher than at baseline.

***Comment***

Among the nine MHIQ modules and the overall score, five modules (Access, PCMH, Practice-Based Team Care, Care Coordination, and Care Management) showed a significant increase in the scores across all practice groups (TAP, TAO, and Comparison), three modules (Practice Management, Quality and Safety, and Health Information Technology) showed no evidence of an increase in scores, and two modules (Practice-Based Services [p=0.06] and the Total score [p=0.06]) showed a non-significant trend toward higher scores. All modules and the total showed an increase in scores in all groups except for two modules in which the TAO group showed no change. There were no statistically detectable differences in the increase among the groups, although two modules did show significant difference among the group scores (but not the change). The Total (overall) score of medical homeness did show a non-significant (p=0.06) trend toward an overall increase (increase of an absolute 5%) among all of the groups

At this point, it does not appear that any one group of practices will be significantly different (i.e., with consistently higher module or total scores) than the other groups, but that assessment will need to wait until the final responses to the MHIQ.

## Medical Homeness: Findings from the Qualitative Team

Consistent with organizational theory, existing studies of PCMH demonstration projects report that successful practices change their management (core structure), staff roles (cultural system), mental models (political systems) and use of information technology.[2] In particular, they describe how physicians and other practice staff members undergo personal change.[3] [4] Further, these existing studies note: (1) wide variation in how practices change; (2) the critical role of the medical home facilitators; and (3) the need for 'adaptive reserve', a combination of teamwork, leadership, and material resources targeted to promote PCMH adoption.

Other factors work against transformation. First, the typical PCMH initiative lasts only 2-3 years which may not be sufficient for practice transformation. Second, initiative sponsors' impatience to demonstrate results may add an administrative reporting burden that diverts energy from practice change and may hinder demonstration's success. These factors may be mitigated if initiative sponsors can ensure that the practices maintain sufficient adaptive reserve. [5]

The qualitative study seeks to explore the themes of practice culture, organization, and infrastructure through two aims:

1. Describe how practices become medical homes; and

2. Identify what hinders that process.

***Methods***

The Qualitative Team used multiple data collection techniques including in-depth, semi-structured individual interviews and focus groups with the Medical Home Facilitators (MHFs), field notes collected during Learning Sessions, and a review of practices' MA PCMHI interventions.

***Findings***

Informed by organizational change theory and evidence from other PCMH initiatives, four key themes became apparent from the qualitative analyses:

1. Each practice has its own path to transformation;
2. Becoming a medical home requires organizational as well as personal transformation;
3. Practice leaders drive transformation; and
4. Information technology adaptations facilitate practice transformation.

Three themes emerged that describe factors hindering medical home adoption:

1. Competing priorities distract leaders;
2. Fee-for-service reimbursement hinders PCMH model care; and
3. Patient care demands challenge time available for MA PCMHI activities.

***Comment***

These findings are consistent with those reported from the National PCMH Demonstration Pilot (NDP).**Error! Bookmark not defined.** [6] The role of leadership is of particular importance to this and future initiatives. Leaders in many, but not all, practices have diverted their attention and full support away from the MA PCMHI. Initially, practice leaders fully and enthusiastically supported the initiative, but as implementation of the demonstration continued, leaders found their time and energy diverted to other priorities. Both organizational theory and evidence from other PCMH demonstrations suggest that reduced leadership support may actually undermine a practice's redesign efforts by reducing its adaptive reserve, that combination of teamwork and material resources which leaders supply. Since adaptive reserve is critical for practice transformation, the MA PCMHI Project Team and Steering Committee should continue their efforts to engage the 46 practices' leaders.

Further, organizational change theory suggests that the MA PCMHI aids practice transformation by aligning the intervention's activities and requirements with each practice's core structure. The results confirm that the MA PCMHI Steering Committee and Project Team have done this in several ways. First, the MHFs have established a unique consultative relationship with each of their assigned practices, assisting the practice to understand the MA PCMHI requirements and align its operational systems accordingly. In one frequently mentioned example, the MHF helped the practice to structure its teams, to develop its teamwork skill and to adopt the team process into its operational system. Also, the MA PCMHI Project Team organized Electronic Medical Record (EMR) user groups and Learning Session activities to meet the practices' need for technical system adaptations. By continuing efforts to align the intervention with each practice's core structure, the MA PCMHI should promote medical home transformation.

