Million Hearts Case Study: Iowa's Million Hearts Initiative

Integrating public health and primary care can both improve quality of care for a population and lower health costs. Both components of the health system share a common goal of health improvement, have similar funding streams and resources, and share many partnerships. If aligned, public health and primary care working together could achieve lasting, substantial improvements in individual and population health in the United States. State and territorial health agencies can make a significant impact in this area by decoding the key elements for successful integration, which can then be shared with others to promote further integration efforts, increase healthcare quality, lower costs, and improve overall population health.

Iowa's Million Hearts Initiative is led by the Iowa Department of Public Health (IDPH) and leverages partnerships across sectors to support components of Million Hearts, particularly improving quality of care around the ABCS of heart health.[1] Key components of this work include supporting team-based care models for blood pressure management, incorporating Million Hearts goals into state-level strategic planning efforts, and educating healthcare professionals and the public about Million Hearts and how to get involved.

Aim of the Integration:

Implement initiatives and communications activities to support the Million Hearts goal in the state's *Comprehensive Heart Disease and Stroke Plan 2010-2014* of preventing 1,000 heart attacks and strokes between 2012 and 2017.

BACKGROUND

In 2007, 34 percent of deaths in Iowa were due to major cardiovascular disease, including heart disease and stroke.[2] That same year, 26.8 percent of Iowans reported they had been told they had high blood pressure,[3] slightly lower than the national median (27.5%) but significantly higher than in 2005 (24.5%). Age was the most significant factor impacting blood pressure: 59.2 percent of Iowans aged 75 and older reported high blood pressure, while just 4.3 percent of Iowans aged 18-24 reported having hypertension. Of those reporting high blood pressure, 81.1 percent were currently taking medication for their condition.[4]

Iowa is a rural state. Fully 43 percent of Iowa's population, and 62 percent of Iowans over the age of 65, live in rural areas. Eighty-nine of the state's 99 counties are considered rural. These rural counties fare worse on many health measures when compared to the state average, and access to care can be a barrier to receiving appropriate health services.[5]

OVERVIEW OF THE INTEGRATION EFFORT

Since 2008, the IDPH Heart Disease and Stroke Prevention (HDSP) Program (replaced in 2013 by the Health Promotion and Chronic Disease Control (HPCDC) Partnership), has been bringing partners together to develop, implement, and monitor Iowa's *Comprehensive Heart Disease and Stroke Plan 2010-2014*. When the national Million Hearts initiative launched in 2011, IDPH staff reached out to key healthcare partners across the state to determine the best ways to support Million Hearts by coordinating and leveraging existing efforts.

Key Partners
Key Million Hearts partners in Iowa include:

- **The Iowa Healthcare Collaborative (IHC)**—IHC is a nonprofit organization created in 2004 through a partnership between the Iowa Hospital Association and the Iowa Medical Society to create a venue for responsible, voluntary public reporting of healthcare data. It engages physicians, hospitals, insurers, employers, consumers, and other community partners with a focus on data reporting, patient safety, and quality improvement. IHC is contracted by IDPH to facilitate the Iowa Cardiovascular and Stroke Task Force (described below) on a day-to-day basis, and IHC's CEO chairs the task force. IHC facilitates the task force primarily by leading the process for developing and monitoring metrics that track progress on the Iowa *Comprehensive Cardiovascular and Stroke Plan 2010-2014* (also described below), supporting day-to-day implementation of the plan, and working with hospitals across the state toward the goals and tactics outlined in the plan. IHC has incorporated Million Hearts resources and messaging into its training and support activities. These resources include an IHC Million Hearts Toolkit for critical access hospitals that uses existing Million Hearts informational materials.
- **Telligen**—Telligen is Iowa's quality improvement organization.[6] Telligen facilitates the Iowa Cardiac Learning and Action Network (LAN), which brings together providers and community partners to offer a forum for sharing best practices, develop an action plan, and provide resources to help providers overcome barriers to improving quality measures. The LAN provides resources including webinars, clinician toolkits, face-to-face meetings, and best practice advice from successful clinics and experts. In alignment with Million Hearts, Telligen is focusing LAN members on improving quality of care around the ABCS and provides support through data collection around ABCS metrics and technical assistance in quality improvement.
- **University of Iowa College of Pharmacy**—Faculty at the University of Iowa College of Pharmacy have expertise in team approaches to managing blood pressure and expanding the roles of community pharmacists to include services such as blood pressure checks. Faculty also played a key role in developing the national *Team Up. Pressure Down.* toolkit.

