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Dear Mr. Clerk,

Pursuant to Massachusetts General Laws Chapter 111, Section 2G, please find enclosed a report from the Department of Public Health entitled "The Massachusetts Prevention and Wellness Trust Fund 2015 Legislative Report."

Sincerely,

Monica Bharel, MD, MPH
Commissioner
Department of Public Health

Charles D. Baker
Governor

Karyn Polito
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Marylou Sudders
Secretary

Monica Bharel, MD, MPH
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The Massachusetts Prevention and Wellness Trust Fund 2015 Legislative Report

January 2016

Massachusetts Department of Public Health

from Capacity Building…

PREVENTION & WELLNESS TRUST FUND

…to Implementation

About the Prevention & Wellness Trust Fund Program

Chapter 224 of the Acts of 2012 (Chapter 224) is the second legislative phase of comprehensive health care reform and focuses on improving the quality of care and reducing health care costs. Section 60 of Chapter 224 establishes the Prevention and Wellness Trust Fund (PWTF) and requires the trust to aid in meeting the health care cost growth benchmark goal of the legislation. In addition, it outlines additional areas of focus:

- Reduce the rates of the most prevalent and preventable health conditions;
- Increase healthy behaviors;
- Increase the adoptions of workplace-based wellness or health management programs that result in positive returns on investment for employees and employers;
- Address health disparities; and/or
- Develop a stronger evidence-base of effective prevention programming.

About the Prevention & Wellness Advisory Board

Sections 60 and 276 of Chapter 224 delineate the responsibilities of the PWAB. The Advisory Board is responsible for the following:

- Making recommendations to the Commissioner of Public Health on the administration and allocation of the Prevention and Wellness Trust Fund,
- Establishing evaluation criteria, and
- Advising the Department of Public Health on its annual report to the legislature on its strategy for administration and allocation of the fund.

A legislative change in 2014 consolidated the PWAB with the Commission on Prevention and Wellness. As a result, the Advisory Board is also responsible for assuring an evaluation of the Prevention and Wellness Trust Fund. The findings of this evaluation are due to the House and Senate Ways and Means Committees and the Joint Committee on Public Health by January 31, 2017.

Acknowledgements: This report was the diligent effort of many people for whom we are very grateful:

Prevention & Wellness Advisory Board Members for their active support, recommendations and commitment to this important and innovative project.

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Special thanks to our **PWTF coordinating partners and their field teams** who contributed time, resources and materials that were incorporated into the case studies and partnership snapshots.

Thanks to **Fabio Carvajal** who graciously allowed us to reprint the Lynn Partnership banners.

Thanks to **Harvard Catalyst** for the contribution to the evaluation section.

Executive Summary

This is the third annual legislative report on the activities of the Prevention and Wellness Trust Fund (PWTF). The PWTF is an innovative demonstration project that links health care to public health efforts and evaluates the effectiveness of this linkage in improving health outcomes and controlling costs.

This model has received national attention and has the potential to redefine health care delivery and to demonstrate the value of early prevention efforts in achieving the goals of improved health outcomes and lower health care costs.

This report summarizes the significant progress and lessons learned to date by the Massachusetts Department of Public Health (DPH; the Department) and partner organizations toward designing and implementing programs to achieve the goals outlined for the PWTF in Chapter 224 of the Acts of 2012 (Chapter 224).

As stated in the legislation, the PWTF will be used to achieve reductions in the prevalence of preventable health conditions and reductions in health care costs or the growth in health care cost trends. In addition, the Department is required to assess which groups benefitted from any reductions resulting from PWTF activities and whether worksite wellness initiatives played a role in these improvements.

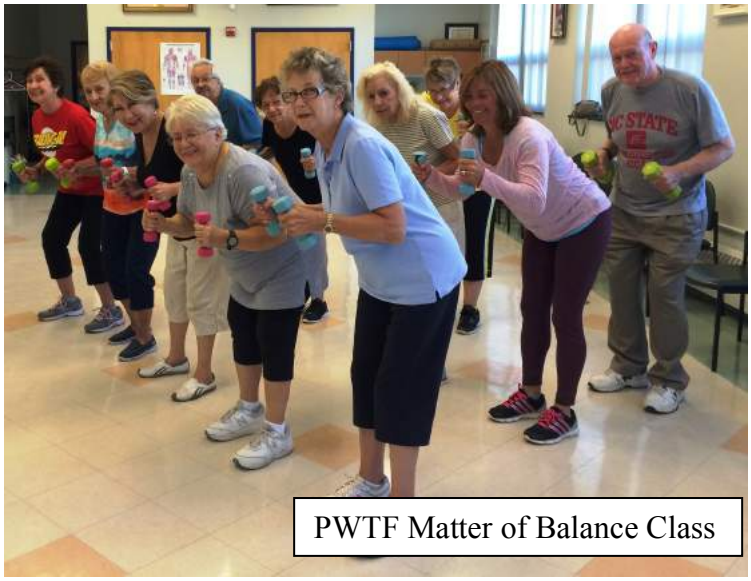
Program Overview

The PWTF is funded through a one-time assessment on acute hospitals and payers totaling $57 million. Under the law, PWTF funds must be allocated as follows: no less than 75% ($42,750,000) must be expended for a grantee program; up to 10% ($5,700,000) can be used for worksite wellness initiatives; and, no more than 15% ($8,550,000) can be spent by DPH on administration and technical assistance for these initiatives.

The Prevention and Wellness Trust Fund goals are to:

- **Assist in meeting the health care cost growth benchmark goal of Chapter 224**
- **Reduce the rates of the most prevalent and preventable health conditions;**
- **Increase healthy behaviors;**
- **Increase the adoptions of workplace-based wellness or health management programs that result in positive returns on investment for employees and employers;**
- **Address health disparities; and/or**
- **Develop a stronger evidence-base of effective prevention programming.**

As described in detail in previous reports, the PWTF grantee program supports 9 partnerships across the Commonwealth. Each partnership includes clinical organizations (hospitals and community health centers), community based organizations, and at least one municipality. Each partnership has a coordinating partner responsible for the operations of the partnership and is the direct point of contact with the Department.



PWTF Matter of Balance Class

PWTF Partnerships

Barnstable Partnership
Coordinating Partner: Barnstable County
Department of Human Services

Berkshire Partnership for Health
Coordinating Partner: Berkshire Medical Center

Boston Partnership
Coordinating Partner: Boston Public Health Commission

Healthy Holyoke Partnership
Coordinating Partner: Holyoke Health Center

Lynn Partnership
Coordinating Partner: City of Lynn

MetroWest Partnership
Coordinating Partner: Town of Hudson

Quincy Weymouth Wellness Initiative
Coordinating Partner: Manet Community Health Center

Southeastern Health Initiative for Transformation (SHIFT) Partnership
Coordinating Partner: City of New Bedford Health Department

Worcester Partnership
Coordinating Partner: City of Worcester

The partnerships are addressing four priority conditions (pediatric asthma, older adult falls, hypertension and tobacco use) and three optional conditions (diabetes, obesity and substance use). The Prevention and Wellness Advisory Board selected these four priority conditions as a result of an extensive review process. The Advisory Board selected these conditions based on the following criteria:

- straightforward access to data to allow for evaluation of PWTF,
- strong evidence-base for health improvements, and
- the likelihood of a positive return on investment.

2015 First Full Year of Implementation

While last year was focused on capacity building, **2015 represents the first full year of implementation** for PWTF with a focus on:

- implementing evidence-based interventions
- utilizing quality improvement techniques to support effective interventions,
- improving community and clinical linkages including e-Referral.

Early Successes

During this first year of implementation:

- PWTF partnerships made over 4,000 referrals from clinical sites to community-based organizations, demonstrating the PWTF model of extending care into the community.

- Since March 2014, 10 e-Referral connections have been made with 547 referrals and 824 feedback reports.

- All 9 partnerships met a critical milestone required of grantees by making at least one of these referral connections electronically.

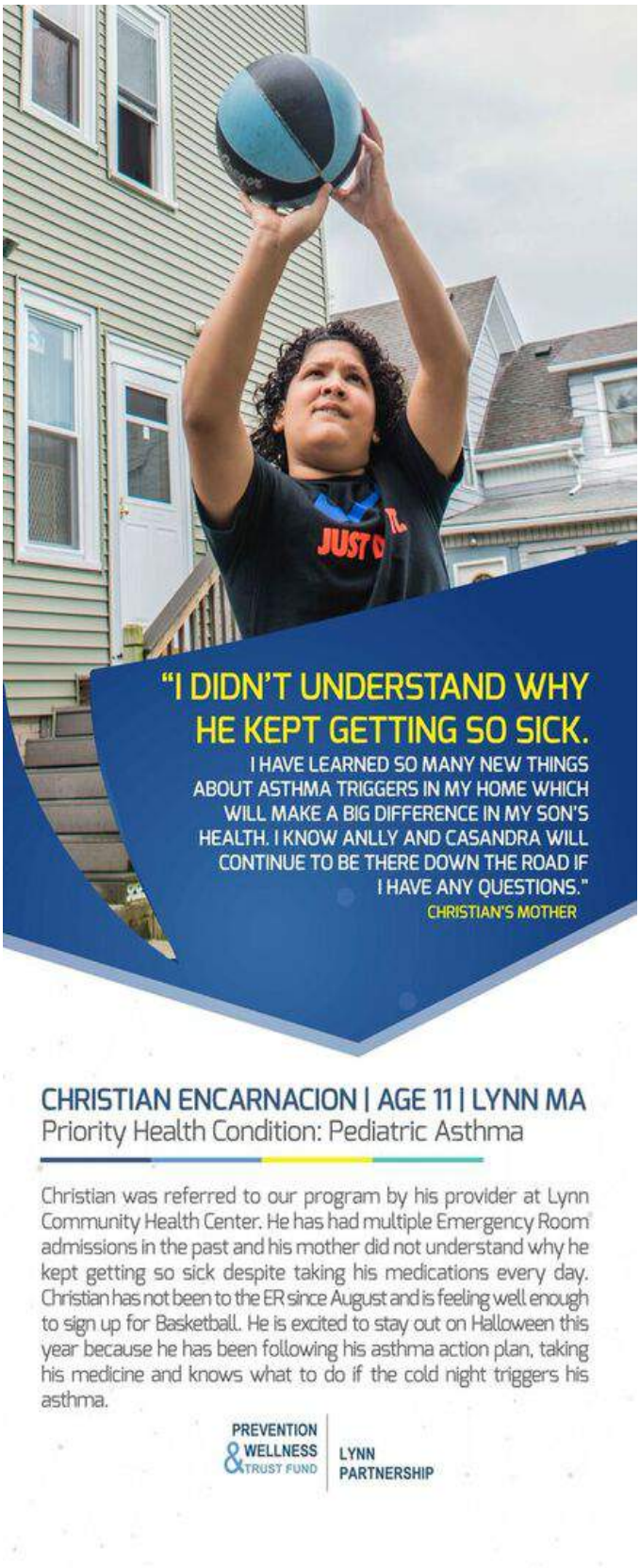
This process, referred to as "e-Referral," allows clinical providers to refer directly from their electronic health records to community based organizations. Most notable to this process is that these community based organizations are then able to provide bi-directional feedback to the clinical site – again, directly into the electronic health record – about a patient's participation in and completion of the intervention.

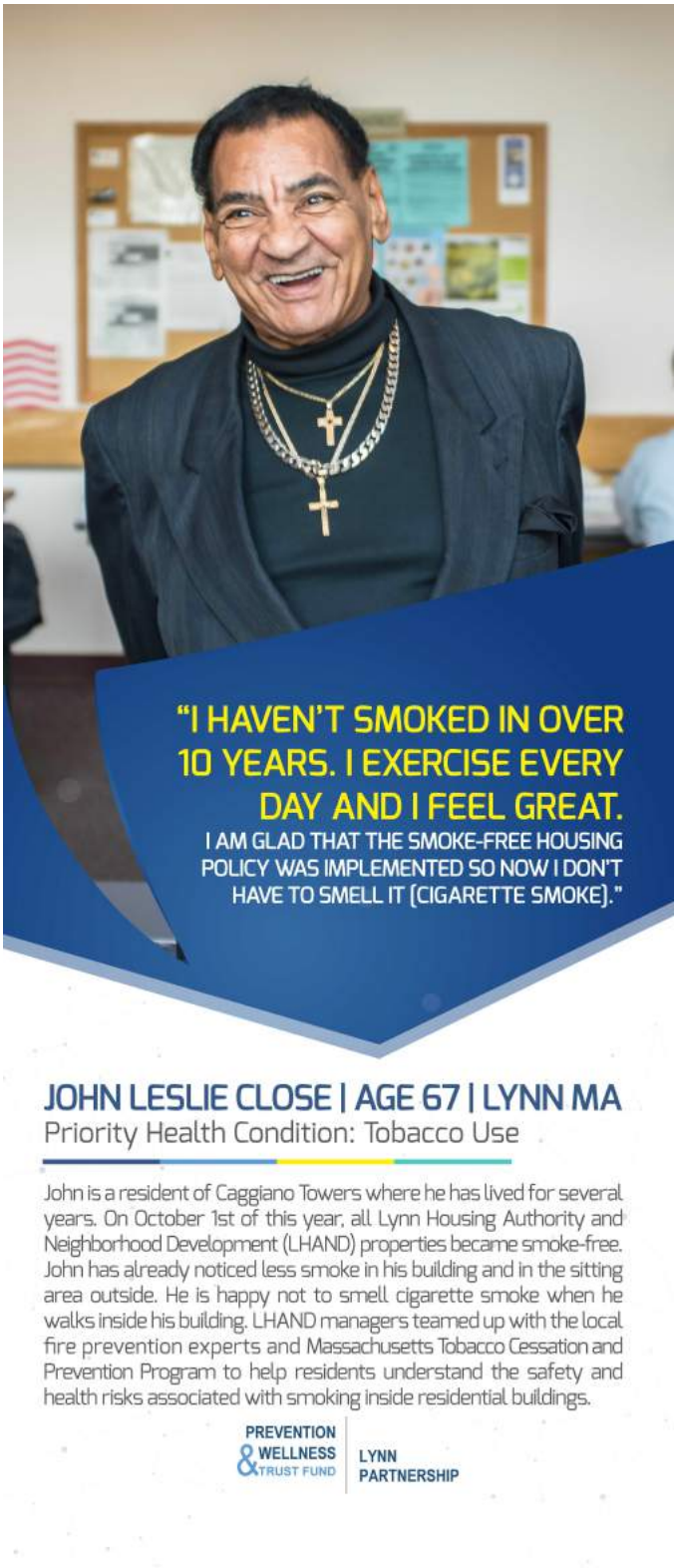
Increasing Support for Partnership Success

As implementation of interventions moved forward, it became clear that the partnerships would benefit from increased technical assistance and health condition specific expertise. Therefore, in the summer of 2015 DPH redesigned its grantee technical assistance and support model.

In addition to bringing on additional Subject Matter Experts and providing health condition specific Learning Sessions, the Department also doubled its staffing to provide more needed programmatic, fiscal and operational support for the partnerships. In addition, DPH provided for the training of over 300 partnership members to support the implementation of interventions.

DPH also strengthened its alignment with existing and ongoing DPH efforts addressing asthma, hypertension, older adult falls and tobacco and garnered the expertise of nationally renowned experts in the field who have experience implementing the PWTF interventions.





Data Driven Quality Improvement

DPH utilizes a data driven quality improvement approach to support partnerships with intervention implementation. This year, DPH successfully extracted data directly from electronic medical records of the clinical sites participating in PWTF for creating quarterly feedback reports to assist with quality improvement.

Worksite Wellness

In terms of the Worksite Wellness initiative also required by ch 224, DPH has designed and implemented a training and capacity building program. This seed funding will support MA employers in implementing comprehensive, evidence-based worksite policies and programs that promote and protect the health of their employees. To date, 30 employers have signed on to the program.

DPH used information garnered from a 2014 survey and the Working on Wellness pilot to develop this program. Those initiatives demonstrated that businesses were interested in worksite wellness programs but needed support from experts, a community that offered opportunities for collaboration and financial resources to help launch a program. It was these findings that informed the current worksite wellness initiative.

PWTF Lessons Learned

This is a first-in-the-nation groundbreaking program. Massachusetts is paving the way on ensuring seamless access to clinical and community programs to prevent chronic disease. It is a model for other states and Massachusetts communities. But, being the first also means there is much to learn along the way**.**

Quality improvement is the bedrock of this project. PWTF evaluates not only the progress of the partnerships, but also its own infrastructure and the day to day support provided to the partnerships. PWTF strives to capture these lessons learned both to improve the existing program, as well as, document recommendations for others who want to follow in its footsteps.

As Massachusetts blazes the trail, others can learn from our successes and challenges.

Capacity building takes time.

As part of its original funding award, DPH gave the partnerships six to nine months to build their partnership structures, establish data-sharing agreements, and hire and train staff. Based on the partnerships' collective experience, capacity-building activities require at least a year. Further, it is important to take the necessary time since effective infrastructure development is the foundation for successful implementation of comprehensive systems change. In response, DPH provided additional flexibility to partnerships in meeting the capacity-building milestones which continued into 2015.

Flexibility to address community needs/conditions is essential for success.

DPH allowed the nine partnerships flexibility in the selection of conditions and interventions, in the timing of intervention roll outs, in the use of data collection tools by community partners and in determining the staffing needed to implement PWTF. This flexibility has helped partnerships leverage their strengths and perhaps has allowed them to implement some interventions more quickly.

At the same time, this flexibility has also required more time from the DPH technical assistance team in helping support the utilization of new systems and implementation of multiple interventions. While the implementation of PWTF may have been easier and quicker if DPH had required more adherence to specific interventions and data collection systems, it would not have allowed local communities to develop a model that best aligns with their organizational requirements, circumstances and needs.

"I believe that public health is a critical piece of the overall health of individuals and the Commonwealth. And I firmly believe that we can continue leading the nation with innovations that keep us amongst the healthiest states in the country,"
-Commissioner Monica Bharel

Robust technical assistance is needed to support the PWTF model.

In the preliminary staffing plan, DPH planned for three people to support the nine partnerships, implementing four priority conditions and 18 interventions. This staffing model did not allow for detailed support on the interventions of PWTF.

Additionally, community-based organizations, less familiar with robust data collection systems, need support as they build and implement such systems. DPH responded to these realities by redesigning its staffing model and dedicating more resources to technical assistance. Now with a six person technical assistance and new management positions, DPH is providing additional support to the partnerships.

The four-year time frame of PWTF has presented opportunities and challenges.

The need to implement prevention strategies that improve health and reduce costs is urgent. The Prevention and Wellness Trust Fund was designed to respond to this urgent need by focusing on health conditions where there were known evidence-based interventions where results could be seen within a four year timeframe.

Partnerships are implementing these interventions and more than 4,000 referrals have already been made. The evaluation of these interventions is beginning and we will be able to see preliminary results by the end of the four year timeframe.

However, the impact of the model of linking clinical and community care and focusing on "upstream" prevention efforts to promote health will not be fully demonstrated by June of 2017 and the opportunity for deeper and more sustained impact is still in front of us.

Looking Forward to 2016

This implementation year saw significant success with a large number of clinic-to-community referrals, a robust implementation of e-Referral, and the engagement of employers on worksite wellness. In 2016, there will be greater impact on communities and individuals as implementation continues. In addition, the Prevention and Wellness Advisory Board will explore options for sustaining PWTF statewide and locally.

Lastly, external evaluators have been engaged for both the grantee program (Harvard Catalyst) and the Working on Wellness Initiative (University of Massachusetts at Lowell). The independent evaluations of the PWTF Grantee Program and the Worksite Wellness Initiative will help document the success of these efforts in improving outcomes and controlling costs.

OVERVIEW Section 1

The Prevention and Wellness Trust Fund represents an unprecedented investment by the Commonwealth of Massachusetts in combining public health and health care strategies with the goal of improving health outcomes and containing healthcare spending.

This nationally innovative project charts new ground for both health care and public health.

The Prevention and Wellness Trust Fund (PWTF) goals are ambitious. Given rising health care costs, any initiative that achieves a measurable decrease in the prevalence of preventable health conditions and the health care costs associated with these conditions in less than four years would stand as a model for health care redesign in Massachusetts and be a model for other states embarking on this path. The Massachusetts Department of Public Health (DPH) has embraced these goals and, with the guidance of the Prevention and Wellness Advisory Board (PWAB) and in collaboration with 9 community partnerships and numerous worksites, is implementing a plan that maximizes the chances of achieving them.

PWTF activities undertaken in 2015 were directed towards assuring strong implementation of evidence-based interventions within health care settings, community settings and worksites. It also focused on strengthening the linkage between health care providers and community-based programs to expand the care of individuals beyond the walls of the health clinic. The PWTF Grantee Program was developed using a framework designed to break down silos and imbed new protocols and referral relationships as part of standard operating procedures. This year, significant DPH and partnership resources coalesced to ensure prioritization of successful models and interventions, use of data to drive improvements, and increasing technical assistance and support to those working on the ground. Sustainability and evaluation of PWTF became a priority for the PWAB this year with the development of two committees dedicated to making recommendations on these topics.

The Working on Wellness program will provide training, technical assistance and other support services to participating employers over a course of 10 months. The program uses best practices in the field of worksite health promotion to help build the skills, knowledge and capacity of the employers. The program will also emphasize community linkages and partnerships to help employers enhance their wellness programming. In 2015, the program hired contractors, developed components of the program, and recruited 30 employers for the first cohort.

The PWTF is funded through a one-time, $57 million assessment on acute hospitals and payers. Under the law, PWTF funds must be allocated as follows: no less than 75% ($42,750,000) must be expended for a grantee program; up to 10% ($5,700,000) can be used for worksite wellness initiatives; and no more than 15% ($8,550,000) can be spent by DPH on the administration and evaluation of these initiatives. This report summarizes the activities that have taken place in calendar year 2015 to implement the PWTF.

THE PREVENTION AND WELLNESS TRUST GRANTEE PROGRAM Section 2

In March 2014, DPH awarded nine grants to community partnerships based in Barnstable, Berkshire, Boston, Holyoke, Hudson/ Metrowest, Lynn, New Bedford, Quincy/ Weymouth, and Worcester resulting from its August 2013 Request for Responses (RFR). DPH developed the PWTF model, with the guidance and approval of the Prevention and Wellness Advisory Board, with the focus of achieving the Trust's ambitious goals as well as institutionalizing sustainable change beyond the existing PWTF funding. This year – 2015 – focused on the robust implementation of this model. Using data to drive programmatic change, DPH and the partnerships have tested the model and have learned some important lessons.

A. The PWTF Model

1. Extending Care into the Community:

Most people with chronic conditions spend the majority of their time living, working, and going to school in the community and spend very limited time in the health care setting. One key component of PWTF is to extend care from the clinic to the community setting in order to ensure access to public health prevention and chronic care services.

With the shared goal of improving the health of the people in the community, strong community and clinical linkages can coordinate and extend care, fill gaps in needed services, and identify and address non-clinical barriers to care.

Clinical practices can serve as access points for primary, secondary and tertiary prevention services. The U.S. Surgeon General's National Prevention Strategy, the Agency for Healthcare Research's National Quality Strategy, and the Expanded Care Model promote the linkage of clinical practice with community resources to help prevent and control chronic diseases. In recent years, public health has increased its efforts to link more effectively with health systems by using community resources and supportive environments to complement and strengthen delivery of clinical care. DPH's e-Referral Project, developed through a Center for Medicare and Medicaid Innovation (CMMI) State Innovation Model Testing Award and a component of PWTF, is a prime example of efforts to institutionalize clinical and community linkages.

This bi-directional electronic referral system links clinical providers, through their electronic medical record (EMR) to community programs. By linking community efforts to support a broad range of activities (such as smoke-free housing and tobacco cessation programming) in low income neighborhoods with health interventions, there is evidence to suggest both cost savings and improved health outcomes can be achieved.[i]

Patient Success Story

FALLS PREVENTION

Matter of Balance Patient Experience:

"When I was taking the falls prevention course, the exercises that I got were very helpful. I had noticed some discomfort in my right foot.

Once I started the exercises, my balance improved and my pain disappeared. Then I was evaluated by my doctor, and my doctor noticed my better balance. That was something big for me."

"I encourage people to come and **educate themselves about simple things** about which they might not be aware."

For the PWTF grantee program, the Department required partnerships to include three types of organizations to ensure strong clinical and community linkages:

- Clinical (healthcare providers, clinics, hospitals) – at least one clinical partner must use and be able to share electronic medical records,
- Community (schools, fitness centers, non-profits, and multi-service organizations), and
- Municipalities or regional planning agencies.

These partnering organizations work together to improve clinical care, develop individual behavior change programs within the community, and link patients between clinical and community settings to control and prevent the PWTF priority conditions.

2. Promoting Sustainable Change:

Sustainable change is the second component of the PWTF model. PWTF tests a new model of health and public health delivery with the hope of changing health care resourcing in the future. Sustaining this model will take time and will require evidence that the model achieves its goals.

While many of the interventions supported by PWTF are currently uncovered by insurance, the development of systems and strong partnerships are investments that can last beyond the trust.

PWTF prioritizes system change efforts as a mechanism for sustainable change. Examples of system change include:

- changing delivery systems by embedding clinical decision supports to make community referrals,
- changing data collection through development of patient registries to identify high-risk patients for referral, and
- institutionalizing community/clinical linkages through e-Referral.

Clinical and community partnerships are central to the PWTF model - and to the future of health care and the Accountable Care Organization (ACO) model. These partnerships require significant investment to build and face many challenges to successful implementation. PWTF has invested in strong partnerships across the Commonwealth that have the capacity to support public health and health activities in the future. Partnerships have begun planning for their long-term sustainability by building local leadership support for their PWTF work; these

partnerships have potential to support health care reform across the Commonwealth.

3. Focusing on Priority Conditions and Evidence-Based Interventions:

By focusing on a few priority conditions, PWTF can test this public health and health care integrated model. Since this model requires changes to health care delivery, the selected focus allows partnerships to build the clinical, community, and clinical/community linkages capacity on a few conditions. Focusing resources on four priority conditions comprises the third component of the PWTF model.

Working with the PWAB, DPH selected the following criteria for evaluating conditions:

- high prevalence of the condition in the population,
- significant associated health care costs for the condition,
- strong evidence base for clinical and community interventions to improve condition outcomes,
- ability of the interventions to yield return on investment within three to five years, and
- access to data for evaluating the impact of the interventions.

After reviewing thirteen conditions, PWAB and DPH selected four priority conditions that met these criteria: Pediatric Asthma, Hypertension, Tobacco Use and Falls in Older Adults. Four optional conditions, for which the evidence base and the potential for reducing health care costs within the four years of the PWTF were less strong, were also identified. Diabetes, Oral Health, Obesity, and Substance Abuse constitute the optional conditions.

In order to increase the likelihood of success in achieving improvements in health and reductions in cost as well as promoting the establishment of new relationships in these communities, each partnership is addressing at least two of the four priority conditions. PWAB and DPH identified mental health and behavioral health as co-morbid conditions that partnerships should address in conjunction with their work on the priority and optional conditions.

PWTF client learning a seated back stretch in class.

4. Targeting Resources – Sufficient Population Size and Funding Levels:

The goals of PWTF are ambitious; and evaluating the impact of PWTF funding requires sufficient population size and reach. To adequately test this model, DPH limited the number of awards. Sufficient population size and funding is the fourth component of the PWTF model. To determine the appropriate population size and service area for the available resources, DPH evaluation staff examined large multi-sector, multi-factor interventions programs like the Community Transformation Grants and the Childhood Obesity Demonstration Grant.

It was clear from this examination that investing too little in a community was just as problematic as investing too much if PWTF was to achieve a positive return on investment. While there is no universally accepted methodology for determining the optimal population size and optimal per capita funding level,

DPH staff considered three significant factors:

- the total reduction in healthcare costs necessary to justify the $42.5 million
- investment across different population sizes,
- the intensity/costliness of interventions, and the effectiveness of interventions.

Based on this analysis, DPH proposed a cap of no fewer than six awards and no more than twelve. Each award would focus on a population between 30,000 and 120,000 people. Annual award amounts would be $250,000 for the capacity-building phase and range from $1.1 million to $2.5 million per year for the remaining three years when programs were fully implementing the interventions.

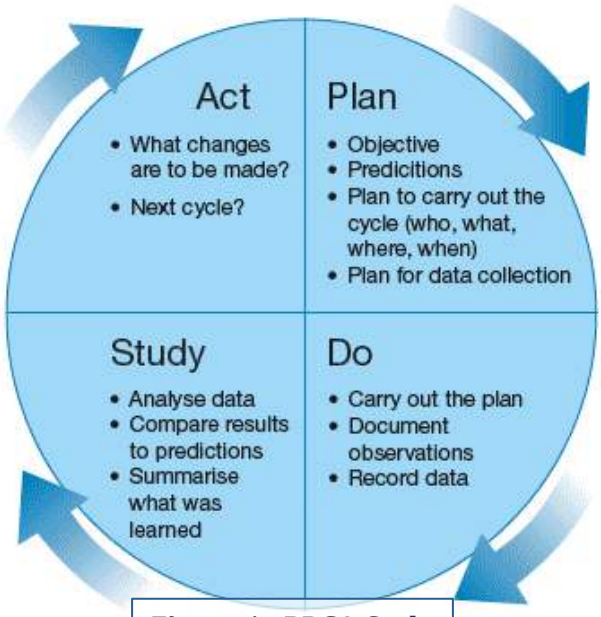


Figure 1: PDSA Cycle

5. Using Data Driven Quality Improvement:

The last component of PWTF rests on the use of data to inform program improvement. In addition to implementing evidence-based interventions for priority conditions, **the PWTF Grantee Program is built upon the use of data to measure results and drive change.**

Primary data sources for quality improvement include referral data taken from the electronic referral system (e-Referral), electronic medical records of participating clinicians, and data collection from community-based organizations focused on their interventions. DPH follows the Institute for Healthcare Improvement's (IHI's) Learning Collaborative model to support grantee quality improvement (QI) efforts. DPH provides measurable targets per priority condition in condition specific guidance documents called "charters."

Using grantee specific PWTF data, DPH quarterly provides data progress reports to grantees to spur action. DPH encourages partnerships to use Plan, Do, Study, Act (PDSA) cycles to improve their intervention delivery.

At learning collaborative meetings and webinars, grantees regularly and formally share best practices with each other.

Nationally recognized leaders in the field run the learning collaboratives and provide support to grantees in order to achieve these goals. As a model, PWTF parallels the efforts of the Massachusetts Paul Coverdell National Stroke Registry, funded by the Centers for Disease Control and Prevention (CDC). Coverdell uses this data-driven, quality improvement approach and has had significant success measuring short-term progress toward achieving national benchmarks for stroke care.

Five components comprise the PWTF program model:

1. community clinical linkages
2. sustainable change
3. priority conditions and evidence-based interventions
4. sufficient resources and population
5. data driven quality improvement

Partnership Snapshot

Healthy Holyoke Partnership

ASSESSING COMMUNITY NEEDS

This community has disproportionate health burdens and risk factors when compared to the state. Strategically selected clinical and community partners came together with a shared vision and commitment to link clients to much needed services in the community with the goal of improving the quality of life for Holyoke's most disadvantaged populations.

Population: 39,880 people.

Demographics:

- Approximately 50% Hispanic population
- Approximately 40% of the families in the city have incomes below the federal poverty guidelines.

Funded health conditions:

- Pediatric asthma
- Hypertension
- Tobacco use and obesity

Clinical partners:

- Holyoke Health Center
- Holyoke Pediatric Association
- Holyoke Medical Center
- River Valley Counseling Center
- Western Massachusetts Physician Associates.

Community partners:

- Hoyloke YMCA
- City of Holyoke
- River Valley Counseling Center

These five components were chosen to give PWTF the best chance to succeed with the ambitious goals of Chapter 224. In 2015, PWTF monitored progress, improved the model, and learned important lessons that informed program implementation. In addition, some of the lessons can inform the Commonwealth as it moves forward to redesign health care delivery and payment.

B. Implementation

This year has focused on the transition from capacity building to the first full year of program implementation.

PWTF partnerships represent diverse communities with broad geographic distribution and have selected interventions that meet the needs of their distinct populations.

Partnerships tested the interventions in the four priority and four optional conditions changing their interventions, ensuring cultural competency and adding new partners. **This year saw a strong focus on linking clinical organizations to community interventions making approximately 4,000 referrals.** Community health workers play a central role in the success of PWTF along with the e-Referral program. Both had significant advancements this year. The progress made this year in the PWTF Grantee Program holds promise for further advancement next year.

1. Overview of the Partnerships: Targeting Resources to Communities with the Right Population Size and Providing Enough Funding

Nine coordinating partners - Barnstable County Department of Human Services, Berkshire Medical Center, Boston Public Health Commission, City of Lynn, City of New Bedford Health Department, City of Worcester, Holyoke Health Center, Manet Community Health Center, and the Town of Hudson – lead partnerships in distinct geographic areas for the PWTF grantee program. These communities have sufficient population size and resources so they can have broad reach to test the PWTF model.