However, the 'implementation climate' in which all 46 practices operate may inhibit their transformation efforts. In particular, the results indicate how current fee-for-service policies actually reduce reimbursement when the practice 'max-packs' care into a single office visit. Certainly no practice welcomes lower revenue but the loss may differentially impact the eight group and independent physician practices which operate without institutional support. To mitigate this situation and to provide support for PCMH model adoption, MassHealth is developing alternative payment methodologies including the Primary Care Payment Reform Initiative (PCPR). By targeting the MA PCMHI practices for PCPR participation, MassHealth may provide additional incentive for them to continue with medical home transformation.

## Findings from the Patient Experience Survey

The Massachusetts Patient-Centered Medical Home (PCMH) Initiative is expected to affect the experiences of patients seeking medical care from participating medical practices. The principles of a medical home include enhanced access,[7] having a personal provider who knows the patient personally,[8] a whole-person orientation to care delivery across the life span,[9] and an emphasis on strategies to fully engage patients in self-management.[10] As the Massachusetts model evolves, the expectation is that patients will notice changes in the way their care is delivered.

This report presents findings from a survey of patients enrolled in practices participating in the PCMHI and from patients enrolled in the group of comparison practices. The survey was administered between December 2011 and February 2012 and represents the first of three surveys planned as part of a comprehensive evaluation of the initiative. The survey will be repeated in the spring of 2013 and the spring of 2014. The results presented in the section are from the Time 1 survey.

The aims of the Time 1 survey include determining:

1. To what extent do patient experiences confirm that their primary care practices have adopted medical home competencies?

2. Where do opportunities for improvement exist and where might future surveys reveal change?

### *Methods*

The survey instruments used for this project were developed by the MA-PES Survey Development team which included UMMS Office of Survey Research staff, MassHealth staff, Massachusetts Health Quality Partners (MHQP) staff, and survey methods experts. Survey content was primarily drawn from the initial versions of the CAHPS® Patient-Centered Medical Home instruments (under development by the Agency for Healthcare Research and Quality (AHRQ) and the National Committee for Quality Assurance (NCQA) as this project was being planned), and MHQP's Patient Experience Survey (PES) instrument.

The survey was administered under a contract with MHQP. The survey data were collected from November 28, 2011 to February 21, 2012 by Center for Study of Services using a two-wave mailing with telephone follow-up. A total of 17,261 patients from 65 practices participating in the Massachusetts PCMHI were invited to complete the mailed survey.

CAHPS Composites include Access, Communication, Office Staff, Self-Management, Comprehensiveness-Prevention (children only), Comprehensiveness-Development (children only), Follow-up, Comprehensiveness-mental/emotional health (adult only).

In addition to the CAHPS composites listed above, responses for selected individual questions were combined to further capture the patient's perception of the practice's achievement of medical home competency. These composites, the PCMHI composites, include urgent access, patient engagement, coordination, self-management knowledge, shared decision making (adult only), wellness (adult only), and behavioral health integration.

### *Findings*

Adults

At Time 1, adult patients reported experiences consistent with their primary care practice having a fairly high adoption of patient-centered care (communication and courteous office staff), self-management support, care coordination, and comprehensive preventive care (a score of 80 and above). Scores for access, other aspects of patient-centered care (encouraging questions, knowledge of patient as a person) and for shared decision-making were moderate (scores in the 60-79 range). Attention to behavioral health was borderline between moderate and low at 60. Experiences with behavioral health integration and access to urgent care suggest that practices have not fully embraced these medical home competencies.

Findings related to access demonstrated moderate to low adoption of medical home competency. At baseline, adult patients reported moderate overall access to care (CAHPS Access score = 70.5) but rather poor access to urgent care. Only about 37% of adult respondents were able to get same-day appointments for urgent problems or were able to get care from the primary care office after-hours and on weekends (PCMH composite).

