



Maryland Million Hearts Evaluation

Maryland Department of Health and Mental Hygiene
Center for Chronic Disease Prevention and Control

September 2015

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TABLE OF CONTENTS

Executive Summary	1
Introduction	6
Million Hearts Initiative	6
Target Initiatives by Maryland Million Hearts	6
Strategies	9
Hypertension	9
Diabetes	12
Maryland Million Hearts Implementation	15
Million Hearts in Baltimore City	15
Million Hearts in Cecil County	18
Million Hearts in St. Mary's County	20
Million Hearts in Washington County	22
Million Hearts in the Midshore	24
Million Hearts in the Lower Eastern Shore	27
Wicomico County Health Department	27
Peninsula Regional Medical Center	28
Maintaining Active Citizens	29
Million Hearts at the Maryland Learning Collaborative	30
Million Hearts at Medicaid	31
Million Hearts at the Mid-Atlantic Association of Community Health Centers	34
Maryland Million Hearts Evaluation	36
Sustainability, Successes, and Challenges	36
Lessons Learned	39
Maryland Million Hearts Evaluator Recommendations	41
Appendix A: Acronyms	44

Maryland Million Hearts Evaluation

EXECUTIVE SUMMARY

The University of Baltimore’s Schaefer Center for Public Policy partnered with the Center for Chronic Disease Prevention and Control at the Maryland Department of Health and Mental Hygiene (DHMH) to evaluate the Maryland Million Hearts program and the successes and barriers of the following key partners: Baltimore City Health Department (BCHD), Cecil County Health Department (CCHD), Kent County Health Department (KCHD), Maintaining Active Citizens (MAC), Maryland Learning Collaborative (MLC), Maryland Medicaid (Medicaid), Mid-Atlantic Association of Community Health Centers (MACHC),¹ Peninsula Regional Medical Center (PRMC), St. Mary’s County Health Department (SMCHD), Washington County Health Department (WCHD), and Wicomico County Health Department (WiCHD) (collectively referred to as the key partners). Interviews with the key partners were conducted in the spring and summer of 2015 to ascertain strategies for achieving positive impacts on two main initiatives: screening and control of (1) hypertension (HTN) and (2) diabetes. Of the key partners mentioned, BCHD, CCHD, MACHC, Medicaid, MLC, SMCHD, and WCHD were part of the Million Hearts program from year one. Year two partner additions included KCHD, MAC, PRMC, and WiCHD.

Using the Deming Framework of plan-do-study-act (PDSA),² DHMH developed four “levers” to guide its key partners in developing goals and strategies for implementation. These levers include:

1. Team-Based Care – encourages key partners to engage non-physician team members (for example, nurses, pharmacists, and patient navigators) in the management of HTN and diabetes;
2. Education and Training – prompts key partners to raise awareness of, and educate and engage patients, providers, and other community stakeholders on, HTN and diabetes management;

¹ MACHC is a trade association for 15 federally qualified health centers located in Delaware and Maryland. Their initiative, among other goals, is unique in that it seeks to develop a data warehouse to improve the tracking of patients treated within the health centers.

² PDSA is a four-step repetitive process that seeks continuously to improve processes. Originally designed for the manufacturing industry, its application has extended to the healthcare arena for the purpose of promoting quality improvement (Michael J. Taylor, Chris McNicholas, Chris Nicolay, Ara Darzi, Derek Bell, and Julie E. Reed. [2014]. Systematic Review of the Application of the Plan-Do-Study-Act Method to Improve Quality in Healthcare, *BMJ Quality and Safety*, 23: 290–98; Theodore Speroff and Gerald T. O'Connor. [2004]. Study Designs for PDSA Quality Improvement Research, *Quality Management in Health Care*, 13[1]: 17–32.)

3. Standardized Practices – by increasing the institutionalization and monitoring of standardized practices at the provider and systems levels;
4. Data Aggregation – by increasing the institutionalization and monitoring of aggregated quality measures at the provider and systems levels.³

These levers have been implemented by most of the key partners. Some notable examples include: (1) SMCHD and WCHD adopted and implemented lever 1 with the goal of engaging non-physician team members in HTN management. (2) MLC adopted and implemented lever 2 with the identified goal of providing clinical coaching and technical assistance to Maryland Multi-Payer Program practices to increase the screening, identification, and management of HTN. (3) CCHD engaged in activities to support lever 3 by developing clinical blood pressure management standards to improve diagnosis, treatment, and follow-up of patients with HTN. (4) MACHC implemented lever 4 through their goal to develop a data warehouse capable of aggregating and standardizing data reported from the 15 Federally Qualified Health Centers (FQHCs) in Maryland.

The Maryland Million Hearts program has shown successes through substantial system and policy changes in the health system as they relate to HTN and diabetes. Strategically, DHMH sought to promote system changes by aligning interventions under the umbrella of Million Hearts to minimize duplication of efforts. The triple aim of DHMH strategies included healthcare cost reductions, improved healthcare outcomes, and improved patient satisfaction. To that end, year one focused on promoting system and policy changes. These changes included partnering with MACHC to develop a data warehouse to aggregate data from the 15 statewide FQHCs; supporting health systems in the development of standardized clinical quality improvement strategies; encouraging partners to develop an interdisciplinary team-based approach by integrating allied health workers, pharmacies, and community health workers; establishing coalitions with community and practice-based entities to develop initiatives targeted at their specific populations; and encouraging providers to reevaluate workflow to maximize the effective use of provider time devoted to Million Hearts data collection. These system and policy changes enhanced the goals of identifying and managing HTN and diabetes in the community.

All partners exerted significant efforts to address these chronic disease challenges within their communities and all achieved some level of success. However, the partners were in varying stages of implementation at the time this evaluation was conducted, and although the successes of some partners could be determined, data provided on metrics used to measure success were

³ Million Hearts State Learning Collaborative – Final Report, Association of State and Territorial Health Officials. (2015). Maryland Department of Health and Mental Hygiene, p. 6.

based on very short timeframes and, in most cases, could not be interpreted with confidence.⁴ For instance, one partner, KCHD, developed a plan but had not yet rolled out its initiatives within the community. Other partners had just recently (within three months of their interview) implemented their initiatives.

Partners were able to set forth certain recurring themes anecdotally. These themes included:

1. *The Importance of Engaging Primary Care Practices*

A key component to success was increased partnerships with primary care practices (PCPs) to identify and track patients with chronic diseases. Those partners who aligned themselves with PCPs were successful in identifying and tracking patients with chronic health issues. More patients were reached when PCPs were able to realize a return on their investment of time and effort. Partners noted that collecting data requires substantial effort on the part of PCPs, which often have limited workforce resources to devote to this task. Because of the importance of partnering with PCPs, key partners used a portion of their grant funding to ease the economic burden on PCPs. This funding compensated them for coordinating patient care and redirecting staff attention away from patient care to Million Hearts initiatives. Providing PCPs with monetary compensation expands the reach of initiatives, encourages PCPs to collect patient data, and, thus, enhances the quality and quantity of data collected.