Iowa Million Hearts Key Components
Iowa's Million Hearts efforts include several key components and initiatives:

Incorporating Million Hearts into the Iowa Comprehensive Cardiovascular and Stroke Plan 2010-2014—The state plan includes goals that directly support Million Hearts, including controlling high blood pressure and cholesterol and improving quality of care around cardiovascular disease and stroke. Progress on the state plan is monitored by the Iowa Cardiovascular and Stroke Task Force, which is co-led by seven organizations: IDPH, IHC, the Iowa Departments of Education and Transportation, the American Heart Association, the Iowa Hospital Association, and Telligen. In alignment with the launch of the national Million Hearts initiative in 2011, the task force added a goal and strategies related to supporting Million Hearts in Iowa, with the aim of preventing 1,000 heart attacks and strokes across the state between 2012 and 2017. Task force members said that the initiative closely aligned with the state

plan's goals and strategies, and that including Million Hearts was a natural evolution of the state plan. In addition, several task force member organizations formally endorse Million Hearts.

Supporting Team-Based Care to Manage Hypertension—IDPH and the University of Iowa College of Pharmacy are collaborating to implement and evaluate a program to improve blood pressure management by supporting pharmacist-provider teams in small communities across the state. When the national Million Hearts initiative launched in 2011, IDPH staff were interested in supporting team-based care for hypertension using primary care providers and community pharmacists. IDPH reached out to faculty at the University of Iowa's College of Pharmacy who had expertise in team-based approaches to managing blood pressure. They jointly decided to pilot translating a successful team-based care model from a clinical to a community setting, where pharmacists and primary care providers are often not located within the same building. Full results of the pilot initiative are summarized in a final report.

The initiative was piloted in 2012 with 11 clinic-community pharmacy pairs in "micropolitan" and rural communities with populations under 10,000 and limited access to healthcare services. The 11 teams received modest compensation to cover staff time and participated in an initial face-to-face team building session facilitated by the University of Iowa project team. During the sessions, the teams completed a worksheet that helped them develop their approach, establish a method for identifying target patients, define team member roles, and agree on communication processes. To allow teams maximum flexibility, the University of Iowa did not develop a standard protocol. However, each team was given a project guide that provided background information and evidence supporting the team-based care model, current blood pressure management guidelines from the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7), detailed suggested protocols and algorithms for team management of blood pressure, sample interventions to address uncontrolled blood pressure, instructions for proper measurement of blood pressure, and patient education materials on topics such as the Dietary Approaches to Stop Hypertension (DASH) diet and home blood pressure monitoring. Some of the materials were sourced from the national Million Hearts resources website and the Pharmacist Drug Adherence Work-up (or DRAW) tool from the *Team Up. Pressure Down.* toolkit. A pharmacist communications log template is included in the project guide, and additional tools used to facilitate communication between team members are included at the end of the final report.

While each team determined the specific system that worked best for them, most teams implemented a system in which the pharmacist conducted blood pressure visits at their pharmacy site, during which they took blood pressure readings and assessed anti-hypertensive medication use. If the patient's blood pressure was not at goal, the pharmacist referred the patient to the provider for further follow-up blood pressure checks and treatment as indicated. Providers, in turn, referred patients identified as having uncontrolled hypertension to the pharmacist for medication monitoring and managing medication-related issues as appropriate. The specific approaches used by each team are described in the final report. After the initial team building session, University of Iowa faculty provided email follow-up as requested. The teams followed the team approach for three to five months and completed baseline and post-surveys to measure outcomes. The results are discussed in the Results/Benefits section of this case study, below.

IDPH's role in the initiative includes providing funding through the Iowa Heart Disease and Stroke Capacity Building Program, providing strategic planning support, helping with site recruitment by

providing access to IDPH physician networks, helping develop the project guide, and holding regular monthly calls with University of Iowa pharmacy faculty to discuss updates, issues, and other administrative topics. IDPH HDSP staff regularly share information and resources on cardiovascular disease, expanded roles for pharmacists in blood pressure management, team-based care models, and use of health IT such as telemonitoring in managing blood pressure.

