

# Opportunities to Improve Population Health by Integrating Governmental Public Health and Health Care Delivery: Lessons from the ASTHO Million Hearts Quality Improvement Learning Collaborative

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*\*The authors are participants in the activities of the Roundtable on Population Health Improvement*

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# **Opportunities to Improve Population Health by Integrating Governmental Public Health and Health Care Delivery: Lessons from the ASTHO Million Hearts Quality Improvement Learning Collaborative**

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## **INTRODUCTION**

As public health and health care leaders embrace the challenge of improving population health, they can learn much from successful models of health system change at the local, state, and national levels. However, it is essential that they examine not only the components of success, but the barriers to sustaining and spreading successful models of population health improvement through the integration of public health and health care delivery. This paper examines lessons learned from the Association of State and Territorial Health Officials' (ASTHO) 10-state quality improvement learning collaborative on hypertension, an example of an adaptable format for sustainable population health improvement. Although this learning collaborative specifically focuses on improving hypertension identification and control, the lessons learned can work for multiple health conditions and apply to a variety of population health improvement projects.

To improve health at a population level and support lifestyle and other changes in homes and communities, we need to continue developing more effective and efficient models of care while engaging other sectors in the system affecting the social determinants of health. However, making these improvements one provider, one clinic, or one community at a time is not enough to stem the urgent need to effectively improve population health. As the Institute of Medicine noted in the report *Primary Care and Public Health: Exploring Integration to Improve Population Health*, “The integration of primary care and public health could enhance the capacity of both sectors to carry out their respective missions and link with other stakeholders to catalyze a collaborative, intersectoral movement toward improved population health” (National Research Council, 2012).

Since September 2013, ASTHO, with funding from the Centers for Disease Control and Prevention (CDC), has led a 10-state multipartner quality improvement (QI) learning collaborative that supports the Million Hearts initiative's aim of preventing 1 million heart attacks and strokes by 2017. The collaborative uses QI rapid-cycle clinical, community, and data system interventions to accelerate improvement in hypertension control. Currently, all 10 states have (1) incorporated NQF-18 reporting into clinics, (2) established registries to identify undiagnosed and uncontrolled hypertensive patients, (3) adopted clinical protocols to identify

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and follow up with hypertensive patients, and (4) created linkages to community resources, including patient self-management.

State teams focus on solutions at both the state policy level and the clinical and community level to address hypertension. More than 250 QI cycles were tested in 1-month periods, generating rapid successes and helping to quickly identify impediments. The collaborative established five key levers for improvement:

1. A commitment must be made by leadership across the health system (at local, state, and national levels).
2. Identify community and clinical resources and linkages, such as team-based care delivery systems, faith-based outreach programs, healthy lifestyle promotions, and skills development for chronic disease self-management.
3. Use multiple data sources to inform action.
4. Use standardized protocols in areas such as hypertension management, community screening and referral, and equipment calibration.
5. Identify financing opportunities, including private and public payment and federal and state grants.

Participating states have reportedly affected 90,000 patients and estimate a potential reach of 1.5 million patients upon full statewide implementation. In just 9 months, several clinics demonstrated improved hypertension control by as much as 11 percentage points. Participating states are now sharing their experiences with other states, demonstrating that collective national, state, and local leadership can have a positive impact on this cardiovascular epidemic. The collaborative's successful first year led it to expand to six additional states and one territory, for a collective national QI collaborative of 16 states (Moffatt et al., 2015).

## **The Components of Success**

### *National, State, and Local Leadership*

The ASTHO Million Hearts Learning Collaborative drew on state health officials' leadership to identify new approaches to linking clinical and public health systems to improve population health. State health officials set the vision and priority direction for their states' projects and played a key role in identifying unique stakeholders and convening clinicians and organizations that had limited prior experience working together on health systems transformation. ASTHO provided each state team with a pre- and postintervention evaluation tool and analyzed each state's partner communications at all levels to suggest areas for improvement.