2. *The Importance of Engaging Faith-Based Partnerships*

Increasing partnerships with faith-based organizations provides access to individuals who are not receiving care from PCPs but who may require intervention in the management of chronic diseases. These faith-based organizations have already gained the trust of their congregants and, thus, are supportive of encouraging congregant participation in the Million Hearts program. Accordingly, they are able to extend the reach of initiatives and better serve the needs of individuals with varying cultural and ethnic backgrounds. WCHD was particularly successful in accessing faith-based communities through its partnership with the Meritus Health Parish Nursing Program. Together, they were able to show improved outcomes in participant blood pressures.

3. *The Importance of Implementing an Interdisciplinary Team-Based, Patient-Centered Care Model*

Partners who implemented a team-based, patient-centered care model reported positive results in the Million Hearts program. As an example, SMCHD, working with MedStar St. Mary's Hospital, was able to engage a hospital-based pharmacist as part of the team, thus

⁴ Quality metric definitions require a data collection timeframe of at least twelve months.

adding another dimension to chronic disease management. The team-based model also requires that the patient participate in developing a treatment plan and have accountability for self-management. To that end, SMCHD developed a system of patient referrals to community self-management programs. However, their ability to determine whether a particular patient attended and completed the program proved difficult.

4. The Need to Extend Grant and Reporting Periods

Some partners expressed concern regarding the six-month timeframes required to design, plan, and implement initiatives. Moreover, data collected in short periods of time are not sufficient for successful quantitative analyses. Extending grants to one year, at a minimum, with quarterly or biannual reporting, is likely to yield noticeable preliminary outcomes and more accurate data that capture the health impacts of these initiatives. Ideally, collection of data over a period of three years is more likely to yield accurate results. It is important to note that most partners felt that the PDSA format of monthly reporting was the least useful and consumed valuable time. This may have been caused by a lack of understanding of the PDSA reporting tool. Key partners stated that they had little to report on a monthly basis, leading some to cut and paste information from previous months simply to fulfill the reporting requirement.

5. The Need for Electronic Linkages to Share Information

In order to identify and track data successfully, a patient status system is required (for example, an interoperable electronic medical record [EMR]).⁵ All partners identified gaps in EMR sharing. Some partners were able to form partnerships that included data sharing; however, most identified significant challenges to accessing EMRs. MACHC currently is in the process of developing ways to gather and share usable data from EMRs. MACHC's initiative may provide the method by which patient information is collected and shared to track patient responses to interventions better and, thus, may ultimately be replicated in other settings. The KCHD, which did not have an effective EMR-sharing system in place, adopted the American Heart Association's Heart360 platform for sharing data among participants, providers, and other community entities. It is KCHD's hope that the Heart360 platform will meet the needs of their initiatives in terms of data sharing.

In an ideal scenario, key partners and their community stakeholders should be able to share health data bidirectionally to facilitate implementation of Million Hearts initiatives. Due to the varying EMR systems used, the costs of developing new EMRs, and Health Insurance

⁵ Electronic medical record (EMR) and electronic health record (EHR) are used interchangeably throughout this report.

Portability and Accountability Act (HIPAA) concerns, many organizations perceive that they cannot share bidirectional health data externally or internally within their own organizations.

6. The Need for Standardizing HTN Screening

Most partners stated that a key initiative should include standardizing the method by which blood pressure readings are taken. This includes creating training modules for healthcare providers, as well as community organizations such as emergency medical personnel. These training modules should include hands-on instruction for trainers, who would then return to their workplaces with the objective of training all staff on the proper method of obtaining blood pressure readings. As an example, CCHD and its partner Union Hospital developed a blood pressure training module that standardized the method by which blood pressure readings are taken.

The purpose of this evaluation is to provide a synopsis of each key partner's involvement in the Million Hearts program and an analysis, where possible, of the successes, challenges, and barriers encountered by each key partner. It is our hope that the information gathered from the evaluation can be used to make formative improvements in the Million Hearts program to help ensure that patients with HTN and diabetes have improved health outcomes that reduce heart attacks and strokes in the state. This evaluation also includes healthcare recommendations targeting each key Million Hearts initiative. Finally, the report sets forth recommendations gleaned from both key partner interviews and the research team's assessment.

INTRODUCTION

MILLION HEARTS INITIATIVE

Million Hearts is a national initiative that aims to prevent one million heart attacks and strokes by 2017. Launched by the US Department of Health and Human Services in 2011, the initiative brings together federal and state agencies, health systems, nonprofit organizations, private sector organizations, and communities in partnerships that aim to prevent heart attacks and strokes. Million Hearts promotes strategies that identify individuals who are at risk, that provide access to appropriate treatment, that promote nutritional awareness, that increase physical activity, and that encourage smoke-free environments to decrease current and future cardiac risk. Million Hearts focuses on the ABCS of prevention: Aspirin for people at risk, Blood pressure control, Cholesterol management, and Smoking cessation. It also encourages efforts in the community to reduce smoking, improve nutrition, reduce blood pressure, and promote healthy lifestyle choices.

TARGET INITIATIVES BY MARYLAND MILLION HEARTS

DHMH is a key partner in the national Million Hearts initiative and coordinates its efforts in Maryland. Having recognized the value of Million Hearts in enhancing existing programs, Maryland formed its own coalitions with numerous partners, including local health departments, the state Medicaid office, quality improvement organizations, health systems/practices, and community programs. The five core components of the Maryland Million Hearts program are: (1) improving clinical care within public and private settings, (2) strengthening tobacco control, (3) promoting a healthy diet, (4) encouraging workplace wellness, and (5) incentivizing local public health action.⁶

DHMH provides the following key recommendations to Maryland partners to guide them in implementing their Million Hearts initiatives:

1. Bring together stakeholders from across sectors, including inside and outside of public health, as well as leaders at the “grasstops,” such as elected officials.
2. At the outset, identify and develop common goals with the shared interests and goals of public health and healthcare partners.

⁶ Implementation Guidance for Maryland’s Million Hearts Initiative. (2012). Baltimore, MD: Maryland Department of Health and Mental Hygiene, October 22.

3. Leverage initiatives that are already funded and determine how to incorporate Million Hearts goals. Avoid duplication of efforts with partners and leverage each other's work.
4. Reach out to healthcare partners early and commit to cultivating long-term partnerships. Develop relationships with key contacts at partner organizations.⁷

Together with its public and private sector partners, Maryland seeks to expand access to quality care and to promote wellness and healthy lifestyles through healthy choices for its residents. Maryland's holistic approach is to increase awareness and effective management of HTN, diabetes, and prediabetes.

To achieve the aforementioned goals and assess the Million Hearts initiatives of key partners, DHMH requested that partners report data on two clinical quality measures (CQMs) via data entry templates NQF 18 and NQF 59.