Leveraging Oral Care Professionals—In 2009 and 2010, IDPH's HDSP program, Tobacco Control program, and Bureau of Oral Health began partnering with the University of Iowa College of Dentistry to incorporate cardiovascular health screenings into Iowa dental practices and blood pressure screening training into dental school curricula across the state. The collaboration arose out of College of Dentistry faculty interest and involvement with the Iowa Commission on Tobacco Use Prevention and Control. The initiative is described in detail in the most recent progress report and involves several key components:

- *Pilot screenings*: Between 2009 and 2012, the partnership piloted the initiative in five dental practices in southeast Iowa that served a variety of patient populations. Dental staff were trained in blood pressure measurement and tobacco use screening. Patients at these practices were screened for hypertension and tobacco use and were referred to their physician and the Iowa tobacco quitline as appropriate.
- *Systems change*: Blood pressure and tobacco screening were added to the University of Iowa's electronic health record (EHR) system. In addition, the pilot practices adopted systems changes including updating patient medical history forms and health records systems to include blood pressure and smoking screening, and redesigning clinic flow and process to incorporate the screenings.
- *Training*: The University of Iowa's Dental Hygiene Program adapted its curriculum to include training in screening for hypertension and tobacco use, and continuing education was offered for practicing dentists and dental hygienists.

The project is currently supported through Iowa's Community Transformation Grant (CTG) funding and continues to expand to more dental clinics every year through partnership with IDPH's I-Smile program.

Providing Million Hearts Education to Healthcare Professionals and Other Stakeholders—IDPH, Telligen, and IHC have co-developed informational resources for broad communications efforts. They also continually share information with their respective networks to educate healthcare professionals and other stakeholders about how to support Iowa Million Hearts. Key components of this work include:

- *Developing a Million Hearts webinar and webcast:* IDPH, Telligen, and IHC co-developed a webinar for providers that includes an overview of Iowa Million Hearts activities and how providers can get involved. In addition, IHC, Telligen and IDPH co-created an informational Million Hearts webcast for targeted groups that is available to anyone through the IHC website and linked to the IDPH website.

- *Conducting other Million Hearts educational activities*: Examples include hosting a panel discussion and presentation about the *Team Up. Pressure Down*. toolkit at a Cardiovascular and Stroke Task Force meeting, staffing table displays at various events, and collecting Million Hearts pledges and taking blood pressure measurements.

- *Leveraging existing communications channels to deliver Million Hearts information*: IDPH and its partners leverage existing communications channels to disseminate information about Million Hearts and raise awareness of how providers and other stakeholders can become involved, such as through pledging. Examples of these channels include:
    - The IDPH Heart Disease/Stroke Prevention webpage, which highlights a variety of Million Hearts links.
    - The IHC Cardiovascular and Stroke webpage, which includes a variety of evidence-based information, including Million Hearts and links to the toolkits.
    - The *Heart to Heart* e-bulletin, a monthly IDPH publication that was distributed to clinic managers who belong to the Cardiovascular Collaborative Healthcare Provider Network. IDPH staff regularly featured Million Hearts and the ABCS of heart health in *Heart to Heart*. A sample e-bulletin is posted on the ASTHO Million Hearts webpage. This e-bulletin is no longer in publication.
    - *Chronic Disease Connections* e-bulletin, a subsequent IDPH publication targeting healthcare systems working with patients to control their diabetes and high blood pressure in the new HPCDC Partnership program.

- *Educating the public about Million Hearts*: IDPH and IHC distribute Million Hearts information at various public events, including local health system cardiovascular health fairs and American Heart Association "Go Red for Women Luncheon" events. During these events they provide information about Million Hearts and how individuals can pledge and distribute resources such as *Team Up. Pressure Down*. blood pressure journals.

IDPH's role in these communications efforts has included collaborative strategic planning, developing informational materials, assisting with outreach to key provider networks, providing population-level health data (e.g., BRFSS) to key partners and assisting them in interpreting the data, and providing access to provider networks and assisting with provider engagement.

IDPH's partners view its role—and the role of public health in general—as vital to supporting healthcare partners' efforts through Million Hearts by providing common messages to many audiences, coordinating and fostering collaboration among stakeholders, and accessing resources such as funding that healthcare partners may not otherwise be able to access.