In 2015, all partnerships were implementing interventions. The work of the partnerships had two phases: capacity building and implementation. Cohort 1 began implementation on October 2014; and Cohort 2 started implementation on January 2015. Each grantee received approximately $250,000 for their capacity-building period and $750,000.00 – 1.5 million per implementation year. Specific funding levels for each grantee, as well as other information about the partnerships' members and selected conditions, can be found in Appendix A of this report.

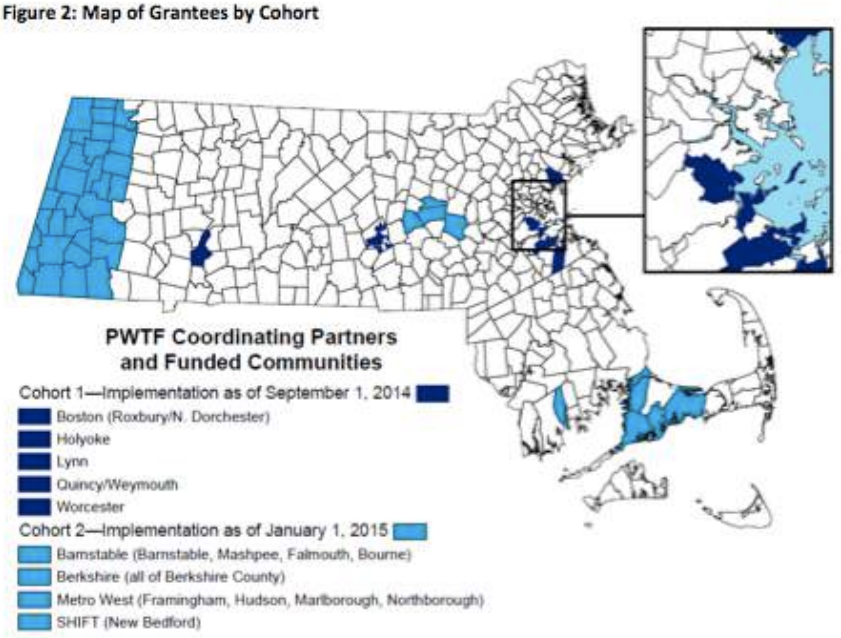
A lesson learned from the early stages of PWTF is that capacity building takes time. DPH gave partnerships six to nine months for capacity building, however, this amount was not sufficient for them to build a solid foundation. Thus, partnership capacity building has continued into 2015. This capacity building takes time because community and clinical partnerships are complex and therefore challenging to build; partnership requires both sides to redefine their care delivery and communication systems. In addition, PWTF requires partnerships to institutionalize change, as much as possible.

Figure 2 below shows the geographic distribution of PWTF grantees across the Commonwealth along with their implementation start dates.

This institutionalization of relationships requires time as clinics change their EMR systems and community organizations change their work flows.

DPH believes these partnerships hold the promise for redirecting health care delivery to include a prevention focus, thus allowing improved outcomes and decreased costs, and so are worth the time and effort needed to become successful. Future similar initiatives should allow for at least one full year of capacity building.

Figure 2: Map of Grantees by Cohort



As noted in the PWTF Model, the design of the Grantee Program includes an important model of multi-sector partnerships with the goals of extending care into the community. Each grantee must have a minimum of three types of organizations in their partnership. These include clinical organizations, municipal or other organizations and community-based organizations.

This triad of client-serving organizations increases the coordination that can lead to improved health outcomes while decreasing the likelihood of patients falling through the cracks during referral and transition. In addition, it serves to offer a broader menu of services in varied settings that could accommodate people in community-based environments that are more convenient or where they may feel more comfortable.

Each partnership has a governing body that includes representatives from all or most of the partner organizations in their project.

DPH's guidance in the development of these leadership committees was based on a philosophy of shared leadership and responsibility for fiscal, model, and quality improvement frameworks. The role of the coordinating partners is one of administrative and fiscal oversight, partnership-wide communication, and coordination of the group's activities.

The coordinating partner organization needs to be able to manage the funding from DPH and in turn, pay the remaining partners as their sub-contractors. The coordinating partners have an equal say in all decisions made by their partnership leadership team. Each partnership has subcommittees that were created based on the conditions that the partnership selected. Subcommittees also include a focus on specific interventions, e-Referral, evaluation, and community health workers. The DPH PWTF team has guided the development of this infrastructure through provision of tools, templates, and technical assistance on budget planning and development, but has not mandated a specific model. (*See section below "Grantee Support and Technical Assistance" for a description of the guidance provided by DPH.*)

Partnership Forming

Quincy Weymouth Wellness Initiative developed a mission statement, vision statement and a statement of shared values to guide their work.

MISSION – VISION – VALUES

MISSION

Together, and on behalf of the communities of Quincy and Weymouth, Massachusetts, the QWWI Partnership will reach for and achieve measurable population health goals through the utilization and tracking of evidence based interventions that address the priority and optional areas of hypertension, falls prevention among older adults, tobacco, and substance abuse.

VISION

Quincy and Weymouth will be measurably healthier communities.

SHARED VALUES

- Every resident of Quincy and Weymouth should have unfettered access to health, wellness and social services information and services
- Clinical, Community, and Municipal partners can reliably and broadly impact population health only by joining together.
- Demonstrate success and challenges, we will embrace the notion and attach the precepts of continuous quality improvement to our work
- Mindful of the social determinants of health, we will work tirelessly to ensure health parity in all we do.
- Reduce healthcare costs for all residents of Quincy and Weymouth
- Decrease the prevalence of preventable health conditions and health risks
- Improve the management of existing chronic disease
- Measure our effect and determine "who" benefited from health care cost reductions

These nine partnerships have the right characteristics to test the PWTF model. They have populations with higher burdens of disease and health care utilization. Their communities have disparate health outcomes by race, ethnicity, income and age. They represent large cities, multiple smaller cities and towns working together, and rural communities.

Partnership Snapshot

Barnstable County Partnership

Clinical partners:
Community Health Center of Cape Cod
Duffy Health Center – Jan 2015
Harbor Community Health Center Hyannis

Community partners:
Healthy Living Cape Cod Coalition

Health Conditions & Interventions

Hypertension

Clinical
- Evidence-based guidelines for HTN screening
- Home Blood Pressure Monitoring

Community
- Chronic Disease Self-Management Programs (CDSMP)

Falls Prevention

Clinical
- STEADI Clinical Risk Assessment

Community
- Matter of Balance
- Tai Chi
- Home Safety Assessment and Modification by PT/OT

Diabetes

Clinical
- Evidence-based guidelines for Diabetes screening

Community
- Chronic Disease Self- Management Program (CDSMP)
- Diabetes Prevention Program

Notable Achievements:

- All clinical partners (which are Community Health Centers) are now using the statewide Data Reporting and Visualization System (DRVS), a web-based data collection system
- Three of our five partners are participating in piloting the e-Referral system via the Mass HIway.

Challenges and Lessons Learned
- We have experienced two significant challenges in pursuing PWTF work: First, changes to clinical practice patterns and workflow to accommodate new PWTF-related referral processes has taken time and effort, as has changing their associated management information systems (EMRs) to facilitate referral to community organizations.
- Second, educating and supporting patients in health behavior change is labor-intensive and maintaining client follow-through and program completion is also challenging for community interventions.

Together, the nine partnerships cover roughly 987,400 residents - approximately 15% of the state population - and include some of the most racially and ethnically diverse communities in the state, many with large percentages of people living in poverty.

To illustrate these levels of inequities, the following figure **highlights disparities in pediatric asthma and cardiovascular disease hospitalization rates by race and ethnicity**. The chart compares PWTF communities who focus on those conditions to the state average. These two conditions have the most significant disparities in hospitalization rates out of the four priority conditions.

Figure 3: Pediatric Asthma ER Visits and Cardiovascular Disease Hospitalization Rates by Race/Ethnicity: PWTF vs. State

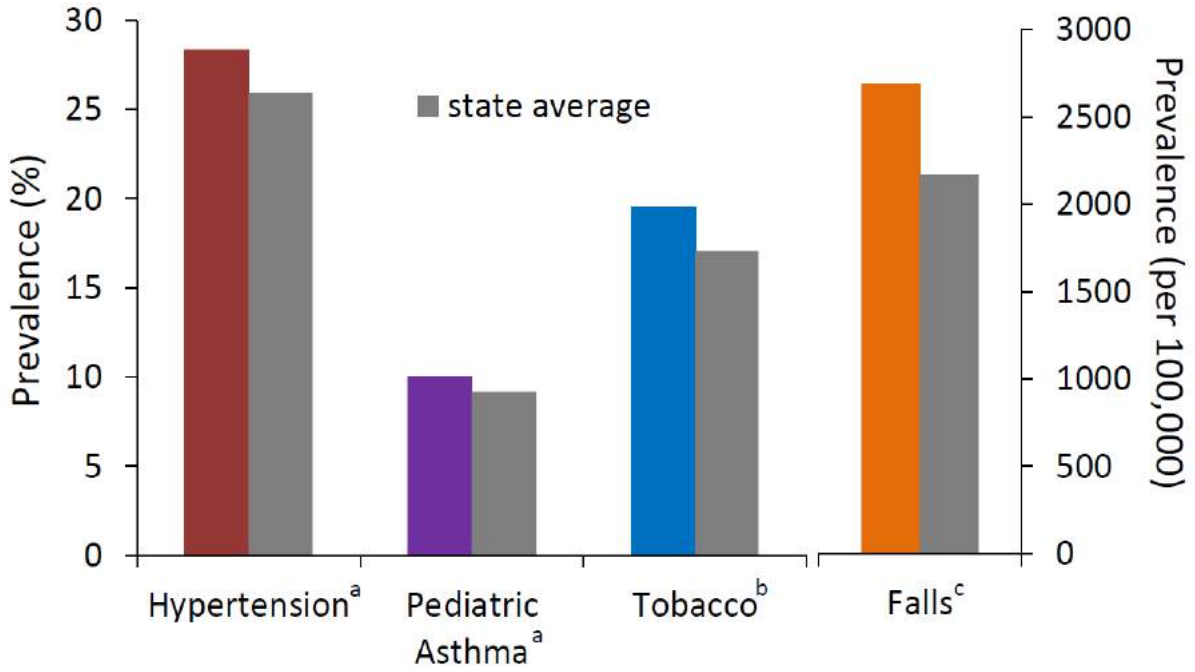


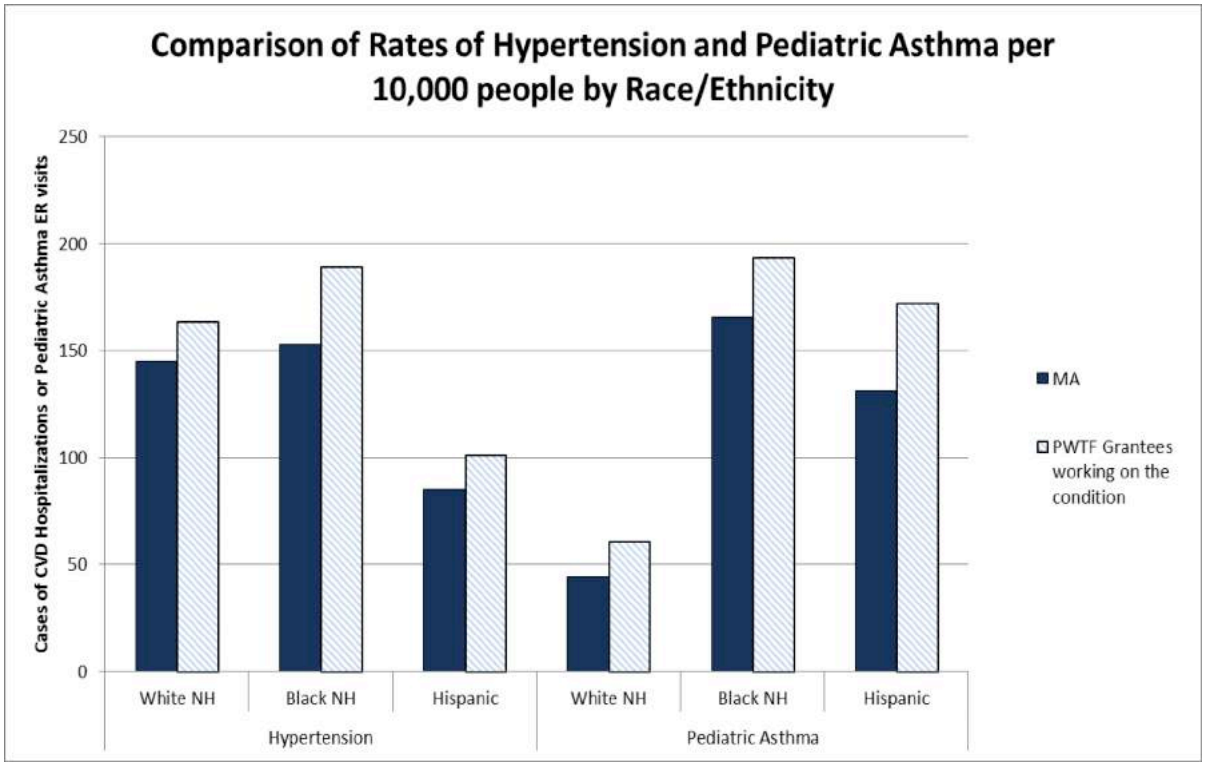
Figure 3: Numerator - Source: Massachusetts Acute Hospital Case Mix Database, Center for Health Information and Analysis. 2011-2014. Prepared by the Massachusetts Dept. of Public Health.
Denominator – Source: American Fact Finder "Sex by Age (Race)" Tables, US Census Bureau. 2013 Five Year Estimates. Prepared by the Massachusetts Dept. of Public Health.

In addition, **PWTF communities also have higher burden of disease and health care utilization**, in the four priority conditions, than the rest of the state, as shown in Figure 4 below.

Figure 4:

Figure 4. Funded partnerships have greater disease burden than the state as a whole for each priority health condition. Color bars correspond to the condition prevalence averaged across participating communities and grey bars correspond to the state prevalence.

PWTF Communities Compared to State Burden of Disease



Data sources are (a) All Payer Claims Database (APCD), (b) Behavioral Risk Factor Surveillance System (BRFSS), and (c) Acute Hospital Case Mix Databases (Case Mix).

2. The PWTF Interventions: Focusing on Priority Conditions and Evidence-Based Interventions

The partnerships are addressing four priority conditions: pediatric asthma, older adult falls, hypertension, and tobacco use and three optional conditions: diabetes, obesity and substance use. The PWTF interventions have the strongest potential to affect population health in the four year time frame. They have a solid evidence base and support the PWTF model of extending care into the community. For an explanation of how the conditions were selected, see the 2014 Annual Report.

The interventions were divided into three tiers. The three-tiered approach for interventions was based on a set of three criteria: access to data to demonstrate outcomes, evidence base for clinical impact, and likelihood of producing ROI. All Tier 1 interventions are for priority conditions, while evidence-based interventions for optional conditions are listed as Tier 2.

- **Tier 1 interventions** are those for which there is straightforward access to data, a strong evidence base for clinical impact, and a high likelihood of a positive ROI.
- **Tier 2 interventions** are those for which there is an evidence base; however, either data availability, evidence-base for clinical improvements, or evidence for a positive ROI were not as strong as for Tier 1 interventions.
- **Tier 3 interventions** are those for which there is little or no access to data to demonstrate a direct health impact, a minimal evidence base for clinical improvements, and/or little likelihood of ROI in the 3.5 years of funding.

Table 1: Tiering of PWTF Interventions

Tier 1

Clinical Interventions	Community Interventions
• **Asthma** - Care Management for High-Risk Asthma Patients • **Falls** - Comprehensive Clinical Multi-Factorial Fall Risk Assessment (i.e. STEADI Assessment) • **Hypertension** – Evidence-Based Guidelines for Diagnosis and Management of Hypertension • **Tobacco** – USPSTF Recommendations for Tobacco Use Screening and Treatment	• **Asthma** - Home-Based Multi-Trigger, Multi-Component Intervention • **Falls** - Home Safety Assessment and Modification for Falls Prevention by Physical or Occupational Therapist • **Hypertension** - Chronic Disease Self-Management Programs (CDSMP) • **Tobacco** – Tobacco Cessation Counseling

Tier 2

Clinical Interventions	Community Organizations
• **Asthma** - Asthma Self-Management in Primary Care • All **optional health condition** clinical interventions are Tier 2: * **Diabetes:** Quality Improvement in Clinical Setting, Pharmacist Interventions to Control Diabetes	• **Asthma** - Comprehensive School-Based Asthma Management Programs, Comprehensive Head Start-Based Asthma Management Programs • **Falls** – Programs to Address Fear of Falling, Strength and Balance (i.e. Matter of Balance, evidence-based Tai Chi), Home Falls

* **Obesity:** Weight Management in the Primary Care Setting * **Substance Use:** Screening, Brief Intervention and Referral to Treatment (SBIRT)	Prevention Checklist by CHW or other professional • **Hypertension** - Self-Measured Blood Pressure Monitoring with Additional Support, Diabetes Prevention Programs (for patients with hypertension and pre-diabetes) • **Tobacco** - Promoting Smoke Free Environments (i.e. Smoke-Free Housing) • All **optional health condition** community interventions are Tier 2 or 3: * **Diabetes** – Chronic Disease Self-Management Program; Diabetes Prevention Programs * **Obesity –** Environmental Approaches in the Community to Address Obesity; Y-USA Diabetes Prevention * **Substance Use:** (*These two interventions are Tier 3 due to the limited evidence to support their approach)* SBIRT in Communities; Brief Strengths-Based Care Management for Substance Abuse (SBCM)

PWTF targets its intervention resources to those most at need in order to meet the PWTF goals of improving health outcomes and controlling costs in the community.

Many of the interventions have enrollment criteria (such as clinical diagnosis of hypertension or uncontrolled asthma); and DPH developed additional guidance on identifying and referring "high-risk" residents to the interventions.

This "high-risk" enrollment criterion spans most interventions with some exceptions for interventions that are population wide such as smoke-free housing. In addition, some interventions have levels of risk, with low or moderate risk individuals receiving some interventions and those screened as high risk receiving the most intensive interventions.

An example of these levels of risk is in older adult falls interventions where low risk residents receive a falls prevention class like Matter of Balance and high-risk residents receive a class and a home visit. DPH has provided training and tools to clinical and community providers to assist with screening and referrals. While public health often focuses on primary prevention and population wide services, DPH felt the goals of the trust required allocating resources to those most at risk of poor health outcomes and high health care utilization in order to test this model.

The specific interventions that each grantee has selected to address in their chosen health conditions can be found in Appendix B and the following figure.

Figure 5: Health Conditions Addressed by PWTF Partnership

Coordinating Partner	Tobacco	Hypertension	Pediatric Asthma	Falls in Older Adults	Other Conditions
Barnstable		✓		✓	Diabetes
Berkshire	✓	✓		✓	Diabetes
BPHC		✓	✓	✓	
Holyoke	✓	✓	✓		Obesity
Lynn	✓	✓	✓	✓	
MetroWest	✓	✓	✓	✓	
Quincy/Weymouth	✓	✓		✓	Substance Use; Diabetes
SHIFT (New Bedford)		✓	✓	✓	Substance Use
Worcester		✓	✓	✓	

A lesson learned from the tiering and priority conditions is that a flexible model enables partnerships to build on the strengths of their community resources as they role out interventions.

While the flexibility allowed communities to choose conditions and interventions that met their particular community needs, the vastness of managing different staging of interventions across nine partnerships required significant oversight by DPH and the Coordinating

Partners. In addition, as partnerships dove into implementation, unanticipated barriers and opportunities arose that required partnerships to rethink interventions. These mid-course corrections are an important part of the PWTF model (data-driven quality improvement). However, they also take time. DPH increased its staffing to support the flexible implementation of the model. Future implementations of this type of flexible model should plan for sufficient technical assistance and support.

DPH made some changes to the interventions this year at the request of the partnerships. It added Diabetes Prevention Programs to Tier 2 community-based interventions for hypertension. DPH made this change at the request of the partnerships that struggled to enroll patients into the Tier 1 intervention, Chronic Disease Self-Management Programs, and wanted another program to offer hypertensive patients. Partnerships only can offer this intervention to those diagnosed with hypertension and pre-diabetes.

In addition, DPH allowed partnerships to expand the Tier 2 community-based intervention for asthma (Comprehensive School-Based Asthma Management Programs) to Head Start students. Since the hospitalization rate is highest for children ages 0 – 5 and Head Start programs operate very similarly to schools (with a nurse on site and nationally and state mandated policies and procedures related to health), DPH allowed this expansion. DPH dropped Oral Health as an optional condition as only one partnership chose this condition and they discontinued their work on it this year. Lastly, DPH expanded the scope of the optional diabetes conditions to include people with diabetes and pre-diabetes diagnoses at the request of the partnerships. These tweaks to the interventions of PWTF demonstrate that DPH has taken a flexible approach to working with the partnerships. At the same time, the flexible approach is more labor and time intensive and has resulted in slower implementation overall.

3. Addressing Cultural Competency and Health Equity

The partnerships have spent significant time assessing the cultural and linguistic needs of their population and ensuring they have the staffing, programming and materials to meet those needs. In addition, several partnerships have focused on health equity and on addressing the role of the social determinates in impacting health.

PWTF partnerships are addressing health disparities in several ways. They are:

- ensuring they have culturally and linguistically competent staff,
- providing culturally and linguistically appropriate materials and education,
- training PWTF on health equity and undoing racism, and
- partnering with community agencies who work with distinct populations.

Several partnerships offer culturally-specific programs (in Chinese, Albanian, Spanish, and Portuguese) through their work with existing or new partners. Many partnerships are integrating community health workers across organizations that speak multiple languages and share the same heritage as the people they serve. Lastly, some partnerships have provided training and support for partners to understand the role of racism in

causing health disparities and encourage partners to explore changes in their work operations.

The Quincy Weymouth Wellness Initiative (QWWI) has made strides towards addressing health equity in the community. QWWI has a large Asian population, approximately 25%, who would benefit from their PWTF programming. QWWI faced many barriers in recruiting and enrolling this population in the community programs: they did not have Chinese speaking leaders promoting the programs; their materials were not in Chinese; and they had limited outreach to the population in senior and other housing. To solve this problem, QWWI added a new partner - Enhancing Asian Community on Health (EACH). EACH is a small non-profit founded in 2014 with a mission of enhancing the health and well-being of individuals and families of all ages, especially those within the Asian community. QWWI added EACH to the Governing Board and provided them with a budget. EACH conducted outreach, help translate materials, and led community programs. The success of this collaboration speaks for itself. Since joining QWWI in 2015, 68 Asian residents participated in the community programs and approximately 15 of EACH's leaders have been trainer for the four community programs. QWWI's decision to partner with an organization focused on the health needs of specific populations by sharing budget and leadership has become a model for other PWTF partnerships.

In order to further the work on health equity, DPH and the PWTF partnerships formed a Health Equity Working Group this year. The goal of this working group is to provide guidance to DPH on the tools and supports that partnerships need in addressing health inequities. The kick off for this effort is the January 2016 PWTF summit which focuses on health equity. The aim of the summit is to provide a common understanding of health equity and begin discussing how DPH and the partnerships can further advance health equity.

Partnership Snapshot

Boston Partnership

Coordinating Partner:

The Boston Partnership is led by the Boston Public Health Commission.

Partnership Goal:

The goal for the Boston Partnership is to build a coordinated system of care for residents of Roxbury and North Dorchester using a racial justice and health equity framework.

Neighborhood Highlights:

- These two neighborhoods have a total population of approximately 140,000 residents, of whom 42% are Black and 23% are Latino.
- These neighborhoods face some of the city's and state's most substantial health inequities, including high rates of pediatric asthma and adult hypertension.
- Both neighborhoods also possess valuable community assets, institutions, and aspirations for improved health outcomes and better coordination of resources and services among providers.

Leaders in Health Equity:

The Boston Partnership is working with residents and organizations in these neighborhoods to develop systems-level solutions that improve health and advance racial justice and health equity.

4. Community Clinical Linkages: Extending Care into the Community

PWTF emphasized community-clinical linkages as one critical component of its model. The primary aim of the community-clinical linkages work is to expand disease prevention and management from the clinical setting into the community setting. PWTF believes that community-clinical linkages will demonstrate:

- improving overall health outcomes through self-management and prevention,
- reduce health disparities by linking patients with culturally competent care in the community, and
- reduce health spending through improved health and by moving patients out into the community setting to receive preventive/management services.

The PWTF model creates community-clinical linkages through community health workers and referral systems with community-based organizations (including MA e-Referral).

a. Community Health Workers

Community Health Workers (CHWs) have a critical role in extending care into the community; and over the past year, DPH has seen the CHW role - as a link between clinical and community organizations -solidify and expand within partnerships. Community Health Workers are public health workers who apply their unique understanding of the experience, language, and/or culture of the populations they serve in order to support a variety of functions to support improved individual and community health. They are hired primarily for their understanding of the community they serve and spend a significant amount of time conducting outreach.[i] Massachusetts leads the national effort to support this workforce and has the first-in-the-nation state certification board for CHWs along with a strong and active state professional association, Massachusetts Association of Community Health Workers.

Another success of PWTF is the considerable strides partnerships have made in integrating CHWs into care teams both in the clinic and in the community.

Partnerships reported having hired or planning to hire up to 60 CHWs at either full or part-time. Their area of focus varies by organization and includes hypertension, falls, pediatric asthma, tobacco, and diabetes. They are employed in equal number by community-based and clinical organizations, depending on partnership structure.

Partnerships are employing a variety of promising practices for integrating CHWs in care delivery. CHWs are providing a warm hand off from the clinic to the community program that has helped assist with the uptake in the enrollment in community programs. Several community programs have embedded their CHWs in the clinic to create stronger relationships between the clinic and community programs. Other community programs have set up CHW office hours in the clinic. CHWs are doing individualized outreach to community residents and help with enrollment and recruitment. CHW supervisors who are trained

Clinical Community Linkages in Action

Steve is a Licensed Social Worker employed by the Greater Lynn Senior Services (GLSS). He supports older adults in Lynn with various services including referrals to community programs and resources to enhance their health and quality of life.

His position is embedded at the Greater Lynn Community Health Center so that he is able to interact directly with the clinic staff as well as patients/clients on a day-to-day basis. This model has been successful for PWTF as it facilitates communication and allows a warm hand-off from the clinical organization to the community organization.

Steve has a unique perspective as he understands how both organizations function and has developed relationships with the staff at both organizations. In addition, it has helped the health center providers understand the programs available at GLSS. As a result he is better able to troubleshoot issues in real-time and identify opportunities for improvement.

Client Story—Older Adult Falls Prevention

Initial Home Assessment:

Following a referral to a CHW (Community Heath Worker) to conduct a home assessment, the older adult female client's home was reviewed for fall risks. The exterior staircase off her porch was identified as one area in need of augmentation to prevent a fall. While the client appreciated the visit, she did not see herself at "high risk" and was not concerned about falling. **Unfortunately, 5 days after the assessment, she fell down the porch stairs.**

Home Assessment:

She immediately visited the Community Health Worker at Central Boston Elder Services (CBES), told her visiting CHW about the incident and requested services for home repair. Because the CHW had already documented the home conditions and because he had introduced her to the services at CBES, it was easy to address the repair needs and connect her to services.

From the CHW: "We realize that normalizing the subject of falls will make elders feel more comfortable recognizing their own risks. Elders wish to remain independent in their homes and if we can continue these prevention strategies, they will see home modifications and tai chi classes as a means to keep them safe in their homes—we can go a long way to reduce falls injuries."

in CHW supervision are able to provide strong support to the CHW in the field; and the provision of networking opportunities for CHWs help them feel connected to others in the field. Lastly, training others in the clinical setting on the role of CHWs has helped with their integration.

These successes result from intentional training of both the CHW and the CHW supervision. Because one lesson **learned** is that integrating CHWs into care teams takes intention, training and technical assistance. To ensure proper training and support of CHWs and their supervisors, DPH mandates certain trainings and provides significant technical assistance and support to teams with CHWs.

For a list of all trainings provided to the partnerships, see Appendix C. To support this expanding workforce, the PWTF team organized a number of training opportunities over the past year, resulting in 22 CHWs trained and 18 supervisors trained. One important training is the CHW Core Competency training.

What makes PWTF unique?

The clinical-community linkage work of the PWTF is an exciting and innovative model that is vastly different than the way healthcare has been done in the past—*Comment by a Coordinating Partner*

The Core Competency Training prepares CHWs to serve in a variety of functions including:

- culturally appropriate health education and outreach,
- mediation between communities and health and human services systems,
- assuring access to services,
- advocating for individual and community needs, and
- building individual and community capacity.

The Core Competency Training introduces CHWs to a public health framework for understanding health issues for at risk communities. In addition, the training program covers a range of health topics which equips the CHWs with health information, knowledge, and referrals to respond to the diverse, multi-faceted needs of their clients and families.

[i] Agency for Healthcare Research and Quality. *Linkages Report*. Washington, D.C. https://innovations.ahrq.gov/linkages/report2. Accessed November 18, 2015.

The PWTF team has also organized condition-specific trainings for CHWs. These trainings cover asthma home visits as well as Home Safety Assessment for Elder Falls Prevention. Supervisors of CHWs took a CHW supervision skills training targeted toward those advising and supervising CHWs. Breakout sessions have been included at each program-wide Learning Session held to date that are designed to provide CHW-specific technical assistance, foster networking, and enable collective problem solving.

To align with other efforts in the state, PWTF is partnering with the Office of Community Health Workers, the Massachusetts Association of Community Health Workers and Massachusetts Public Health Association. These organizations have provided input into PWTF's work, provided training and networking opportunities, promoted insurance coverage of the CHW workforce, and raising awareness of CHW certification process in Massachusetts.

b. Clinic to Community Referrals

An early **success** of PWTF is the number of clinical to community referrals made this year. **Approximately 4,000 referrals for priority and optional conditions occurred in 2015**. The biggest numbers of referrals fall into hypertension and older adult falls, however, DPH continues to collect data from partnerships, so this number may undercount referrals made by condition. This high referral count highlights the success the nine partnerships have had in creating strong community and clinical linkages and bodes well for the ability to track outcomes in the future.

Another method for extending care into the community is to formalize referral relationships to include two-way communication between the clinical and community organization.

Bi-directional information sharing and referrals are at the heart of PWTF. These referrals also will play an important role in an expanded health care model such as Accountable Care Organizations as they seek to improve outcomes and control costs. Bi-directional referrals may transpire using e-Referral, but can also happen through more usual methods of communication. In PWTF, community health workers play an important role in linking patients to needed community services. True bi-directional referrals include the following elements:

- clinical organizations refer clients for services and programs offered by community-based organizations that will
- support improved management or prevention of the PWTF conditions;

Partnership Snapshot

Worcester Partnership

Overarching Goal:

The partnership goal is to implement the evidence-based intervention through a healthy equity lens and to help Worcester be the healthiest city in the Commonwealth by 2020.

Partnering Organizations:

- Community Legal Aid
- Edward M. Kennedy Community Health Center
- Fallon Health
- Family Health Center of Worcester
- Massachusetts Audubon Society of Worcester
- Mosaic Cultural Complex
- Worcester Public Schools/Head Start
- Worcester Senior Center

First Steps Towards Sustainability

Many partners in the Worcester community and the City of Worcester **are investing in-kind resources** to help maintain our PWTF activities as we think through our sustainability plans for the future.

Partnership Snapshot

Berkshire Partnership

Overview:
The partnership's programs and services have been strategically designed to ensure the partners work together to close the loop for Massachusetts resident by delivering comprehensive and evidence-based care that ultimately improves the health and wellness of the community.

Population Served:
This is the largest catchment area—serving all of Berkshire County

Partnering Organizations:

- Berkshire County Boards of Health Association
- Berkshire Medical Center
- Berkshire Regional Planning Commission/ Berkshire Public Health Alliance
- Berkshire South
- Community Health Programs
- Fairview Hospital
- Northern Berkshire Community Coalition Pittsfield Family YMCA
- Tri-Town Health Department
- Volunteers in Medicine

Linkages Priority:
A HUB has been established to provide clinical and coaching support for assessing eligibility, identifying co-morbidities, scheduling appointments into programs/classes, and referrals to appropriate resources. This HUB works in unison with CHWs and provides important patient feedback to clients' providers.

Partnerships innovate and problem-solve to address client barriers.

"Thank you for getting me transportation, I honestly wouldn't have showed up without it."
—PWTF Tobacco Treatment patient

- clients are contacted by community-based organizations and receive services; and
- community-based organizations document client enrollment, attendance, and program status and send this information back to clinical organizations.

These referral processes "close the loop" by allowing providers to know which clients need extra support to manage their conditions outside of a clinical setting. CHWs often help patients access community services by addressing any barriers to accessing services such as transportation or by utilizing motivational techniques to encourage participation. These bi-directional referrals enable a more comprehensive approach to a patient's needs by combining health information and care management with services provided in the community.