1. NQF 18 is the percentage of patients 18 to 85 years of age who have had a diagnosis of HTN and whose blood pressure has been adequately controlled ($< 140/90$) during the measurement year. The numerator of NQF 18 indicates patients whose blood pressure at their most recent visit was adequately controlled (systolic blood pressure < 140 mm Hg and diastolic blood pressure < 90 mm Hg) during the measurement period, whereas the denominator indicates the number of patients 18 to 85 years of age who had a diagnosis of HTN within the first six months of the measurement period or at any time prior to the measurement period.⁸ NQF 18 is a CQM that the Centers for Medicare and Medicaid Services (CMS) requires from eligible professionals as part of the Electronic Health Record (EHR) Incentive Program.
2. NQF 59 is the percentage of patients with diabetes 18 to 75 years of age who had hemoglobin A1C > 9.0 percent during the measurement period.⁹ The numerator of NQF 59 is the number of patients whose most recent HbA1c level (performed during the measurement period) was > 9.0 percent, whereas the denominator is the number of patients with diabetes 18 to 75 years of age with a visit during the measurement period.

⁷ Million Hearts Case Study: Maryland's Million Hearts Initiative, Association of State and Territorial Health Officials. (2013). Maryland Department of Health and Mental Hygiene.

⁸ CMS.gov. (2015). 2014 eCQMs for Eligible Professionals Table May 2015, <https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/EPMeasuresTableMay2015.pdf>, accessed on August 10, 2015.

⁹ For NQF 59, low percentages are better than high percentages—indicating low numbers of uncontrolled cases.

NQF 59 is a CQM that CMS requires from eligible professionals as part of the EHR Incentive Program.

In addition to these two quality measures, some partners voluntarily report NQF 575. NQF 575 is preferred by some due to the confusion surrounding the interpretation of NQF 59. Because NQF 59 measures the rate of poor blood sugar control (HbA1c > 9.0 percent), NQF 575 was developed to measure controlled cases of diabetes—an inverse metric of NQF 59. Accordingly, the numerator of NQF 575 is the number of patients whose most recent HbA1c level (performed during the measurement period) is < 8.0 percent, whereas the denominator is the number of patients with diabetes 18 to 75 years of age with a visit during the measurement period.

STRATEGIES

This section includes healthcare recommendations for the management of HTN and diabetes. The strategies reflect the current state of practice synthesized from a review of current research.

HYPERTENSION

Recommended healthcare setting strategies¹⁰

Guidelines for diagnosis of HTN:

There should be an educational component related to HTN and its risk factors during the initial patient encounter and assessment.¹¹ Moreover, the health risks of uncontrolled HTN should be made clear to the patient at the first HTN screening.

Practice facilitation for blood pressure assessment:

Clinical personnel must be fully trained in the use of HTN measurement. A complete understanding of types of equipment used and proper placement of HTN cuff is necessary. A second HTN reading at the time of initial screening is also recommended. Therefore, the development of a standardized protocol for obtaining blood pressure readings and education are essential to accurate initial diagnosis and subsequent monitoring.

¹⁰ Donald M. Lloyd-Jones, Jane C. Evans, Martin G. Larson, and Daniel Levy. (2002). Treatment and Control of Hypertension in the Community: A Prospective Analysis, *Hypertension*, 40(5): 640–46; Ihab Hajjar, Jane M. Kotchen, and Theodore A. Kotchen. (2006). Hypertension: Trends in Prevalence, Incidence, and Control, *American Review of Public Health*, 27(April): 465–90; Centers for Disease Control and Prevention. (2007). State Heart Disease and Stroke Prevention Program Addresses High Blood Pressure, February; Rural Assistance Center. (2014). Health Coaches for Hypertension Control, June 3; Richard D. Moore. (2001) *The High Blood Pressure Solution: A Scientifically Proven Program for Preventing Strokes and Heart Disease* (Rochester, VT: Healing Arts Press).

¹¹ It should be noted that the Systolic Blood Pressure Intervention Trial (SPRINT) study is currently underway and results are expected to be published in 2017. SPRINT seeks to answer the question, “Will lower blood pressure reduce the risk of heart and kidney diseases, stroke, or age-related declines in memory and thinking?” Funded by the American Recovery and Reinvestment Act and National Institutes of Health, approximately 9,000 participants (55 years of age and older) have been enrolled and followed in more than 80 clinical sites nationwide and in Puerto Rico. “Participants [were] randomly assigned to one of two groups: to treat systolic blood pressure to the lower goal of less than 120 mm Hg or to treat to the standard goal of less than 140 mm Hg” (NIH Launches, 2009). Depending on the results of the study, the approach to HTN control may be redefined and best practices revisited (NIH Launches Multicenter Clinical Trial to Test Blood Pressure Strategy. [2009]. NIH News, National Heart, Lung, and Blood Institute, October 29).

Patient follow-up:

A concise but complete discussion about HTN should be conducted with the patient, noting the risks of uncontrolled HTN, factors that may contribute to HTN, and appropriate interventions that will help control HTN. Key elements include: (1) the need for continued HTN measurement by the patient, (2) appropriate future visits to clinical personnel, and (3) utilization of appropriate community interventions.

Community referrals to self-management resources:

Clinicians must have complete knowledge of appropriate community programs that assist with HTN management. Community programs must be suitable for the patient in terms of such things as cost, travel, and access, especially where disability is present. Special emphasis must be placed on access to HTN prescription medicines (for example, location of pharmacies, ease of ordering).

Medication adherence:

Appropriate rescheduling of HTN clinical visits should occur along with conversations about medication adherence. Pharmacy reminders about medication refills should be scheduled. Patients should have appropriate pill management boxes and should keep records of pill usage. Records of continued clinical examinations of prescription medication usage should be kept by the clinician.

Team-based care in clinical settings:

Clinicians should bring together other appropriate clinical/community personnel for discussions with the patient about HTN status and progress on a regular basis (for example, monthly, quarterly). Consideration should also be given to electronic interactions with the patient who is unable to come to the clinic. A renewed focus on community partners at this meeting should also occur.

Home blood pressure monitoring:

An important goal should be the monitoring of blood pressure readings at home. Initial training at the home site with appropriate HTN equipment must occur. A call-in site for handling self-management problems should be established, and the patient should be comfortable with taking and recording the readings. HTN readings at community settings should also be encouraged.

Recommended community–clinical linkages strategies

Coordination of patient blood pressure data between community and clinical settings:

HTN readings should be electronically sharable in either direction between clinical and community settings. If HTN readings are first encountered in a community setting, they should

be transmitted to an appropriate clinical provider. Future HTN readings should be made available to the community setting where the patient travels for follow-up treatments.

Patient referrals from community screening to clinical practice:

Community screening staff should have the full inventory of appropriate clinical practices along with information on cost, distance, and other features of the clinical practice. Community organizations should also strive for formal agreements with clinical practices that have proven HTN procedures so that speedy access can be provided to the patient.

Use of and referral to community programs that lead to effective self-management resources:

Community programs offer a “comfortable” venue for HTN patients to begin the diagnosis of their blood pressure condition. Senior programs and social programs in community settings are some of the best gateways to effective HTN management. A complete inventory of community programs must be undertaken, because such resources can aid in the treatment of other related causes of HTN. The patient should be given all the information on such resources.