Resources

In addition to tools and resources already described, IDPH and partners have leveraged resources from other sources, including:

- A wide variety of tools and resources available on the national Million Hearts Resources webpage. Particularly useful resources on this webpage include a blood pressure journal for patients, informational videos with standardized Million Hearts messaging, *Team Up. Pressure Down*. resources, and the Million Hearts Partners toolkit.
- National guidelines such as JNC7.
- National evidence-based reports and emerging data supporting ongoing focus on addressing and preventing cardiovascular disease, such as the September 2013 *Vital Signs* report on preventable deaths from heart attack and stroke.

Next Steps

Next steps for the pharmacist-provider team management initiative include expanding the program in Year Two through the HPCDC Partnership to additional communities and providing more support to the participating teams through additional follow-up communication, modifying patient communication materials, and improving the guidance to better support team care activities. Data collection tools (particularly the pharmacist blood pressure log) will be modified to facilitate tracking blood pressure trends. Longer-term expansion of the initiative will include incorporating diabetes control into the training curriculum and involving both public and private payers.

Next steps for the overall Iowa Million Hearts initiative include building a broad-based collaborative of stakeholders. IDPH, Telligen, and IHC will also continue to spread Million Hearts messaging through existing communications activities and promote pledges at upcoming partner events.

RESULTS/BENEFITS

Successes

***Communications*—**The broad communications efforts have helped raise awareness among providers across the state about Iowa Million Hearts and how they can get involved. The communication activities have also been successful in disseminating useful, evidence-based tools such as the *Team Up. Pressure Down*. toolkit to providers across the state.

***Pharmacist-Provider Team-Based Care Initiative*—**Four of the 11 participating teams were classified as "Worked Well," meaning they successfully established a system to support the team approach and used that system to provide team-based care for an average of 26.5 blood pressure visits per team. Five teams were categorized as "Limited Success," meaning they either didn't fully establish a team support system or used it for only a few patients. Two teams were categorized as "No Team Care" and did not provide team management to any patients, for reasons that were discussed with the University of Iowa faculty and will be incorporated into Year Two technical assistance plans. Factors that supported success were positive provider-pharmacist relations, establishing a support system for team care, team member commitment to performing team care activities in their practices, and patient willingness to participate in team care. Year Two evaluation will include a blood pressure management outcomes component.

***Oral Healthcare Initiative*—**Data collected through the dental program at baseline, six-month, and 12-month follow-up indicated:

- A decrease in the proportion of patients with pre-hypertension (65% at baseline, 47% at six months, and 49% at 12 months) and an increase in the proportion of patients with normal blood pressure (<120/80 mmHg) from 7 percent at baseline to 28 percent at 6 months and 24 percent at 12 months.
- Increased patient awareness of their high blood pressure (23% at baseline vs. 43% at the 12-month recall).

The project outcomes were also publicized through dental conferences, meetings, and journals. As a result of this project, system changes were instituted for clinic procedures and the University of Iowa Dental School clinics' EHR system to improve recording or blood pressure, tobacco use, and referral documentation.

Metrics and Measurement

Under the previous HDSP and the newer HPCDC Partnership program, IHC is tasked with collecting data on implementation of the state plan and CDC-required performance measures, which will include metrics related to blood pressure management, the number of Million Hearts pledges, and more. The specific metrics that will be tracked are currently under consideration as IDPH is under new funding and grant direction. IHC is leading the process to develop a performance measure matrix and data portal to house the performance metrics which will occur toward the summer of 2014. Measures will include National Quality Forum (NQF) 18 (hypertension control) and 59 (diabetes control via HbA1c), medication adherence, EHR adoption, and others. This process will involve convening a discussion among key stakeholders—including IDPH—to advise the process and achieve consensus on key measures to track over time. IHC will leverage its in-house statistician, Iowa Hospital Association data managers, and IDPH epidemiologists to access hospital claims data and ABCS-related metrics from health systems. In addition, it will work with providers and payers to obtain data related to their quality improvement work through the Affordable Care Act.