Patient-centeredness demonstrated by practices mixed high to moderate adoption. The two CAHPs composites scored fairly high at Time 1 at 88% for Communication and 84% for Office Staff. However, the slightly different aspects of patient-centeredness captured by the PCMHI Patient-Engagement composite suggest moderate adoption of patient-centeredness in other areas. The PCMHI composite assesses whether a provider encourages questions, whether a provider makes sure the patient understands instructions, and whether the provider knows the patient as a person. About 67% of respondents reported that their provider always encouraged questions, checked understanding, and knew them as a person.

Shared Decision-Making and other involvement of the patient in their care, while not as low as the Urgent Access and Behavioral Health Integration composites, showed only moderate scores. Between 62% and 70% of respondents felt their provider always engaged them in discussions about medication decisions.

Patients reported moderate to low attention to their behavioral health needs (CAHPS Comprehensiveness composite = 60). They also reported that practices only sometimes were able to help them with personal or emotional issues and were only sometimes aware of other behavioral health treatment being received by the patient (PCMH BH Integration composite = 40%).

Child

At Time 1, the parents and guardians of sampled children reported experiences consistent with their primary care practice having a fairly high degree of adoption of several medical home competencies: good communication and courteous office staff (patient-centered competencies) and providing information and training in chronic condition management for parents of children with chronic conditions. Adoption of the access competencies, including access to urgent services was moderate, as was adoption of comprehensive care.

The two areas where reported patient experience suggests insufficient adoption of medical home competencies were supporting parents in taking care of their child's health (CAHPS Self-Management composite = 49.3) and in integrating behavioral health care into primary practice (PCMH BH Integration composite = 42%).

***Comment***

At baseline, both adult and child survey respondents report experiences consistent with high adoption of several medical home competencies. Both the CAHPS Communication and Office Staff composites scored well above 80. In addition, the PMCH composite, Self-Management Knowledge, demonstrated that patients believe they have the knowledge and skills to manage chronic conditions.

Areas of moderate adoption of medical home competency include general access, urgent access for children, activities designed to engage the patient, self-management support for adults, care coordination, shared decision-making, and comprehensive care delivery. These areas had scores in the 60 to 80 range. While moderate adoption of a competency is completely appropriate given the early stage of the PMCHI when the survey was conducted, it suggests possible opportunities for future quality improvement.

De-constructing composites into individual questions may offer clues about where to focus quality improvement efforts. For example, 63% of adult respondents reported that their provider always encouraged questions and 67% said their provider always checked for understanding. Viewed through a slightly different lens, out of every 100 patients, about 33 to 37 patients walk away from an office visit with unanswered questions or confused about what they heard.

Three areas deserve special attention by practices moving forward as the respondent's experiences with care seem to indicate that much needs to be done towards achieving competency. The first area is urgent access for adults. Between 60 and 70% of the adults sampled required urgent or after-hours care at some point in the prior 12 months. Of these, only 37% were always able to get the care they needed in a timely manner. The remaining 63 out of 100 people waited several days for care or perhaps turned to the Emergency Department at their local hospital for care.

The second area for special attention is supporting parents and guardians in the management of their child's health (CAHPS Self-Management Support score = 49.3). The questions included in the composite (goal-setting, things that make it hard to manage health) are more often associated with chronic illness management in adults. To the extent that these probes are appropriate for the entire child population, it may require pediatricians to consistently encourage dialog with parents and guardians.

The final area where practices lag in the adoption of medical home competency is integration of behavioral health care with medical care. In addition to being a major thrust of the MA PCMHI, it also represents a challenge for the health care system. Historically, primary care providers do not receive significant training in behavioral health management within the primary care setting. The comfort of most primary care clinicians is with medical rather than behavioral care. Additional support, including training of primary care providers, co-location or enhanced consultation with behavioral health providers or integrated care practices may be necessary to address this core competency of the PCMH.[11]

## Findings from the Staff Survey

The Massachusetts Patient-Centered Medical Home Initiative (PCMHI) is expected to affect the work of clinicians, administrators, and support staff in participating medical practices. One approach to assessing the impact of change on work life is to ask workers about their experiences using the same survey over time.