Use of team-based care in community settings:

Clinical teams and associated health professionals should make a point of promoting HTN sessions in community settings. These services can be provided jointly or separately to HTN patients. Sessions such as these are known as shared medical appointments. They would provide further evidence of the multiple organizations that can help with HTN treatments in their various forms.

HTN monitoring and other self-management approaches in partnership with community partners:

Self-management of HTN is not an easy task. It can be erratic and, in some cases, incorrect. Community partners can bring together a number of HTN patients and jointly assist with effective self-management techniques, as well as troubleshoot problems that patients might encounter with self-management efforts. These periodic community settings can also give patients a sense of durable progress with self-management techniques.

Recommended healthcare setting strategies¹²*Guidelines for diabetes and prediabetes screening:*

All asymptomatic individuals should be tested regularly beginning at the age of 45, unless they fall into one or more of the high-risk categories. If additional risk factors are identified, screening should be performed regardless of age. These high-risk categories include adults of any age who are overweight¹³ or who have one or more additional risk factors such as familial history, race/ethnicity (African Americans, Latinos, Native Americans, Asian Americans, or Pacific Islanders), HTN ($\geq 140/90$) or on hypertensive medications, HDL cholesterol levels < 35 mg/dl and/or triglyceride levels of > 250 mg/dl, history of cardiovascular disease, and women who have delivered a baby weighing ≥ 9 pounds or have been diagnosed with gestational diabetes.

A1C is the most effective and convenient screen for diabetes, because unlike plasma glucose testing, it does not require that the individual fast prior to testing. An individual is considered to have prediabetes if their A1C falls between 5.7 and 6.4 percent, and to have diabetes if their A1C is ≥ 6.5 percent. A1C testing should be repeated at regular intervals for patients with diabetes.¹⁴ Once tested, those individuals with prediabetes or diabetes should be referred for a comprehensive evaluation. This evaluation should include a medical history, physical examination, and additional laboratory testing (including repeat A1C levels, liver function tests, lipid profiles, creatinine, GFR, and TSH).

Patient follow-up:

Individuals with diabetes should be followed by a collaborative, multidisciplinary, patient-centered team that includes the patient, the patient's family, pharmacists, ophthalmologists, registered dietitians, nurses, dentists, and podiatrists. This patient-centered, team-based approach is also a way to educate the patient on comorbidities, including HTN, elevated cholesterol/lipids, smoking, and obesity. In addition, it is important that the patient be engaged in the development of a management plan. The patient, family, and healthcare providers should work together to formulate the plan, taking into consideration the patient's age, social situation, support systems, education, physical activity, values, and culture.

¹²American Diabetes Association: Standards of Medical Care in Diabetes—2015. (January 2015). *Journal of Clinical and Applied Research and Education*, 38(1): S1–S94.

¹³ BMI ≥ 25 kg/m² or 23 kg/m² in Asian Americans.

¹⁴ A1C testing should take place in a formal healthcare setting as opposed to a community setting, because individuals with elevated levels may fail to follow-up, thereby becoming lost to the healthcare system.

Community referrals to self-management resources:

Often, in the presence of comorbidities, the management plan will be complex and include multiple medical and medication management challenges. As such, to give patients with diabetes further support, Diabetes Self-Management Education (DSME) and Diabetes Self-Management Support (DSMS) must be made available to empower the patient to play an active role in their care. Ideally, the goal of DSME and DSMS is to improve outcomes (lower A1C) for patients with diabetes by advancing their understanding of the disease process, enhancing their self-care, and increasing their interest in achieving and maintaining a healthy lifestyle. These programs must be suitable to the patient, taking into consideration costs, travel expenses, accessibility, and potential language barriers. Community health organizations and clinicians should have a thorough understanding of existing resources that can provide support to the patient.

Those individuals diagnosed with prediabetes should be referred to appropriate counseling resources that can provide information and guidance on preventative approaches (for example, evidence-based diabetes prevention programs). These resources should counsel the individual on the importance of lifestyle changes to prevent or delay the onset of diabetes.

Medication adherence:

Patients with diabetes should be scheduled for clinical visits at regular intervals. Pharmacists should review medications and share their reviews with patients. Patients should have a thorough understanding of their medications, including purpose, dosage, and administration times, as well as adverse reactions and side effects. For those patients who are insulin-dependent, education should be provided on the signs and symptoms of hyperglycemia and hypoglycemia, as well as the actions that should be taken in either circumstance.

Recommended community–clinical linkages strategies

Coordination of A1C information should be shared between community and clinical practices so that data can be gathered concerning the success of identifying patients with prediabetes or diabetes. Ideally, this data should be shared electronically; however, because of the lack of consistent, dependable, and compatible electronic-sharing platforms, most communities continue gathering data manually in written form. For those partners who have transitioned to electronic records, automated clinician prompts facilitate referrals and patient access to community resources.

Community partners should be attuned to, and refer, those individuals in the community who are identified as being high risk for developing diabetes. Partnerships with clinical treatment sites must include discussions with practitioners about the benefits of identifying patients with

diabetes and those at high risk for developing diabetes, the positive impact of early intervention in patients with pre-disposing risk factors, and the benefits of medical management of patients with existing diabetes who are not controlled. Clinical practices that have proven approaches to the identification and management of diabetes should be identified so that their success strategies can be shared with other clinical practices.

Information about DSME and DSMS programs should be made readily available to the community to encourage patient autonomy and commitment to improving quality of life. This can be accomplished through shared appointments so that information is disseminated to a group rather than an individual. Shared appointments can prove to be beneficial in reaching a broader audience. These educational sessions must be easily accessible in terms of transportation and cost. This can be accomplished by linking the healthcare system with community groups such as senior centers, local YMCA centers, libraries, virtual diabetes educational programs, universities, school systems, faith-based groups, city and county parks, and the media. Community linkages should become a natural extension of clinical practices in coordinating healthcare delivery and promoting public health. Moreover, because A1C levels are measured in a clinical setting, community organizations have the important task of identifying those individuals who are at risk for developing diabetes, as well as those individuals who have been diagnosed with diabetes, and providing appropriate referrals and follow-up.

MARYLAND MILLION HEARTS IMPLEMENTATION

This evaluation focuses on initiatives introduced by eleven key Million Hearts partners across the state of Maryland. Semi-structured interviews and a review of relevant documents were used to produce both brief partner profiles and more in-depth narratives on partner contributions to the Maryland Million Hearts program. Although all partners are part of the same effort, there was, nevertheless, considerable variation in the implementation of strategies, partner groups, resources, and design of each key partner's efforts.

Overall, key partners were able to develop or implement effectively initiatives that addressed their particular community's needs, and they used available resources to make positive strides in meeting the objectives of the Million Hearts program. Some of the accomplishments of DHMH over the course of the Million Hearts program include initiating the development of a data warehouse that will aggregate standardized data from all FQHCs in Maryland; increasing partnerships between private practices, FQHCs, health departments, and managed care organizations (MCOs); extending the reach of the program by welcoming five new key partners in year two; and expanding the reach of initiatives to include prediabetes screening.