LESSONS LEARNED

Key recommendations from IDPH and its partners to date include:

- **Identify and systematically disseminate existing, useful tools and resources**—Consider the broad range of stakeholders you would like to reach and provide them with information, tools, guidance, and evidence that is directly applicable and meaningful to their role in supporting Million Hearts. For example, providers appreciate practical information about working toward meeting national blood pressure guidelines, screening protocols, and medication compliance.
- **Leverage existing infrastructure already**—IDPH leveraged the Cardiovascular and Stroke Task Force to incorporate the Million Hearts goal into the state plan and used its existing relationships with IHC and Telligen to access networks of providers and other healthcare partners.
- **Utilize technology**—Use both health information technology and communications technology to foster communications and team building, particularly in working with rural communities where transportation and access to resources may be barriers. Be creative with technology use.
- **Be patient**—Moving the needle on cardiovascular disease—and hypertension in particular—may take a lot of time and requires coordinated efforts across all sectors and at every level. Coordinating these efforts will be powerful.
- **Focus on building partnerships with traditional and nontraditional partners**—Consider working with state healthcare professional associations (for example, state medical or hospital societies/associations and pharmacy associations) and investigate what is going on at academic institutions.

INFRASTRUCTURE TO SUPPORT COLLABORATION AND SUSTAINABILITY

IDPH, Telligen, and IHC meet regularly to discuss how to support Million Hearts on an ongoing basis. They share resources and information across their respective networks. This informal and ongoing communication is a strength and asset of their partnership. Each partner brings its expertise and

network of partners to the table as described above, which enhances the reach and robust nature of the initiative.

A number of factors currently support—or are needed to better support—Iowa Million Hearts efforts:

- *State-level prioritization of cardiovascular disease prevention*—The fact that Iowa's *Comprehensive Cardiovascular and Stroke Plan 2010-2014* includes goals on Million Hearts, blood pressure control, and improving quality of care ensures state resources will be channeled to these priority areas. In addition, several Iowa CTG objectives align with Million Hearts goals, including tobacco-free living, active living and healthy eating, and evidence-based quality clinical preventive services.
- *Well-established communication systems*—The continuous information exchange and collaboration between IDPH and key Million Hearts healthcare partners support ongoing efforts to leverage each other's' strengths and assets.
- *Expanded provider roles*—Sustainability of pharmacist-provider team blood pressure management models in general will require that pharmacists be considered providers so they can be reimbursed for services such as blood pressure checks. Emerging care models such as accountable care organizations and patient-centered medical homes, along with their payment incentives, may offer opportunities to expand the role of pharmacists to allow them to offer those services.
- *Funding alignment at state and national levels*—Sustained focus on blood pressure control will be facilitated by consistent and continued focus across funding agencies such as CDC, Center for Medicare and Medicaid Services, the Agency for Healthcare Research and Quality, and national associations such as the American Heart Association and the American College of Cardiologists. The national Million Hearts initiative reinforces this consistent focus on improving the ABCS.

FOR MORE INFORMATION

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[1] The ABCS are appropriate aspirin therapy, blood pressure control, cholesterol management, and smoking cessation.
[2] Iowa Department of Public Health. "Vital Statistics of Iowa." Des Moines: Iowa Department of Public Health, Center for Health Statistics; 2007.
[3] Iowa Department of Public Health. "Health in Iowa Annual Report: From the 2007 Iowa Behavioral Risk Factor Surveillance System (BRFSS)." Des Moines, IA: Iowa Department of Public Health, Bureau of Health Statistics; 2007:19-20.
[4] Iowa Cardiovascular Task Force and Iowa Department of Public Health. "Iowa Comprehensive Heart Disease and Stroke Plan, 2010-2014." Available at http://www.idph.state.ia.us/hpcdp/common/pdf/hdsp/hdsp_prevention_plan.pdf. Accessed 9-23-13.

[5] Ibid.
[6] Quality improvement organizations are private, mostly nonprofit organizations that work to improve the effectiveness, efficiency, economy, and quality of services delivered to Medicare beneficiaries by reviewing medical care, helping beneficiaries with complaints about the quality of care, and implementing quality improvements throughout the spectrum of care. Source: Centers for Medicare and Medicaid Services. "Quality Improvement Organizations." Available at http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityImprovementOrgs/index.html?redirect=/qualityimprovementorgs. Accessed 6-10-2013.