To date, several national initiatives have explored the experiences of staff in practices participating in medical home demonstrations. Jaen and Nutting reported on the National Demonstration Project (NDP),[12 13] Reid et al described the Group Health Medical Home project,[14] and Lewis et al reported on the Safety Net Medical Home Initiative funded by the Commonwealth Fund.[15]

Each group used a somewhat different framework for assessing staff experiences. The National Demonstration Project's Clinician Staff Survey grouped items into five scales: adaptive reserve, community knowledge, health information technology integration, cultural sensitivity, and patient safety. The NDP described a practice's *adaptive reserve* as central to its transformation process. Adaptive reserve represents the practice's ability to keep pace with change and its ability to adapt to change. "A strong adaptive reserve includes such capabilities as a strong relationship system within the practice, shared leadership, protected group reflection time, and attention to the local environment."[6] Thus, adaptive reserve defines a practice's capacity to be resilient and survive under pressure especially during times of dramatic change. Five qualities often define adaptive reserve, including: (1) *leadership* that facilitates change; (2) *sensemaking* to understand problems; (3) an enjoyable *work environment;* (4) a *culture that promotes learning;* and (5) an *infrastructure of relationships* among workers that promotes reflection and open discussion.

In developing its tool to assess staff experience, the Massachusetts PCMHI evaluation team sought to link survey development to prior research as well as align with the core principles underlying the Massachusetts demonstration. Thus, the Massachusetts survey focuses on aspects of a practice's capacity to change, its adaptive reserve, and the relationship of that capacity to two of the core competencies outlined by the Massachusetts PMCHI Steering Committee – adoption of a culture of quality and the development of team work. The survey was administered in the fall of 2012 and will be repeated in the spring of 2013 and the spring of 2014.

### *Methods*

Staff members from all 65 comparison and intervention practices (doctors, nurses and all support staff) were identified at the time of the survey as 'eligible' to participate. Each practice was asked to provide email addresses of its on-site staff members. If email addresses were unavailable, practices were asked to provide staff names so that individuals could be contacted through postal mail. All workers were asked to complete the survey using an internet URL address. Those with email addresses were sent an electronic invitation with the survey's URL hyperlink. Those with postal addresses were

sent an invitation letter indicating where the survey could be located by typing in the URL address online. A total of 55 practices participated in the staff survey.

The MA PMCHI Staff Member Survey drew upon questions from several surveys used to evaluate national demonstrations of patient-centered medical home transformations. The selected questions measure a practice's ability to change, its success in achieving selected transformations, and the initiatives impact on staff. Each question asked the staff member the extent to which he/she either agreed or disagreed with the statement or answer how often events occurred in their practice.

***Findings***

At Time 1, the study and comparison practices were virtually identical in terms of the adaptive reserve components of leadership and knowledge of the community. Where the groups differed is on the integration of technology and work environment. The comparison sites reported, on average, higher levels of technology integration and a more pleasant work environment than the intervention practices.

Statistical testing showed that at Time 1, the comparison group appeared to have higher levels of quality improvement culture and of teamwork.

Size of a practice may make a difference in the adoption of PMCH competencies. Only small to medium-sized practices appear to have high levels of quality culture and teamwork.

At Time 1, there were no differences between the Study and Comparison groups on job satisfaction (p=0.39). The strongest correlates of job satisfaction were work environment, leadership, adoption of a QI culture, and teamwork.

Across the nearly 1,000 respondents, those with a clinical background reported a more positive perception of the practice's progress towards becoming a medical home. However, for only a few domains were the differences significant. Clinical staff in the two intervention groups perceived a greater culture of quality and of teamwork than the non-clinical staff. Clinical staff in the comparison group sites also reported greater teamwork. Clinical staff in both study and comparison groups reported greater job satisfaction and a more positive work environment than non-clinical staff.

***Comment***

This survey presents the data from nearly 1,000 respondents in 55 practices participating in the MA PCMHI Demonstration, approximately nine months into the implementation of the initiative.

At Time 1, intervention and comparison practices appeared similar in terms of adaptive reserve characteristics of leadership and connection of the community. Ample literature documents the importance of strong leadership in shepherding change.[16] Comparison and intervention practices differed in the extent to which the practices effectively use technology, with staff in the comparison practices reporting more comfort with HIT integration.

Intervention and comparison practice staff also reported differing degrees of transformation towards a medical home related to the adoption of a quality improvement culture and teamwork. At Time 1, comparison practices had a slight, but statistically significant, edge over the TAP and TAO practices.