MILLION HEARTS IN BALTIMORE CITY

The BCHD implemented a three-pronged initiative in year two of the grant that addressed increasing clinical–community linkages to care. One prong focused on working with a local FQHC to identify and track patients at risk for HTN and diabetes; another utilized a tracking system with a local health/fitness club to allow members to track their blood pressure ranges; and the third offered chronic disease self-management courses to interested participants. These initiatives are currently ongoing.

BCHD's two primary partners are Total Health Care (THC) and B'more Fit, as a majority of participants in the department's initiatives have come from these two sources. BCHD's other partners include West Baltimore CARE, the YMCA, the Division of Aging and Care Services, and the American Heart Association.

The strategies that BCHD seeks to implement are to:

- increase the reporting, monitoring, and use of quality measures NQF 18 (HTN control) and NQF 59 (poor A1C control);

- improve identification of undiagnosed persons with high blood pressure, prediabetes, and diabetes in clinical settings;
- improve treatment and follow-up of persons with high blood pressure or diabetes;
- establish formal referral systems linking at-risk patients identified in the community to follow-up healthcare;
- engage non-physician team members in HTN and diabetes management in the healthcare system;
- increase HTN and diabetes awareness;
- increase prediabetes awareness;
- identify and promote community resources and programs for the prevention and control of high blood pressure, prediabetes, and diabetes;
- promote self-measured blood pressure monitoring accompanied by clinical support;
- implement policies or systems in healthcare settings that encourage a multidisciplinary approach.

BCHD's partner, THC, has helped to address these strategies by tracking high-risk patients through its patient database. It first identified a zip code, 21223, because it had the highest emergency department admission rates for HTN. From this zip code, THC then identified 200 patients with uncontrolled HTN and 200 patients with uncontrolled diabetes.

Of these 400 patients, 22 patients with HTN and 28 patients with diabetes agreed to participate in an eight-week monitoring program. BCHD offered a grocery store gift card as an incentive for continued participation. The gift card was presented only after completion of the program. The 22 patients with HTN received blood pressure equipment for home monitoring, which was donated by the American Heart Association. Additionally, THC trained all 22 patients with HTN on how to take their blood pressure accurately at home.

The first step to tracking participants was to review EMRs for information requiring immediate follow-up or attention. Participants' plan of care was reviewed by nurse managers and physicians. Pharmacists were engaged on an as-needed basis. BCHD enlisted the assistance of THC nurse managers and community health workers to track follow-up and referrals.

Nurses and community health workers contacted patients every other week to obtain blood pressure readings and to view participants' EMRs on alternate weeks for any developing health issues that might require patient follow-up. Patients were also given access to a BCHD local community resource inventory aimed at guiding them to resources that encouraged self-management. The inventory provided information on both HTN and diabetes resources. At the end of the eight-week tracking program, each participant completed an evaluation. Beyond the

eight-week program, THC staff intended to engage in periodic follow-up with each patient to determine if further intervention would be required.

Another aspect of BCHD's overall initiative for increasing community–clinical linkages is its partnership with B'more Fit, a program that helps postpartum women reach their health goals. Currently, BCHD uses Resource Access Cards (RAC) with unique Quick Response (QR) codes for nearly 50 participants.¹⁵ These RAC cards are used to login to iPads located at a B'more Fit gym. A trained B'more Fit facilitator takes the blood pressures. The actual blood pressure is not recorded in the system; rather, a blood pressure range is recorded in the RAC system and the actual blood pressure is recorded in a handwritten document. When participants access the RAC system via their unique QR code, they are able to plot their blood pressure within one of the ranges. The current RAC system only allows participants to view the ranges within which their blood pressure falls and does not allow them to see previously recorded ranges.

BCHD is planning to transition from the RAC tracking system to the American Heart Association's "Check. Change. Control." (CCC) program. This program includes the bidirectional Heart360 portal¹⁶ that will allow patients to view their previous blood pressure readings, as well as input additional readings.

Finally, BCHD and the Division of Aging and Care Services developed and delivered chronic disease self-management classes targeting two high-risk zip codes. These courses were offered during the daytime hours, once a week, over a period of six to eight weeks. Each course was presented by nursing students from Coppin State University and lasted approximately two-and-a-half hours. Participants were recruited from THC clinics, through primary care physicians, and using databases of previously targeted or identified patients. Unfortunately, the classes were not well attended by participants, most likely due to child care and transportation issues. As such, they were not as effective as BCHD would have liked.

BCHD has had a number of successes through their implementation of year two initiatives. They were able to identify and target 50 patients from high-risk areas in the city, as well as assist postpartum women in managing and tracking their high blood pressures. Moving forward, BCHD hopes to enlist more partners and track additional patients using the more user-friendly Heart360 software.

¹⁵ QR codes™ are machine-readable codes consisting of black-and white-squares used for the storing of information that can later be read by the camera on a smartphone.

¹⁶ Heart360 is discussed further in the "Million Hearts in the Midshore" section.

MILLION HEARTS IN CECIL COUNTY

The CCHD, along with its partners, developed a series of initiatives to target HTN and diabetes within their community. CCHD is one of the original jurisdictions to receive Million Hearts funding in year one. It is currently in its second year of participation.

CCHD's partners include the Cecil County Department of Emergency Services, Healthy Lifestyle Taskforce, RFP Consult, Triangle Health Alliance, Union Hospital, Union Multispecialty Practices, and FQHC West Cecil Health Center. CCHD has collaborated with its partners to produce policies, strategies, and community events for improving public health. Million Hearts funding has allowed CCHD to enhance existing programs and develop initiatives with its partners that specifically target HTN, diabetes, and, to a lesser extent, smoking cessation.

CCHD's stated strategies are to:

- increase the reporting, monitoring, and use of quality measures NQF 18 (HTN control) and NQF 59 (poor A1C control);
- improve identification of undiagnosed persons with high blood pressure, prediabetes, and diabetes in clinical settings;
- improve treatment and follow-up of persons with high blood pressure or diabetes;
- establish formal referral systems linking at-risk patients identified in the community to follow-up healthcare;
- engage non-physician team members in HTN and diabetes management in the healthcare system;
- increase HTN and diabetes awareness;
- identify and promote community resources and programs for the prevention and control of high blood pressure, prediabetes, and diabetes;
- implement policies or systems in healthcare settings that encourage a multidisciplinary approach;
- use health information technology to facilitate bidirectional data sharing that supports care coordination and improves health outcomes.

In an exclusively educational initiative in year one of Million Hearts, CCHD awarded “mini-grants” to seven African-American churches and the local NAACP to host HTN awareness events in their communities. Six of these churches and the NAACP presented “moveable kitchen” demonstrations that provided guidance on how to make favorite recipes healthier. CCHD also hosted an educational focus group for African-American churches to increase awareness of HTN

and diabetes, and participated in the development of culturally and ethnically appropriate marketing materials on chronic diseases. In year two, Million Hearts grant funding requirements stated that educational initiatives had to be tied to a clinical component. As such, these strictly educational initiatives were discontinued for year two.