All partnerships actively refer between clinical and community organizations for a variety of health conditions and interventions and employ multiple methods for linking to services. They may send referrals electronically directly from a clinical site's EMR (see e-Referral section below), but many also take other forms.

Some sites use e-Faxes, a tool similar to e-Referral that enables clinical organizations to send referrals directly from their EMR. Emails, paper-based forms, phone calls, and hand delivery of patient referrals are also employed to enable the exchange of information and services between clinical and community organizations. In addition some of our partnerships have developed special tracking devices for their non e-Referral sites to not only keep track of clinical referrals, but also to enroll clients through their devices.

Several of the partnerships have developed and implemented systems to act as the central hub for PWTF referrals. These systems vary in their complexity and sophistication but have been an effective strategy for coordinating the referral process. The most sophisticated example is from the Berkshire partnership. Their Hub is a

centralized database where all clinical and community initiated referrals are sent. They have developed processes for referral submissions to occur electronically, via fax, or phone. They have hired several staff to run the Hub and process the referrals. Their role is similar to a case manager as they find the appropriate program for the individual or schedule the appropriate appointment and contact the patient/client with the information. They identify and troubleshot barriers like transportation issues and send feedback reports as appropriate. They have 2 nurses who support the Hub and conduct phone screening of patients/clients if necessary.

Another model is a web-based referral system that was created for the MetroWest partnership using a Google platform. This system has a shared calendar of all community-based interventions. The clinical staff is able to log in, make a referral and see in real time that a client has been referred. The majority of the communication between the clinical and community organizations is done using this system. The MetroWest Partnership also uses this system to report data to DPH.

Figure 6: Percentage of Referrals by Condition

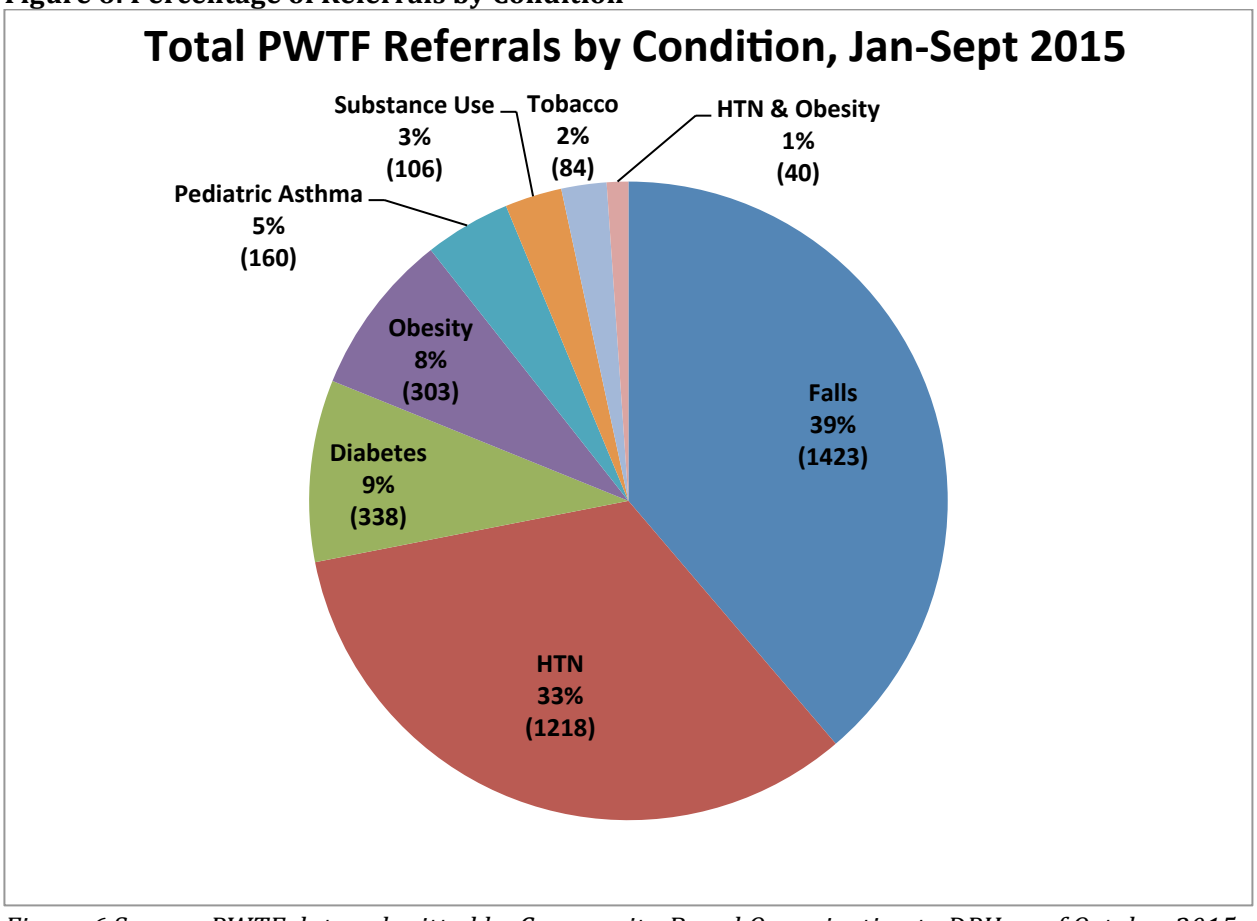


Figure 6 Source: PWTF data submitted by Community-Based Organization to DPH as of October 2015. Prepared by the Massachusetts Dept. of Public Health.

c. E-Referrals

E-Referral has been **successfully** implemented in all nine partnerships with 10 e-Referral connections made - resulting in 547 patients referred to community organizations and 824 feedback reports sent to health care providers from community organizations. DPH developed the e-Referral system to electronically link clinical providers with community services through a Center for Medicare and Medicaid Innovation (CMMI) State Innovation Model Testing Award.

This innovative system has the potential to change the relationship of health providers and community organizations as it formalizes communication and provides feedback to the health care provider on the status of their patients.

While these processes sometimes occur without this system, e-Referral simplifies the process and allows for regular communication and tracking of patient status that is difficult with a paper or phone system. PWTF grantees are tasked with establishing at least one bi-directional electronic linkage between a clinical site and community-based organizations (dyad) within their partnership by the end of the project and all of them have met this requirement. Seven out of nine partnerships are on track to implement more than one e-Referral dyad.

The e-Referral process is similar to other methods of referral with a few important exceptions. An e-Referral is initiated by a clinical provider and *sent through their EMR or EHR* to a community-based organization that offers an appropriate intervention for a given patient. The community-based organization then contacts the patient/client to explore interest and enrolls the patient in the community intervention. After engagement in the intervention, the community-based organization *sends a feedback report* containing agreed upon patient information back to the originating clinical organization via the e-Referral system. This electronic referral and communication system not only documents

Client Case Study

Chronic Disease Self Management Program

CLIENT BACKGROUND:

51 year old male at Neponset Health with diabetes and hypertension. Client noted to his provider that his parents, aunts, uncles, and grandparents all died in their 50s, due to chronic diseases.

Step 1—CLINICAL ASSESSMENT & e-REFERRAL

Patient at Neponset Health Center was referred through e-Referral to the My Life, My Health class at Ethos by his provider.

Step 2—COMMUNITY INTERVENTION

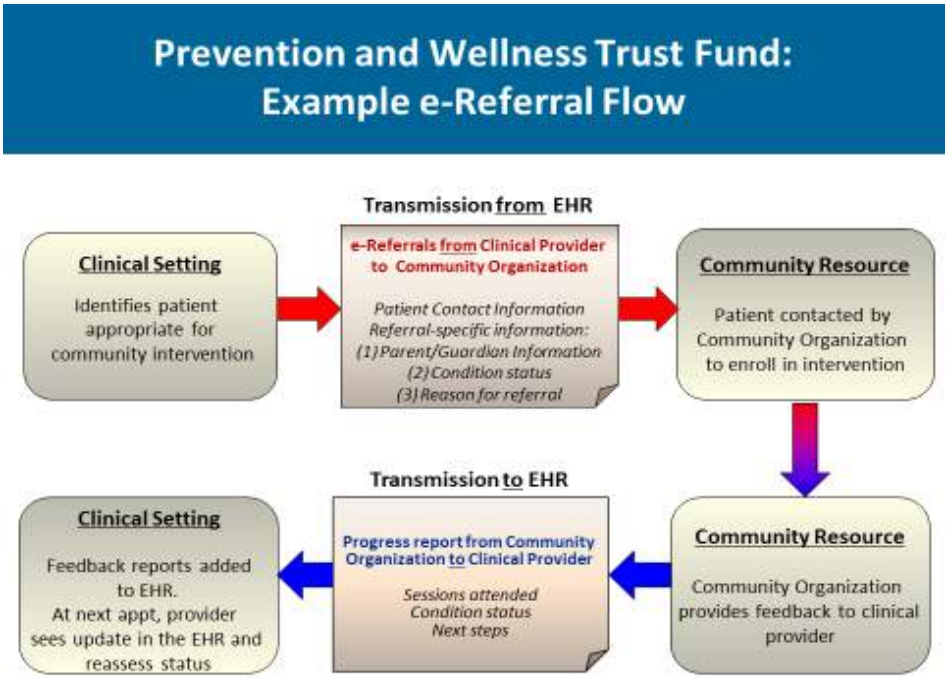
Client attended every class hosted and he noted the program was "immensely useful and the most important change" that he has made for his health.

RESULTS:

Blood pressure has been reduced and client has adopted many healthy lifestyle changes. Client success led to an invitation to join the Leader training class in April to lead by example, share his experiences, and be a role model to others for healthy living.

referrals and improves communications between the two (or more) organizations on behalf of a patient, but also serves as a way to *document and evaluate the health outcomes of community-based, health related interventions* in an efficient new way. This is an important tool for community-based organizations to demonstrate their effectiveness reaching and impacting the health of their patients.

Figure 7: E-Referral Flow Picture



DPH continues to partner with other state agencies in implementing e-Referral. The Commonwealth's State Innovation Model (SIM) grant award from the Centers for Medicare and Medicaid Services (CMS) has continued to enable the expansion of e-Referral as six PWTF grantees also received SIM-funded support in 2014 and 2015. Through the SIM grant, the e-Referral team works closely with the Executive Office of Health and Human Services' Information Technology Division and the Massachusetts Health Information Exchange (Mass HIway) to enable the hosting of e-Referral software and secure transmission of messages. In addition to connecting to e-Referral, the PWTF and e-Referral teams have helped six clinical organizations connect to the Mass HIway to send referrals.

DPH and the PWTF partnerships' clinical sites also work with EMR companies in implementing e-Referral. Last year, e-Referral sites had successful engagements with EMR vendors. DPH and PWTF partnerships' clinical sites worked with athenahealth and NextGen to enable their EMRs to use e-Referral. In 2015, DPH and clinical sites have engaged with additional vendors to enable eClinical Works and Greenway Intergy EMRs to send referrals and receive feedback reports. Next year, PWTF plans to work with clinical sites that use EPIC OCHIN.

Throughout this implementation year, grantees have made noteworthy strides in establishing e-Referrals. All nine grantee partnerships have at least one live e-Referral dyad, and several have multiple e-Referral connections established that are live. The types of clinical sites utilizing e-Referral have expanded beyond community

health centers to also include larger medical centers and physician practices. Nine clinical sites refer to nine community-based organizations that include 3 YMCAs, 3 senior service providers and 3 others types of community organizations (such as legal aid). The community-based offer interventions for falls prevention, hypertension, pediatric asthma, and diabetes (some clinical sites may refer into the same organization). The e-Referral team hopes to connect all sites to the tobacco quitline for tobacco cessation counseling in 2016. DPH will prioritize future connections based on degree of past success with e-Referral, evidence-base for requested interventions, EMR vendor, and DPH capacity. Appendix D outlines the e-Referral connections made by each partnership.

While clinical providers access e-Referral using the Electronic Medical Record (EMR) (with one exception), community-based organizations continue to use the web-based e-Referral Gateway (eRG) to receive referrals from clinical organizations as well as to send feedback reports. One challenge has been securing legal agreements between clinical and community partners. DPH has always required organizations sending and receiving e-Referrals draft and execute a legal agreement (typically a MOU or BAA) to address confidentiality and security issues involved in sharing patient/client referrals and information. Starting this year, DPH now requires this agreement be signed prior to beginning the onboarding process. This policy is the result of **lessons learned** in the first year, when legal barriers stalled progress on a handful of implementations in the middle of the on-boarding process.

To support additional implementation in the future, DPH has developed tools for PWTF partnerships and others looking to implement or expand e-Referral. Building on the "Steps to Go Live Checklist" developed last year, grantees now have access to an Implementation Process Guide that details key meetings, lists crucial decision points and to-do's, and serves as a project plan for the overall implementation process. Supporting documentation such as agendas and slide decks are part of the toolkit. In most cases, the DPH team will work closely with grantee partners using these documents. However, as partnerships expand their

Partnership Snapshot

City of New Bedford SHIFT Partnership

The Southeastern Health Initiative for Transformation (SHIFT)

Partnering Organizations:

- Boston University Medical Center
- City of New Bedford
- Community Nurse and Home Care
- Hawthorne Medical
- New Bedford Community Health Center
- New Bedford Housing Authority
- Seven Hills Behavioral Health
- University of Massachusetts-Dartmouth

Outcomes addressed:

- Falls Prevention employing STEADI and A Matter of Balance (MOB)
- Hypertension employing clinical identification and CDSMP or My Life My Health (MLMH)
- Pediatric Asthma employing clinical identification and home-based assessment
- Substance Abuse (pilot only) employing SBIRT and Brief Strengths-Based Case Management

Program goals include the following:

- Increase the number of Master Trainers and coaches, client referrals, and course offerings in Spanish and Portuguese for Matter of Balance and My Life My Health (CDSMP)
- Implement the home-based assessment intervention for pediatric asthma
- Promote recruitment and retention for the Substance Abuse community-based intervention
- Increase patient referrals by enlisting a new clinical partner (Hawthorne Medical)
- Increase outreach and marketing at clinical and community sites to improve health literacy, community awareness, and client recruitment and retention
- Develop a core workforce 'playbook' for CHWs to streamline programmatic operations, training opportunities and requirements, approaches for motivational interviewing and opportunities for advocacy

e-Referral connections, they will work independently on most steps, checking in with the e-Referral team at specified intervals and with each deliverable. DPH also has developed robust training materials and protocols to support both clinical and community organization staff who actively utilize e-Referral.

DPH plans to continue e-Referral beyond the SIM grant and PWTF funding, if additional support is secured. To start the transition in 2016, the e-Referral team will expand on the materials in order to allow for a less intensive onboarding process. This new process should support scalability and sustainability of the e-Referral system. In addition the e-Referral team will be working with legal and the Mass HIway to create the infrastructure to support e-Referral after the SIM grant ends in December 2017. DPH is committed to supporting the continuation of this project.

Blood pressure cuffs are a tool that can be used for self monitoring

e-Referral Case Study: Pediatric Asthma

The Challenge:

- Improving school nurse and provider communication is a goal of the Massachusetts Strategic Plan for Asthma.
- Currently, school nurses only have asthma action plans for approximately 6% of students with asthma[iii].

The Approach:

To address this problem, DPH and the Boston Partnership have established a novel electronic connection between community health centers and Boston Public Schools to address pediatric asthma.

As of September 2015, six community health centers in the BPHC partnership now have the ability to send patients' Asthma Action Plans and Medication Order Forms to Boston Public School (BPS) Nurse Liaisons through the e-Referral Gateway (eRG).

The Nurse Liaisons triage the information and then send it to the appropriate school-based nurses, enabling them to provide up-to-date, accurate, and timely care to students.

Continuum of Care:

BPS nurses can also send feedback reports in the eRG back to community health centers. These feedback reports can detail a change in a given student's asthma status. Should students' asthma status remain unchanged throughout the school year, BPS nurses will send a mid-year feedback report.

DPH will continue to assess use, functionality, and success of this pilot approach, looking to expand to and replicate with additional PWTF grantees and potentially others addressing pediatric asthma in 2016 and beyond.

[iii] Massachusetts Department of Public Health. (June 2015). *Strategic Plan for Asthma in Massachusetts: 2015-2020.* Boston, MA.http://massclearinghouse.ehs.state.ma.us/ASTHMA/AS931.html. Accessed November 18, 2015.

C. Grantee Support and Technical Assistance

This year saw major changes in DPH's technical assistance and support for partnerships. Over the last two years, DPH focused on developing strong partnerships and building the capacity of partnerships to work collaboratively and to prepare for implementation. It structured its technical assistance staffing around the categories of community, clinical and quality improvement.

A staff of three people and two part-time consultants supported DPH's technical assistance team. This team conducted intensive coaching visits to support partnership development and intervention development and they coordinated training on broad topics such as quality improvement, motivational interviewing and CHW core competency along with intervention specific training. As shown in the referrals data and partnership section, this technical assistance **succeeded** in placing the partnerships on solid footing to undertake such a large and innovative project. However, the small technical assistance team also meant that DPH did not have the capacity to fully understand each partnership's approach, fully align with public health efforts in the priority conditions or provide the comprehensive and

Partnership Snapshot

MetroWest Partnership

Overview:

- Led by the Town of Hudson, the partnership selected all four priority health conditions for this initiative – falls prevention among older adults, pediatric asthma, hypertension, and tobacco use reduction.

- The four municipalities within the partnership, namely Framingham, Hudson, Marlborough, and Northborough, represent over 140,000 residents with diverse ethnic and socioeconomic backgrounds.

Goals:

The partnership goals are to provide coordinated care between clinical and community health sectors and to improve health outcomes.

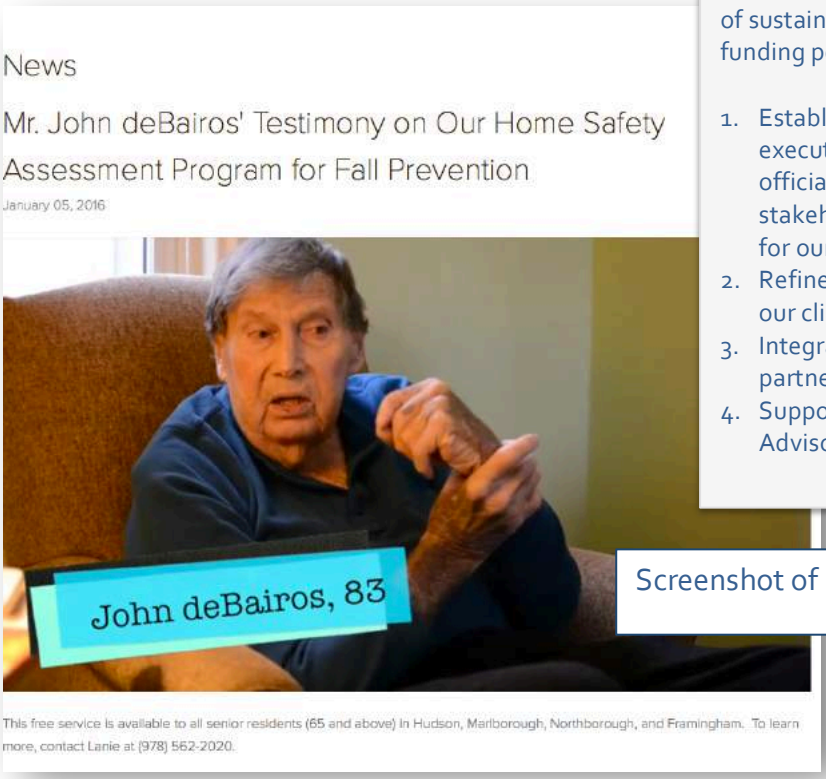
Partnering Organizations:

- Charles River Medical Associates
- EMK Community Health Center
- Framingham Health Department
- Hudson Health Department
- Latino Health Insurance Program
- Marlborough Health Department
- MetroWest YMCA
- YMCA Central Mass

Leading the Way Toward Sustainability:

We are focusing on four main areas to work towards the goal of sustaining the PWTF interventions beyond the grant funding period:

1. Established a regional Advisory Council, made up of top executives from healthcare organizations, elected local officials, state legislators, academia, and other stakeholders to provide feedback and serve as advocates for our work in this initiative.
2. Refine our newly developed linkage framework between our clinical and community health partners.
3. Integrating the interventions in this initiative into our partners' standard operating processes.
4. Supportive of and participate in the statewide PWAB Advisory Committee's sustainability efforts.



Screenshot of MetroWest Client Video online

intensive support needed for intervention implementation requested by partnerships. Applying quality improvement principles to its own technical assistance, DPH expanded its capacity in 2015 to meet partnership needs. The **lesson learned** in technical assistance is that the state needs to dedicate adequate staffing to provide oversight and technical assistance to partnership's as they implement interventions, especially when providing flexibility to implementation and interventions.

In 2015, DPH has redesigned and increased its technical assistance to have two components: 1) data driven quality improvement with intervention support and 2) partnership assistance and oversight. DPH has doubled its staffing for this work from three to six team members along with creating two additional positions that support operations and overall administrative tasks. DPH made these changes partially at the request of partnerships. As partnerships moved into implementation, they requested significantly more support on intervention delivery. In addition, DPH realized it did not have sufficient capacity to understand the approach of partnerships and thus was hindered in providing direction and oversight to their work. DPH concluded that three staff for technical assistance was not sufficient for the scope of work. This enhanced approach to technical assistance started mid-year 2015. DPH hopes that this new model will increase the support partnerships need to succeed at the PWTF model.

1. Technical Assistance: Using Data Driven Quality Improvement with Intervention Support

The framework for the quality improvement assistance provided by DPH is the Institute for Healthcare Improvement's (IHI) Collaborative model that uses rapid cycle "tests of change" in a shared learning community to accelerate the pace of improvement. The PWTF grantees conduct small tests of change using the Plan-Do-Study-Act (PDSA) method within their own partnerships and have the opportunity to share and learn from other PWTF teams at statewide learning sessions. The goal of the IHI Collaborative model is to facilitate and accelerate improvement through shared learning of others' successes and failures from tested changes on the same topic area.

Figure 8 below provides an overview of the key aspects of the IHI Collaborative model that includes: quarterly learning sessions; action periods between the learning sessions when teams are conducting PDSA cycles; and on-going supports for teams from TA coaches.

Partnership Snapshot

Lynn Partnership

Partnering Organizations:

- City of Lynn
- Greater Lynn Senior Services
- Lynn Community Health Center
- Lynn Public Schools
- Lynn Housing Authority and Neighborhood Development
- Massachusetts Coalition for the Homeless
- Metropolitan Area Planning Council

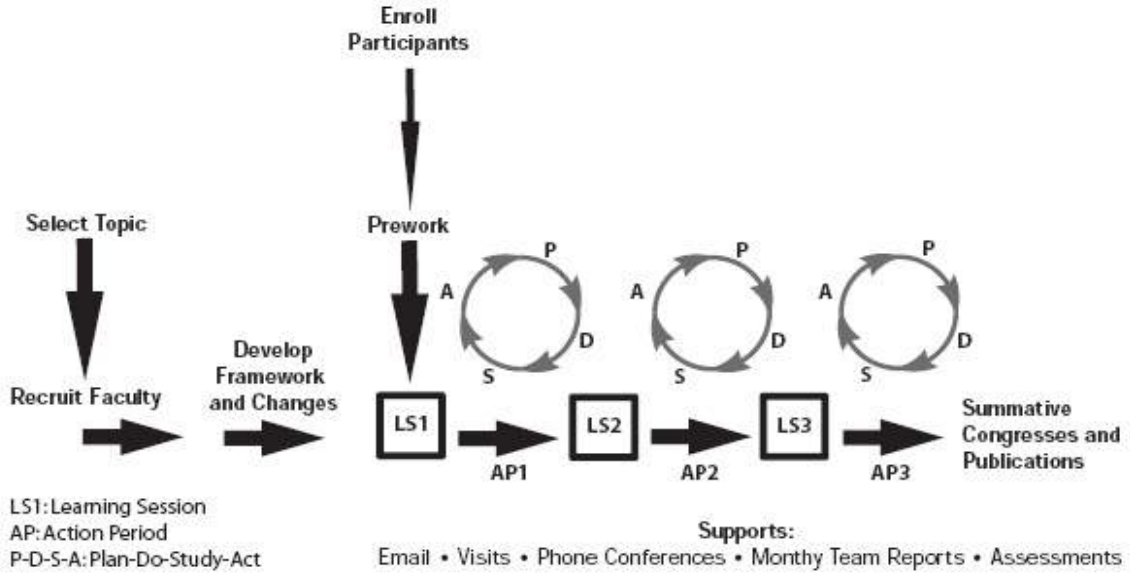
Strong Internal & External Communication:

- October 30th 2015 – held a kick-off stakeholder breakfast meeting with local community and organizational leaders.
- Monthly newsletter is sent to the Executive Team including graph of up-to-date referral #'s by intervention.
- Patient profiles and banners were produced for display at meetings and events (images can be found through this annual report.)

Achievements in Tobacco Policy to Date:

- Board reviewed 220 resident surveys and voted to proceed with Smoke- Free Housing Initiative
- Lynn awarded additional $12,000 for Technical Assistance for smoke-free private housing
- Resident tobacco champions identified and trained in August and September
- October 1st successful go-live date for Smoke-Free Housing policy

Figure 8. Institute for Healthcare Improvement Collaborative Model



DPH significantly enhanced its support for the four priority conditions in 2015 by augmenting staffing, further aligning with DPH efforts on the conditions, and hiring renowned subject matter experts for each condition to "coach" the partnerships. As of this year, PWTF has three stand-alone learning collaboratives on asthma, hypertension and older adult falls, three of the four priority conditions. For the fourth condition, tobacco use, DPH is integrating PWTF partnerships with the work of the Massachusetts Tobacco Control and Prevention Program. Two new staff persons, called Quality Advisors, run the hypertension and older adult falls collaborative, and the DPH Asthma Prevention and Control Program runs the Asthma Learning Collaborative. DPH procured subject matter experts for each priority condition who have the necessary knowledge and experience to coach the partnerships as they implement interventions and conduct data driven quality improvement.

This year, DPH continues to support training through various training institutes, professional organizations, and subject matter experts to train staff in the nine community partnerships on skills and topics relevant to their roles and their selected interventions. Trainings are held regionally or statewide and seek to enhance organizational and individual capacity to implement interventions in all priority chronic conditions. Training vendors include the Healthy Living Center for Excellence, American Lung Association, Partners Asthma Center, the University of Massachusetts, the Boston Public Health Commission, and the Maine Chronic Disease Program. Training areas include, but are not limited to, asthma home visiting for community health workers, community-based interventions for falls (Matter of Balance, evidence-based Tai Chi), chronic disease self-management programs (CDSMP), tobacco counseling, and QI methods.

DPH gathers all partnerships together regularly to learn and share best practices. Previously, this occurred at quarterly statewide Learning Sessions. Under the new TA model, partnerships will gather in condition-specific Learning Sessions that meet three times a year and PWTF Summits that are held twice a year. This year, DPH held three Learning Sessions in December 2014, March 2014 and June 2015. They were attended by an average of 150 participants each event. The purpose of these statewide Learning Sessions was to bring together all the key staff creating, overseeing and implementing the goals of PWTF in order to provide health condition content, training modules related to the specific components of an intervention and an important opportunity to network with other partnerships throughout the state. Going forward, since DPH will hold thrice a year condition-specific Learning Sessions, the full partnership meetings will be semi-annual "Summits" that cover a high-

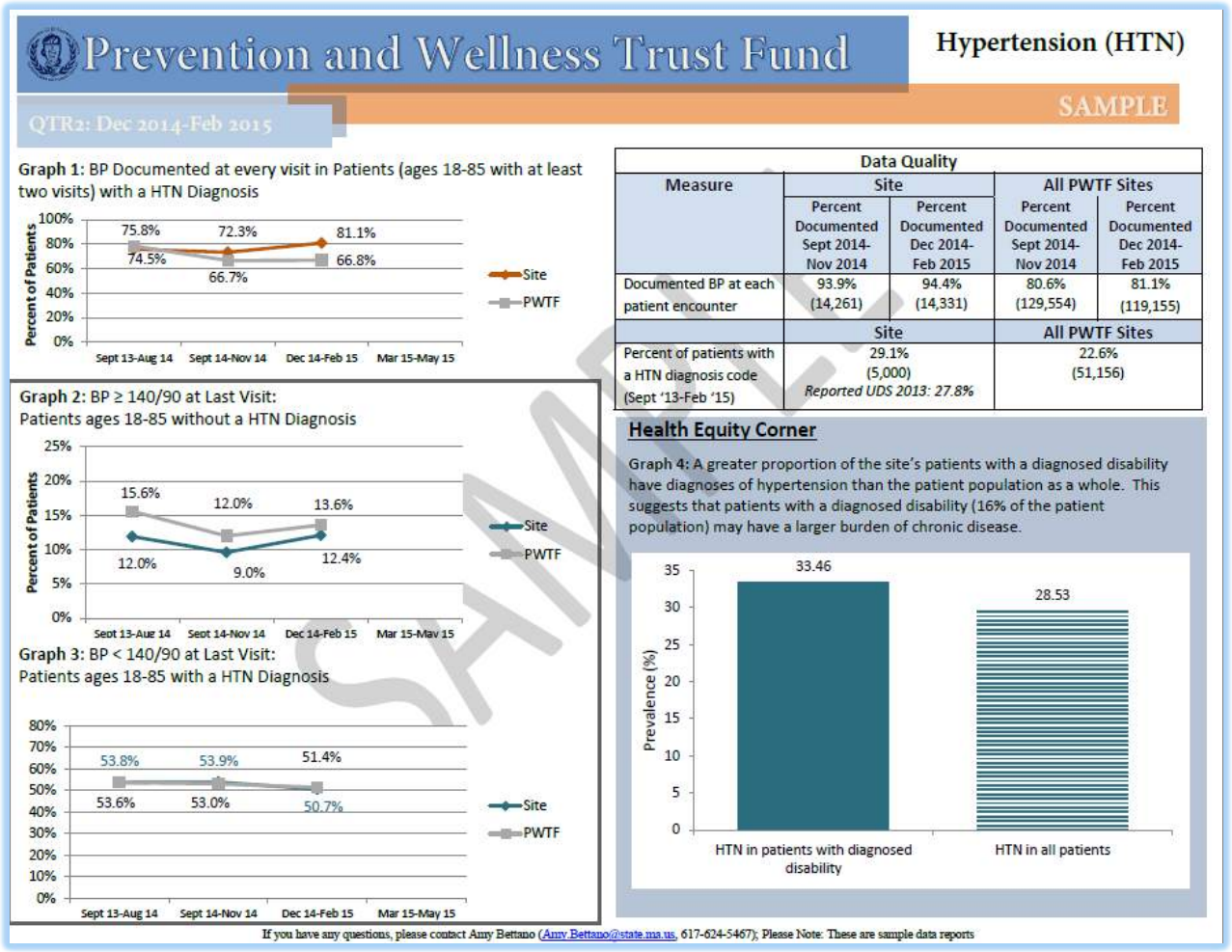


Figure 9: Sample Feedback Report

level overarching topic specific to the needs of every organization. The shift in our focus also allows more time for partnerships to share successes and strategize responses to challenges. The first newly titled statewide Summit to be held in January 2016 will focus on health equity.

The learning collaboratives unite the partnerships around common goals and objectives for the priority conditions. In 2015, DPH developed charters that included improvement goals and measures for each condition-specific collaborative. These charters:

- layout the overall goals of the collaborative (e.g. reduce asthma hospitalizations and improve asthma control for children with high-risk asthma),
- provide common metrics that all teams will use to measure their progress in addressing the condition (e.g. increasing the number of asthma action plans sent to the school nurse to 90%), and
- specify the roles and responsibilities of all members of the collaborative (such as what DPH will provide and what the partnership teams need to do).

The charters include clinical, community and linkage metrics. As partnerships move into implementation this year, the charter provides concrete goals and metrics to assess their progress.

To support data driven quality improvement, DPH provides quarterly feedback reports to each partnership on the conditions addressed. The reports align with the metrics in the charter and compare their progress to other partnerships. This process is further described in the Evaluation section. The learning collaborative coaches use the data report to work with individual partnerships and help them identify quality improvement methods to increase identification, referral, enrollment, and retention of patients in the PWTF interventions. An example of a feedback report is below.

One **lesson learned** in using data to drive quality improvement was that partnerships found it difficult to do PDSA cycles on interventions that were in development or just being implemented. They felt PDSA cycles were not meaningful and saw them as extra work needed to satisfy a contract deliverable. Based on this feedback, DPH offered individualized coaching on PDSA cycles. In addition, DPH has postponed the condition-specific PDSA cycle requirement until December 2015, after the condition-specific learning collaboratives for older adult falls and hypertension meet. DPH hopes that as interventions get underway, PDSA cycles will hold more meaning for partnerships as they seek to increase referral numbers or patient retention.