The teams succeeded partly by leveraging local, state, and national partners' leaders, who included clinicians, clinical managers and staff, community organizers, academic institution experts, state and national public and private payers, and representatives of national organizations like the American Heart Association and quality improvement organizations. Leaders at the state agency level facilitated internal change from traditional program implementation to rapid-cycle, systemwide change with engagement from the provider and payer communities. These early successes spread and became sustainable thanks to such key team strategies as leveraging siloed funding and identifying new funding opportunities. For example,

several states in the collaborative have applied for the Centers for Medicare and Medicaid Services' State Innovation Model (SIM) grants aimed at improving population health.

### *Linking Patients with Community Resources*

Purposefully and proactively integrating health systems, community partners, and engaged patients can create a much greater impact than any one entity's efforts alone. Building strong linkages between the clinical setting and community assets is key to improving the health of a community. Clinics can link patients to numerous community assets and resources, including culturally sensitive programs, volunteers, transportation, community activities, and events. Each ASTHO learning collaborative state has drawn from its communities' rich assets by engaging local leaders, workers, and volunteers (e.g., paramedics, barbers, faith-based community leaders, pharmacists, dental hygienists, and librarians) in its hypertension interventions.

In one example, New Hampshire's learning collaborative team benefited from Cheshire Medical Center/Dartmouth-Hitchcock Keene's experience integrating community and clinical partners and increasing patient engagement in two federally qualified health centers in different metropolitan areas. The medical center's integrated approach to hypertension control, which reached 85 percent for more than 12,000 patients, helped the federally qualified health centers improve blood pressure control by 10 percentage points in less than 9 months. This exemplifies the power of identifying a successful model and working with community and clinical partners in other municipalities to replicate the success, while still drawing on each community's unique assets.

### *Using Data to Drive Action*

Important patient and community health data can be found in electronic and paper clinical records, payer claims, pharmacies, and local and state health agencies, among other locations. This data can be used to drive action for optimum population health improvements in the following ways:

- Clinicians and individuals can use the data to make informed care decisions.
- Clinicians can use population health data to target individuals in their patient panels for additional follow up and connect them to appropriate community resources.
- Local and state health agencies can use population health data to target areas of high need.
- Payers can use data to identify areas of high quality to achieve success measures and provide payment incentives and replication opportunities.

Each state in the ASTHO learning collaborative identified a need to improve its ability to achieve data-driven action. The learning collaborative setting provided an opportunity for states to bring current and new partners together to test where data existed but was not being used or linked back to clinicians. State health leaders have played a key role in facilitating these partnerships to identify opportunities to use data more strategically to improve health outcomes. For example, several states worked with pharmacies to improve medication adherence using clinical data and payer claims data to address the multiple barriers to adherence. Each state health department is also using population health data, such as information from the Behavior

Risk Factor Surveillance Survey, to target areas for priority outreach and to replicate successful models.

### *Standardizing Protocols*

Successful outcomes in clinical care settings are often dependent on establishing and standardizing treatment protocols. However, to achieve population health improvement, states need to identify and standardize protocols far beyond the clinical setting. Public health, clinical care, and community partners can work together to address this issue. In the ASTHO learning collaborative, these partners identified and developed innovative protocols to test change and improve hypertension outcomes using quality measures. For example, teams updated protocols for taking and reporting blood pressures in community settings, referral protocols between community partners and clinical settings, protocols for medication adherence follow-up, training protocols for community health workers, and protocols on data sharing.

### *Resources to Sustain and Spread Improvement*

To sustain and spread successful population health improvement models we need to strategically identify and plan for resources that support success at the local, state, and national levels. Needed resources include not only funding but an expert workforce, community assets, payment policies, and collaborative partnerships.