CCHD, in collaboration with Union Hospital, developed two best practices policies: the Union Multispecialty Practices Hypertension Protocol (Hypertension Protocol) and the Hypertension Best Practices Policy for Adult Blood Pressure Screening Procedure (Screening Procedure). The Hypertension Protocol addresses best practices for the clinical management of HTN. The goal of this policy is to provide evidence-based protocols for the diagnosis, treatment, and follow-up of patients with HTN. This policy has been adopted by Union Multispecialty Practices, which includes primary care and specialty providers.

The Screening Procedure aims to standardize adult blood pressure screening procedures. Education and training is provided to practitioners on a number of topics, including: the mechanics of accurately measuring blood pressure readings, how to determine systolic and diastolic blood pressure readings, referral guidelines using initial blood pressure screening ranges with recommendations for follow-up tied to each range, patient education, and documentation of referral and follow-up. Individuals identified with HTN are provided with a referral form documenting their blood pressure reading. CCHD retains a copy of the referral form, and a community health nurse contacts those individuals with HTN to determine whether follow-up did, in fact, occur. The Screening Procedure also provides referral guidance for individuals with diabetes. This policy has been adopted by multiple partners in Cecil County, including the Department of Emergency Services, Union Multispecialty Practices, and West Cecil Health Center.

In addition to these two best practices policies, Union Hospital participated in the development of a patient handbook addressing chronic disease self-management. Currently, the handbook has been provided to 14 PCPs for distribution among their patient population.

CCHD also provides educational posters on HTN, diabetes, and screening events that were developed through a community-driven Healthy Lifestyle Task Force. These flyers can be accessed by providers through All Scripts. Patients in Cecil County have access to a “follow my health” patient portal that tracks important health information and contains a repository of recommended resources and flyers.

In collaboration with West Cecil Health Center, CCHD is engaged in expanding the use of Care2Care, an information technology platform used to capture patient care that occurs outside

the clinical site. This expansion is currently being used for HTN care coordination and includes appointment assistance, education, and record review. A community health nurse is able to conduct medication reconciliation and provide information to practitioners via the EMR, including flagging the record for situations that may require the provider's immediate attention. The long-term goal is to increase the functionality of Care2Care by developing an interface with the Chesapeake Regional Information System for our Patients, which will, in turn, enhance data sharing and interoperability.

The CCHD case management program includes developing patient self-management care plans, monitoring for medication adherence, and referring individuals to community resources. The West Cecil Health Center has referred twelve clients with uncontrolled HTN, eight of whom are tracked in the case management program. The goal is to attain a ten-point decrease in either their systolic or diastolic blood pressure. A CCHD community health nurse follows patients' progress and response to interventions. The community health nurse also visits participants and reports findings to their primary care providers. In the fourth quarter of 2015, 70 percent of patients tracked from West Cecil Health Center saw improved blood pressure readings compared to their baseline data.

CCHD has also compiled a community resource inventory that provides information on resources for HTN, diabetes, obesity, and high cholesterol. Further information provided includes topics on healthy eating, physical activity, and the various risk factors for chronic diseases. The inventory is hosted on Union Hospital's website and is periodically updated by the Healthy Lifestyle Task Force.

Through all these efforts, CCHD and its partners have achieved a number of other accomplishments. Between January 1, 2014, and June 30, 2014, 48 individuals were screened for HTN. Seventeen of these individuals were identified with HTN and referred for follow-up care and to community resources. Of these 17 individuals, eight were identified as having received follow-up healthcare. Also, the community outreach program has reached over 900 community members, and CCHD has trained six nurses to provide follow-up care and coordination.

MILLION HEARTS IN ST. MARY'S COUNTY

SMCHD has implemented a variety of initiatives through partnerships with Hollywood Medical Center; MedStar St. Mary's Hospital; a MedStar physician group comprised of multiple medical center sites, including Charlotte Hall Medical Center, J. Patrick Jarboe Medical Center, and Shanti

Medical Center; Patuxent Medical Clinic; Shah Associates; St. Mary's County Department of Aging and Human Services; and Wildewood Medical Care.

The strategies that SMCHD seeks to implement are to:

- increase the reporting, monitoring, and use of quality measures NQF 18 (HTN control) and NQF 59 (poor A1C control);
- improve identification of undiagnosed persons with high blood pressure, prediabetes, and diabetes in clinical settings;
- improve treatment and follow-up of persons with high blood pressure or diabetes;
- establish formal referral systems linking at-risk patients identified in the community to follow-up healthcare;
- engage non-physician team members in HTN and diabetes management in the healthcare system;
- increase HTN and diabetes awareness;
- increase prediabetes awareness;
- identify and promote community resources and programs for the prevention and control of high blood pressure, prediabetes, and diabetes;
- implement policies or systems in healthcare settings that encourage a multidisciplinary approach; and
- use health information technology to facilitate bidirectional data sharing that supports care coordination and improves health outcomes.

SMCHD has focused on quality improvement by collecting outcomes and process measurement data to give provider practices a framework for improving patient outcomes. Through its collaboration with MedStar, SMCHD has also been able to engage hospital pharmacists in consultations with practices (at least four hours per month per practice) in an effort to improve medication management of patients with HTN or diabetes. The pharmacist is able to conduct chart reviews, counsel clinicians and patients, and provide education for clinic staff. The introduction of pharmacist consultations has proven to be a valuable addition to the team-based care model of addressing HTN management.

SMCHD requires its partners to attend monthly peer learning meetings to share information about best practices, process improvements, and data collection. Met initially with some hesitancy by community partners, the meetings have proven to be instrumental in providing a venue for sharing information, improving strategies to achieve objectives, and focusing energies on developing additional strategies to improve community health.

Through their combined efforts, SMCHD and its partners have realized accomplishments. Their initiative of team-based care has engaged eight practices that care for more than 50,000 patients. They have reached an NQF18 average of 63.5 percent for May 2015, which is above the national average of 52 percent, and have made over 1,000 referrals to various educational and self-management programs. The referral system averages 37 patients per month to six different programs. These programs include Smoking Cessation, Tobacco Quitline, St. Mary's Alive!, Diabetes Prevention Program, Chronic Disease Self-Management Program, and Nurse Care Coordinators.

The success of SMCHD is in large part attributable to its leadership, which has encouraged a more data-conscious approach to tracking community health. SMCHD also hired an epidemiologist to assist in Million Hearts initiatives. The involvement of an epidemiologist has eased the data-collection and reporting processes, as well as lent expertise to the interpretation of the data collected. SMCHD's combined efforts have contributed to the successful implementation of programs targeting the identification, referral, and follow-up of at-risk patients.

MILLION HEARTS IN WASHINGTON COUNTY

The WCHD is overseeing a variety of community health initiatives for the Million Hearts program. WCHD has partnered with FQHC Family Healthcare of Hagerstown (formerly Walnut Street Community Health Center), Meritus Health, FQHC Tri-State Community Health Center, and multiple local faith-based communities. The partnership with Meritus includes Meritus Medical Center, the Parish Nursing Program, Potomac Family Medicine, and Robinwood Family Practice. The main focus of WCHD has been working with the Parish Nursing Program to increase awareness and education of HTN and diabetes in the faith-based community.