2. Technical Assistance: Partnership Assistance and Oversight

DPH has expanded its capacity to work with partnerships to better understand their work and provide guidance to their efforts. Similar to its earlier model, it has hired three Technical Advisors who each focus on three partnerships organized by geographic region. The Technical Advisors are the "experts" for DPH on the partnerships. They work with partnerships on aligning their work with the PWTF goals and the PWTF model. They approve work plans and budgets, review progress reports, and respond to technical assistance needs. In order to better understand the successes and challenges of each partnership, DPH amended their work plan template to better capture condition specific activities, the budget allocated for this work, and target-reach numbers. DPH hopes partnerships will use the new work plan and the charter goals to plan and prioritize their work for Year 2.

One method for learning about partnership progress has been the coaching visits. These visits halted in July 2015 when DPH focused on redesigning its TA team. In the first half of the year, the TA team conducted "Coaching Visits" with all sites at least once. The TA team met with partnership subcommittees to solve issues encountered during implementation. Going forward, the technical advisors will have regular contact with partnerships through weekly calls and quarterly in person meetings focused on overall functioning of the partnerships, overcoming any challenges and identifying successes. The Technical Advisors will work with partnerships on local sustainability, health equity, and overall implementation. They are DPH's one point of contact for their partnership.

Partnership Snapshot

Quincy Weymouth Wellness Initiative

Overview:
Led by Manet Community Health Center, the Quincy Weymouth Wellness Initiative (QWWI) serves residents of Quincy and Weymouth.

Partnering Organizations:
QWWI currently is comprised of 10 partners including:

- Manet Community Health Center
- South Shore Hospital and Steward Medical Group
- City of Quincy
- Town of Weymouth
- Bay State Community Services
- Enhancing Asian Community on Health (EACH)
- South Shore Elder Services
- South Shore Workforce Investment Board
- South Shore YMCA

Health Conditions Selected:

- Falls Prevention
- Hypertension
- Tobacco
- Substance Abuse

Well Trained Teams:
As of July 2015, QWWI has:

- 32 CDSMP Trainers
- 42 Matter of Balance Trainers
- 7 Tobacco Cessation Counselors (with two more now being certified)
- 11 SBIRT counselors

One **lesson learned** is that there is an ongoing need for *operational* support for the coordinating partners that doesn't end when they are fully into implementation. To that end, DPH quarterly convenes the Program Managers of the Coordinating Partners to provide direct assistance to the lead agency. Originally, a short "early-bird" session was held exclusively for the coordinating partner program managers before the Learning Sessions. The Coordinating Partners found this time so valuable that ultimately DPH developed an all day break-out session for them at the Learning Sessions. At the last Learning Session, Coordinating Partners' Program Managers requested to have a separate meeting for this group so that they could attend the other segments of the learning session. DPH now provides stand-alone full-day coordinating partner sessions on a quarterly basis that are hosted by the partnership sites on a rotating basis.

3. Technical Assistance: Tools and Resources

a. Communication

A project as complex as this requires strong communication to ensure all partners stay on mission. One component of DPH's communication strategy is the weekly electronic newsletter called the "PWTF Weekly Update." The goal for the weekly update is to serve as a weekly digest of all the PWTF-related information needed by grantees.

To date we have delivered 90 newsletter "weekly updates."

It serves as a singular resources for all information related to PWTF activities or relevant information outside of PWTF. A recent facelift makes the update more user-friendly and easier to navigate. The FAQ section includes questions from grantees and the DPH responses. In addition, the FAQs are also catalogued in a separate document that is posted on our SharePoint page. SharePoint is another resource for all information sharing. All individuals within the partnerships are given credentials to use the secure resource. Individuals are directed there from the update to access toolkits, materials, templates and shared partnership resources. In turn, grantees are also expected to use this resource to maintain all DPH materials.

Going forward, DPH will support other communication mechanisms for the condition specific learning collaboratives, as the number of partners working with DPH expands to include more clinical and community professionals who will need more real time information.

b. Subject Matter Experts

As mentioned under quality improvement, DPH has aligned its work with leaders in the field to ensure strong intervention adherence to the evidence base and alignment with the broad public health efforts of the department. Subject matter experts (SMEs) with specific content expertise have been supporting partnerships since inception; but with implementation, partnerships requested more intervention support. Over the last year, DPH has garnered the support of both internal DPH experts and external experts. First, DPH has worked to strengthen the alignment of PWTF with the public health messages of DPH on asthma, hypertension, older adult falls, and tobacco. Additional external experts with particular intervention, clinical or community expertise have been engaged to provide technical assistance to teams on all priority interventions. Moving forward, these experts will support the priority conditions either through leading learning collaboratives, working with individual teams, regular calls with partnerships, webinars, and through reviewing work plans and feedback reports.
The grid in Appendix E provides the list of key experts for each condition and/or intervention.

c. Toolkits

To facilitate system-wide improvements, DPH developed resource "toolkits" that are available on SharePoint. The toolkits supplement the charters and support community and clinical team members to deliver care and services consistent with national guidelines and

Best Practices in Practice

The DPH Asthma Prevention and Control Program created an *Asthma Home Visiting Protocol Manual* for the PWTF CHWs doing asthma home visits. This manual provides detailed guidance for each visit, educational materials for the families, and checklist to use at each visit.

The manual is available in print and on-line and the educational materials have been translated into Spanish and Haitian Creole. The Asthma Program also offers training on the home visits and a mentoring program for CHWs who are new the intervention.

recommendations. The toolkits provide a roadmap for grantees to identify patients with the priority condition, provide evidence-based care to manage illness and reduce risk, and refer patients to appropriate resources in the community to support self-management.

d. DPH Staffing and Infrastructure to Administer Grantee Program

DPH has built a strong team to provide the enhanced technical assistance requested by the partnerships. This year, DPH had turnover of key members of the Technical Assistance team and hired a new Program Manager in the summer of 2015. These changes provided an ideal time for DPH to revisit its staffing model. After several months of strategic planning, DPH redesigned its staffing model to include 5 new full-time positions. These positions supplement seven existing positions and two part-time contractor positions, expanding DPH's capacity in fiscal management and contract oversight, interventions and partnership support, and administrative support. **The Administrative Team's** primary responsibilities include:

- leading and coordinating long term strategic planning,
- promoting PWTF including preparing all written reports,
- aligning PWTF with department efforts,
- ensuring adherence to PWTF goals including overseeing bi-annual PWTF summits,
- developing and managing budgets and contracts, and
- planning and convening of Prevention and Wellness Advisory Board meetings.

In addition to the PWTF Program Manager, the administrative team includes a full-time Operations Manager and a one full-time Program Coordinator along with one contractor providing communications support. The administrative team also coordinates with other internal DPH departments and contractors that collaborate with PWTF. The Program Manager started in June 2015. The Operations Manager, a new position, started on August 2015. The Program Coordinator started in October 2015.

The Technical Assistance (TA) Team, comprised of the Technical and Quality Advisors and the e-Referral Specialist, is responsible for:

- administering learning collaboratives for hypertension and falls,
- providing all quality improvement coaching, intervention support and technical assistance to PWTF grantees, and
- working with subject matter experts to ensure adherence to the evidence base.

PWTF Bi-Annual Learning Summit
Health Equity—January 2016

The TA team is also responsible for monitoring and sharing progress on benchmarks and indicators, identifying and creating resources and materials, and securing training to help grantees progress to outcome goals. (This team relies on external experts - for identifying meaningful outcome and process measures and learning sessions - and internal DPH experts for content expertise and message alignment.) The e-Referral Specialist is a part-time contractor who liaisons with the DPH e-Referral team and provides the technical and workflow support to partnerships so that they are able to establish bi-directional e-Referral between clinical and community partners. In addition to the Technical Assistance Team Manager, the TA Team includes 3 Technical Advisors who each support and manage 3 partnerships, and 2 Quality Advisors who each manage the Hypertension and Falls Learning Collaboratives, along with liaising to other DPH programs. The TA Team also has one Program Coordinator for overall project support and one contractor who acts as liaison with the e-Referral team at DPH and the partnerships on e-Referral.

The Evaluation Team is responsible for coordinating and planning evaluation processes such as quality improvement, and organizing, sharing, and analyzing data and other information among staff and grantees. This team is led by the Director of the Office of Statistics and Evaluation in the Bureau of Community Health and Prevention and is supported by two full-time epidemiologists who are staff of the Office of Statistics and Evaluation. In addition, Harvard Catalyst is the independent evaluator of PWTF. While independent, Harvard Catalyst partners with DPH in understanding the program and explaining the independent evaluation design.

DPH Leadership is responsible for overseeing PWTF and ensuring its work meets the legislative mandate. DPH Leadership includes the Commissioner of the Department of Public Health who chairs the Prevention and Wellness Advisory Board and the Director of the Bureau of Community Health and Prevention who supervises the PWTF Manager.

Client Case Study

Chronic Disease Self Management Program

CLIENT BACKGROUND:

63 year old male with obesity and Type 2 Diabetes

Step 1—CLINICAL ASSESSMENT AND REFERRAL

Identified by his PCP who determined he was a candidate for CDSMP.

Step 2—COMMUNITY INTERVENTION

Referred for local community program conducting chronic disease self managment classes with additional nutritional support and a recommendation for diabetic shoes to support continued walking plan. Attended 5 of 6 sessions.

RESULTS:

Reduced reliance on medication by 66%; lost 24 pounds (BMI reduced from 35.4 to 32)

CLIENT FEEDBACK:

" The program was GREAT… I reduced my medication and my doctor said it might get reduced further next month after labwork."

D. Evaluating the Prevention and Wellness Trust Fund

The goals of the Prevention and Wellness Trust Fund (PWTF) are to improve health outcomes and contain healthcare spending. Chapter 224 states that "a commission on prevention and wellness shall" evaluate the effectiveness of activities funded through the grant, including the extent to which the programs have addressed the goals set in the legislation for prevalence, health disparities, and health care costs.

Two types of evaluations focus on PWTF. The first is led by DPH and focuses on using data for quality improvement purposes, as mentioned in the above section. The second is led by Harvard Catalyst and focuses on conducting the independent evaluation of PWTF required by legislation. Both serve important purposes that either improve the functioning of PWTF or evaluate whether it met its legislative goals.

1. Using Data to Drive Quality Improvement: DPH's Evaluation Efforts

To support the PWTF model of continuous quality improvement, outcome data is collected from the partnerships. Using data, DPH works with partnerships to ensure process modifications produce positive effects as sites adjust interventions and practices. Every three months, clinical and community sites working on the Trust submit encounter-level or aggregate data on their interventions and service population. Unlike traditional public health data sources (such as public health surveys or claims datasets), partnerships' electronic medical records and community-based organization data are far closer to being a real-time data set because of the frequency with which it is reported. DPH cleans and processes the data before populating the quarterly quality improvement reports. Metrics in the data reports include National Quality Forum (NQF) measures, demographic data, intervention statistics, and health equity breakouts; sheets are provided at the individual clinical or CBO level, as well as being aggregated by condition and partnership. Data is trended across quarters so that sites and partnerships can use the sheets to identify focus areas for quality improvement work and to keep track of their progression (example sheets are provided in Appendix F). Additionally, aggregate data for all sites working on the condition or intervention is provided on the sheets so that participants can gauge how their efforts compare to their peers in the Trust.

DPH also analyzes data to prepare for reports such as this one. Using the Behavioral Risk Factor Surveillance Survey, CaseMix data that includes hospitalization charges, MDPHnet[1], and the Massachusetts All Payers Claims Database (MA APCD), DPH can analyze how Trust communities compare to the state in terms of burden of disease, health care utilization, and health behaviors. Appendix G includes tables on the conditions addressed by PWTF and provides a snapshot of where each partnership stands compared to each other and the state.

a. Summary of surveys and action

DPH seeks to improve its processes and applies quality improvement principles to its own work. DPH obtains feedback from grantees in a variety of ways and strives to be responsive to their needs. The main methods of obtaining feedback include an annual site inventory survey; a qualitative survey; request for information for this annual report summarizing successes and challenges; and participant evaluations conducted following all training sessions (learning sessions, webinars, and site visits). Additionally, DPH receives feedback from grantees during our interaction with them via email, phone, and other meetings.

Key findings of these cumulative processes are summarized below along with DPH's responses.

[1] MDPHNet is an automated public health surveillance system that uses data routinely stored in electronic health records. The system allows the Massachusetts Department of Public Health (MDPH) to initiate custom queries against participating practices' electronic health records while the data remain behind each practice's firewall. In addition to getting results that are specific to certain practice sites or zipcodes, MDPHnet also has the capability to extrapolate results to the state level.

- Partnership **successes** include partnership building, strengthening of existing relationships and developing new relationships among diverse organizations. Many responded that execution of the Memoranda of Understanding (MOUs) or Business Associate Agreements (BAAs) among partners were notable milestones because they often took much longer than planned. Likewise finalizing data collection processes (such as collaborating with IT to ensure appropriate fields are built, validating reports, integrating EMRs/DRVS, refining software) was noted as a success. Related to interventions, success revolved around hiring and training of staff to implement interventions, developing condition specific algorithms and workflows for the referral, and initiating of interventions.

- Many of the **challenges** cited were the converse of the successes noted above. Several grantees responded that it was challenging to work with their partner organizations for the following reasons: lack of understanding of prioritization of conditions or interventions, inexperience with quality improvement / Plan-Do-Study-Act (PDSA), lack of technology and meeting spaces, not speaking a shared language, high need for communication/coordination, slow partner organization onboarding process, and difficulty building consensus and maintaining engagement.

- Data collection also posed significant challenges as often the data needs for PWTF did not match data needs from other funding sources (such as CDC), there was a lack of coordination across partnerships, lack of IT infrastructure or support, and data collection tools were unclear initially. Initial implementation of the interventions was challenging as well due to lengthy hiring processes, hiring timelines that differed among organizations, lag time between hiring and trainings, sharing staff across domains, and staff retention. Partnerships felt that they did not have clarity on the components of the interventions. Partnerships had challenges around participant recruitment.

- In relationship to DPH's technical support, partnerships **appreciated** DPH's flexibility and feedback on their work. The site visits, webinars and one to one support helped partnerships succeed. They found DPH staff to be hard-working, responsive and accessible. They liked the DPH PWTF Weekly Update.
- **Areas of improvement for DPH** identified by the partnerships included: lack of alignment and clear direction between DPH staff, multiple requests for the same information, the PWTF SharePoint website is difficult to navigate and not kept up-to-date, lengthy delays in getting a response from DPH and lack of communication on changes in requirements, lack of feedback on documents that are submitted to DPH and in consistent support across conditions.

The structure of the statewide learning sessions has changed over time as a direct result of participant input and evaluations.

In response to this feedback, DPH redesigned its Technical Assistance Team to increase staffing. DPH believes some of the issues reported by the partnerships resulted from lack of adequate staffing to review documents or respond to requests. In addition, PWTF lacked a manager for almost a year. DPH anticipates that the new Manager can help ensure alignment and clear direction. Lastly, DPH added significant staff and subject matter experts to assist with providing more consistent support across conditions.

b. The Independent Evaluation (written by Harvard Catalyst)

Harvard Catalyst has assembled an experienced evaluation team led by Professor Michelle Williams, chair of Epidemiology at the Harvard T.H. Chan School of Public Health. An experienced full-time project manager for the Harvard team is in place. The search for a full-time doctoral-level Research Associate with claims analysis experience has been challenging, because the work of combining public and

commercial claims is an emerging field. Some key variables in the All-Payers Claims Database (APCD) are not yet ready for use. The Harvard team will probably have to build this expertise in the initial stages of this evaluation.

Given the time frame in which the interventions will be implemented, and the lag in availability of data covering the implementation period, it is unlikely that Harvard will be able to document actual cost reductions and outcomes improvements by the time of delivery of the final report to the legislature in January 2017. However, Harvard's analysts from the Center for Health Decision Analysis expect to model return on investment (ROI) based on projections from outputs. Harvard's informatics expertise is assisting DPH in its work with MassHealth, Executive Office of Health and Human Services and Center for Health Information and Analysis in the development of a data warehouse linking critical data sets such as the MA APCD, Case Mix, death registry, and EMRs from multiple practices through MDPHNet. These secure data linkages may take a year or two to develop with appropriate safeguards, but once in place they will enable the Harvard team to evaluate actual changes in outcomes and costs for the four priority conditions during a more appropriate intervention period.

The Prevention and Wellness Advisory Board's evaluation subcommittee has clarified, and the Harvard team agrees, that the independence of the Harvard evaluation is not compromised by the close collaboration necessary between Harvard, the grantees, and the DPH in the design and iterative adaptation of the evaluation and the collection of data. Among other things, this collaboration will allow Harvard to document PWTF innovations in systems and processes, including e-Referral, collaboration between clinical and community partners, and targeted use of community health workers, through a combination of quantitative and qualitative data. In that way, when Harvard is eventually able to accurately measure costs, outcomes, and ROI, it will also be able to understand what each of the nine communities did to put evidence into practice, and to offer explanations for how they succeeded or why they failed.

E. Sustainability

Clinical care has a limited role in impacting the overall health of individuals. The Prevention and Wellness Trust Fund represents an unprecedented investment by a state government in linking public health prevention strategies to clinical care in order to improve health outcomes and contain healthcare spending. It is the first step in recognizing that health begins outside the health care setting.

This nationally innovative project charts new ground for both health care and public health. The sustainability of the model of PWTF along with the partnerships and interventions funded by PWTF rests partially on the opportunities presented through the changing landscape of health reform and partly on the success of the PWTF model in demonstrating improvements in health and reductions in cost. Alternative payment methodologies (APMs) and Accountable Care Organizations (ACOs) both hold promise for supporting the type of partnerships, linkages and interventions funded by PWTF. However, this landscape is still under development and at the beginning stages. When the current PWTF sunsets in June 2017, the health care system may or may not be prepared or able to embrace many of the goals and activities of PWTF. In addition, the lag time in data (claims data are approximately nine months behind) and required start-up time for PWTF grantee partnerships mean that the January 2017 independent evaluation report to the legislature will provide a glimpse of the potential of this model but not demonstrate its full effect. Therefore, the Sustainability Committee of the Prevention and Wellness Advisory Board is exploring several options for sustaining PWTF.

Described in more detail below, the PWAB charged the Sustainability Committee with developing recommendations for sustaining PWTF. The committee is exploring three opportunities for PWTF: 1) adoption of PWTF interventions and systems by the health care system; 2) local mechanisms for sustaining PWTF partnerships and interventions; and 3) ability to sustain PWTF statewide. Next year, this

committee will make recommendations to the Prevention and Wellness Advisory Board.

At the same time, PWTF partnerships have begun to explore local sustainability by convening key local decision makers and stakeholders. Both the Metrowest and Lynn Partnerships have convened a stakeholder group that meets regular to develop recommendations for local sustainability of the work. DPH will be encouraging other partnerships to convene their local stakeholders in the coming year.

Sustainability of PWTF includes ensuring the capacity to maintain program services at a level that will provide ongoing prevention and treatment for the priority health conditions in order to have a population health effect.

In the coming years, the health care system could sustain parts of PWTF through either covering the interventions or embedding activities of PWTF in the health care system. This sustainability will only occur if health insurers cover PWTF interventions through a fee-for-service or alternative payment model. In some cases, the interventions may also be covered through insurance wellness programs. In addition, under the alternative payment models, the providers also have the capacity to cover PWTF interventions through bundled or global payments. Some of the PWTF interventions already have a strong evidence-base and have demonstrated a strong return on investment (Tier 1 interventions). Others are evidence-informed and PWTF is testing their validity. PWTF is testing both types of interventions on a scale not tried in Massachusetts and can provide evidence to the health insurance system for possible for improving health and controlling costs at scale.

In addition, the linkage aspect of PWTF holds promise for the health care system to improve outcomes and reduce costs. PWTF evaluation will assess whether this key concept resulted in improved health and reduced costs. However, components of this linkage already have demonstrated results such as community health workers and e-Referral. Numerous studies attest to Community health workers ability to reduce chronic disease symptoms and control costs. Adding CHWs to the care team enables each team member to work at the top of their license while also helping develop trusting relationships with hard to reach patients or clients. E-Referral helps providers, insurers and public health agencies formalize the connection between health care providers and public health agencies while also allowing for tracking and evaluation of this referral.

PWTF is testing whether the model of linking clinical providers with community interventions while providing adequate funding and sufficient population size can improve health and reduce costs. As the case is made for increased coverage for these services, the health care system will most likely incur savings. These savings, to the taxpayers of Massachusetts, pose an opportunity for the state to reinvest in broader public health programs that focus on the primary prevention of disease – thus focusing on Massachusetts having an overall healthier population that requires less health care services.

MASSACHUSETTS WORKING ON WELLNESS PROGRAM Section 3

A. Background

Chapter 224 calls for the increased adoption of workplace wellness programs and allocates up to 10% of PWTF funds towards this effort. This mandate supports work place health promotion as a way to improve employee health and well-being, reduce chronic disease risk, and curtail rising health care costs. In 2014, DPH began developing a program framework for the PWTF Worksite Wellness Initiative using lessons learned from the Working on Wellness program (a worksite wellness training program offered by DPH from 2008-2013) and results from a 2014 worksite health survey of Massachusetts businesses. Information garnered from these initiatives showed that businesses were interested in worksite wellness programs but needed support from experts, a community that offered opportunities for collaboration, and financial resources to help launch a program. Building upon these findings, DPH has designed a training and capacity building program, with seed funding, to support MA employers in implementing comprehensive, evidence-based worksite policies and programs that promote and protect the health of their employees. The rest of this section describes the progress made to date in implementing this Worksite Wellness Initiative.

B. Program Progress and Updates

1. Program Team

DPH is working with Health Resources in Action (HRiA), Advancing Wellness, the University of Massachusetts Medical School (UMMS), and the University of Massachusetts Lowell (UML) to develop, implement and evaluate the Worksite Wellness Initiative.

These contractors were selected in the spring of 2015 through a competitive bidding process and are charged with providing subject matter expertise in worksite health promotion, training and technical assistance to employers, and monitoring and evaluation. Specifically, HRiA is working with DPH on the design of the wellness program and on business capacity development, along with recruitment and distribution of seed funds. HRiA has subcontracted with Advancing Wellness to assist in providing these services. UMMS has subcontracted with UML and will be providing technical assistance to employers on data collection, management, and analysis, in addition to monitoring and evaluating the wellness program itself. Collectively, the program team brings a unique set of skills to help employers succeed in developing a culture of wellness.

2. Program Launch

The program team, in collaboration with DPH, has met weekly since June of 2015 to design the Worksite Wellness Initiative and plan for the launch. The program was given the name Massachusetts Working on Wellness (MAWOW) and officially rolled out on August 20, 2015. During this time, recruitment efforts began and the program website (www.mawow.org) went live. Recruitment strategies included emails and presentations to employer associations, distribution of flyers to businesses, informational webinars, outreach to PWTF and Mass in Motion communities, and social media posts on Facebook, Twitter and LinkedIn.

Employers were encouraged to visit the program website to learn more about Working on Wellness as well as sign up for an informational webinar, complete an online application, and access wellness blogs.

3. Program Components

The Working on Wellness program will provide training, technical assistance and other support services to participating employers over a course of 10 months. The program uses best practices in the field of worksite health promotion to help build the skills, knowledge and capacity of the employers. Program components will include webinars, group technical assistance calls, self-paced modules and case studies. The program will also emphasize community linkages and partnerships to help employers enhance their wellness programming. Each of the following components will be provided to participating employers:

- **Training.** The training curriculum will reflect the elements of the Worksite Wellness Program Development Model (described in the next section). Learning opportunities will be presented in webinars and using an online learning management system. Participating employers will have a secure log-in and can access the online learning management system at www.mawow.org
- **Technical Assistance (TA).** Worksite Wellness Advisors will provide technical assistance in group settings through an online learning community. Worksites will be clustered based on organizational characteristics to encourage sharing of experiences across the businesses.
- **Online Support Resources.** Working on Wellness will provide articles, newsletters, tools, case studies and other resources through an online portal.
- **Community Resources.** Working on Wellness will create opportunities for worksites to link to community resources that will support their respective worksite wellness program. This may include local health resources and program resources to enhance their programming. Working on Wellness worksites will be able to share best practices and ideas through online learning forums and connect with like-minded organizations.
- **Monitoring and Evaluation.** Worksites will be provided with tools to collect data on their employee population and worksite environment. The evaluators from UMass will use this data to establish baselines and to measure impact over time. Participating worksites will learn how to develop ongoing monitoring and evaluation processes and practices.
- **Seed Funding.** Seed funding ranging from $5,000 to $10,000 will be provided to each worksite. Working on Wellness will provide guidance on utilizing the seed funding to develop a Worksite Wellness Action Plan to implement effective and sustainable policies and programs.
- **Best Practices Forum.** This annual event will be an opportunity to share best practices, lessons learned and success stories.

4. Program Development Cycle

The Working on Wellness training curriculum follows the Program Development Cycle. The cycle, illustrated in Figure 10, reinforces the key elements needed for a successful worksite wellness program, including leadership buy-in, assessment, planning, community resources, implementation and evaluation. The training curriculum guides employers through each of the steps in the cycle and will include lectures, activities and resources. TA calls will complement the training curriculum and will address participants' needs, issues and barriers throughout the Program Development Cycle.

Figure 10: Working on Wellness Program Development Cycle

The online training curriculum modules will be available to employers via the online learning management system and are built on the following best practices:

- **Buy-in**: engaging both management and employee to define the business case for the initiative and to identify appropriate resources to successfully implement the initiative.
- **Assessment:** identifying employee needs and interests, as well as evaluating the current worksite environment.
- **A planning process** to develop a worksite wellness action plan that includes policy and program goals, objectives, priority interventions, and organizational infrastructure such as establishing a wellness committee and engaging senior leadership.
- **Implementation:** putting into place selected health promotion programs, policies, practices, and environmental supports, and making them available to all employees. This will include focus on priority interventions targeted to tobacco use and hypertension.
- **Leveraging Community Resources:** connecting participating worksites to local resources and organizations to further support the worksite wellness action plan.
- **Evaluation:** systematically investigating the reach, quality, and impact of the worksite wellness initiatives.

5. Eligibility Criteria

To be eligible to apply to the Working on Wellness program, employers must attend an informational webinar prior to applying and must meet the following criteria:

- A Massachusetts for-profit, non-profit corporation or government entity.
- Offer health insurance benefits to your employees.
- The majority (over 50%) of employees must work in Massachusetts.
- Businesses must be in compliance with all legal obligations of employers including, but

not limited to, those enumerated in Massachusetts General Laws (MGL), chapter 149, and with all applicable labor, licensing and tax laws (including MGL c. 149, MGL c. 151, MGL c. 151A, MGL c. 152).
- Do not currently have a comprehensive wellness program. A comprehensive wellness program is available to all employees and includes: a plan for the program, assessment of employee needs and interests, awareness and education programs, behavior change programs, and workplace policies.
- Have not received a seal of approval for their wellness program from the Massachusetts Department of Public Health under the Small Business Wellness Tax Credit Incentive Program.

Eligibility criteria were selected for alignment with the Massachusetts Small Business Wellness Tax Credit Incentive Program, with the exception of employer size. Employers of all sizes are eligible to apply. Preference, however, will be given to small businesses (200 or fewer employees) and industries that employ low wage workers, as they are less likely to implement worksite wellness programs. Employers located in DPH regions of geographic priority, including Mass in Motion Communities and PWTF communities, will also be given priority.

6. Recruitment

Approximately 350 employers will be recruited for the Working on Wellness program. Employers will be accepted in three cohorts, with the first cohort commencing in October 2015. The second cohort is expected to begin in April of 2016 and the third in October of 2016.

Table 2: Working on Wellness Program Timeline

Group	Recruiting	Start	End
Cohort 1	Aug-Sept 2015	October 2015	July 2016
Cohort 2	Feb- Mar 2016	April 2016	January 2017
Cohort 3	Aug-Sept 2016	October 2016	June 2017

Each cohort will have 10 months of program learning and intensive support. The last cohort is expected to run through June 2017 but all businesses will continue to have ongoing access to program tools and resources after the program end date. There will also be some tools and resources that will be made available to the general public.

a. Recruitment Update for Cohort 1

Working on Wellness began accepting employer applications for Cohort 1 in August of 2015 via the program website (www.mawow.org). All businesses interested in in the program were required to attend an informational webinar prior to applying to ensure they understood the application requirements, seed funding information, and employer roles/expectations. Applications were due October 9, 2015 with a program state date of October 26, 2015. Of the 31 applications received, 30 employers were accepted to Cohort 1 of Working on Wellness. One employer did not meet the eligibility criteria. Of the 30 employers, 57% were small businesses (200 or fewer employees) and 63% nonprofits, 20% for-profit, and 17% government agencies. The majority of employers (43%) were located in the Boston area followed by Southeastern (23%) and Western MA (17%). The top three industries represented in the applicant pool were health care and social assistance (54%), public administration (13%) and manufacturing (10%). Six employers were also located in PWTF communities and 6 in Mass in Motion communities. Once accepted to the program, employers will be expected to sign a Memorandum of Understanding (MOU) that commits them to the following roles/expectations:

- Appoint Wellness Champion and Wellness Committee members
- Establish a program budget
- Attend training webinars

- Complete online self-paced learning tools including quizzes
- Conduct a survey of employee needs and interests – the survey tool will be provided to businesses and should be offered to all employees
- Conduct an environmental audit
- Submit a Worksite Wellness Action Plan, including goals/objectives
- Participate in an/the online community
- Submit periodic updates to the Worksite Action Plan
- Submit data to evaluators for ongoing monitoring of the program
- Present experience and lessons learned at resource sharing events and outcomes trainings

b. Seed Funding

Employers accepted into Working on Wellness will receive seed funding in the amount of $5,000-$10,000 depending on employer size and types of interventions planned. Employers will be expected to match seed funding. For-profits must match 100% of the amount of their seed funding; up to 50% of that may be in-kind resources. Government entities and nonprofits must match 50% of their seed funding; 100% may be in-kind resources.

C. Community Linkages

Working on Wellness is emphasizing partnering because our approach is to make linkages between employees, employers and their communities to maximize the impact of the worksite wellness initiatives. To this end, we have done the following:

- Created a Program Development Cycle that emphasizes and describes community partnerships as a key step in the development of a worksite wellness program. Participating employers will learn why cross-collaboration across employers and community partners is beneficial, and what employers might do to connect to social/environmental drivers of workforce health in their communities.
- Designed a community scan tool so that employers can assess available resources, as well as existing policy/systems change initiatives in their community.
- Designed our TA clusters so that, during our regular technical assistance calls, like-businesses will have opportunities to share with and learn from each other.
- Will offer periodic learning opportunities, via webinars, to connect participant employers to relevant community initiatives.

D. Evaluation and Data Collection

An evaluation plan has been developed for the Working on Wellness program. The plan is to collect data via surveys from participating employers to assess the worksite environment and wellness activities, and from participating employees to assess their needs and interests, selected health indicators and health beliefs, and demographics. Additionally, we will use the All-Payer Claims Database (APCD) to examine aggregated health care utilization and expenditure at the employer level. Multiple waves of surveys and multiple years of APCD will be used for the evaluation to assess changes before and after the program. Participating employers will not be given access to individual-level APCD data or survey responses. To protect employee privacy, employee surveys will be completed anonymously and we will only report findings at the aggregated level.

The following is a list of the data collection instruments that have been developed for Working on Wellness and will be built into the online learning management system:

- **Employer program application survey**
  Purpose: Evaluation of which employers apply to the program and whether the sample is representative state-wide; also permits determination of employer eligibility for the wellness program tax credit.
- **Employer post-acceptance survey**
  Purpose: Evaluation of employer and workforce characteristics that should be taken into account in the design of program

activities and materials; effectiveness of employer recruitment and selection processes; and reach of services to non-traditional or hard-to-reach employees.

- **Employee needs and interests survey**
  Purpose: Evaluation of employee health needs, characteristics that should be taken into account in the design of program activities and materials, and potential individual and workplace barriers to change. Follow-up survey will additionally permit assessment of employee outcomes such as changes in health behaviors and attitudes.
- **Employee satisfaction surveys**
  Purpose: Evaluation of employee program participation and satisfaction with wellness activities; fidelity of program delivery within businesses; and potential individual and workplace barriers to change.
- **Employer satisfaction surveys**
  Purpose: Evaluation of vendor effectiveness of service delivery and satisfaction of participating businesses.
- **Employer environmental scan**
  Purpose: Evaluation of policy and environmental changes in workplace that lead to healthy and safe working conditions.
- **Wellness action plans** (from employers)—planned health objectives and program activities
  Purpose: Evaluation of employer program intensity and fidelity of program delivery within businesses.