The finding that practices with strong facilitative leadership are more likely to achieve a quality culture and teamwork suggests that focusing change support on leadership development may reap substantial benefits in terms of a practice's ability to engage in transformative change.

Finally, the finding that non-clinical staff reported a lower job satisfaction and seemed less engaged in the medical home transformation, may have implications for future change. To the extent that the medical home transformation is intended to reach all levels of staff, non-clinical as well as clinical staff should be involved.

## Clinical Impact

The Massachusetts PCMHI Initiative presupposes that a combination of strategies will lead to changes in primary care practice and produce measurable results. As described above, strategies encompass both those external to a practice as well those to be enacted within a practice. External strategies include participation in Learning Collaboratives, coaching provided by external facilitators, and feedback of aggregated data. Internal strategies include multidisciplinary team-based care, a dedicated clinical care manager, use of registries with reporting capability, quality improvement embedded in care delivery, and linkages to the medical neighborhood.

This section of the report examines the overall impact of these strategies on a practice's delivery of selected clinical services, including preventive care, care coordination and care management, and its processes and outcomes of care related to the initiative's targeted conditions of diabetes and asthma. The data, collected monthly, cover the time period from April 2011 through September of 2012.

### *Methods*

The Learning Collaborative team developed a core set of clinical quality measures for use during the Collaborative. The measures were divided into adult and pediatric sets and covered the domains of chronic condition management, care transitions and care management, continuity of care, and preventive care. Measures were selected to be clinically meaningful and aligned, where possible, with HEDIS, Meaningful Use, NCQA requirements, and other existing Massachusetts initiatives such as the Qualis Safety Net Medical Home Project. Some measures were developed as indicators of implementation of PCMH processes. The entire measure set was designed to foster the further development of practices' quality improvement activities and skill set and thus required practice-based, as opposed to claims-based, reporting. Measures were grouped into four categories:

- Management of certain chronic conditions for adult and pediatric populations
- Care transitions & care management
- Continuity of care
- Preventive care for certain conditions in adult and pediatric populations

### *Findings*

There was a significant improvement in the one diabetes process measure, screening for depression, but no significant change in the diabetes outcome measures over this time period. The other significant improvement was in follow-up after discharge from the hospital. None of the other measures demonstrated a significant improvement. It should be noted, however, that the number of reporting practices for the pediatric asthma measures was quite small. Only five practices reported at baseline and 18 months for the asthma medication measure and only six practices reported at both time periods for the asthma action plan measure.

Both pediatric asthma measures showed improvement over time, but did not reach a level of statistically significant improvement. Nearly 70% of patients received appropriate medications for persistent asthma since the outset of the initiative and this continued to increase over time to approximately 90%.

Tobacco use assessment was performed at a high rate – approximately 80% of adult patients received this screening. The provision of a tobacco cessation intervention showed a slight, but non-significant, upward trend over time. Similarly, although not statistically significant from baseline to last reporting month, there was a trend toward improvement in adult weight screening and follow-up.

***Comment***

This analysis finds that practices are improving in care transitions and care management measures. Care coordination and care management are important components of the PCMH model and, in general, are new services for primary care practices. Other demonstration projects have shown significant reductions in hospitalizations and ED visits, which may be outcomes of care management.[14 17 18] We have chosen to use process measures to help guide and monitor the implementation of these important PCMH components. The MA PCMHI evaluation will include an analysis of hospital and ED unit utilization in its final report at the end of the initiative.

Limitations to these findings relate to the data reporting by practices, small sample sizes, and the lack of data from the evaluation comparison group. In addition, the small number of enrolled practices and the short time period of analysis may have reduced the ability to detect statistically significant differences. Finally, the comparison practices did not report clinical quality data, and therefore we cannot infer whether or not observed differences represent true changes related to our interventions or whether these noted changes are due to other factors, such as changes in health care law, regulations, and other environmental factors.

## Summary

### Question 1: To what extent do practices transform to become medical homes?

***Baseline Medical Homeness***

Both practice self-assessment and patient report suggest that participating practices had adopted some of the characteristics of the PCMH prior to the initiation of the MA PCMHI. At baseline, practices showed high adoption of selected aspects of the first competency, patient-centered care (Sections 1 and 4). Providers had good communication practices and a customer service culture as exhibited through courteous office staff (Section 4).