WCHD's strategies are to:

- increase the reporting, monitoring, and use of quality measures NQF 18 (HTN control) and NQF 59 (poor A1C control);
- improve identification of undiagnosed persons with high blood pressure, prediabetes, and diabetes in clinical settings;
- improve treatment and follow-up of persons with high blood pressure or diabetes;
- establish formal referral systems linking at-risk patients identified in the community to follow-up healthcare;
- engage non-physician team members in HTN and diabetes management in the healthcare system;

- increase HTN and diabetes awareness;
- identify and promote community resources and programs for the prevention and control of high blood pressure, prediabetes, and diabetes;
- promote self-measured blood pressure monitoring accompanied by clinical support;
- implement policies or systems in healthcare settings that encourage a multidisciplinary approach.

One method by which the WCHD is meeting these strategies is through their partnership with the Parish Nursing Program. Over 100 volunteer registered nurses across 52 faith-based communities serve as the foundation for the Parish Nursing Program. Twenty-five of these parish nurses from 15 faith-based communities volunteered to participate in the Million Hearts program in year one. In year two, the program welcomed 29 nurses in 18 faith-based communities. As part of the program, parish nurses receive training and return to their congregations to recruit parishioners for blood pressure monitoring. WCHD provides blood pressure monitors and educational materials for the participants and patient resource materials for the parish nurses.

Parish nurses meet with participants three to four times over a three-month period. During that time, blood pressures are monitored and education on lifestyle changes is provided. The lifestyle areas identified were: self-monitoring of blood pressures, healthy activity, healthy weight, managing medications, healthy eating, tobacco use, and stress management. The Parish Nursing Program initially intended to screen 1,000 individuals for HTN and distribute educational materials to 4,500 individuals. They far exceeded their goal in 2014, and by the end of the three-month period, 1,729 individuals had been screened for HTN and resource materials had been distributed to 21,886 individuals. In terms of outcomes, 51 participants completed the Parish Nursing Program. Forty-two patients (82 percent) showed a decrease in systolic or diastolic blood pressure over the three-month period in 2014.¹⁷ In 2015, 61 individuals participated in the program and 1,820 community members were screened for HTN.

WCHD collaborated with Meritus Medical Center to standardize the method of obtaining blood pressures. To accomplish this goal, 15 medical assistants were trained in such a standardized process. As a result of these efforts, blood pressure screenings have become standardized throughout outpatient practices. In the third quarter of the grant (2015), Meritus hosted screenings at the hospital, rotary club, local mall, and health fairs. During these screenings, 1,387 community members were screened for HTN, 46 of whom were identified with HTN. Meritus also

¹⁷ The average blood pressure at the beginning of the period was 142/82. At the end of the three months, this average had been lowered to 130/76.

hosted a training and best practices forum and an HTN symposium to build on the knowledge and awareness of HTN in the community.

In addition, Meritus conducted a health risk assessment of 2,000 hospital employees and found that many had HTN or exhibited high risk factors for developing HTN. To address these findings, Meritus offered blood pressure screenings over a six-week period and provided incentives to encourage participation. Employees received educational resources that addressed self-management of HTN and the identification of risk factors. Meritus adopted the New Hampshire blood pressure tracking card template. These cards were distributed to participants, who were thereafter tracked by nurses. The nurses provided additional support and follow-up during the tracking period.

Another strategy to identify patients with HTN was to establish partnerships with PCPs such as Robinwood Family Practice and Potomac Family Medicine. Robinwood identified a total of 4,367 patients with HTN. Of these patients, 3,101 (71 percent) were controlled after intervention. Home blood pressure monitoring devices were distributed to 67 patients of whom 42 showed improvement, while 13 continued to have uncontrolled HTN. Potomac Family Medicine identified 51 HTN patients in quarter four of year one. Seventy-four percent showed improvement of HTN compared to their baseline readings. In year two, 1,120 patients with HTN were identified.

Finally, WCHD compiled a community resource inventory. This inventory is among the educational materials distributed to participants and community members at health fairs. WCHD is also working to increase referrals to chronic disease self-management programs and diabetes prevention programs by raising the profile of these programs. During the 2015 grant period, WCHD referred 3,442 individuals to community programs or resources. They have also obtained over 1,600 blood pressure readings at a blood pressure kiosk placed in a local restaurant. The kiosk was stocked with blood pressure cards to encourage community members to record their readings.

MILLION HEARTS IN THE MIDSHORE

The initiative adopted by the KCHD is the American Heart Association's CCC program. CCC is a free blood pressure monitoring and HTN program that operates from the Heart360 platform.¹⁸

¹⁸ Powered by Microsoft HealthVault.

KCHD's target population consists of residents with uncontrolled HTN in the midshore counties of Caroline, Dorchester, Kent, Queen Anne's, and Talbot.

KCHD has planned a rollout of its CCC initiative in early summer 2015.¹⁹ It has identified multiple strategies for its initiative, including to:

- increase the reporting, monitoring, and use of quality measures NQF 18 (HTN control) and NQF 59 (poor A1C control);
- improve identification of undiagnosed persons with high blood pressure, prediabetes, and diabetes in clinical settings;
- improve treatment and follow-up of persons with high blood pressure or diabetes;
- establish formal referral systems linking at-risk patients identified in the community to follow-up healthcare;
- engage non-physician team members in HTN and diabetes management in the healthcare system;
- increase HTN and diabetes awareness;
- identify and promote community resources and programs for the prevention and control of high blood pressure, prediabetes, and diabetes;
- promote self-measured blood pressure monitoring accompanied by clinical support;
- implement policies or systems in healthcare settings that encourage a multidisciplinary approach;
- use health information technology to facilitate bidirectional data sharing that supports care coordination and improves health outcomes.

KCHD has developed relationships leading to formal agreements with multiple community partners. These partners include Associated Black Charities, Bethel AME Church, Chesapeake Multicultural Resource Center, FQHC Choptank Community Health System, Eastern Shore Area Health Education Center, the Local Health Improvement Coalition, a regional group of local health departments, and University of Maryland Shore Regional Health.

KCHD's primary partner, Choptank, is identifying participants for the CCC initiative by using the health record databases of their network of providers. Thus far, 1,100 patients have been identified as having uncontrolled HTN. The goal at the outset of the initiative was to enroll 100 participants in CCC. Physicians at Choptank are provided with referral forms to engage participants. The health data provided by Choptank are to be used for the initiative's baseline

¹⁹ No outcome data were available at the time of this evaluation.

data. Choptank is also interested in assessing whether decreasing blood pressure has any effect on A1C levels in patients with diabetes.

The benefits of using CCC and the Heart360 platform are three-fold. First, it places patients in control of their health by allowing them to use multiple devices to track blood pressure, weight, and blood sugar from home. Second, CCC uses community health worker volunteers and mentors to encourage patients to be vigilant in their home monitoring. Lastly, CCC allows for bidirectional data sharing among participants, health providers, and health mentors.