E. Conclusions and Next Steps

The Working on Wellness program is well underway with the first cohort beginning in October of 2015. Lessons learned from this cohort will be used to improve the program for future cohorts. Next steps for the program will include finalizing the training curriculum and data collection tools. The program team will also be working to build all the components (e.g., learning modules, case studies, surveys) on the program website via a secured log-in for participating employers. Recruitment of employers for Cohort 2 is expected to begin in February of 2016. To prepare, we will administer a survey to all employers who attended the informational webinars for Cohort 1 (~100) but did not apply to Working on Wellness. The survey will help us assess some of the main reason they chose not to participate in the program. Findings from the survey will be used to modify the recruitment strategies and program components as necessary.

THE PREVENTION AND WELLNESS ADVISORY BOARD

Section 4

The Prevention and Wellness Advisory Board, established in Section 60 of Chapter 224, is charged with informing the plans for the expenditure of PWTF funds. In 2014, the legislature introduced a proposal to streamline Chapter 224 by consolidating the existing Prevention and Wellness Advisory Board (established in Section 60 and seated in 2013) and the as yet un-appointed Commission on Prevention and Wellness (established in Section 276 of Chapter 224). This proposal was adopted in the fiscal year 2015 Budget through outside sections 136, 194 and 250.

Section 60 of Chapter 224 also delineates the responsibilities of the PWAB. The Advisory Board is responsible for making recommendations to the Commissioner of DPH on the following:

- administration and allocation of the Prevention and Wellness Trust Fund,
- establishing evaluation criteria,
- reporting annually to the legislature on its strategy for administration and allocation of the fund.

As a result of the recent statutory changes and the consolidation of the PWAB with the Commission on Prevention and Wellness, the Advisory Board is also responsible for assuring an evaluation of the Prevention and Wellness Trust Fund, including analysis of:

- the extent to which the program impacted the prevalence of preventable health conditions,
- the extent to which the program reduced health care costs or the growth in health care cost trends,
- whether health care costs were reduced and who benefited from the reduction,
- the extent to which workplace-based wellness or health management programs were expanded and whether those programs improved employee health, productivity and recidivism,
- if employee health and productivity were improved or employee recidivism was reduced, the estimated statewide financial benefit to employers,
- recommendations for whether the program should be discontinued, amended or expanded and a timetable for implementation of the recommendations, and
- recommendations for whether the funding mechanism for the fund should be extended beyond 2016 or whether an alternative funding mechanism should be established.

The findings of this evaluation will be due to the House and Senate Ways and Means Committees and the Joint Committee on Public Health by January 31, 2017.

Table 3: 2015 Prevention & Wellness Advisory Board Members

Board Member, title, organization	*Area of Representation*
Monica Bharel, *Chair* *Commissioner, Department of Public Health*	*DPH*
Robert Bruce Cedar*, CMG Associates*	*Administrator of an Employee Assistance Program*
Keith Denham *Principal and National Director of CohnReznick Advisory Group, CohnReznick LLP*	*Interest of businesses*
Rebekah Gewirtz *Executive Director, Massachusetts Public Health Association*	*Statewide public health organization*
Catherine Hartman *Vice President, Prevention & Wellness,* Blue Cross Blue Shield	*Large Health Insurance Carrier*
David Hemenway *Professor of Health Policy, Department of Health Policy and Management, Harvard School of Public Health*	*Public Health Economics*
Peter Holden *President and Chief Executive Officer of Jordan Health Systems, Inc, Board Member of the Mass Hospital Association*	*Hospital association*
State Representative Kate Hogan	*Joint Committee on Public Health*
Paula Johnson *Chair, Boston Public Health Commission*	*Local Board of Health with population > 50,000*
State Senator Jason Lewis	*Joint Committee on Public Health*
Stephenie Lemon *Associate Professor of Medicine, Division of Preventive and Behavioral Medicine and Associate Professor, Graduate School of Biomedical Sciences, Ph.D. Program in Clinical and Population Health Research, University of Massachusetts Medical School*	*Public health research*
Heidi Porter *Director of Public Health Town of Bedford*	*Local Board of Health with a population < 50,000*
Karen Regan *Supervisor of School Nurses New Bedford Public Schools*	*Public health or school nurse*
State Representative Jeff Sanchez	*Joint Committee on Healthcare Financing*
Marilyn Schlein Kramer (designee) *Dep. Exec. Director for Services and Strategy Center for Health Information and Analysis [CHIA]*	*Executive Director of the Institute of Health Care Finance & Policy (or designee)*
Susan Servais *Executive Director, Massachusetts Health Council, Inc.*	*Consumer health organization*
State Senator James Welch	*Joint Committee of Healthcare Financing*
Ashlie Brown *Health Care Innovation Program Director, EOHHS* *(Vacant as of December 2015)*	*EOHHS Representative*
Lynn Ostrowski *Corporate Relations, Brand and Population Health Management, Health New England* *(Vacant as of June 2015)*	*Small Insurance Carrier*
VACANT -Health Equity	
VACANT-Association of Community Health Workers	

A. PWAB Meeting Themes and Highlights

March 2015
The March 2015 meeting introduced the new DPH Commissioner – Monica Bharel. The PWAB has several presentations that focused on highlighting the success of the worksite wellness initiative and the success of the PWTF Grantee Program's partnerships in moving from capacity building to implementation. A large portion of the meeting focused on the Chapter 224 required independent of PWTF. DPH reviewed the applications received and selected vendor – Harvard Catalyst.

The board voted to create an Evaluation Committee to provide input on the independent evaluation process, such as: the definition of independent, what data should be considered, and what outcomes should the report include. Lastly, the board discussed sustainability of PWTF. DPH shared that the grantees are requesting more support to help develop strategies for long-term sustainability of their current PWTF funded interventions. The board voted to form a Sustainability Committee to research, develop and make recommendations to the Board regarding sustainability options for the Trust.

The June 2015 meeting was cancelled due to lack of quorum.

SEPTEMBER 2015

The September 2015 meeting included an update from the Sustainability Committee and the Worksite Wellness Initiative, two presentations from the PWTF Partnerships: Boston and Metrowest, and a presentation from Harvard Catalyst on the PWTF independent evaluation progress. At this meeting, the PWAB voted to create a Publications Committee that would oversee all PWTF outcomes publications. It required that all PWTF publications be held until the report to the legislature is delivered.

To accomplish its multiple obligations, the PWAB has met two times in 2015 (March). Agendas, materials and minutes of all Advisory Board meetings are posted at **www.mass.gov/pwtf**

B. PWAB Evaluation and Sustainability Committees

1. Prevention and Wellness Advisory Board Evaluation Committee

In March 2015, the Prevention & Wellness Advisory Board (PWAB) voted to form a committee with the charge of defining the "independent" status of the contract in Harvard's evaluation of PWTF, compile recommendations of what data should be considered and what outcomes the report should include. With the development of the evaluation subcommittee, the Board determined that the subcommittee would be comprised of members of the Board and DOH staff. All evaluation subcommittee meeting adhere to open meeting laws and guests in attendance are allowed and encouraged to participate in the discussions of the subcommittee.

The committee defined independence as unbiased, not unconnected. The committee recognized that a successful PWTF evaluation will require collaboration with DPH and partnerships. Second, the committee decided that DPH's role in the evaluation be facilitating data access and assisting with the IRB process. DPH could provide input into defining outcomes

and the analysis plan. Partnerships would provide background and context and also would have a role in defining outcomes and the analysis plan. Harvard Catalyst's role is to conduct the evaluation and determine the criteria for success. Harvard should focus on the outcomes of PWTF. The committee would help oversee the independent evaluation.

Prevention and Wellness Advisory Board Evaluation Committee Members:

- *Laura Nasuti, Dept of Public Health, Director of Statistics & Evaluation (chair)*
- *Marilyn Schlein Kramer, CHIA*
- *Stephanie Lemon, UMass*
- *Michael Powell, EOHHS*

2. Prevention and Wellness Advisory Board Sustainability Committee

In March 2015, the Prevention & Wellness Advisory Board (PWAB) opted to form a committee with the charge of researching, developing and making recommendations for sustainability options for the Trust. With the development of the sustainability committee, the Board determined that the subcommittee would be comprised of members of the Board and board member delegates would be allowed to serve as members of the subcommittee.

All sustainability committee meeting adhere to open meeting laws and guests in attendance are allowed and encouraged to participate in the discussions of the subcommittee. This committee has met three times in August, September and October of 2015. It plans to meet one more time this year. The August meeting focused on developing a schedule for fact-finding to inform the recommendations of the committee. The September meeting's objective was to develop a common understanding of the PWTF Grantee Program and the legislative intent of the law. In October, the Health Policy Commission presented is work under Chapter 224 and the committee discussed alignment with on-going health care policy reform. December's meeting will have presentations from Harvard Catalyst on the independent evaluation and from MassHealth on their movement to an ACO model of payment.

Prevention and Wellness Advisory Board Sustainability Committee Members:

- *Jean Zotter, Dept of Public Health, PWTF Program Manager (co-chair)*
- *Maddie Ribble, Massachusetts Public Health Association (co-chair)*
- *Jeff Stone, Massachusetts Health Council*
- *Samantha Pskowski, Research Analyst, Representative Kate Hogan*
- *Sarah Sabshon, Chief of Staff, Representative Jeffrey Sanchez*
- *Erika Scibelli, Legislative Director, Senator James Welch*
- *Zack Crowley, Chief of Staff, Senator Jason Lewis*

More detailed PWAB information can be found online at: **http://tinyurl.com/MassPWAB**

EXPENDITURES TO DATE Section 5

Over the four-year life of the program, the Prevention and Wellness Trust will receive $57 million. The Prevention and Wellness Trust Fund budget for the four years allocates no more than $8,550,000 (or 15%) for DPH's administrative, technical assistance and evaluation costs. Seventy-five percent goes to the PWTF Grantee Program for a total amount of $42,750,000. The last 10% ($5,700,000) is allocated for worksite wellness activities.

As of January 15, 2016, the DPH has credited $44,280,984.54 in revenue to PWTF. Overall, the total expenses of PWTF equal $27,153,115.98. These expenses break down into the following categories spanning the timeframe of (July 1, 2013 to January 15, 2016):

- DPH Administrative costs: $3,996,025.57
- PWTF Partnerships: $22,723,601.13
    - County of Barnstable (Barnstable County Partnership): $2,104,316.89
    - Berkshire Medical Center Inc. (Berkshire Partnership for Health): $2,367,953.50
    - Boston Public Health Commission (Boston Partnership): $3,069,207.88
    - Holyoke Health Center (Healthy Holyoke Partnership): $2,433,259.30
    - City of Lynn (Lynn Partnership): $3,076,250.00
    - Town of Hudson (MetroWest Partnership): $2,415,860.81
    - Manet Community Health Center Inc. (Quincy Weymouth Wellness Initiative): $3,076,250.00
    - City of New Bedford (Southeastern Health Initiative for Transformation): $2,481,001.39
    - City of Worcester (Worcester Partnership): $1,699,501.36
    - Worksite Wellness Initiative: $433,489.28

The funds expended to date are 61% of the total received and 48% of total funds anticipated over the four-year life of the program. DPH anticipates a total annual PWTF budget of $20,882,531.84 for state fiscal year 2016 and $20,067,327.87 for state fiscal year 2017.

In addition, the PWTF Partnership expenditures will significantly increase on a quarterly basis now that partnerships are in the implementation phase of the program (the capacity phase was in 2014 and was a smaller amount of funding). DPH has awarded $15,220,541.14 for state fiscal year 2016 and another $14,883,223.23 for state fiscal year 2017 to the nine PWTF Partnerships.

CONCLUSIONS AND FUTURE WORK

Section 6

The PWTF Grantee Program and Worksite Wellness Initiative have made significant strides this year. It was a year of implementation that succeeded in linking clinical and community partners and promoting worksite wellness. Nine PWTF partnerships focused on four priority conditions to implement interventions in the clinic and community settings. Approximately 4,000 referrals from clinics to community programs occurred this year. Worksite Wellness recruited 30 employers for is Cohort 1 roll out that started in October of this year.

This important effort of redefining health care to include public health holds much promise for improving outcomes and controlling costs. With more time, PWTF can test this model and help shape future health care reform efforts.

Appendices

APPENDIX A: Partnership Summaries

Coordinating Partner Organization: Barnstable County Department of Human Services
Budget Allocation through FY16: $2,477,976.45
Date began implementation: January 1, 2015

Overview of Barnstable Partnership
The Barnstable Prevention Partnership, serving the towns of Barnstable, Mashpee, Falmouth, and Bourne, has created a system of care for patients with chronic conditions. Three independently-run community health centers, Duffy Health Center, Harbor Community Health Center-Hyannis, and the Community Health Center of Cape Cod, have come together to create a formal network to provide services and referrals to patients who could benefit from an evidence-based chronic disease self-management course or a diabetes prevention course. Through this system of chronic disease care, providers from these health centers began referring patients to two community-based organizations in 2015 - the YMCA and the Healthy Living Cape Cod Coalition--for hypertension and diabetes management programs. Referrals to and from the community health centers are standardized and are embedded into their EMRs. In addition to hypertension and diabetes, in 2015 the Barnstable Partnership began providing interventions for falls prevention for those at high risk.

	Hypertension	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Evidence-based guidelines for HTN screening	Community Health Center of Cape Cod – Jan 2015 Duffy Health Center – Jan 2015 Harbor Community Health Center Hyannis – Jan 2015	
Clinical	Home Blood Pressure Monitoring		Harbor Community Health Center Hyannis – Dec 2015
Community	Chronic Disease Self-Management Programs (CDSMP)	Healthy Living Cape Cod Coalition -Jan 2015	

	Falls	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	STEADI Clinical Risk Assessment	Community Health Center of Cape Cod - Jan 2015 Duffy Health Center - Jan 2015 Harbor Community Health Center Hyannis – July 2015	
Community	Matter of Balance	Healthy Living Cape Cod Coalition - Jan 2015	
	Tai Chi	Healthy Living Cape Cod Coalition -Jan 2015	
	Home Safety Assessment and Modification by PT/OT	Healthy Living Cape Cod Coalition - Jan 2015	

	Diabetes	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Evidence-based guidelines for Diabetes screening	Community Health Center of Cape Cod - Jan 2015 Duffy Health Center -Jan 2015 Harbor Community Health Center Hyannis - Jan 2015	
Community	Chronic Disease Self-Management Program (CDSMP)	Healthy Living Cape Cod Coalition - Jan 2015	
	Y Diabetes Prevention Program	YMCA of Cape Cod - Jan 2015	

Achievements to Date

We have been successful in initiating all clinical and community interventions, according to plan, in 2015. Our partnership has an active, animated, and self-led Interventions Workgroup which manages the referral and feedback relationships between the clinical and community sides. Our Governing Team of agency leaders works very collaboratively to maintain the strategic direction of the project. Our patient referral and service numbers for Falls and Diabetes are ahead of planned levels; our referrals for hypertension are increasing. All three of our clinical partners (which are Community Health Centers) are now using the statewide Data Reporting and Visualization System (DRVS), a web-based data collection system; Harbor Community Health Center-Hyannis was already on DRVS prior to PWTF. Three of our five partners are participating in piloting the e-Referral system via the MassHIway.

Strategies to Address Health Equity

From the outset of the project the Barnstable partnership has addressed health equity in two significant ways:

1. Recognition of low socio-economic status as a major barrier to health access and disproportionately low health outcomes. Thus all three of our clinical partners are Federally Qualified Community Health Centers (FQHCs) and all PWTF services to which the clinicians refer are offered free of charge to participants.
2. Recognition of the need to provide community-based services in Spanish and Portuguese. Demographically, Cape Cod is predominantly white (93%) and English-speaking. However approximately 8% of residents (17,280) speak a primary language other than English (mostly Spanish and Portuguese) and these persons are disproportionately of low socio-economic status. Therefore, our community partners are working to provide interventions in these three languages. Note that while CDSMP is available in all three languages, DPP is only available in English and Spanish, not Portuguese. In 2015, the Barnstable partnership began work to identify a source for the DPP curriculum and materials in Portuguese.

Strategies to Address Sustainability

An important strategy for sustainability is to demonstrate the net benefit of additional staff to the success of clinical teams. These staff members are successful in encouraging and "managing" client referrals to community partners, yet we also need to examine the impact on related health outcomes, which can potentially demonstrate cost effectiveness.

With regard to our two community partners, reimbursement for interventions provided is the primary means of sustainability. At present the PWTF is our partnership's "payor" for CDSMP, DPP, and Falls Risk Assessment/Home Modification/Tai Chi/Matter of Balance. Future payors might be public and private insurers, and/or the clinical providers themselves if these interventions are shown to yield the health outcomes being sought.

Challenges and Lessons Learned

We have experienced two significant challenges in pursuing PWTF work: First, changes to clinical practice patterns and workflow to accommodate new PWTF-related referral processes has taken time and effort, as has changing their associated management information systems (EMRs) to facilitate referral to community organizations.

Second, educating and supporting patients in health behavior change is labor-intensive and maintaining client follow-through and program completion is also challenging for community interventions. Further, practice patterns are still developing so as to make timely use of the feedback received from the community partners on their patients' participation in the community interventions.

Coordinating Partner Organization: Berkshire Medical Center
Budget Allocation through FY16: $2,791,544.20
Implementation began: January 1, 2015

Overview of Berkshire Partnership for Health
The Berkshire Partnership for Health is a county-wide initiative that engages dynamic community & clinical partners to reduce tobacco use, control hypertension, prevent diabetes and decrease falls among older adults. Our programs and services have been strategically designed to ensure our partners work together to close the loop for our patients/clients by delivering comprehensive and evidence-based care that ultimately improves the health and wellness of our community. Our partners include Berkshire Medical Center (Coordinating Partner), Berkshire County Boards of Health Association, Berkshire Regional Planning Commission/Berkshire Public Health Alliance, Berkshire South, Community Health Programs, Fairview Hospital, Northern Berkshire Community Coalition Pittsfield Family YMCA, Tri-Town Health Department, and Volunteers in Medicine.

Tobacco		**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	USPSTF Screening Guidelines	Lenox Family Health - Oct 2015	Hillcrest Family Health – Jan 2016 Dalton Medical – Feb 2016 Suburban Medical – March 2016 Fairview Internal Medicine – April 2016
	Tobacco Cessation Counseling	Berkshire Health System – Jan 2015	
Community	Promoting Smoke-Free Environments	Berkshire County Boards of Health Association - July 2015 Tri-Town Health Department - July 2015	

Hypertension		**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Evidence-based guidelines for HTN screening	Lenox Family Health - Oct 2015	Hillcrest Family Health – Jan 2016 Dalton Medical – Feb 2016 Suburban Medical – Mar 2016 Fairview Internal Medicine – April 2016

Community	Self-Monitored Blood Pressure w/ Add'l Support	Berkshire Medical Center- Jan 2015 Fairview Hospital- Jul 2015 Berkshire Public Health Alliance - July 2015 CHWs provided by North Berkshire Community Coalition, YMCA, Community Health Partners, Berkshire South, Fairview Hospital - Jul 2015	

Falls		**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	STEADI Clinical Risk Assessment	Lenox Family Health – Oct 2015	Hillcrest Family Health – Mar 2016 Dalton Medical – Apr 2016 Suburban Medical – Jun 2016 Fairview Internal Medicine – Jan 2016
Community	Matter of Balance	Berkshire Public Health Alliance - July 2015 CHWs provided by North Berkshire Community Coalition, YMCA, Community Health Partners, Berkshire South, Fairview Hospital - Jul 2015	Tri-Town Health Department- Jan 2016
	Home Falls Prevention Checklist	CHWs provided by North Berkshire Community Coalition, YMCA, Community Health Partners, Berkshire South, Fairview Hospital - Aug 2015	

Diabetes		**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	QI in Clinical Settings	Lenox Family Health – Oct 2015	Hillcrest Family Health – Mar 2016 Dalton Medical – Apr 2016 Suburban Medical – Jun 2016 Fairview Internal Medicine – Jan 2016
Community	National Diabetes Prevention Program	Berkshire Medical Center has been offering pre-diabetes classes since Jul 2015 to prime the pump for referrals into the NDPP class.	Berkshire Medical Center- Dec 2015

Achievements to Date

Partnership building:

- We have strategically been developing and implementing various partnership models, procedures, protocols, consents, intake forms, assessments, etc. and successfully on-boarded new clinical and community partners (Berkshire South, YMCA's, CHP, and VIM)

Stakeholder engagement:

- Leadership & intervention teams have continuously grown based on needs, organizational strengths and have been built to ensure a diverse clinical and community linkage among organizations.

IT systems:

- e-Referral systems is live for Allscript providers with the falls Independent screening tool, STEADI & Pre-Diabetes screening tools embedded into the EMR. These practices are now sending e-Referrals for tobacco treatment, Get Cuffed (hypertension), pre-diabetes, DPP, Matter of Balance, and Home Safety Assessments
- Additionally, Care Director, a platform to enable community-based partners to receive e-Referrals, has been built and partners have been trained. 'Go live' is scheduled for late 2015.

Intervention planning:

- A HUB has been established to provide clinical and coaching support for assessing eligibility, identifying co-morbidities, scheduling appointments into programs/classes, and referrals to appropriate resources. This HUB works in unison with CHWs and provides important patient feedback to clients' providers.
- Programs such as tobacco treatment, Get Cuffed, Matter of Balance and Pre-Diabetes classes have all successfully been implemented and/or enhanced or improved, and STEADI & Pre-Diabetes screening tool has been implemented at Lenox Family Health

Community Health Workers:

- Six CHWs have been hired, oriented, and trained, including integrated support & mentorship

Strategies to Address Health Equity

- A health literacy training for the partnership is being scheduled in the spring
- Tobacco Treatment expanded to BMC North (a rural and under-served area) & group classes offered at primary care offices and throughout the county
- We have allocated a patient assistance fund to help those whose insurance doesn't cover tobacco treatment NRT and/or where the counseling or co-pay is high. We are using the same fund to support transportation to/from programs and classes
- We are currently planning to offer Get Cuffed & Pre-Diabetes Classes in Spanish
- County Health Initiative (CHI) stakeholder semi-annual meetings- review & update community needs, share PWTF & other county initiatives, feedback, etc.

Strategies to Address Sustainability

- Partnership is reviewing/researching how to bill for programs (i.e. BP cuffs, STEADI, group nutrition, etc.)
- Care Director, the population health software BMC and community partners use for e-Referral, is embedded and institutionalized and all will continue to use beyond PWTF
- CHI Leadership Committee – clinical & community partners review needs & develop goals based on needs
- Part of the DPH established Sustainability Committee

Challenges and Lessons Learned

- Coordinating intervention related programs & initiatives with many partners
- Widespread delivery across the county, and lack of a central communication system
- Keeping partners abreast and engaged with all aspects of the grant is extremely challenging
- Managing PWTF-related and partner contracts, addendums, user agreements, data sharing agreements
- Finding adequate (large enough, free, central IT support, etc.) space to meet/train
- Keeping true to the community and clinical linkage
- Changing operational process, as some interventions require emotional management and basic coordination
- Ensuring our process did not create a bottle neck in the primary care setting

Coordinating Partner Organization: Boston Public Health Commission
Budget Allocation through FY16: $3,514,464.23
Implementation began: September 1, 2014

Overview of the Boston Partnership
The goal for the Boston PWTF is to build a coordinated system of care for residents of Roxbury and North Dorchester using a racial justice and health equity framework. These two neighborhoods have a total population of approximately 140,000 residents, of whom 42% are Black and 23% are Latino. These neighborhoods face some of the city's and state's most substantial health inequities, including high rates of pediatric asthma and adult hypertension. Both neighborhoods also possess valuable community assets, institutions, and aspirations for improved health outcomes and better coordination of resources and services among providers. As Coordinating Partner, BPHC is working with residents and organizations in these neighborhoods to develop systems-level solutions that improve health and advance racial justice and health equity.

Hypertension		**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Evidence-based guidelines for HTN screening	Harbor Health - January 2015 Harvard St - December 2014 Whittier St. – July 2015 Dimock - June 2015	Bowdoin St - March 2016 Codman – March 2016 Dot House - April 2016
Community	Chronic Disease Self-Management Programs (CDSMP)	Ethos - May 2015 Boston Senior Home Care- Sept 2015 Central Boston Elder Services- Sept 2015 Elderly Commission- 2015	Combined community classes - Dec 2015

	Falls	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	STEADI Clinical Risk Assessment		Bowdoin St – December 2015 Dimock – December 2015 Whittier – December 2015 Harvard St. – December 2015 Harbor Health - March 2016
Community	Tai Chi	Ethos - Nov 2015 Boston Senior Home Care- Sept 2015 Central Boston Elder Services- Sept 2015 Elderly Commission- 2015	Combined community classes - Nov 2015
	Matter of Balance	Ethos - May 2015 Boston Senior Home Care- Sept 2015 Central Boston Elder Services- Sept 2015 Elderly Commission- 2015	Combined community classes - Jan 2016
	Home Safety Checklist w/ CHW Assistance	Boston Senior Home Care- Sept 2015 Central Boston Elder Services- Sept 2015 Elderly Commission- 2015	

	Pediatric Asthma	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Care Management for High-Risk Asthma Patients	Codman Sq - March 2015 Dimock - March 2015 Dorchester House - March 2015 Harbor Health - March 2015 Harvard St. - March 2015	Whittier St - Jan 2016 Bowdoin - Jan 2016
Community	Comprehensive School-Based Asthma Programs	Boston Public Schools (27 sites) - Sept 2015	
	Comprehensive Head Start-Based Asthma Programs		ABCD Head Start (6 sites) - Jan 2016

Achievements to Date

Four clinical sites have implemented evidence-based guidelines for hypertension screening and treatment (either JNC 7 or 8). Five clinics have implemented evidenced-based screening and treatment for falls (CDC STEADI), and five clinics are using the e-Referral Gateway for bi-directional communication and pediatric asthma care coordination between clinics and BPS. The project has four new CHWs to

connect the clinics to service organizations to improve the care and expand the services being offered in both settings. In addition, there are four elder service organizations- the Elderly Commission, Boston Senior Home Care, Central Boston Elder Services, and Ethos which provide direct services to residents including case management, home health services, evidenced-based programming and connections with Boston's elder population. In May 2015 a Performance Scorecard was developed to measure the project's and individual organization's achievements for Year 1, and served as the basis for financially rewarding partners in meeting or exceeding their goals.

Strategies to Address Health Equity

Use of CHW staff to act as clinical/community linkages and to provide cultural and language capacity in both settings is a clear health equity approach. Boston is also offering classes in four languages to help all people in our community live healthier lives. In collaboration with DPH Boston is co-chairing the newly formed Health Equity Workgroup.

Strategies to Address Sustainability

The BPHC Partnership is looking to develop and support systems which can endure beyond the grant years for relationship building, reporting, evaluation, and population management purposes; these tools allow our partners to report quality data accurately and efficiently.

Challenges and Lessons Learned

Each clinical and community site is a unique organization, with different staffing models, electronic patient/client record platforms, and degree of readiness to move to the next steps in implementation and quality improvement standards and measures. Investing resources in developing a registry system has enhanced the capacity of clinical sites in identifying high risks patients. Linking the systems across partners creates more opportunities for data sharing, with the goal of a fully functional e-Referral system. However, introducing the e-Referral system as a major component of the collaboration requires high financial cost and working within the existing organizational structures across clinical sites and community agencies requires sustained leadership commitment and strategic prioritization.

Coordinating Partner Organization: Holyoke Health Center, Inc.
Budget Allocation through FY16: $2,777,984.45
Implementation began: September 1, 2015

Overview of Holyoke Partnership
The Healthy Holyoke Partnership for the Prevention and Wellness Trust Fund consists of important clinical and community partners throughout the region. The clinical partners are the Holyoke Health Center, Holyoke Pediatric Association, Holyoke Medical Center, River Valley Counseling Center and Western Massachusetts Physician Associates. The community partners are the Greater YMCA, City of Holyoke and River Valley Counseling Center. The collaborative shows a city-wide commitment to this project and reaches across all potential access points in the city. Our collaborative is addressing the following health conditions: tobacco cessation, hypertension, pediatric asthma and obesity.

	Tobacco	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	USPSTF Screening Guidelines	Holyoke Health Center – Sept 2014 Holyoke Medical Center – Sept 2014 Western Mass Physicians Associates – Sept 2014	
Clinical	Tobacco Cessation Counseling	Holyoke Medical Center – Nov 2014 Western Mass Physician Associates – Nov 2014	Holyoke Medical Center – Dec 2015 (expanding to Spanish) Western Mass Physician Associates – Dec 2015 (expanding to Spanish)
Community	Promoting Smoke-Free Environments	Holyoke Housing Authority – March 2015	
Community	Tobacco Cessation Counseling	River Valley Counseling Center – Nov 2014	

	Hypertension	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Evidence-based guidelines for HTN screening	Holyoke Health Center – Sept 2014 Western Mass Physician Associates – Sept 2014	
Community	Chronic Disease Self-Management Programs	Holyoke YMCA – May 15 Holyoke Health Center – Aug 15	Holyoke Health Center – March 2016
Community	Self-Monitored Blood Pressure w/ Add'l Support	Holyoke YMCA – June 2015	Holyoke YMCA – Feb 2016

Pediatric Asthma		**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Care Management for High-Risk Asthma Patients	Holyoke Medical Center – Sept 2014 Holyoke Health Center – Sept 2014 Western Mass Physician Associates – Sept 2014	
	Asthma Self-Management in Primary Care	Holyoke Medical Center – Sept 2014 Western Mass Physician Associates – Sept 2014 Holyoke Health Center – Sept 2014	
Community	Home-Based Multi-Trigger, Multi-Component Intervention	Holyoke Health Center – May 2015 Western Mass Physician Associates –Oct 15	Holyoke Health Center – Nov 15
	Comprehensive School-Based Asthma Programs	Holyoke Public Schools – Sept 2014 City of Holyoke/Board of Health – Sept 2014	Holyoke Public Schools – Kelly School Dec 15; Peck School and Lawrence School March 2016 City of Holyoke/Board of Health – March 2016

Obesity		**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Weight management in primary care	Holyoke Health Center – Sept 2014 Western Mass Physician Associates – Sept 2014	Holyoke Health Center – Dec 2015 Holyoke Pediatrics Association – Dec 2015
Community	Environmental approach in the community to address obesity	Holyoke YMCA – Sept 2014 City of Holyoke – Sept 2014	City of Holyoke - Dec 2015 River Valley Counseling Center – Dec 2015
	Y-USA Diabetes Prevention Program	Holyoke YMCA – Nov 2014	Holyoke YMCA – Dec 15

Achievements to Date

The Healthy Holyoke Partnership has reached significant achievements to date. Of those, we were among the first collaborative to utilize the e-Referral system, and we are using it currently at both Holyoke Health Center and Holyoke Medical Center. Our collaborative is one of the only cohorts to have a local hospital on board as a clinical partner. We have also incorporated the Holyoke Health Center's innovative Medication Therapy Management program which runs via their onsite 340B pharmacy. The Healthy Holyoke Partnership has completed a CDSMP class held at the Holyoke YMCA and is in the midst of doing another class currently at the Holyoke Health Center. The YMCA is just wrapping up a pilot of Self Monitored Blood Pressure Program which involved 20 individuals and upon further analysis, will launch an expanded program later this year. Both the Holyoke Medical Center and the River Valley

Counseling Center have Trained Tobacco Cessation Counselors on staff, and the medical center is in the process of providing classes in Spanish.

Strategies to Address Health Equity

Addressing health inequalities has been fundamental to the work of all of the partners in Holyoke, the Commonwealth's poorest City with a population that is 50% Latino. All of the CHWs on staff for the partnership represent City residents in language and culture. Additionally, the Holyoke YMCA sent their CDSMP-trained staff to the Tomando training which will allow for these courses to be taught in Spanish. The Holyoke Health Center is in the midst of signing up staff to get trained in Tomando.

Strategies to Address Sustainability

The Partnership is routinely billing payors for RN education visits, as well as working on documenting the CHW activity to create best practices and data to support the reimbursement of their services. All partner organizations are committed to thoroughly researching sustainability for this city-wide program.

Challenges and Lessons Learned

This partnership has experienced staff turnover in the lead coordinator position and the health center coordinator position, which has provided valuable learning opportunities as well as challenges. The loss of knowledge was difficult, but also allowed us to evaluate lessons learned in collaborative communication and determine better ways to meet the needs of all partner organizations. The lead coordinator position is nearly filled and the coordinator position will be posted shortly. Additional challenges revolve around the understanding and collecting of data necessary for DPH's program evaluation, and we are working with the DPH evaluation team to move forward.

Coordinating Partner Organization: City of Lynn
Budget Allocation through FY16: $3, 522,500.00
Implementation began: September 1, 2014

Overview of Lynn Partnership
The City of Lynn coordinates a community based coalition that includes Lynn Public Schools, Lynn Community Health Center, Greater Lynn Senior Services, Massachusetts Coalition for the Homeless, Lynn Housing Authority and Neighborhood Development, Metropolitan Area Planning Council as well as other organizations to address key health issues to achieve the goals of the PWTF. The partnership has identified evidence-based interventions in four priority areas: tobacco use, hypertension, pediatric asthma, and falls among the elderly. Within these priority conditions, the Lynn partnership currently offers five different clinical interventions and nine interventions in the community, all of which will be tracked and evaluated as part of the PWTF initiative. Quality improvement activities are ongoing throughout the duration of the grant for all interventions as well.