At baseline, practices had moderate levels of competency in activities related to a quality and safety culture, use of health information technology, teamwork, and supporting patients to become active partners in their care (Sections 1 and 5). Section 3 of this report documents the struggles of practices to extract data from recalcitrant HIT systems and the challenges of changing old habits and patterns of communication as the practices sought to develop competency in teamwork.

Care coordination and care management activities were somewhat less well developed in that they showed low to moderate adoption at baseline, at least as measured by the MHIQ and the patient

experience survey (Sections 1 and 4). Access to care, especially urgent care access, seemed to be an elusive competency at baseline.

***18 Months Medical Homeness***

At 18 months, changes were noted. Both intervention and comparison practices showed evidence of adoption of additional medical home competencies over the 18-month period, per the MHIQ survey (Section 1). As expected, practices entered the demonstration at differing levels of medical homeness. Overall medical home adoption ranged from a minimum score of medical homeness of 11 to a maximum of 89. By the 18-month measurement, adoption had improved with the minimum score rising to 47. In addition variation between scores decreased. Interestingly, both intervention practices and comparison practices improved their medical home scores by about the same amount – 4.5% overall.

Care management, access, and patient-centeredness showed the largest improvements between the two MHIQ measurement points (median changes 13 point, 10 points and 10 points, respectively). This may reflect the projects support activities. The Learning Sessions have focused on care management and patient-centered care and the Medical Home Facilitators have worked extensively with the practices to improve access to care.

***Facilitators and Barriers to Medical Home Adoption***

As the interviews conducted for this evaluation show, practices find transformation hard work requiring both organizational transformation and personal transformation at the staff level. Although EMR software ultimately should improve a practice's ability to monitor patients and provide care, the changes in the software and workflow required to get useful information from the systems has been a daunting task for practices. Both the interviews (Section 3) and the staff survey (Section 5) found that practices had a way to go to achieve full integration of technology into their workflow.

Data from the staff survey and the qualitative interviews also show that leadership drives transformation. The staff survey suggests that practices with strong leadership achieve teamwork and adopt a quality culture. The medical home facilitators make the point that leaders must decide to forgo billable time so that staff can do transformation activities such as meeting as a team.

The staff survey revealed that at Time 1, the development of the team work competency and the culture of quality competency may be related to practice size. Smaller practices, perhaps organizationally more nimble than larger practices, were the most likely to demonstrate both teamwork and a quality culture. The next iteration of the staff survey to be fielded in the spring of 2013 may demonstrate other areas of change in the adoption of core competencies.

## Question 2: To what extent do patients become active partners in their health care?

The patient-experience survey conducted as part of this evaluation captures the experiences of individuals enrolled at intervention and comparison sites, approximately eight months after the first Learning Session (Section 4). Given the look-back period of the survey, last 12 months, the survey also captures about four months of experiences before the kick-off of the PCMHI. Without the "time 2" survey, which is being fielded in the spring of 2013, it is impossible to directly address the impact of PCMH practice transformation on patient engagement. The baseline findings, however, reveal strengths and areas for improvement among the participating practices. The findings also demonstrate differences in the way in which patients and families engage in adult- and child-focused practices at baseline, which may lead to difference in the changes perceived by those different age groups.

Adult and child-focused practices were similarly competent in the patient experience of communication with providers and office staff, leaving little room for improvement. Other competencies assessed by the CAHPS and PCMHI composites, however, had marked room for improvement, particularly self-management support, urgent access to care and behavioral health integration. In general, at baseline, patients reported being moderately engaged in their care. Shared decision-making occurred some of the time and patients sometimes reported that their provider knew them as a person.

The experience of adult patients, however, seemed different for those patients with one or more chronic diseases and those without a chronic disease. The chronic disease sample began with better scores than the general adult sample in access, self-management support, comprehensiveness (behavioral health), coordination, and shared decision-making. The patient experience of the caregivers of children, however, showed little difference between the chronic disease sample and the general child sample. As practices transform into medical homes, it will be interesting to see if the impact of the initiative spreads differently in the child-focused and adult-focused practices. While we expect the families and patients in the chronic disease samples to see the change in care first, the culture of pediatric practice may be such that the improvement is perceived by both general and chronic disease populations.