ASTHO established its learning collaborative through funding from CDC to leverage the national focus on the Million Hearts initiative. ASTHO used this funding to support states, national partners, and internal infrastructure for the collaborative. The participating states were required to identify and implement a plan to sustain and replicate successes. ASTHO provided states with funding to do the work along with a structured process for developing and measuring goals, engaging stakeholders, and obtaining access to national and federal experts.

This federal investment in a 10-state learning collaborative created a critical structure for state health agencies and their partners to strategically plan for resources to sustain and spread their success. For example, in all 10 states this work has informed CDC-funded state-directed chronic disease programs. In six states the collaborative partnerships and successes have informed the states' applications for SIM grants. States also learned strategies to identify and maximize resources, such as using community health benefit funds to support registry managers in clinic settings. In addition, each state leveraged its state leaders' expertise: Alabama consulted with academic leaders on health disparities to inform their work, many states consulted with their quality improvement organizations, and several states partnered with state medical societies to help spread their successes.

## **Addressing Barriers to Sustaining and Spreading Successful Models of Population Health Improvement**

### *Implementing a Quality Improvement Approach*

Clinicians, payers, and local and state health leaders can identify successes in small or local settings, but often lack ways to systematically spread these successes across regions and states. Without a quality improvement approach, it is very difficult to understand impediments to success, make adjustments, and sustain and replicate successes, removing or limiting opportunities for improved population health.

In the early phases of the Million Hearts Learning Collaborative, partners worked together to identify examples of success and created plans to replicate it using the plan-do-study-act (PDSA) quality improvement process to rapidly test change improvements. The PDSA model

provides a format whereby states and partners work closely to test plans multiple times before taking them to scale. During this process, state health agencies engage partners at the highest decision-making level along with regional partners, community and clinical providers, and local public health agencies. As states implement action plans and learn from each other, this rapid cycle model allows for all levels of the system to test the model for change, study its effects, test again until the process is fully refined, and then support meaningful dissemination. The 10 states identified problems and solutions and tested these solutions, generating rapid successes and helping to quickly define impediments.

Requiring state teams to report change tests to their partners and the other learning collaborative teams has assured ongoing quality improvement across this national collaborative. In addition, besides convening two in-person meetings of the 10 state teams, ASTHO draws on a unique organizational strength: its use of technology to provide virtual meetings. Virtually connecting all 10 states and their partners for real-time information sharing goes far beyond conference calls: ASTHO also facilitates visual presentations and simultaneously engages all partners. Through these meetings states have been able to share challenges and solutions as well as motivate and support each other (Moffatt, et al, 2015).

#### *Linking Community Resources*

Communities' unique needs and resources have long been valued as a contributor to improved population health. However, if community attributes and resources are held in isolation, clinical and public health partners miss opportunities to link individuals to these resources, limiting communities' efforts and reach. Thus, the efforts of communities may not be fully realized or spread through the community, region, and state.

The Million Hearts Learning Collaborative brought community partners to the planning team to identify unique community needs, priorities, and resources. For example, one state used farmers markets to educate patients on heart-healthy foods and provide blood pressure monitoring. In another state, multilanguage translators worked with clinicians, the state medical society, and local and state health agencies to develop materials on blood pressure control. One state is working with librarians in different regions to provide blood pressure monitoring equipment to local residents. Other states are using community paramedics, pharmacists, dental hygienists, barbershop employees, and librarians to provide blood pressure information, equipment, and monitoring. In several states community partners are using the Stanford Chronic Disease Self-Management Program to help individuals act on their health care providers' recommendations.

#### *Using Data to Drive Action*

Learning collaborative states repeatedly noted that the lack of a data feedback loop for clinicians, payers, and local and state leaders was a barrier to improving hypertension rates. All 10 states regularly gathered data by multiple methods, yet did not systematically collect this information to drive action. For example, states did not mine data from electronic health record reports and analysis to identify new and uncontrolled hypertensives in a clinic's population. Payers' and local and state public health agencies' data was typically not connected or interoperable. This created barriers to using data to inform community, regional, and state-level population health interventions. Without data feedback loops, states continued to miss opportunities to inform priority areas of need, target resources, and evaluate population health progress.