	Tobacco	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	USPSTF Screening Guidelines	Lynn Community Health Center – Oct 2014	
Clinical	Tobacco Cessation Counseling	Lynn Community Health Center – Oct 2014	
Community	Promoting Smoke-Free Environments	Lynn Housing Authority and Neighborhood Development – Nov 2014	MAPC/LHAND PRIVATE HOUSING 2016

	Hypertension	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Evidence-based guidelines for HTN screening	Lynn Community Health Center – Nov 2014	
Community	Chronic Disease Self-Management Programs (CDSMP)	Greater Lynn Senior Services – Oct 2014	
Community	Self-Monitored Blood Pressure w/ Add'l Support	Greater Lynn Senior Services – Oct 2014	
Community	Kiosk / Community BP Monitoring w/ Add'l Support	Greater Lynn Senior Services – Sept 2014	

	Falls	Implemented	Projected implementations
		Organization	*Organization*
Clinical	STEADI Clinical Risk Assessment	Lynn Community Health Center – Nov 2014	
Community	Tai Chi	Greater Lynn Senior Services – June 2015	
	Matter of Balance	Greater Lynn Senior Services – Nov 2014	
	Home Falls Prevention Checklist	Greater Lynn Senior Services – Nov 2014 Lynn Housing Authority and Neighborhood Development – Nov 2014	

	Pediatric Asthma	Implemented	Projected implementations
		Organization	*Organization*
Clinical	Care Management for High-Risk Asthma Patients	Lynn Community Health Center – 10/14 Oct 2014	
	Asthma Self-Management in Primary Care	Lynn Community Health Center – Oct 2014	
Community	Home-Based Multi-Trigger, Multi-Component Intervention	Mass Coalition for the Homeless – Sept 2014	
	Comprehensive School-Based Asthma Programs	Lynn Public Schools – Sept 2014	

Achievements to Date

PWTF Overall:

- MPHA to partner with Lynn PWTF team to help promote PWTF activities to key, local stakeholders
- October 30th 2015 – initial stakeholder breakfast meeting
- Monthly Newsletter to Executive Team including graph of up-to-date referral #'s by intervention

Senior Falls:

- "LCH and GLSS are leaders in the state adopting the electronic referral system and providing invaluable feedback to DPH on refinement of the system"- Pattie Daley, DPH
- Tai Chi (English Only) and Matter of Balance classes offered in Spanish and English at multiple sites

Hypertension

- First formal referrals started in March from LCHC patients to GLSS programs
- e-Referrals utilized not for HTN referrals to the community programs

Pediatric Asthma

- Regular referrals from LPS and LCHC to Room to Breathe for multi-trigger home interventions

- Building a strong relationship and communication between schools, pediatricians/primary care providers, and Room to Breathe to ensure Asthma Action Plans are on file and multi-trigger, multi-component home interventions are provided to asthmatic children
- Partnering with Pediatric Health Care Associates to further improve care for LPS asthmatics

Tobacco:

- J Weedan, LHAND, presented at the Sate PWTF Learning Session on Lynn's smoke-free housing
- Board reviewed 220 resident surveys and voted to proceed with Smoke- Free Housing Initiative
- 6 Scholarships awarded to Lynn PWTF by Umass Medical School for Tobacco Treatment Specialist training
- Lynn awarded additional $12,000 from MACP for Technical Assistance for smoke-free private housing
- Resident tobacco champions identified and trained in August and September
- October 1st successful go-live date for Smoke-Free Housing policy
- LCHC conducting self-evaluation survey with UMASS medical on Tobacco treatment protocols

Strategies to Address Health Equities

Given that the city of Lynn has a poverty ratio of 1 in 5, all interventions will reach disparate populations often with health inequities. However, specific initiatives have grown out of the partnership's intervention QI work that have helped us to better address health equity. Many of our pediatric asthmatics live in unhealthy environments that may trigger their asthma. In attempts to address this, we have worked with the local housing authority to remediate pest control problems, remove carpets in children's bedrooms and provide safe cleaning products to these families. Also, several of our PWTF clients found transportation to be a barrier to attending Matter of Balance classes so we organized transportation to and from the class.

Strategies to Address Sustainability

- Build lasting partnerships in community including a presentation to key stakeholders in Oct 2015
- Institutionalization of e-Referral in multiple agencies
- Community Health Worker training and recruitment in both English and Spanish
- Smoke-free housing policy
- Environmental modifications to reduce falls and asthma triggers: on-site laundromat, ramps and rails installed, asthma-friendly cleaning supplies, school-based programs
- Training and education; Lynn Public School nurse champions, exercise class trainers, BP and Falls screening for medical assistants, Asthma best –practice talk to providers by expert Megan Sandel

Challenges and Lessons Learned

There have been many challenges along the way as we learn to function as a team with partner agencies we did not know or work with much before. The partners have had to create seamless referral pathways for our clients while working within the constructs of our own individual agency. In general, the teams figured out how to do this with little angst. An additional challenge has been in the recruitment of clients to long, multi-session programs such as Matter of Balance and My Life, My Health. This is where the most opportunities lie as we push ourselves to be innovative and determine how to make these classes accessible and appealing to our clients.

Coordinating Partner Organization: Town of Hudson
Budget Allocation through FY16: $2,849,050.78
Implementation began: January 1, 2015

Overview of MetroWest Partnership
The MetroWest Prevention and Wellness Partnership was formed in early 2014 to plan and implement PWTF strategies. The partnership selected all four priority health conditions for this initiative – fall prevention among older adults, pediatric asthma, hypertension, and tobacco use reduction. The four municipalities within the partnership, namely Framingham, Hudson, Marlborough, and Northborough, represent over 140,000 residents with diverse ethnic and socioeconomic backgrounds. Our goals are to provide coordinated care between clinical and community health sectors and to improve health outcomes.

Hypertension		**Implemented**	**Projected implementations**
Clinical	Evidence-based guidelines for HTN screening	EMK CHC - June 2015	MetroWest Medical Center – Nov 2015
Community	Chronic Disease Self-Management Programs (CDSMP)	Latino Health Insurance Program - June 2015 MetroWest YMCA – July 2015	

Pediatric Asthma		**Implemented**	**Projected Implementations**
Clinical	Care Management for High-Risk Asthma Patients		EMK CHC – Dec 2015
Community	Home-based Multi-trigger, Multi-component Intervention		Framingham Health Dept – Jan 2016

Falls Prevention		Implemented	Projected Implementations
Clinical	STEADI Clinical Risk Assessment	Charles River Medical Associates– April 2015 Latino Health Insurance Program – July 2015 EMK CHC – Sept 2015	
Community	Tai Chi	MetroWest YMCA – May 2015 YMCA Central MA – June 2015	
	Matter of Balance	Latino Health Insurance Program – April 2015 MetroWest YMCA – July 2015 YMCA CM – May 2015	
	Home Safety Checklist w/ CHW Assistance	Framingham Health Dept – July 2015 Hudson Health Dept – June 2015 Marlborough Health Dept – June 2015	

Tobacco Cessation		Implemented	Projected Implementations
Clinical	Clinical Guidelines	EMK CHC – Oct 2015	MetroWest Medical Center – Nov 2015
Community	Tobacco Cessation Counseling	Hudson Health Dept – October 2015	Framingham Health Dept – Nov 2015 Marlborough Health Dept – Nov 2015

Achievements to Date

Our partnership has created a strong working relationship between our clinical and community health partners, and a structured electronic referral and feedback reporting system. We implemented interventions in three out of four priority conditions selected. Through our clinical partners, thousands of residents were screened for fall risk, hypertension, and tobacco use. Hundreds were referred to our community health partners to enroll in interventions to address these conditions. Vast majority of patients experienced positive outcomes in these interventions. At our regional Advisory Council meeting in October of 2015, a senior patient from Charles River Medical Associates, one of our clinical partners, indicated that his balance has improved substantially after attending an eight-week educational class called “A Matter of Balance” at the YMCA of Central Massachusetts. He is now attending Tai Chi classes at the same YMCA. He said, “I’m now able to put on pants while standing without being afraid of falling”.

Strategies to Address Health Equity

Our health equity strategies are driven by data and needs. For example, the prevalence of hypertension is higher among Hispanic population when compared to non-Hispanics. Our clinical partner for hypertension employs Spanish and Portuguese CHWs to engage their predominantly Hispanic patient population. Our community partner also offers CDSMP classes in Spanish and Portuguese for the patients. These strategies increase access to our interventions for those affected by language barriers.

Some of our health equity strategies are based on need. Many of our low income seniors have mobility and transportation barriers, limiting their ability to access many of our community-based interventions. In order to address this equity issue, our community partners offer interventions at Senior Centers in our communities, many of whom provide transportation support for residents to attend events at their facilities.

Strategies to Address Sustainability

We are focusing on four main areas to work towards the goal of sustaining the PWTF interventions beyond the grant funding period. First, we established a regional Advisory Council, made up of top executives from healthcare organizations, elected local officials, state legislators, academia, and other stakeholders to provide feedback and serve as advocates for our work in this initiative. Second, we continue to refine our newly developed linkage framework between our clinical and community health partners. Third, we work towards integrating the interventions in this initiative into our partners' standard operating processes. Fourth, we are strongly supportive of and participate in the statewide PWTF Advisory Committee's sustainability efforts.

Challenges and Lessons Learned

There are a number of challenges that we encountered during this first year of implementing the interventions. We underestimated the difficulty of engaging some providers within our clinical partners. This is especially apparent for one clinical partner, which has a large number of providers across many locations. While some of their providers bought in to the clinical-community linkage scheme, others proved to be difficult to engage. We are currently developing strategies to resolve this issue.

This initiative also provides a great opportunity for most of our community-based partners to expand our scope of services. For the first time, our local health departments have hired CHWs as part of the workforce. In addition to providing interventions as part of the PWTF initiative, the local health departments are also learning more about the important services that CHWs can provide to our communities.

Coordinating Partner Organization: City of New Bedford Health Department
Budget Allocation through FY16: $1.874M/year
Implementation began: January 1, 2015

Overview of partnership

The Southeastern Health Initiative for Transformation (SHIFT) is the PWTF program based in New Bedford (NB), MA. Primary partners include the NB Community Health Center, Community Nurse and Home Care, Housing Authority, University of Mass-Dartmouth, Seven Hills Behavioral Health, Boston University Medical Center, and Hawthorne Medical. Five outcomes are addressed: Falls Prevention employing STEADI and *A Matter of Balance (MOB)*, Hypertension employing clinical identification and CDSMP or *My Life My Health (MLMH),* Pediatric Asthma employing clinical identification and home-based assessment, and Substance Abuse (pilot only) employing SBIRT and Brief Strengths-Based Case Management. The catchment area includes all New Bedford residents with a specific emphasis on culturally-diverse, vulnerable populations, including Hispanic/Latino, Cape Verdean, and Portuguese. The program supports a cadre of community-based, bilingual (Spanish/Portuguese) Community Health Workers who are embedded in both the clinical and community partner sites. Program goals include the following:

- Increase the number of Master Trainers and coaches, client referrals, and course offerings in Spanish and Portuguese for *MOB* and *MLMH*
- Implement the home-based assessment intervention for pediatric asthma
- Promote recruitment and retention for the Substance Abuse community-based intervention
- Increase patient referral by enlisting a new clinical partner (Hawthorne Medical)
- Increase outreach and marketing at clinical and community sites to improve health literacy, community awareness, and client recruitment and retention
- Develop a core workforce 'playbook' for CHWs to streamline programmatic operations, training opportunities and requirements, approaches for motivational interviewing and opportunities for community advocacy

	Hypertension	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Evidence-based guidelines for HTN screening	Greater New Bedford Community Health Center - March 2015	Hawthorn Medical Associates - Jan 2016
Community	Chronic Disease Self-Management Programs (CDSMP)	Community Nurse and Home Care - April 2015	

	Falls	Implemented	Projected implementations
		Organization	*Organization*
Clinical	STEADI Clinical Risk Assessment	Greater New Bedford Community Health Center - Nov 2014	Hawthorn Medical Associates - Jan 2016
Community	Matter of Balance	Community Nurse and Home Care - Nov 2014	

	Pediatric Asthma	Implemented	Projected implementations
		Organization	*Organization*
Clinical	Asthma Self-Management in Primary Care	Greater New Bedford Community Health Center - March 2015	Hawthorn Medical Associates - Feb 2016
Community	Home-Based Multi-Trigger, Multi-Component Intervention	New Bedford Health Department - Oct 2015	New Bedford Health Department - Jan 2016

	Substance Use	Implemented	Projected implementations
		Organization	*Organization*
Clinical	SBIRT	Greater New Bedford Community Health Center - Aug 2015	NA
Community	Brief Strength-Based Care Management for Substance Abuse (SBCM)	Seven Hills Behavioral Health - Aug 2015	NA

Achievements to Date

- Developed new strategies to enhance health literacy and health equity by hiring and training bilingual, community-based CHWs who are embedded in the clinical and community sites
- Hired a Coordinator of CHWs to provide support for and promote consistency and structure for training and mentoring of eight CHWs throughout the program.
- Delivered >25% referral/completion rate for clients referred to *MOB* with courses in 3 languages.
- Bolstered outreach and marketing at clinical and community partner sites to increase community awareness, health literacy, and client referral and retention
- Established a Pediatric Asthma Home Visiting team comprised of a registered nurse and CHWs who are trained in home-based assessments in collaboration with the NB Housing Authority

Strategies to Address Health Equity

- New Bedford is culturally and linguistically diverse and many residents are distrustful of "outsiders." CHWs who are New Bedford residents and possess the requisite cultural and competencies are hired to facilitate enrollment and retention of patients into interventions.

- Community-based interventions (MOB, MLMH) are conducted in trusted community venues where high-need patients reside. This also helps address the transportation barrier for many patients.

Strategies to Address Sustainability

- Training several bilingual "coach teams" for *MOB* and *MLMH* courses (train the trainer model).
- Embed bilingual CHWs in partner sites and adapt partner workflows to promote sustainable practice.
- Promote delivery of programs in community venues with vested interest in sustainability (e.g., parishes, recreation centers, senior centers).
- Promote consistency in competencies and practice for CHWs as a sustainable workforce/career path.

Challenges and Lessons Learned

- Ensuring ongoing coordination across partner sites while simultaneously adjusting workflow, referral algorithms, etc. to address recruitment/retention barriers and enhance participation.
- Overcoming health literacy issues with the target population given many are immigrants from countries without health care access.

Coordinating Partner Organization: Manet Community Health Center
Budget Allocation through FY16: $3,522,500.00
Implementation began: September 1, 2014

Overview of Quincy/Weymouth Partnership
The Quincy Weymouth Wellness Initiative (QWWI) targets residents of Quincy and Weymouth with a goal of making both communities measurably healthier by 2018. QWWI currently is comprised of 10 partners including three clinical partners, Manet Community Health Center (which also serves at the Coordinating Partner), South Shore Hospital and Steward Medical Group; two municipal partners, the City of Quincy and the Town of Weymouth; and five community partners, Bay State Community Services, Enhancing Asian Community on Health (EACH), South Shore Elder Services, and South Shore Workforce Investment Board and South Shore YMCA (SSYMCA). QWWI has launched interventions for three Priority Conditions (Falls Prevention, Hypertension and Tobacco) and one Optional Condition (Substance Abuse) and plans to add Diabetes in Year 2. An e-Referral connection has been established between Manet Community Health Center and two community partners, SSYMCA and South Shore Elder Services.

	Tobacco	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	USPSTF Screening Guidelines	Manet Community Health Center – 9/2014South Shore Hospital – March 2015	Steward Medical Group – Nov 2015 Granite Medical Group (pending Board Approval) – Dec 2015
Clinical	Tobacco Cessation Counseling	Manet Community Health Center – Nov 2014 South Shore Hospital – March 2015	Steward Medical Group – Nov 2015 Granite Medical Group (pending Board Approval) – Dec2015
Community	Promoting Smoke-Free Environments	City of Quincy – Jan 2015 Bay State Community Services – Jan 2015	Town of Weymouth – March 2016 Multi-Unit Housing in Quincy and Weymouth – Jan 2016
Community	Tobacco Cessation Counseling	Bay State Community Services – May 2015	EACH – Jan 2016

	Hypertension	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Evidence-based guidelines for HTN screening	Manet Community Health Center – Jan 2015 South Shore Hospital – March 2015	Steward Medical Group – Nov 2015 Granite Medical Group (pending Board Approval) – Dec 2015
Community	Chronic Disease Self-Management Programs (CDSMP)	South Shore YMCA – Jan 2015 EACH – Sept 2015 City of Quincy – Sept 2015 Town of Weymouth – Jan 2015	

	Falls	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	STEADI Clinical Risk Assessment	Manet Community Health Center – Jan 2015	South Shore Hospital – Dec 2015 Steward Medical Group – Nov 2015 Granite Medical Group (pending Board Approval) – Dec 2015
Community	Tai Chi	South Shore YMCA – April 2015 Town of Weymouth – July 2015	
	Matter of Balance	City of Quincy – Sept 2015 Town of Weymouth – Feb 2015 South Shore YMCA – March 2015 Enhance Asian Community on Health (EACH) – March 2015	
	Home Falls Prevention Checklist	South Shore Elder Services – Dec 2014	

	Substance Use	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	SBIRT	Manet Community Health Center – May 2015 South Shore Hospital – July 2015	Steward Medical Group – Nov 2015
Community	SBIRT in Communities	Bay State Community Services – April 2015	

	Diabetes	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	QI in Clinical Settings		Manet Community Health Center –Jan 2016 South Shore Hospital – Jan 2016 Steward Medical Group – Jan 2016 Granite Medical Group (pending Board Approval) – Jan 2016
Community	Chronic Disease Self-Management Programs/DSME	YMCA – June 2015	City of Quincy – Feb 2016 Town of Weymouth – Feb 2016 Enhance Asian Community on Health (EACH) – Feb 2016
	Diabetes Prevention Program	YMCA – Oct 2015	

Achievements to Date

QWWI has built a strong, united and well-functioning collaborative, despite the closure of one of the founding hospital partners. We have leaders from all partners actively participating on our governing board. Our workgroup structure is especially strong, meeting monthly with nearly 100% participation and led by chairs, who themselves provide the interventions, in community and clinical arenas. Further, the community capacity for wellness programming is arguably the biggest success for QWWI during Year 1. By July, QWWI had 32 CDSMP Trainers, 42 Matter of Balance Trainers, 7 (with two more now being certified) Tobacco Cessation Counselors, and 11 SBIRT counselors trained to provide community wellness programs. *Developing Innovative Supports and Delivery of Interventions:* The QWWI coalition has also developed two successful strategies being shared statewide. The first is a helpful work-around for coalitions with partners not on e-Referral -- the Reverse Referral form. The second is a Tobacco Cessation Resource Guide. QWWI is also developing innovative delivery of the SBIRT intervention (substance use) with South Shore Hospital shifting the traditional setting of the SBIRT from the ED to the surgical in-patient unit, where patients are likely to be prescribed pain medication. In addition, QWWI produces a monthly newsletter "QWick News" to keep our coalition informed and engaged. QWWI has a Facebook page and worked on development of a webpage, launching in October 2015.

Strategies to Address Health Equity

Recognizing the need to reach a huge Asian population in our target area, QWWI reached out to and embraced EACH (Enhance Asian Community on Health) as a community partner in Year 1, and with their help, translated program and promotional materials and now can offer classes in Chinese for CDSMP, Matter of Balance and Tobacco Cessation.

Strategies to Address Sustainability

One strategy we have begun to employ is to reach out and engage volunteer leaders for community wellness programming. The SSYMCA is lending use of their volunteer database to help QWWI manage new volunteers. We also are working with clinical partners to integrate the clinical interventions into regular, and thus grant independent, workflows and Quality Improvement activities.

Challenges and Lessons Learned

Capacity building took much longer than anticipated, especially with the closure of one of the founding clinical partners, as well as because we did not have a project manager for five months of the first year. It also took time to truly understand how to most effectively locate the clinical interventions to meet the goals of PWTF, but we have made good progress, and are ready to expand our clinical capacity for Year 2. It also took time for all partners to fully appreciate how our evaluation goals would impact how we targeted our interventions and how we should most effectively use PWTF grant resources.

Coordinating Partner Organization: City of Worcester
Budget Allocation through FY16: $3,483,553.79
Implementation began: October 1, 2014

Overview of Worcester Partnership
Throughout the first year of implementation of the Prevention & Wellness Trust Fund, community organizations across the City have built capacity and strengthened existing relationships by collaborating on building unique partnerships and models of care under this new program. Our partners organizations include Community Legal Aid, Edward M. Kennedy Community Health Center, Fallon Health, Family Health Center of Worcester, Massachusetts Audubon Society of Worcester, Mosaic Cultural Complex, Worcester Public Schools/Head Start and the Worcester Senior Center. We are addressing hypertension, falls prevention among older adults and pediatric asthma for residents of 26 census tracts within the City of Worcester. The selected census tracts represent 105,742 residents, with a margin of error of 11,384. The census tracts represent the lowest income and diverse neighborhoods in the city at most risk for health disparities in the three priority conditions. Our goal is to implement the evidence-based intervention through a healthy equity lens and to help Worcester be the healthiest city in the Commonwealth by 2020.

	Hypertension	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Evidence-based guidelines for HTN screening	EMK Community Health Center Worcester - Oct 2014 Family Health Center Worcester - Oct 2014	
Community	Chronic Disease Self-Management Programs (CDSMP)	Mosaic Cultural Complex - June 2015	
	Self-Monitored Blood Pressure w/Add'lSupport	Mosaic Cultural Complex - July 2015	

	Falls	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	STEADI Clinical Risk Assessment	Family Health Center Worcester - Oct 2014	UMass Memorial - Feb 2016
Communi	Tai Chi	Worcester Senior Center - Sept 2015	
	Matter of Balance	Worcester Senior Center - Sept 2015	
	Home Safety Checklist w/ CHW Assistance	St. Paul's Elder Outreach - June 2015	UMass Memorial - Feb 2016

	Pediatric Asthma	**Implemented**	**Projected implementations**
		Organization	*Organization*
Clinical	Care Management for High-Risk Asthma Patients	EMK Community Health Center Worcester - Oct 2014 Family HealthCenter Worcester - Oct 2014 UMass Memorial - Oct 2014	
Clinical	Asthma Self-Management in Primary Care	EMK Community Health Center Worcester -Oct2014 Family HealthCenter Worcester - Oct2014 UMass Memorial -Oct2014	
Community	Home-Based Multi-Trigger, Multi-Component Intervention	EMK Community Health Center WorcesterCHWs- Feb 2015 Family Health Center WorcesterCHWs- Feb 2015 UMass MemorialCHWs- Dec 2014	
Community	Comprehensive Head Start-Based Asthma Programs	Worcester Head Start - Oct 2014	
Community	Comprehensive School-Based Asthma Programs	Worcester Public Schools - Oct 2014	

Achievements to Date

The Worcester Partnership's pediatric asthma intervention has demonstrated a substantial reduction in ER visits among high risk asthma patients (60 in the 2013-2014 school year, 38 for 2014-2015). Absenteeism also decreased, and CHWs from all three of our clinical sites have completed over 100 homes visits for the first year of implementation. Additionally, through its work with the hypertension intervention, Family Health Center of Worcester reports that the Trust Fund continues to have profound impact on their clinical site, helping providers to focus on population health and efforts to reinvigorate these evidence-based programs. Further, 87 senior patients have been seen in the Family Health Center Falls Clinic, and many home visits have been conducted in Albanian, Spanish, and Arabic. For year two of implementation, UMass Memorial, a dedicated partner in pediatric asthma, will be joining the Falls team through its Trauma Intervention Clinic.

Strategies to Address Health Equity

Integrating a lens of health equity into all the work that we do is a priority. CHWs from different racial and ethnic communities continually address barriers of discrimination and underutilization of health care services. Additionally, we are working to address the language needs of our target population.

Strategies to Address Sustainability

The capacity building at our clinical sites and community based organizations, as well as the relationship development among our partners that has occurred over the life of this project will foster lasting change

in the health of the Worcester community. Many of our partners in the Worcester community and the City of Worcester are investing in-kind resources to help maintain our PWTF activities as we think through our sustainability plans for the future.

Challenges and Lessons Learned

It is important to note that many of the interventions have required a great deal of capacity building on the part of the partner organizations to establish the processes for engaging in the initiatives. A great deal of work was done both during capacity building and through the implementation periods to break down barriers between organizations and build relationships between the clinical and community partners. The clinical-community linkage work of the PWTF is an exciting and innovative model that is vastly different than the way public health has been done in the past.

APPENDIX B: Intervention Grid

PWTF Interventions by Grantees

Priority Conditions

			Healthy Holyoke	Quincy/ Weymouth	Boston	Lynn	Worcester	SHIFT	MetroWest	Barnstable	Berkshire
	Tobacco	**Tier**									
Clin	USPSTF Screening Guidleines	1	X	X		X			X		X
Community	Promoting Smoke-Free Environments	2	X	X	NA	X	NA	NA	X	NA	X
Community	Tob Cessation Counseling	1	X	X		X			X		X
	Hypertension	**Tier**									
Clin	Evidence-based gdlns for HTN screening	1	X	X	X	X	X	X	X	X	X
Community	Chronic Disease Self-Management Programs	1		X	X	X	X	X	X	X	
Community	YDPP or NDPP (for pts with HTN and pre-diabetes)	2	X	X						X	
Community	Self-Measured Blood Pressure Monitoring w/ Add'l Support	2	X			X	X				X
	Pediatric Asthma	**Tier**									
Clinical	Care Management for High-Risk Asthma Patients	1	X		X	X	X		X		
Clinical	Asthma Self-Management in primary care	2	X			X	X	X			
Community	Home-Based Multi-Trigger, Multi-Component Intervention	1	X	NA		X	X		X	NA	NA
Community	Comprehensive Head Start-Based Asthma Programs	2			X		X				
Community	Comprehensive School-Based Asthma Programs	2	X		X	X	X				
	Falls	**Tier**									
Cli	STEADI Clinical Risk Assessment	1		X	X	X	X	X	X	X	X
Community	Tai Chi	2		X	X	X	X		X	X	
Community	Matter of Balance	2		X	X	X	X	X	X	X	X
Community	Home Safety Assessment and Modification by PT/OT (HSAM)	1	NA							X	
Community	Home Safety Checklist assistance by CHW (HSC-CHW)	2			X		X		X		
Community	Home Falls Prevention Checklist - unspecified (HFPC)	2		X		X				X	

PWTF Interventions by Grantees

Optional Conditions

			Healthy Holyoke	Quincy/ Weymouth	BPHC	Lynn	Worcester	SHIFT	MetroWest	Barnstable	Berkshire
	Substance Abuse	**Tier**									
Clinical	SBIRT	2	NA	X	NA	NA	NA	X	NA	NA	NA
Community	SBIRT in Communities	3		X							
	Brief Strengths-Based Care Management for Substance Abuse (SBCM)	3						X			
	Obesity	**Tier**									
Clin	Weight management in primary care	2	X	NA	NA	NA	NA	NA	NA	NA	NA
Community	Environmental approaches in the community to address obesity	2	X								
	Y-USA Diabetes Prevention	2	X								
	Diabetes and Pre-Diabetes	**Tier**									
Clinical	QI in Clinical Settings	2	NA	X	NA	NA	NA	NA	NA		X
	Pharmacist Interventions to Control Diabetes	2									
	Additional Interventions									X	
Community	Chronic Disease Self-Management Programs	2		X						X	
	Diabetes Prevention Program (YDPP or NDPP)	2								X	X

APPENDIX C: Summary of Trainings Offered

2015 PWTF Trainings Offered to Partnerships		
January 20th	Asthma Learning Collaborative Webinar	This webinar addressed the collection and reporting of outcome measures, focusing particularly on Asthma Control status.
February 28th	Become a Certified Asthma Educator!	PWTF partnered with the Partners Asthma Center, the Massachusetts League of Community Health Centers, and the Boston Public Health Commission, to offer a one day training Being an Effective Asthma Educator. FOUCS: Up-to-date teaching regarding the knowledge and skills needed for asthma educators at CHCs and at partner sites, such as schools and Head Start programs. CEU credit (6 hours)was awarded to nurses and nurse practitioners who attended. An ancillary goal of the program was to bring together asthma educators at CHCs from across the commonwealth into an enduring collaborative to facilitate ongoing sharing of experience and expertise.
March 5th	PWTFLearning Session	Full-day session with plenary sessions and breakouts on priority conditions, CHWs and other relevant topics.
April 9th	80-Hour Certificate Course For Community Health Workers Outreach Worker Training Institute (OWTI)	Free80-Hour training for CHWs in Worcester County funded by the Fairlawn Foundation.
June 30th	80-Hour Certificate Course For Community Health Workers Outreach Worker Training Institute (OWTI)	Free80-Hour training for CHWs in Worcester County funded by the Fairlawn Foundation.
April 27th, April 29th, May 4th, May 6th	Asthma Home Visiting Training for CHWs	Acomprehensive4-day training that prepared CHWs to conduct asthma home visits by training them on: Understanding asthma and asthma medications; How to use asthma action plans effectively; How to conduct an asthma home visit; How to assess and address asthma triggers in the home; How to motivate parents to make changes. The training is a product of the Massachusetts Department of Public Health and was developed and delivered by the Boston Public Health Commission.

May 20th and May 27th	MDPH Supervisor Training for CHW Asthma Home Visiting Programs	Target Audience: All Supervisors of CHWs in Asthma Home Visiting Programs Description: This two session training addressed issues specific to the supervision of CHW asthma home visiting programs. The training reviews the key roles of supervisors, including orientation/training, establishing practice standards, problem solving, goal-setting as well as best practices of communication. Participants explore ways to effectively supervise and support CHWs in becoming vital members of the health care team. In addition, the training covers motivational interviewing in CHW home visiting models. Understanding concepts of motivational interviewing (MI) Techniques for supervision to incorporate MI in home visits
May 26th, May 27th, May 28th	CHW-Assisted Home Safety Assessment for Elder Falls Prevention	3-day training Target audience: 1.CHWs who will be conducting this intervention 2. All other professionals assisting with home safety assessments COURSE OBJECTIVES: 1. Train CHWs and others in the protocol for conducting the CHW-Assisted Home Safety Assessment 2. Educate clients about fall risk prevention 3. List resources available to clients through their Aging Services Access Points (ASAPs) for additional support 4. Initiate referrals to the appropriate ASAP 5. Participate in a learning community that will encourage and facilitate peer learning and networking.
May 28th	Developing a Comprehensive Plan to Address Asthma Management and Indoor Air Quality in Schools	This was a one-day training is sponsored by the Massachusetts Department of Public Health. The training included presentations from the American Lung Association, Mascot, and the Bureau of Environmental Health. Target Audience: PWTF partners including school nurses, coordinators, and head start to assist in developing a Master Plan for prioritizing school asthma initiatives. Goals & Objectives: Education on how to address environmental conditions and green cleaning in District Wellness Policies. The training also provided information on Indoor Air Quality in schools.
June 11th	PWTF Learning Session	Full-day session with plenary sessions and breakouts on priority conditions, CHWs and other relevant topics.

June 15th and June 17th	PWTF CHW Training Series Supervisor Skills Training CHEC	This two part workshop series addressed issues specific to the supervision of community health workers programs. The focus on principle-centered leadership is especially useful in understanding the guidelines of personal and organizational effectiveness. Participants in this workshop explored ways to support their staff, discover new strategies and techniques to make staff accountable, resolve conflict and learn how to transform vague feedback into clear and effective feedback. Participants applied methods learned in the workshop to several realistic, outreach specific role-play scenarios.
August 11th	Coordinating Partner Planning Session	This 4hrsession provided updates to CPs on various items including: evaluation, work plan planning, budget, TA and staffing model, etc. In addition, CPs had an opportunity to discuss successes and challenges and network.
September 16th and September 24th	Tobacco Cessation Training Regional Booster Sessions	These were 4hrsessions.Target Audience: The target audience for these sessions is individuals who have completed Basic Skills course (either recently as part of PWTF or any time in the past and not related to PWTF) and will be working with clients to address tobacco use. Description: The purpose of the Booster Session training is to build on the information presented in the Basic Skills online course by providing an in-person interactive setting to review and practice the skills needed to intervene more confidently, consistently and effectively with persons who use tobacco.
October 19th, 22nd, 26th, 28th	MDPH Asthma Home Visiting Training for Community Health Workers	Target audience: This training is for recently hired CHWs working in pediatric asthma who have not completed the CHW Asthma Home Visiting Training. Attendance for all 4 sessions is required.
October 22nd	Tobacco Cessation Training Regional Booster Sessions	This was a 4hr session. REQUIRED: for any PWTF staff who have received a scholarship and completed the UMass Basic Skills for Working with Smokers. Target Audience: individuals who have completed Basic Skills course (either recently as part of PWTF or any time in the past and not related to PWTF) and will be working with clients to address tobacco use. Prerequisite: Participants must have completed the online Basic Skills course to attend this training. Description: The purpose of the Booster Session training is to build on the information presented in the Basic Skills online course by providing an in-person interactive setting to review and practice the skills needed to intervene more confidently, consistently and effectively with persons who use tobacco.