In addition, the pediatric practices that volunteered to participate in the PCMHI had better patient experience scores in more composite domains than comparison practices, unlike the composite scores in the adult practices which show no difference between participating and comparison practices. This will need to be accounted for as we look for evidence of change in the Time 2 survey.

### Question 3: What is the initiative's impact on service use, clinical quality, and patient and provider outcomes?

The logic model for the initiative anticipated that the acquisition of medical home competencies would lead to improved care processes at 18 months, especially for the initially-targeted conditions of diabetes and asthma. Other expected 18-month outcomes included improved access to care and improved delivery of preventive services. By 18 months, it was also expected that patients would begin to perceive improvements in the care experience.

However, 18 months into the PMCHI demonstration we have limited data with which to assess impact. For example, the service use and Time 2 patient outcome measures are not yet available. The Massachusetts All-Payer Claims Database is providing data for the PCMHI Evaluation and the receipt of that data is expected for February 2013. The patient and staff experience surveys are being repeated in the late winter/early spring of 2013. Thus, full data on the impact of PMCHI won't be available until the summer of 2013.

The evidence to date for the initiative's impact on clinical processes and outcomes shows improvement in many measures, but not at a statistical level (Section 6). Statistically significant change was noted in the screening of patients with diabetes for depression and in the follow-up of patients who had been hospitalized. In the pediatric arena, data clearly show an upward trend in performance; the limited number of practices reporting pediatric measures limited the ability to detect statistically significant differences. The perennial question is of course, to what extent does a statistically important change reflect a clinically important difference? It is quite possible that although many of the metrics did not achieve statistical change, the improvement was clinically noticeable. Change occurs slowly. As one author noted: "Overall, the rate of improvement per year is probably not what national policy makers are hoping to see from transformation to medical homes." (page 520).[19]

### Evaluation Challenges

Data collection and formation of a comparison group have been the principal challenges for the evaluation team. Patient survey data collection was delayed over six months due to the need to negotiate stringent data use agreements which each of the participating payers. Staff survey data collection was hampered by the unwillingness of some practices to share contact information with the evaluation team.

Perhaps the biggest challenge was forming a comparison group. The process for recruiting comparison practices for this evaluation was unusual and probably contributed to the comparison group being somewhat different from the intervention group. As shown repeatedly throughout this report, the resulting comparison group of 19 practices differs from the intervention practices in many ways: baseline medical homeness, patient populations, and staff characteristics. Moving ahead, it will be extremely important to place these differences in context and not drawn unwarranted conclusions about the impact of the PMCHI intervention because of baseline differences in groups. The comparison group is not a control group. Statistical techniques to be used in analyzing time 2 data will help in appropriately assessing performance between groups and between time periods.

## Looking to the Future

As the PCMH gains attention and popularity, it is important to keep in mind that transforming primary care practices into medical homes is a complex endeavor that requires substantial money, time, and energy for systemic transformation and sustainability. If proper attention is not given to building the infrastructure necessary to support and develop all the components of the PCMH, the result will be a temporary, surface change. Practices need engaged leadership on both the executive and practice levels to influence transformation process innovation and to facilitate implementation and improving clinical performance.[20] They also need financial incentives that support the development and sustainability of medical home core competencies.

The risk in today's environment as PCMH has become more mainstream is that rushing to show results will be counterproductive. Practices in the MA PCMHI that have taken the time to build a solid infrastructure are making the most progress. The transformation of the whole system of primary care through implementation of PCMH must not be viewed as an effortless prescheduled set of steps in practice redesign or as part of certification requirements. Instead, it represents a long lasting commitment to transformation and adaptability to patient needs and achieving the ultimate goals of improved health and patient satisfaction, and reduced costs.

Furthermore, state and national healthcare systems continue moving towards transformation of incentives, payment structures and practice environments. Change is happening, with and without the engagement of Massachusetts primary care practices. A solid patient-centered medical home structure with its protective adaptive reserve characteristics should help practices weather future turmoil. Consequently, PCMHs are best thought of as a stepping-stone to larger health care system transformation.

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