State teams addressed these data barriers in multiple ways. In a New Hampshire clinic, registry managers supported by community health benefit funding from a regional hospital system reviewed clinical data and alerted priority individuals for recall physician visits. Registry managers actively manage data and have a critical role in providing regular transparent feedback to clinicians on hypertension control and prioritizing patients that need follow up. In Vermont, the state health agency worked with public and private payers to identify data and target specific regions for interventions to improve hypertension. Other states are working with pharmacies to link care providers with information on patient medication use.

### *Building a Public Health Workforce Skilled in Health System Transformation*

One of public health's greatest strengths is the diversity of its workforce, which includes epidemiologists, health educators, lawyers, nurses, physicians, social workers, and many other individuals. At the same time, this diversity of education and skill may not include understanding health system change implementation. As ASTHO observed in the Million Hearts Learning Collaborative, although public health staff were eager to improve hypertension, they frequently sought programmatic interventions instead of taking a health systems approach drawn from multiple partners' expertise. Additionally, many public health staff had limited experience in leading quality improvement change using PSDA rapid cycles.

In 2013, a group of 67 public health organizations representing the full spectrum of public health practice identified systems thinking and change management as two of the top three areas in which the public health workforce needs to improve (Kaufman et al., 2014). To better help public health staff lead sustainable, replicable population-level improvements, it is critical to educate them on moving from program implementation to health system change. This investment requires support from public health leaders at the local, state, and national levels. This training should include how to use a quality improvement approach with active PSDA cycles to develop and support the components of successful change. The National Board of Public Health Examiners offers a certification of public health professionals (CPH) program to enhance the public health workforce. Additionally, local and state health agencies can pursue Public Health Accreditation Board (PHAB) accreditation to build a public health workforce skilled in health system change.

### *Identifying Resources to Sustain and Spread Models of Success*

As noted above, a key component for sustaining and spreading successful models of population health improvement is having a strategic plan for resources. This was a requirement of the ASTHO Million Hearts Learning Collaborative. Although it was challenging, each of the 10 states identified sustainability plans, including optimizing current CDC funding, working with federally qualified health centers through their HRSA-supported work, applying for SIM grants, and drawing on community, regional, and state partners.

As federal agencies and foundations develop additional funding opportunities, there are several lessons to take from ASTHO's Million Hearts Learning Collaborative. First, health system collaboration requires support for sustained high-level leadership that can convene across sectors (e.g., state health officials). Learning collaboratives must also require teams to develop and implement plans to sustain and spread their successes. Additionally, statewide and national quality improvement learning collaboratives need funding if they want to replicate successes beyond one community or clinic setting at a time; private and public payers must also be actively engaged at state, regional, and national levels to develop payment models that support these collaboratives. Finally, it is important to support multilevel partnerships across communities,

regions, states, and nationally to help identify opportunities to optimize unique resources and expertise to sustain and spread success.

## CONCLUSION

Lessons learned from nationally led quality improvement initiatives like ASTHO's Million Hearts Learning Collaborative can help inform and achieve other population health improvements. To start, population health improvement requires that we understand successful models of health system change, clearly identify the components of and barriers to success, and develop methods for sustaining and expanding success models beyond their initial locations or communities. In addition, by collaborating, public health partners can identify opportunities to move from isolation through the continuum of integration to weave expertise into a coherent and consistent approach to improving health outcomes (National Research Council, 2012). It is therefore crucial to recognize each partner's expertise and unique contributions. Finally, we cannot afford to create success one clinic or one practice community at a time if our goal is to improve population health. It will take collaboration between public health, clinical, and community leaders to sustain and spread models of successful population health improvement and strategically identify and plan for the resources that support success.

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