November 2nd and November 4th	MDPH Supervisor Training for CHW Asthma Home Visiting Programs	This two session training addressed issues specific to the supervision of CHW asthma home visiting programs. The training reviewed the key roles of supervisors, including orientation/training, establishing practice standards, problem solving, goal-setting as well as best practices of communication. Participants explored ways to effectively supervise and support CHWs in becoming vital members of the health care team. In addition, the training covered motivational interviewing in CHW home visiting models. TARGET AUDIENCE: This training is required for individuals providing CHW supervision for the asthma home visiting programs
November 3rd	Pediatric Asthma Learning Session	Target audience: This attendance is required for PWTF communities working on pediatric asthma. Your team should consist of at least: a representative of the organization, a physician, an asthma nurse care manager, CHW, and if applicable, a school nurse.
November 16th	Falls Prevention Learning Collaborative Kick-off Meeting	This was a 4hrsession with didactic plenary sessions and breakouts by intervention. Target audience - Clinical: at a minimum a team member from the clinical organization involved in implementing STEADI and ideally a team from the clinical site. Community: at a minimum a team member from each community based organization that is involved in implementing a community falls intervention (MOB, Tai Chi, Home safety assessment) and ideally more than one person from those organizations.
November 16th	Falls Assisted Home Safety Assessment (AHSA) training	3hrsRefresher Session for staff who completed the2.5 day training in May conducted by Julie St. John.
November 16th	Hypertension Learning Collaborative Kick-off Meeting	This was a 4hrsession with didactic plenary sessions and breakouts by intervention. Target audience - Clinical: at a minimum a team member from the clinical organization involved in Hypertension intervention and ideally a team from the clinical site. Community: at a minimum a team member from each community-based organization that is involved in implementing a community hypertension intervention and ideally more than one person from those organizations.
November 17th	Falls Assisted Home Safety Assessment (AHSA) training	This full-day(6hr)session was for any staff not yet trained in ASHA. Note: anyone conducting AHSA is required to be trained.
Tuesday, December 1st	Coordinating Partner Information & Networking Session	This 4hrsession will provide updates to CPs on various items including: budget, sustainability, work plan, TA model, site visits, PDSA timeline, evaluation, etc. Also they will have an opportunity to present successes and

		challenges and network.
December 2nd	CHW Support/Networking Meeting and Continuing Education Session – Teens with Asthma	The quarterly support meetings provide skill-building and networking opportunities for CHWs doing asthma home visiting.
December 7th and December 10th	MDPH Supervisor Training for CHW Asthma Home Visiting	This two session training addresses issues specific to the supervision of CHW asthma home visiting programs. The training reviews the key roles of supervisors, including orientation/training, establishing practice standards, problem solving, goal-setting as well as best practices of communication. Participants explore ways to effectively supervise and support CHWs in becoming vital members of the health care team. In addition, the training covers motivational interviewing in CHW home visiting models. Required attendees: This training is required for individuals providing asthma CHW supervision

APPENDIX D: e-Referral by Partnership

Table 1: PWTF-specific e-Referral Activity by Geographic Area (Partnership) from September 2014 through October 2015.

Geographic area	# of Clinical Sites live with e-Referral	# of PWTF e-Referral Community Organizations	Referral Condition and Type	Connect Dates*	Referrals Sent**	Feedback Reports**
Barnstable	1	1	Hypertension: CDSMP	05/15	70	25
Boston: N. Dorchester, Roxbury	1	1	Pre-Diabetes: YDPP	01/15	68	39
Holyoke	2	1	Hypertension: CDSMP, YDPP Obesity: YMCA referral	5/15, 8/15	141	41
MetroWest	1	1	Hypertension: CDSMP	09/15	8	10
Lynn	1	1	Hypertension: CDSMP, SMBP Falls: Home Modification, Ta-Chi, MoB	11/14	213	647
Quincy/ Weymouth	1	2	Hypertension: CDSMP, YDPP Falls: Falls Risk Assessment, Tai-Chi, MoB	06/14	47	62
SHIFT (New Bedford)	1	1	Falls: Tai-Chi, MoB	09/15	0	0
Worcester	1	1	Asthma: Home-based interventions	09/15	0	0
Total	**9**	**9**			**547**	**824**

*Connect date is the date that testing on the e-Referral system was completed. For Quincy-Weymouth, this date significantly predates their going live with a PWTF-approved intervention.

**Referral counts obtained from e-Referral system.

Notes: Chronic Disease Self-Management (CDSMP); Self-monitoring Blood Pressure support (SMBP); Matter of Balance (MoB); YMCA Diabetes Prevention Program (YDPP)

APPENDIX E: Subject Matter Experts

PWTF Internal and External SMEs by Health Condition		
Health Condition: Tobacco		
Internal		
Name	***Position/Program***	***Organization***
Esmirna Damaso	Smoke Free Housing	DPH
Pattie Henley	Smoke Free Housing	DPH
Anna Landau	Tobacco Cessation	DPH
Jackie Doane	Smoke Free Housing	DPH
Lea Susan Ojamaa	Division Director	DPH
External		
Nanette Vitali	Tobacco trainings	UMASS Center for Tobacco Treatment Research and Training
Kathleen McCabe	Smoke Free Housing	Health Resources in Action
Chris Banthin	Smoke Free Housing	Public Health Advocacy Institute
Health Condition: Falls		
Internal		
Name	***Position/Program***	
Carla Cicerchia	Falls	DPH
Julie Kautz Mills	Falls	DPH
External		
Julie St. John	Assisted Home Safety Assessment	Texas Tech University Health Sciences Center
Kalpana Shankar	Assisted Home Safety Assessment Checklist	Boston University
Jennifer Raymond	Matter of Balance and Tai Chi	Healthy Living Center of Excellence
Patricia MacCulloch	STEADI	UMASS Lowell
Health Condition: Asthma		
Internal		
Name	***Position/Program***	
Erica Marshall	Asthma	DPH
Ashley Stewart	Asthma	DPH
Mary Gapinski	School Health	DPH
External		
Megan Sandal, MD	Asthma/Clinical	Boston Medical Center
Matthew Sadof, MD	Asthma/Clinical	Baystate Medical Center
James Moses, MD	Asthma/QI	Boston Medical Center
Dave Turcotte	Asthma/Schools & Home visits	UMass Lowell
JoHanna Flacks	Asthma/Legal (housing)	Medical Legal Partnership
Umbereen Nehal,MD	Asthma/Payor	MassHealth
Nathalie Bazil	Asthma/Home visits	Boston Public Health Commission

Amy Burack	Asthma/Clinical	Boston Children's Hospital/Partners
Health Condition: Hypertension		
Internal		
Name	***Position/Program***	
Janet Spillane	Hypertension	DPH
Carrie Wetzel	Hypertension	DPH
Anita Christie	Hypertension	DPH
External		
Naomi Fisher	Hypertension	Brigham and Women's Hospital
Jennifer Raymond	CDSMP	Healthy Living Center of Excellence
Other SMEs		
Internal		
Name	***Position/Program***	
Carol Girard	BSAS Substance Abuse	DPH
Terry Mason	CHWs	DPH
Jessica Aguilera-Steinert	CHWs	DPH
Gail Hirsch	CHWs	DPH
Gwendolyn Stewart	Communication	DPH
Javier Gutierrez	Community Liaison	DPH
Mary Brush	Community Liaison	DPH
Donna Salloom	Community Liaison	DPH
Maria Evora-Rosa	Community Liaison	DPH
Max Alderman	Diabetes	DPH
Claire Santarelli	Diabetes, Worksite Wellness	DPH
Thomas Land	Director of DOMA	DPH
Laura Nasuti	Evaluation	DPH
Georgia May Simpson	Health Equity	DPH
Jaime Corliss	Obesity (1422)	DPH
Joanne LaBelle	QI	DPH

APPENDIX F: Feedback Report Examples

Overview of Prevention and Wellness Trust Fund Data Feedback Reports

Partnership sheets:

The feedback reports are a one-page intervention summary of the current quarter of data for the entire partnership. They combine information across all Tier 1 interventions for all PWTF priority conditions. The reports break down into three panels:

1) Center Panel– this panel combines community and clinical data to allow partnerships to evaluate how well they are doing at referring, contacting, and providing feedback on potential intervention clients.
2) Community Panel (right side of sheet) – this panel focuses on the combined intervention efforts of all community partners in the partnership
3) Clinical Panel (left side of sheet) – this panel focuses on the combined intervention efforts of all clinical partners in the partnership

Clinical sheets:

The feedback reports are a one-page summary of the current quarter of data for each clinical site; Each PWTF condition will have its own sheet. They consist of three main content areas:

4) The "data quality" tables (upper right corner of sheet) – which allows sites to monitor the data DPH receives versus what they can see. Their UDS numbers (numbers they report annually to the US Health Resources and Services Administration) are used where possible to track how the data DPH receives compares to what the site officially reports
5) The "areas of focus" (left side of sheet) – selected areas (based on NQFs where possible; they identify national quality improvement priorities) for all sites to pay attention to as they implement interventions and target participants
6) The "health equity corner" (bottom right corner of sheet) – each time a different possible health disparity area will be highlighted. Health equity is one of the cornerstones of PWTF; the sheets want to consistently keep that focus present in quality improvement and evaluation efforts. Health equity areas under consideration include race, ethnicity, preferred language, gender, age, disability status, and comorbidities (including mental health and other PWTF health conditions).

Community (CBO) sheets:

The feedback reports are a one-page summary of the current quarter of data for each community site; each PWTF condition will have its own sheet. They consist of four main content areas:

7) The "site demographics" tables (upper right corner of sheet) – which allows sites to monitor the demographics of participants who have enrolled in interventions
8) Graphs 1 & 2 (upper left side and center of sheet) – selected areas of focus for CBOs around referrals, enrollment, feedback reports, and completion
9) Graph 2 (lower left side) – compares the CBO statistics of the site (by program) with all other sites in PWTF doing the same intervention so sites have a sense of how their numbers compare
10) The "health equity corner" (bottom right corner of sheet) – each time a different possible health disparity area will be highlighted. Health equity is one of the cornerstones of PWTF; the sheets want to consistently keep that focus present in QI and evaluation efforts. PWTF will be working with community sites around how to better address health equity concerns in the community setting.

Disclaimer:

These sheets are based on the currently-available clinical and community data (as more information and fields become available, the sheets will evolve). For the "All PWTF Sites" data, this is based on all sites working on the condition for whom we have data. "All PWTF Sites" data will continue to develop and update as additional clinical sites contribute data. These sheets are intended for quality improvement on both ends – for DPH to check that the data we receive is correct, and for sites to identify quality improvement areas they might want to address.

Sample Partnership Data Feedback Report

Prevention and Wellness Trust Fund: SAMPLE

QTR3: Mar 2015-May 2015

Clinical

Graph 6: Percent of Clients Seen this Quarter from the Total Population of Interest

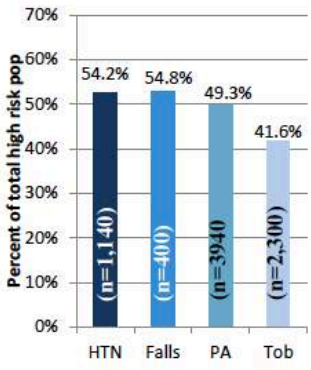
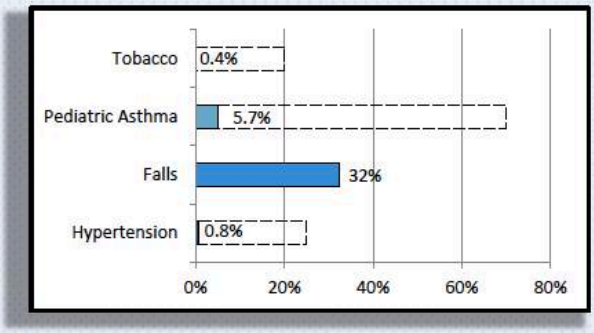


Table 1: Percent of Clients Improving or Maintaining their Health

	HTN	Falls
QTR2	57.8%	N/A
QTR3	62.4%	N/A
Change	+8.1%	N/A
	PA	Tob
QTR2	N/A	71.0%
QTR3	N/A	74.1%
Change	N/A	+4.4%

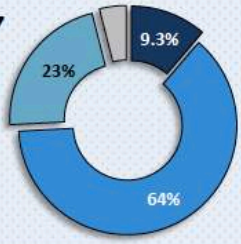
Graph 1: Eligible Patients Referred to a Provider-Initiated Intervention



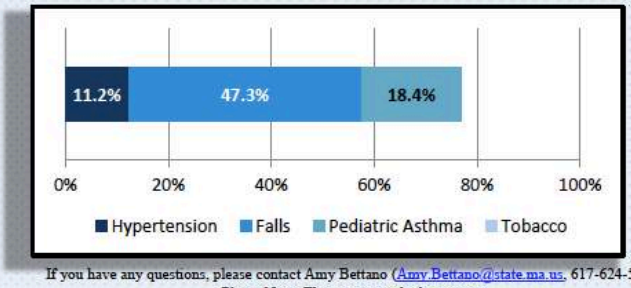
Number of PWTF clients enrolled in interventions **72**

Number of e-referrals before June 2015 **157**

Graph 3: Percent of Referrals with a Feedback Report



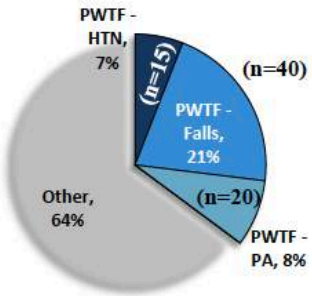
Graph 2: Percent of PWTF Patient Referrals Contacted within 48 Hours



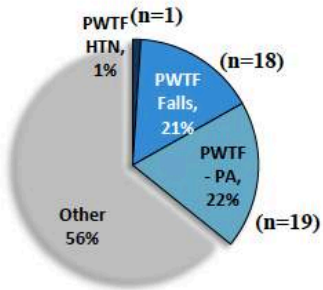
If you have any questions, please contact Amy Bettano (Amy.Bettano@state.ma.us, 617-624-5467)
Please Note: These are sample data reports

Community

Graph 4: Percent of Intervention Enrollees that are PWTF Clients



Graph 5: Percent of Completing Clients that are PWTF Clients



Sample Clinical Data Feedback Report

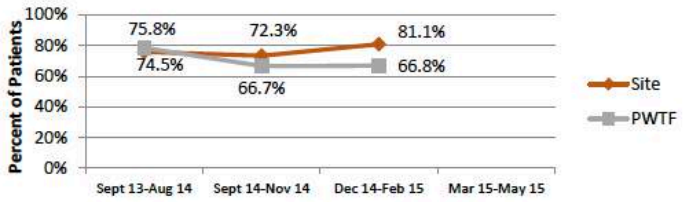
Prevention and Wellness Trust Fund

Hypertension (HTN)

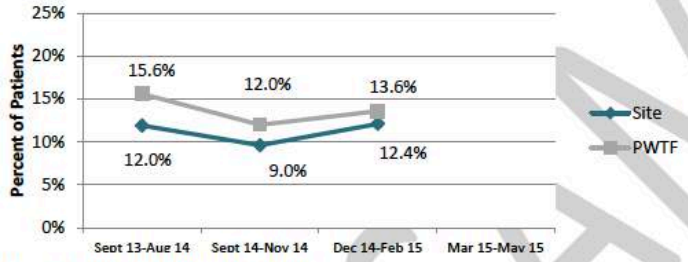
QTR2: Dec 2014-Feb 2015

SAMPLE

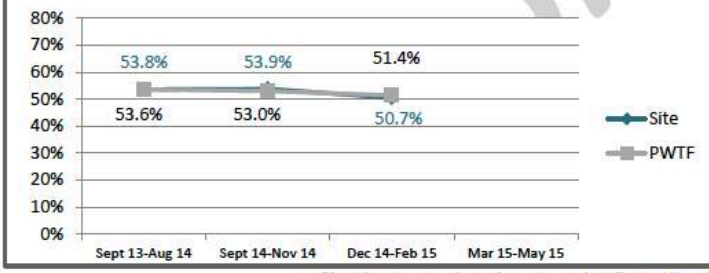
Graph 1: BP Documented at every visit in Patients (ages 18-85 with at least two visits) with a HTN Diagnosis



Graph 2: BP ≥ 140/90 at Last Visit:
Patients ages 18-85 without a HTN Diagnosis



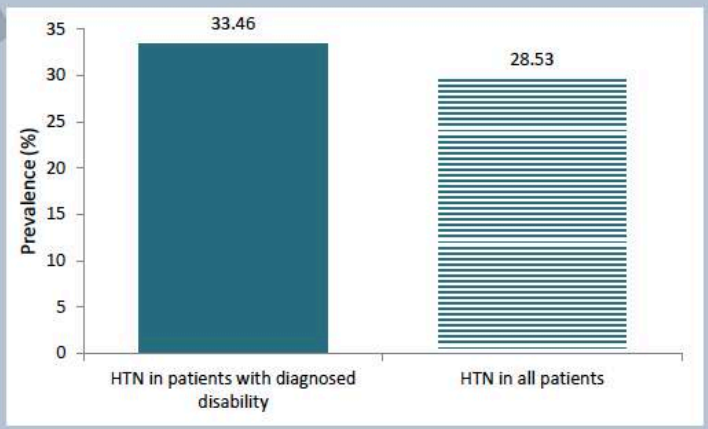
Graph 3: BP < 140/90 at Last Visit:
Patients ages 18-85 with a HTN Diagnosis



Data Quality				
Measure	**Site**		**All PWTF Sites**	
	Percent Documented Sept 2014-Nov 2014	**Percent Documented Dec 2014-Feb 2015**	**Percent Documented Sept 2014-Nov 2014**	**Percent Documented Dec 2014-Feb 2015**
Documented BP at each patient encounter	93.9% (14,261)	94.4% (14,331)	80.6% (129,554)	81.1% (119,155)
	Site		**All PWTF Sites**	
Percent of patients with a HTN diagnosis code (Sept '13-Feb '15)	29.1% (5,000) *Reported UDS 2013: 27.8%*		22.6% (51,156)	

Health Equity Corner

Graph 4: A greater proportion of the site's patients with a diagnosed disability have diagnoses of hypertension than the patient population as a whole. This suggests that patients with a diagnosed disability (16% of the patient population) may have a larger burden of chronic disease.



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Sample Clinical Data Feedback Report

Prevention and Wellness Trust Fund

Pediatric Asthma

QTR2: Dec 2014-Feb 2015

SAMPLE

Graph 1: Age distribution of Pediatric Asthma Patients (Sept 2013-Feb 2015)

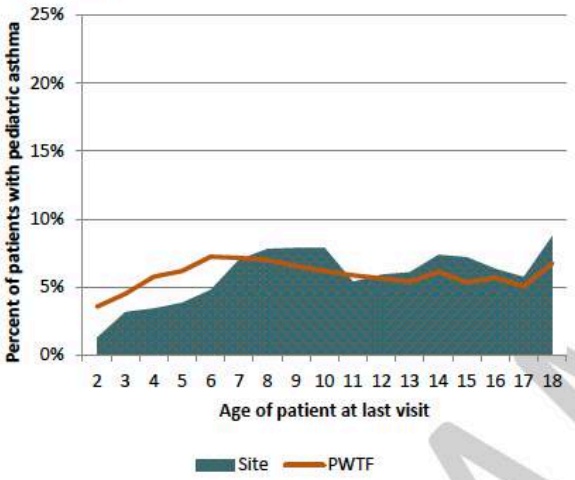


Table 1: Breakdown of pediatric asthma severity classifications

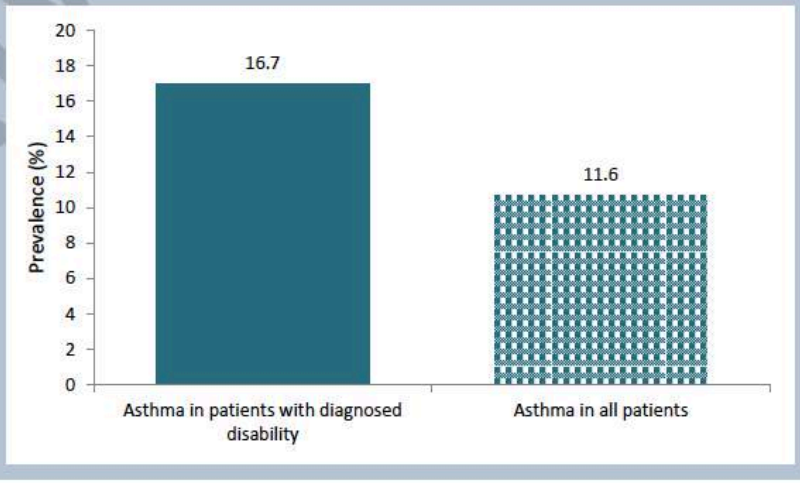
Asthma Severity Category	Number of Patients	Percent
Mild	2	0.5%
Mild Intermittent	275	65.0%
Mild Persistent	**115**	**27.0%**
Moderate Persistent	**20**	**9.0%**
Severe Persistent	**1**	**0.2%**

*bolded categories are those used by the National Heart, Lung, and Blood Institute

Data Quality				
Measure	**Site**		**All PWTF Sites**	
Percent of pediatric patients (2-18) with an asthma diagnosis code (Sept 2013-Feb 2015)	13.8% (1,277)		15.7% (7,785)	
	Site		**All PWTF Sites**	
	Sept 2014-Nov 2014	**Dec 2014-Feb 2015**	**Sept 2014-Nov 2014**	**Dec 2014-Feb 2015**
Percent of patients with pediatric asthma with an influenza vaccination within the past year	89.0% (326)	85.3% (320)	56.4% (1,075)	54.2% (1,843)

Health Equity Corner

Graph 2: A greater proportion of the site's patients with a diagnosed disability have diagnoses of asthma than the patient population as a whole. This suggests that patients with a diagnosed disability (24% of the patient population at the site) may have a larger burden of chronic disease.



If you have any questions, please contact Amy Bettano (Amy.Bettano@state.ma.us, 617-624-5467); Please Note: These are sample data reports

Sample Clinical Data Feedback Report

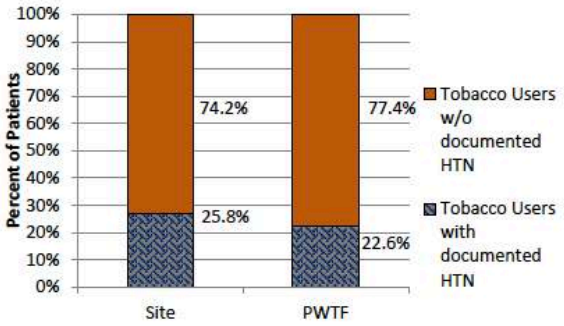
Prevention and Wellness Trust Fund

Tobacco

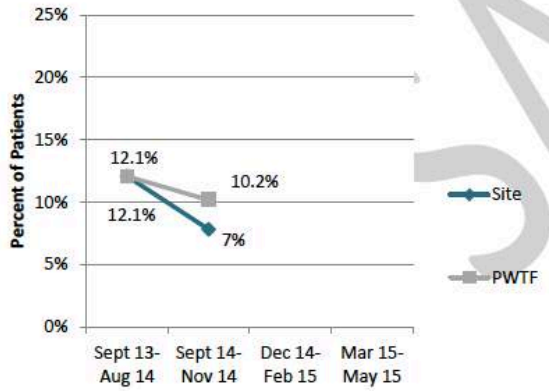
QTR1: Sept 2014-Nov 2014

SAMPLE

Graph 1: Among current tobacco users, percent of patients with a hypertension diagnosis since Sept 2013



Graph 2: Among current tobacco users without a hypertension diagnosis, percent of patients who had a blood pressure > 140/90 at their last visit

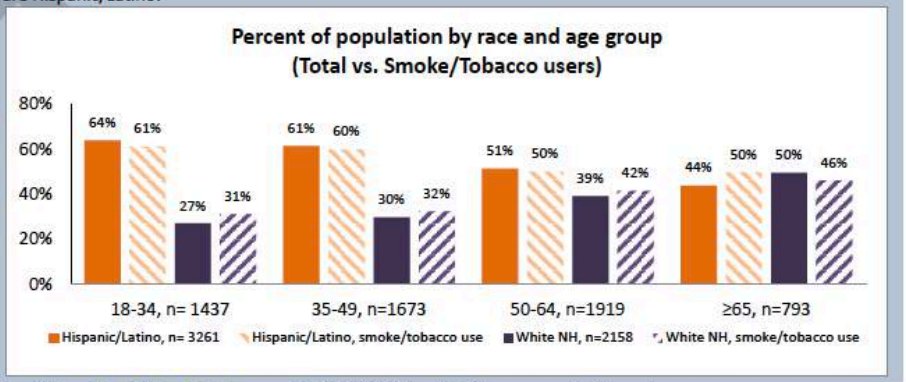


Data Quality				
Measure	**Site**		**All PWTF Sites**	
	Percent Documented: Sept 2013-Aug 2014	**Percent Documented: Sept 2014-Nov 2014**	**Percent Documented: Sept 2013-Aug 2014**	**Percent Documented: Sept 2014-Nov 2014**
Smoking status or tobacco usage evaluated within the past 24 months* (Counseling for those identified as tobacco users will be tracked in future sheets)	93% (12,000) *Reported UDS 2013: 95.1%*	N/A*	84.3% (33,206)	N/A*
Smoking status or tobacco usage evaluated at the last visit	82.9% (9,900)	55.5% (3,998)	75.0% (28,134)	68.5% (15,747)
	Site		**All PWTF Sites**	
Percent of patients who are current tobacco users/smokers (Sept 2013-Nov 2014)	32.1% (3,867)		20.9% (8,216)	

*Data will only reflect the 1.25 years' worth of data to which PWTF currently has access; a separate quarter measure will not be calculated until 2 years' worth of data has been collected.

Health Equity Corner

Graph 3: Percent of patients that currently or formerly smoke by race and age category at the site compared to the racial and age distribution in the patient population. Thirty-nine percent of patients between the ages of 50-64 are non-Hispanic White. However, 42% of smokers/tobacco users ages 50-64 are non-Hispanic White. Of patients over 65 years of age, 44% are Hispanic/Latino but 50% of smokers/tobacco users ages 65+ are Hispanic/Latino.



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Sample Clinical Data Feedback Report

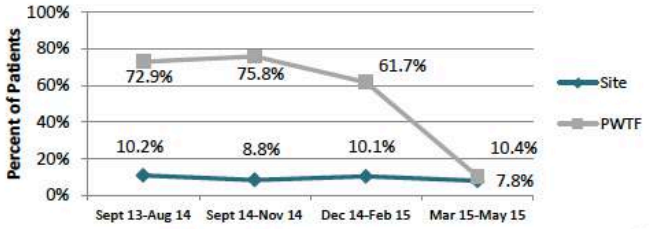
Prevention and Wellness Trust Fund

Diabetes/ Obesity

QTR3: Mar 2015-May 2015

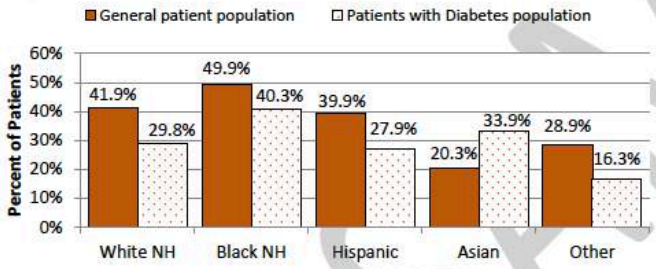
SAMPLE

Graph 1: Percent of patients with diabetes without an HbA1c test documented in the past year



Data Quality, Sept 2013-May 2015		
Measure	**Site**	**All PWTF Sites**
Percent of patients with prediabetes, metabolic syndrome, or abnormal glucose test	9.2% (900)	7.8% (2,726)
Percent of patients with diabetes	10.0% (1,000)	11.2% (3,928)
Percent of patients with diabetes with an HbA1c>9.0%	27.8% (300)	18.3% (718)
Percent of patients with a BMI > 30	36.9% (3,200)	37.2% (7,773)

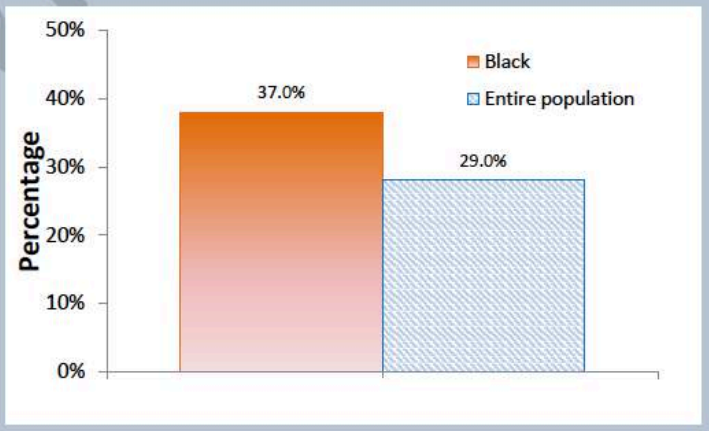
Graph 2: Percent of patients by race who smoke in the general patient population versus the patients with diabetes population



Diabetic Exams				
	Site		**All PWTF Sites**	
	Dec 2014-Feb 2015	**Mar 2015-May 2015**	**Dec 2014-Feb 2015**	**Mar 2015-May 2015**
Percent of patients with diabetes with an eye exam in the past year	10% (150)	11% (160)	1.7% (33)	2.1% (43)
Percent of patients with diabetes with a foot exam in the past year	8% (80)	7% (76)	24.3% (466)	23.3% (485)

Health Equity Corner

Graph 3: Last quarter, the population of black patients seen had a higher prevalence of diabetes than the entire clinical population seen in the last quarter.



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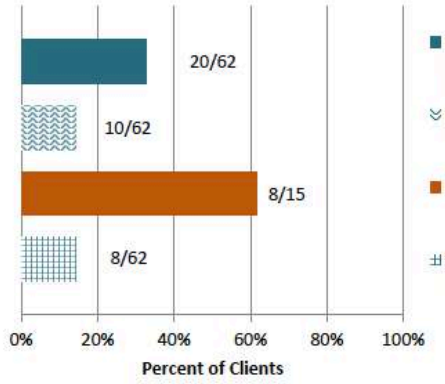
Sample Clinical Data Feedback Report

Prevention and Wellness Trust Fund

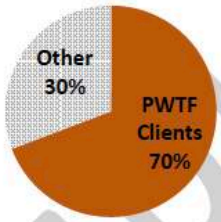
Falls
(MoB)

QTR2: Dec 2014-Feb 2015

Graph 2: Overall CBO statistics

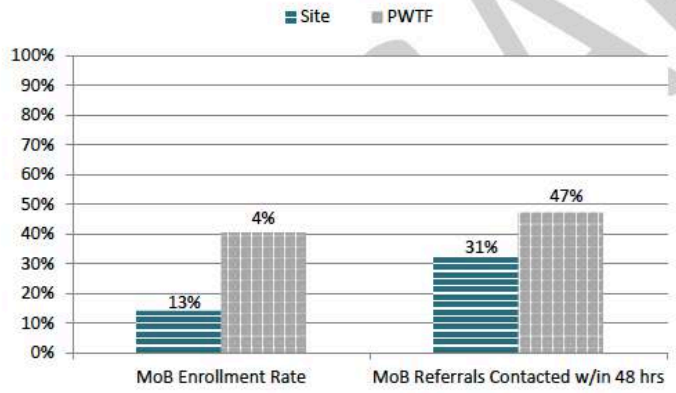


Graph 1: Percent of enrolled clients who were from PWTF clinics



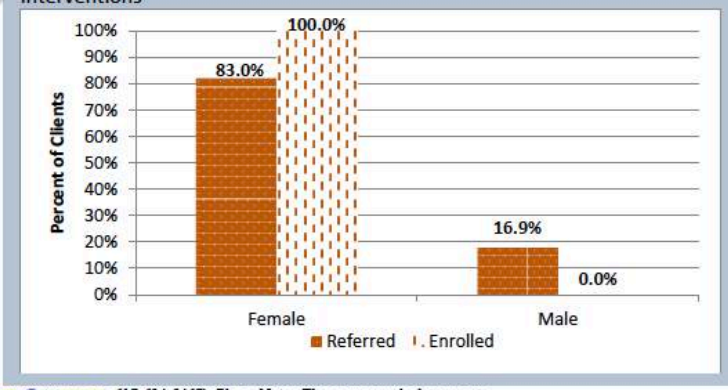
Site Demographics: Enrollment	Percent	N (n=15)
Gender		
Female	73.3%	11
Male	26.7%	4
Race		
American Indian/ Alaskan Native	**	**
Asian	**	**
Black/ African American	**	**
Native Hawaiian	**	**
Pacific Islander	**	**
White	53.3%	8
Ethnicity		
Hispanic/ Latino	13.3%	2
Non-Hispanic/ Latino	6.7%	1
Preferred Language		
English	53.3%	8
Spanish	13.3%	2
Other	33.3%	5

Graph 3: CBO statistics versus PWTF by program



Health Equity Corner

Graph 4: Gender Breakdown of PWTF clients referred vs. enrolled in Falls Interventions



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APPENDIX G: PWTF Partnership Baseline Data

Calculating Baselines

In the 2014 Annual Legislative Report, DPH used statewide surveillance data and clinical encounter-level data to calculate baselines for improvement; for the 2015 Annual Legislative Report, the data has been updated to include the most recent years available as well as the partnerships' electronic medical record data. The baseline prevalences of the four priority conditions (hypertension, tobacco use, pediatric asthma, and falls among the elderly) and three optional conditions (diabetes, obesity, and substance use) were calculated from multiple datasets. The datasets utilized were the US Census 2010, Behavioral Risk Factor Surveillance System (BRFSS), Acute Hospital Case Mix Databases (Case Mix), MDPHnet, the All Payer Claims Database (APCD), and encounter-level electronic medical record data submitted from participating clinical sites. DPH used the most current data available at the time of release.

Using multiple datasets allows comparison of different aspects of chronic disease burden in the state. The Behavioral Risk Factor Surveillance System (BRFSS) provides self-report data. The All Payer Claims Database (APCD) provides prevalence of hypertension diagnoses for all patients covered by insurance (public or private, however MassHealth data was not available for analysis at the time of this report). With the Acute Hospital Case Mix Databases (Case Mix), we are able to calculate prevalence of distal outcomes that often result from untreated chronic conditions, such as cardiovascular disease (due to hypertension) and lung cancer (due to smoking). MDPHnet allows users to query the medical records of three large healthcare providers in the state (Cambridge Health Alliance, Atrius, and community health centers participating in the Massachusetts League of Community Health Centers' Azara DRVS system) to determine the prevalence of illness in those clinical populations as well as to see projections of illness prevalences for each town in Massachusetts. Each data source is described in detail below.

Data Sources and Analysis Methodology

The *US Census 2010 data* was obtained from the American Fact Finder website (http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml). Race and ethnicity data for each town and zip code for PWTF-funded communities were calculated from the 2010 Demographic Profile Data tables. Information on socioeconomic status was obtained from the 2008-2012 American Community Survey 5- Year Estimates tables. Partnership-level estimates were then calculated as a weighted average of the estimates from towns or zip codes. The US Census 2010 represents the most accurate and detailed view of demographic characteristics of Massachusetts communities.

The *Behavioral Risk Factor Surveillance System (BRFSS)* is a telephone survey that has been conducted in the state since 1986. The latest available year for analysis was 2014, though some questions are not asked every year. For all calculations we used the latest available data, and we averaged across multiple calendar years (i.e. 2012, 2013, and 2014) where possible. To calculate prevalence at the town or zip code level, we calculated small area estimates, which were weighed by the demographic characteristics (i.e. race, ethnicity, age) of the geographic area. Partnership-level estimates were then calculated as a weighted average of the estimates from towns or zip codes. The BRFSS is a major source of self-report health data in the Commonwealth, and its long history will enable us to compare current and historical trends in health condition prevalences.

The *Acute Hospital Case Mix Databases (Case Mix)* contains patient-level data from hospital inpatient discharges and hospital emergency departments. (Unless otherwise noted, all

hospitalization data are from hospital inpatient discharges.) The latest full fiscal year for analysis was 2014, and we calculated average rates over the past three fiscal years (i.e. 2012, 2013, and 2014). Partnership-level estimates were calculated as a weighted average of town or zip code level estimates.

The *All Payer Claims Database (APCD)* consists of medical, pharmacy, and dental claims for all payers covering Massachusetts residents. The most recent year available for analysis was 2012. We calculated condition prevalence at the town or zip code level using the number of unique patients. Partnership-level estimates were then calculated as a weighted average of the town or zip code prevalence. (Since DPH's access to the APCD was only very recent - September 2014, we were only able to calculate condition prevalence for this report.) In the future, we will also use the APCD to calculate baselines for medication adherence and costs in each funded partnership.

MDPHnet is a system for querying the electronic medical records of three large healthcare providers in the state (Cambridge Health Alliance, Atrius, and community health centers participating in the Massachusetts League of Community Health Centers' Azara DRVS system). Participating healthcare providers' EMRs are directly linked to the MDPHnet system; however they remain in control and privacy is maintained as only they can permit the query from a user to run and send the aggregate results back to the user. The MDPHnet system provides the actual stratified counts as well as projected counts for all MA towns based on weighting actual MDPHnet data to the demographic distribution of the town. The most recent complete calendar years were used (2012, 2013, and 2014). Partnership-level estimates were calculated as a weighted average of the town projections divided by the number of projected patients with a medical visit during the time period.

PWTF Clinical Encounter-level electronic medical data (i.e EMR data) is the data collected during each visit to a medical provider. Clinical providers participating in PWTF agreed to share their clinic's data through either encounter-level data pulls that they sent to DPH or aggregate counts that the clinical sites were in charge of calculating; the overwhelming majority or participating clinical sites are sending limited datasets to DPH that have been stripped of patient information. All sites submit their data to DPH quarterly. This EMR data is important to the analysis of PWTF efforts because it represents the medical records of sites participating in the Trust; their quality improvement efforts can be directly assessed from these records as well as the outcomes of patients who received referrals to Trust interventions. All PWTF encounter-level clinical data that was available was used (covering Sept 2013-Sept 2015). Partnership-level estimates were calculated directly using the data from the clinics located in their partnership.

PWTF Community Based Organization Data (i.e. PWTF CBO data) is the data collected by sites offering PWTF community-based interventions. Data is collected both on clients who received a referral into the program from a PWTF clinic as well as those clients who enroll into a PWTF program but did not have a PWTF referral (i.e. walk-in, from a non-PWTF clinic, etc.). CBOs participating in PWTF share their data either from a database (such as the PWTF-provided CBO Access database or from their own database) or they submit aggregate counts that the CBOs are in charge of calculating. All sites submit their data to DPH quarterly. This CBO data is important to the analysis of PWTF efforts because it is used to calculate referral, enrollment, and completion

statistics; it also is used for quality improvement efforts for CBO partners around their intervention offerings. All PWTF CBO data that was available was used (covering Jan 2015-Sept 2015).

The geographic extent of each partnership was determined from the RFR applications and work plans submitted to DPH. The spatial resolution of each geographic area (towns or zip codes) was determined based on this information as well. Three partnerships consist of single towns/cities: Holyoke, Lynn, and SHIFT (New Bedford). Three partnerships consist of multiple towns/cities: Barnstable (Barnstable, Bourne, Falmouth, and Mashpee), MetroWest (Framingham, Hudson, Marlborough, and Northborough), and Berkshire County (Adams, Alford, Becket, Cheshire, Clarksburg, Dalton, Egremont, Florida, Great Barrington, Hancock, Hinsdale, Lanesborough, Lee, Lenox, Monterey, Mount Washington, New Ashford, New Marlborough, North Adams, Otis, Peru, Pittsfield, Richmond, Sandisfield, Savoy, Sheffield, Stockbridge, Tyringham, Washington, West Stockbridge, Williamstown, and Windsor). The remaining three partnerships consist of multiple zip codes within towns/cities: Boston (02120, 02119, 02125, 02121, and 02122), Quincy/Weymouth (02171, 02169, 02188, 02189, and 02190), and Worcester (01610, 01608, 01607, 01604, and 01603).

Results

Baseline prevalences in each community from each data source are presented in Tables 3-11 for each health condition; overall, the average disease burden in funded partnerships was greater than the state average for each priority condition. Participating communities also contain greater percentages of racial and ethnic minorities than the state as a whole (Tables 1a & 1b), and have a more people living below the Federal Poverty Level (Table 2).

Demographics

While funded partnerships overall contain greater percentages of racial and ethnic minorities than the state as a whole, certain communities have the ability to reach specific racial or ethnic minorities that are traditionally underserved by the current health care system. For Black/African American populations, the Boston, Lynn, and Worcester partnerships have much greater percentages than the state average (Table 1a). For Hispanic/Latino populations, the Holyoke, Lynn, Worcester, Boston, and SHIFT partnerships have much greater percentages than the state average. The Quincy/Weymouth partnership has the ability to reach Asian populations and the SHIFT and Barnstable partnerships have the ability to reach American Indian/Alaskan Native populations as well.

Participating communities in six funded partnerships have a greater percentage of people living below the Federal Poverty Level: Holyoke, Boston, Worcester, Shift, Lynn, and Berkshire (Table 2). Thus, the Prevention and Wellness Trust Fund has the potential to reduce health disparities for those of low socioeconomic status as well.

Table 1a: Race and Ethnicity Population Breakdown in Prevention and Wellness Trust Fund Grantee Communities, 2010

Geographic Area	Total Population	White alone (%)	Black or African American alone (%)	American Indian/ Alaskan Native alone (%)	Asian alone (%)	Hawaiian Native/ Pacific Islander (%)	Hispanic or Latino (any race) (%)
Barnstable	110484	90.77	2.34	0.87	1.25	0.05	2.40
Berkshire County	131219	92.50	2.70	0.20	1.20	0.00	3.50
Boston: N. Dorchester, Roxbury	123279	27.29	43.62	0.62	8.15	0.06	22.12
Holyoke	39880	66.00	4.70	0.80	1.10	0.10	48.40
MetroWest	140035	78.66	3.92	0.24	5.61	0.05	10.38
Lynn	90329	57.60	12.80	0.70	7.00	0.10	32.10
Quincy/ Weymouth	118052	76.38	4.56	0.20	14.66	0.02	3.24
SHIFT (New Bedford)	95072	74.50	6.40	1.30	0.90	0.10	16.70
Worcester	90777	64.90	12.35	0.48	7.38	0.06	24.99
Grantee Average	**939127**	**70.67**	**10.81**	**0.55**	**5.59**	**0.05**	**14.88**
State Average	**6547629**	**80.40**	**6.60**	**0.30**	**5.30**	**0.00**	**9.60**

Table 1a. Communities in PWTF partnerships are more racially and ethnically mixed than the state as a whole. All data is from the US Census 2010, for more information please see the "Data Sources and Analysis Methodology" section above.

Table 1b: Race and Ethnicity Population Breakdown in Prevention and Wellness Trust Fund Grantee Clinical Sites providing encounter-level data, Sept 2013-Sept 2015

Geographic Area	White alone (%)	Black or African American alone (%)	American Indian/ Alaskan Native alone (%)	Asian alone (%)	Hawaiian Native/ Pacific Islander (%)	Hispanic or Latino (any race) (%)
Barnstable	69.1	10.1	0.7	1.9	0.6	12.2
Berkshire County	93.8	3.5	0.1	0.3	0.0	1.8
Boston: N. Dorchester, Roxbury	16.2	48.3	0.4	18.7	1.2	10.6
Holyoke	42.5	2.9	0.2	0.9	0.1	48.5
MetroWest	44.5	3.9	0.1	2.5	0.2	37.5
Lynn	17.4	12.8	1.1	7.0	0.0	51.8
Quincy/ Weymouth	81.7	6.6	0.1	2.9	0.0	3.1
SHIFT (New Bedford)	47.2	15.9	0.3	0.8	0.7	32.8
Worcester	24.6	13.2	0.2	5.8	0.1	43.8
Grantee Average	**50.3**	**15.2**	**0.3**	**5.8**	**0.3**	**21.8**

Table 1b. Clinics in PWTF partnerships are racially and ethnically mixed. All data is from encounter-level data submitted by PWTF clinical sites. Sites include: Berkshire Medical Center, Bowdoin St. Health Center, Codman Sq. Health Center, DotHouse Health, Duffy Health Center, Edward M. Kennedy CHC (Framingham and Worcester), Family Health Center, Fairview Hospital, Greater New Bedford CHC, Harbor Health (Hyannis, Geiger Gibson, and Neponset), Holyoke Health Center, Lynn CHC, Manet CHC, South Shore Hospital, and Western Mass Physician Associates; for more information please see the "Data Sources and Analysis Methodology" section above.

Table 2: Income Levels for Individuals and Families in Prevention and Wellness Trust Fund Grantee Communities

Geographic Area	All families with children <18 whose incomes are less than the Federal Poverty Level (%)	Persons with incomes below Federal Poverty Level (%)
Barnstable	10.28	9.55
Berkshire County	16.60	12.40
Boston: N. Dorchester, Roxbury	34.41	30.15
Holyoke	39.90	30.60
MetroWest	8.93	7.76
Lynn	23.90	20.80
Quincy/ Weymouth	11.71	8.97
SHIFT (New Bedford)	27.10	21.60
Worcester	30.08	24.32
Grantee Average	**20.49**	**16.94**
State Average	**12**	**11**

Table 2. Communities in PWTF partnerships have a greater percentage of people living below the Federal Poverty Level than the state as whole. All data is from the US Census 2010; for more information please see the "Data Sources and Analysis Methodology" section above.

Table 3: Hypertension: Prevalence of hypertension and cardiovascular disease by PWTF partnership across five data sources

Geographic Area	BRFSS (%)	Case Mix CVD prevalence per 100,000	APCD (%)	MDPHnet (%)	EMR (%)
Barnstable	31.9	2028.6	35.9	27.5	22.2
Berkshire County	32.7	1723.1	28.7	25.3	29.4
Boston: N. Dorchester, Roxbury	30.5	1608.8	25.1	16.5	25.8
Holyoke	37.6	2099.0	32.8	21.4	30.7
MetroWest	28.8	1281.3	28.5	21.6	16.3
Lynn	31.6	1532.4	27.6	20.2	22.1
Quincy/ Weymouth	28.7	1644.7	27.6	21.7	18.7
SHIFT (New Bedford)	34.8	2289.2	34.1	21.5	25.3
Worcester	28.9	1363.0	28.9	19.4	25.3
Grantee Average	**31.2**	**1688.1**	**28.8**	**19.9**	**23.3**
State Average	**28.8**	**1530.1**	**25.9**	**22.0**	**N/A**

Table 3. Communities in PWTF partnerships have higher prevalence of hypertension than the state as a whole for survey (BRFSS), hospitalization (Case Mix), and claims data (APCD). CVD = cardiovascular disease. BRFSS prevalence is a small-area estimate generated from the number of respondents between the ages of 18 and 85 that have ever been told they have hypertension averaged across the 2011 and 2013 surveys (data source: BRFSS, 2011 & 2013). Case Mix prevalence is the normalized rate of inpatient encounters of patients between the ages of 18 and 85 averaged across fiscal years 2012, 2013, and 2014 that had a diagnosis code beginning with any of the following three digits: 401, 402, 403, or 404 (data source: MA Acute Hospital Case Mix Database, FY2012-2014). APCD prevalence is the proportion of unique patients between the ages of 18 and 85 in the year 2012 for which there is a claim with a diagnosis code beginning with any of the following three digits: 401, 402, 403, or 404 (data source: All Payer Claims Database, Center for Health Information and Analysis, 2012). MDPHnet prevalence is the proportion of unique patients between the ages of 20 and 89 in 2012, 2013, and 2014 for which there is a medical visit with a diagnosis code beginning with any of the following three digits: 401, 402, 403, or 404 (data source: MDPHnet query, 2012-2014). EMR prevalence is the proportion of unique PWTF clinical patients between the ages of 18 and 85 between Sept 2013 to Sept 2015 for which there is a medical visit with a diagnosis code beginning with any of the following three digits: 401, 402, 403, or 404 (data source: PWTF Clinical Encounter-Level Data, 2013-2015); for more information about the data sources please see the "Data Sources and Analysis Methodology" section above.

Table 4: Tobacco Use: Prevalence of tobacco use, lung cancer, and COPD by PWTF partnership across five data sources

Geographic Area	BRFSS (%)	Case Mix tobacco-attributable conditions per 100,000	APCD (%)	MDPHnet (%)	EMR (%)
Barnstable	14.8	474.2	11.0	15.9	30.0
Berkshire County	18.3	333.3	10.4	15.6	30.2
Boston: N. Dorchester, Roxbury	18.7	601.7	9.0	14.0	18.4
Holyoke	27.9	927.3	13.7	14.9	24.4
MetroWest	13.8	357.4	11.3	14.9	15.8
Lynn	20.7	653.0	10.4	14.7	19.6
Quincy/ Weymouth	17.8	613.5	11.2	14.9	17.2
SHIFT (New Bedford)	25.1	1087.1	12.4	14.9	32.8
Worcester	23.1	564.5	11.2	14.5	21.7
Grantee Average	18.1	501.7	11.0	15.0	19.8
State Average	15.9	466.3	10.0	15.0	N/A

Table 4. Communities in PWTF partnerships have a higher prevalence of tobacco use than the state as a whole. BRFSS prevalence is a small-area estimate generated from the number of respondents over age 18 that have smoked at least 100 cigarettes in their lifetime and are now smoking regularly averaged across the 2012, 2013, and 2014 surveys (data source: BRFSS, 2012-2014). Case Mix prevalence is the normalized rate of inpatient encounters of patients over the age of 18 averaged across fiscal years 2012, 2013, and 2014 that had a diagnosis code beginning with any of the following digits: 162.9, 490, 491, 492, 493, 494, 495, or 496 (data source: MA Acute Hospital Case Mix Database, FY2012-2014). APCD prevalence is the proportion of unique patients over the age of 18 in the year 2012 for which there is a claim with a diagnosis code beginning with any of the following digits: 162.9, 490, 491, 492, 493, 494, 495, or 496 (data source: All Payer Claims Database, Center for Health Information and Analysis, 2012). MDPHnet prevalence is the proportion of unique patients between the ages of 20 and 99 in 2012, 2013, and 2014 for which there is a medical visit with a diagnosis code beginning with any of the following three digits: 162.9, 490, 491, 492, 493, 494, 495, or 496 (data source: MDPHnet query, 2012-2014). EMR prevalence is the proportion of unique PWTF clinical patients 18 and older between Sept 2013 to Sept 2015 for which the last medical visit on record states that the patient is a tobacco user (data source: PWTF Clinical Encounter-Level Data, 2013-2015); for more information about the data sources please see the "Data Sources and Analysis Methodology" section above.

Table 5: Pediatric Asthma: prevalence of pediatric asthma and emergency department visits due to pediatric asthma by PWTF partnership across five data sources

Geographic Area	BRFSS (%)	Case Mix ED visits per 100,000	APCD (%)	MDPHnet (%)	EMR (%)
Barnstable	13.5	663.6	7.1	9.3	6.3
Berkshire County	13.8	578.0	9.6	9.2	13.3
Boston: N. Dorchester, Roxbury	17.1	1969.6	12.9	9.3	19.0
Holyoke	18.1	2356.6	11.1	9.3	20.0
MetroWest	13.8	797.4	9.4	9.3	13.3
Lynn	15.6	1116.7	10.5	9.4	12.7
Quincy/ Weymouth	12.7	726.0	10.4	9.4	7.6
SHIFT (New Bedford)	15.8	1052.8	11.0	9.3	22.6
Worcester	14.9	1447.9	8.8	9.3	14.2
Grantee Average	15.6	1369.5	10.4	9.3	17.1
State Average	13.7	737.6	9.3	9.3	N/A

Table 5. Communities in PWTF partnerships have a higher prevalence of pediatric asthma than the state as a whole for survey (BRFSS), hospitalization (Case Mix), and claims data(APCD. BRFSS prevalence is a small-area estimate generated from the number of respondent parents of children between the ages of 2 and 18 that have ever been told they have asthma averaged across the 2012, 2013, and 2014 surveys (data source: BRFSS, 2012-2014). (Please note that typically the state reports on pediatric asthma surveillance from schools for town-level data, not BRFSS small area estimates.) Case Mix prevalence is the normalized rate of emergency department (ED) encounters of patients between the ages of 2 and 18 averaged across fiscal years 2011, 2012, and 2013 that had a diagnosis code beginning with 493 (data source: MA Acute Hospital Case Mix Database, FY2011-2013). APCD prevalence is the proportion of unique patients between the ages of 2 and 18 in the year 2012 for which there is a claim with a diagnosis code beginning with 493 (data source: All Payer Claims Database, Center for Health Information and Analysis, 2012). MDPHnet prevalence is the proportion of unique patients between the ages of 0 and 19 in 2012, 2013, and 2014 for which there is a medical visit that met MDPHnet's algorithm for an Asthma visit (data source: MDPHnet query, 2012-2014). EMR prevalence is the proportion of unique PWTF clinical patients between the ages of 2 and 18 from Sept 2013 to Sept 2015 for which there is a medical visit with a diagnosis code beginning with 493 (data source: PWTF Clinical Encounter-Level Data, 2013-2015); for more information about the data sources please see the "Data Sources and Analysis Methodology" section above.

Table 6: Falls among older adults: prevalence of falls by PWTF partnership across five data sources

Geographic Area	BRFSS (%)	Case Mix falls per 100,000	APCD (%)	MDPHnet (%)	EMR (%)
Barnstable	15.3	2128.1	3.8	10.6	1.8
Berkshire County	13.2	2137.8	4.4	10.8	15.5
Boston: N. Dorchester, Roxbury	7.0	1352.2	4.8	10.2	2.8
Holyoke	13.7	2732.6	6.8	11.8	5.3
MetroWest	9.7	2136.7	5.0	10.7	1.7
Lynn	9.3	2127.2	7.4	10.4	2.0
Quincy/ Weymouth	11.1	2893.8	6.1	10.8	6.0
SHIFT (New Bedford)	12.2	2165.0	6.8	11.4	2.7
Worcester	8.4	1656.3	7.1	11.2	2.5
Grantee Average	10.9	2141.2	5.6	10.6	4.4
State Average	10.1	2141.5	5.2	10.5	N/A

Table 6. Communities in PWTF partnerships have higher prevalence of falls than the state as a whole for survey (BRFSS),claims (APCD), and MDPHnet data. BRFSS prevalence is a small-area estimate generated from the number of respondents over age 65 that have experienced a fall with an injury in the past twelve months averaged across the 2012 and 2014 surveys (data source: BRFSS, 2012 & 2014). Case Mix prevalence is the normalized rate of inpatient encounters of patients over the age of 65 averaged across fiscal years 2012, 2013, and 2014 that had a diagnosis code of 800-909.2, 909.4, 909.9, 910-994.9, 995.5-995.59, or 995.80-995.85 and an E code of E880.0-E886.9, or E888 (data source: MA Acute Hospital Case Mix Database, FY2012-2014). APCD prevalence is the proportion of unique patients over the age of 65 in the year 2012 for which there is a claim with a diagnosis code beginning with any of the following digits: E880, E881, E882, E883, E884, E885, E886, E888, E957, E968.1, E987, or V15.88 (data source: All Payer Claims Database, Center for Health Information and Analysis, 2012). (Please note that APCD is currently missing Medicare data). MDPHnet prevalence is the proportion of unique patients between the ages of 60 and 99 in 2012, 2013, and 2014 for which there is a medical visit with a diagnosis code beginning with any of the following digits: E880, E881, E882, E883, E884, E885, E886, E888, E957, E968.1, E987, or V15.88 (data source: MDPHnet query, 2012-2014). EMR prevalence is the proportion of unique PWTF clinical patients ages 65 from Sept. 2013 to 2015 and older multiplied by 33%; the CDC reports that one out of three adults ages 65 and older has experienced a fall within the last year (http://www.cdc.gov/homeandrecreationalsafety/falls/adultfalls.html) (data source: PWTF Clinical Encounter-Level Data, 2013-2015); for more information about the data sources please see the "Data Sources and Analysis Methodology" section above.

Table 7: Diabetes: prevalence of diabetes by PWTF partnership across five data sources

Geographic Area	BRFSS (%)	Case Mix diabetes prevalence per 100,000	APCD (%)	MDPHnet (%)	EMR (%)
Barnstable	7.7	159.9	8.1	11.8	7.9
Berkshire County	9.0	185.6	8.1	10.6	11.1
Boston: N. Dorchester, Roxbury	11.0	326.5	10.4	7.4	11.0
Holyoke	15.0	341.5	11.0	9.3	13.9
MetroWest	7.9	133.6	8.9	8.2	7.4
Lynn	11.7	222.8	10.3	8.9	13.5
Quincy/ Weymouth	8.7	179.5	8.6	9.4	6.8
SHIFT (New Bedford)	11.8	330.1	12.0	9.3	11.5
Worcester	10.2	427.8	10.2	8.5	12.6
Grantee Average	8.5	173.9	8.1	11.1	9.6
State Average	7.9	162.6	7.9	9.6	N/A

Table 7. Communities in PWTF partnerships have a higher prevalence of diabetes than the state as a whole. BRFSS prevalence is a small-area estimate generated from the number of respondents between the ages of 18 and 75 that have ever been told they have diabetes averaged across the 2012, 2013, and 2014 surveys (data source: BRFSS, 2012-2014). Case Mix prevalence is the normalized rate of inpatient encounters of patients between the ages of 18 and 75 averaged across fiscal years 2012, 2013, and 2014 that had a diagnosis code beginning with 250 (data source: MA Acute Hospital Case Mix Database, FY2012-2014). APCD prevalence is the proportion of unique patients between the ages of 18 and 75 in the year 2012 for which there is a claim with a diagnosis code beginning with 250 (data source: All Payer Claims Database, Center for Health Information and Analysis, 2012). MDPHnet prevalence is the proportion of unique patients between the ages of 20 and 79 in 2012, 2013, and 2014 for which there is a medical visit that met MDPHnet's algorithm for a Diabetes Type I or Diabetes Type II visit (data source: MDPHnet query, 2012-2014). EMR prevalence is the proportion of unique PWTF clinical patients between the ages of 18 and 75 from Sept 2013 to Sept 2015 for which there is a medical visit with a diagnosis code beginning with 249 or 250 (data source: PWTF Clinical Encounter-Level Data, 2013-2015); for more information about the data sources please see the "Data Sources and Analysis Methodology" section above.

Table 8: Obesity: prevalence of obesity by PWTF partnership across five data sources

Geographic Area	BRFSS (%)	Case Mix obesity prevalence per 100,000	APCD (%)	MDPHnet (%)	EMR (%)
Barnstable	21.2	102.1	5.8	18.9	31.4
Berkshire County	24.0	70.4	7.1	18.6	34.6
Boston: N. Dorchester, Roxbury	30.4	152.2	13.0	16.8	29.1
Holyoke	34.6	49.9	10.4	17.8	45.8
MetroWest	24.8	95.1	10.1	18.3	32.0
Lynn	30.9	127.3	12.3	18.0	38.5
Quincy/ Weymouth	20.8	83.6	11.0	18.1	37.4
SHIFT (New Bedford)	30.8	176.7	9.4	17.9	42.8
Worcester	29.3	101.2	13.6	17.5	37.6
Grantee Average	34.6	49.9	10.4	17.8	45.8
State Average	23.3	91.7	8.4	18.3	N/A

Table 8. Communities in PWTF partnerships have higher prevalence of obesity than the state as a whole in survey (BRFSS) and claims (APCD) data. BRFSS prevalence is a small-area estimate generated from the number of respondents over age 18 that have a body mass index (BMI) of 30 or greater averaged across the 2012, 2013, and 2014 surveys (data source: BRFSS, 2012-2014). Case Mix prevalence is normalized rate of inpatient encounters of patients over the age of 18 averaged across fiscal years 2012, 2013, and 2014 that had a diagnosis code beginning with 278 (data source: MA Acute Hospital Case Mix Database, FY2012-2014). APCD prevalence is the proportion of unique patients over the age of 18 in the year 2012 for which there is a claim with a diagnosis code beginning with 278 (data source: All Payer Claims Database, Center for Health Information and Analysis, 2012). MDPHnet prevalence is the proportion of unique patients between ages 20 and 99 in 2012, 2013, and 2014 for which there is a medical visit with a diagnosis code beginning with 278 (data source: MDPHnet query, 2012-2014). EMR prevalence is the proportion of unique PWTF clinical patients ages 18 and older between Sept 2013 to Sept 2015 for which there is a medical visit with a BMI recorded that was 30 or greater (data source: PWTF Clinical Encounter-Level Data, 2013-2015); for more information about the data sources please see the "Data Sources and Analysis Methodology" section above.

Table 9: Substance Use: prevalence of substance use by PWTF partnership across five data sources

Geographic Area	BRFSS (%)	Case Mix substance use prevalence per 100,000	APCD (%)	MDPHnet (%)	EMR (%)
Barnstable	15.0	268.8	8.1	11.9	27.7
Berkshire County	16.1	1515.2	8.2	12.0	23.6
Boston: N. Dorchester, Roxbury	15.9	396.9	8.0	12.0	11.1
Holyoke	13.9	1367.7	9.3	12.0	13.8
MetroWest	15.2	278.4	7.1	12.4	7.4
Lynn	13.9	438.3	10.8	12.3	14.9
Quincy/ Weymouth	15.3	582.0	8.3	12.2	13.4
SHIFT (New Bedford)	13.7	460.2	10.8	12.0	25.0
Worcester	15.3	435.2	10.3	12.1	11.2
Grantee Average	14.6	529.5	9.1	12.1	15.5
State Average	16.5	385.7	6.7	12.3	N/A

Table 9. Communities in PWTF partnerships have higher prevalence of substance use-related hospitalizations (Case Mix) and claims (APCD) than the state as a whole. BRFSS prevalence is a small-area estimate generated from the number of respondents over age 18 that have had 5 or more drinks in one sitting in the past month averaged across the 2012, 2013, and 2014 surveys (data source: BRFSS, 2012-2014). Case Mix prevalence is the normalized rate of inpatient encounters of patients over the age of 18 averaged across fiscal years 2012, 2013, and 2014 that had a diagnosis code beginning with any of the following digits: 291, 292, 303, 304, 305, 965.0, 965.00, 965.01, 965.02, 965.09, E850.0, E850.1, or E850.2 (data source: MA Acute Hospital Case Mix Database, FY2012-2014). APCD prevalence is the proportion of unique patients over the age of 18 in the year 2012 for which there is a claim with a diagnosis code beginning with any of the following digits: 291, 292, 303, 304, 305, 965.0, 965.00, 965.01, 965.02, 965.09, E850.0, E850.1, or E850.2 (data source: All Payer Claims Database, Center for Health Information and Analysis, 2012). MDPHnet prevalence is the proportion of unique patients over age 18 in 2012, 2013, and 2014 for which there is a medical visit with a diagnosis code beginning with any of the following digits: 291, 292, 303, 304, 305, 965.0, 965.00, 965.01, 965.02, 965.09, E850.0, E850.1, or E850.2 (data source: MDPHnet query, 2012-2014). EMR prevalence is the proportion of unique PWTF clinical patients ages 18 and older between Sept 2013 to Sept 2015 for which there is a medical visit with a diagnosis code beginning with any of the following digits: 291, 292, 303, 304, 305, 965.0, 965.00, 965.01, 965.02, 965.09, E850.0, E850.1, or E850.2 (data source: PWTF Clinical Encounter-Level Data, 2013-2015); for more information about the data sources please see the "Data Sources and Analysis Methodology" section above.

Costs

The per capita growth in total health care expenditures from 2013 to 2014 was 4.8%, which is above the Commonwealth's 2014 health care cost growth benchmark of 3.6% (Center for Health Information and Analysis: http://www.chiamass.gov/assets/2015-annual-report/2015-Annual-Report.pdf). As a result, Massachusetts health care expenditures exceeded the projected national per capita growth as well as state inflation and that of the growth of the Massachusetts economy. The Prevention and Wellness Trust Fund aims to generate reductions to health care cost growth in the Commonwealth; DPH does not currently have health care expenditure estimates for each funded partnership.

Data Summary

To ascertain chronic disease burden in the state, we calculated prevalence from self-report data (BRFSS), insurance claims (APCD), hospital data (Case Mix), and clinical data (MDPHnet and encounter-level data from PWTF clinical sites). Combining these data sources provides information on health risk and clinical outcomes across multiple settings (i.e. primary care as opposed to hospital visits). Multiple data sources indicate that funded partnerships have a higher disease burden, greater proportions of racial and ethnic minorities, and more people living below the Federal Poverty Line than the state as a whole (Tables 1-11). Thus the Prevention and Wellness Trust Fund has the opportunity to reach those at high risk and traditionally underserved by health care. In addition to reducing chronic disease burden, reaching these populations will improve health equity and reduce health care costs, maximizing return on investment. Analyses of future data from the above surveillance data sources, as compared to these updated baseline prevalences, will enable DPH to measure the effect of PWTF interventions at the community level.