Community health workers are trained in a comprehensive curriculum before being assigned to patients. Once assigned, these workers track and engage patients for a period of four months, with the goal of collecting at least eight blood pressure measurements. The time period and number of readings are standards set by the American Heart Association. However, a physician may increase monitoring to more than eight readings. Community health workers also make weekly phone calls to patients to check on their progress and assist in addressing any issues or questions that patients may have. Thus, patients receive support from, and are connected to, a mentor or community health worker and their provider through the Heart360 portal.

Patients can input blood pressure readings into the Heart360 platform in various ways. They can input the information online using the portal or submit readings via text message, phone, or from enabled devices. Once the readings are in the system, both community health workers and healthcare providers can access the readings and assess patient status. Providers are also able to set alerts for patients to notify them of blood pressure readings that exceed certain parameters. Choptank has already programmed alert parameters that notify healthcare workers and providers of patient status.

In addition to the Heart360 platform and monitoring of patient data, KCHD is working with community groups to identify accessible CCC locations where community members can have their blood pressures taken. The current list of locations can be accessed through the Heart360 portal. Having prior working relationships with churches and community groups on other community projects has given KCHD a head start in identifying convenient, accessible CCC sites.

Because KCHD has not fully implemented its initiative as of the date of this evaluation, complete information on outputs, outcomes, and successes is not available. However, KCHD has identified the following accomplishments: (1) it has trained community health workers from five different counties, (2) it has established numerous partnerships, and (3) it has fostered relationships that will provide the necessary foundation and support going forward.

MILLION HEARTS IN THE LOWER EASTERN SHORE

The WiCHD, PRMC, and MAC work as one cohesive unit in the implementation of their collective Million Hearts initiatives. These three entities have joined together to work as a single partner in their overall mission to make positive impacts on community health. They stress that the work of one partner is the work of every partner and that they are all equal partners in the pursuit of improving community health. This coalition also includes the assistance of Crisfield Clinic, Delmarva Cardiology, Peninsula Home Care (the home care arm of PRMC), and Three Lower Counties Community Services (TLC).

The strategies of this partnership are to:

- increase the reporting, monitoring, and use of quality measures NQF 18 (HTN control) and NQF 59 (poor A1C control);
- improve identification of undiagnosed persons with high blood pressure, prediabetes, and diabetes in clinical settings;
- improve treatment and follow-up of persons with high blood pressure or diabetes;
- establish formal referral systems linking at-risk patients identified in the community to follow-up healthcare;
- engage non-physician team members in HTN and diabetes management in the healthcare system;
- increase HTN and diabetes awareness;
- increase prediabetes awareness;
- identify and promote community resources and programs for the prevention and control of high blood pressure, prediabetes, and diabetes;
- implement policies or systems in healthcare settings that encourage a multidisciplinary approach.

WICOMICO COUNTY HEALTH DEPARTMENT

WiCHD's main role in the partnership with PRMC and MAC is to provide administrative support (for example, reporting) and the infrastructure to implement their initiatives. WiCHD has assisted with the operation of all their health services and has helped coordinate and develop the varying roles among the partners. WiCHD also helps manage all referrals.

The partners have developed a clinical pathway that addresses the referral and navigation of patients through the healthcare system. The clinical pathway sets forth criteria for making

referrals—for example, who makes referrals, when referrals should be made, and where to dispatch patients for additional care, if needed. WiCHD tracks referrals and helps organize the flow of referrals throughout the partnership. Ninety-one percent of referrals averted hospitalization for 30 days.

The partnership also conducts community screenings to identify individuals with chronic health concerns, and they use other partners (for example, TLC and Crisfield Clinic) to identify and refer patients. Once patients have been screened and identified, the partnership determines the appropriate intervention. Participants are given the opportunity to attend seven-week self-management workshops presented by the partners and may be referred to members of a multidisciplinary team. WiCHD has many evidence-based management programs available to patients, including a prediabetes lifestyle balance program. As of 2015, 76 individuals were screened for diabetes, 27 of whom were identified with diabetes. Among those, seven patients had HbA1c greater than 9 percent and were referred to a primary care provider.

PENINSULA REGIONAL MEDICAL CENTER

One of the main initiatives of the coalition was the introduction of community health workers into the healthcare interdisciplinary team. Six health workers were trained and are supervised by PRMC. Community health workers assist patients with HTN and diabetes management and can refer patients to primary care facilities as needed. If a patient is referred to a primary care provider, a community health worker continues to follow the patient. This process establishes continuity of care between the healthcare worker and the patient and assures that the patient remains on track. Subsequent referrals are made if necessary.

Overall, the partnership's mission is to prevent high-cost emergency department visits by addressing community healthcare needs before emergency intervention is necessary. Many participants in the initiative were high utilizers of hospital services for care that typically could have been managed at the primary care level. Together, the partners are targeting this population by providing resources through PCPs, clinics, pharmacies, area agencies on aging, hospitals, and local health departments, which together function as a holistic, interconnected network.

Aside from being a key partner in overseeing community health workers, PRMC is also a leader in the data-sharing aspects of the partnership. It has developed a data-collection file that enables the partners to identify patients confidentially. PRMC is currently embarking on a mission to purchase a new EMR system that will provide hospital access to the records of a patient's entire episode of care. The hope is for all community providers and hospital physicians to be connected

and have access to this patient information. Because there is no single instrument used to collect data, this information is transferred to a community-based record.

Peninsula Home Care, part of PRMC, also plays a vital role in the partnership. To prevent hospitalizations, it uses state-funded, non-clinical, senior care workers to provide long-term home and community-based services to patients. These senior care workers manage high-risk patients in the community for approximately six weeks, unless more acute care is needed. The senior care workers are also cross-trained in chronic disease management.

PRMC has contributed to many of the partnership's successes. Certified nursing assistants are cross-trained as community health workers through a partnership between PRMC and Peninsula Home Care. These certified nursing assistants are able to provide follow-up care to individuals with poorly managed chronic conditions. As a result of the coalition's work, 91 percent of patients referred to the partnership's program avoided hospital readmissions for over 30 days.

MAINTAINING ACTIVE CITIZENS

MAC, a nonprofit area agency on aging, is the final partner in the Lower Eastern Shore Million Hearts coalition. MAC's primary role in the coalition is focused on HTN interventions and the care of senior citizens. MAC has taken the lead in training coalition members on the methods of standardized blood pressure screenings. Along with the other partners, MAC conducts screenings to identify community members with HTN.

MAC uses state-funded, non-clinical senior care workers to provide long-term home and community-based services for patients to keep them in the community and out of the hospital. These workers typically engage high-risk patients for approximately six weeks, unless additional care is needed. Like community health workers, senior care workers are also cross-trained in chronic disease management and can identify individuals who no longer need intensive clinical assistance.

MAC has accrued many successes. Four senior care workers were certified in the Chronic Disease Self-Management Program (CDSMP) and the Diabetes Self-Management Program (DSMP). Six master trainers and 32 leaders were trained in an HTN module. Fifty-two individuals attended a DSMP workshop and 27 attended a CDSMP workshop. MAC held workshops at 17 different locations across the lower Eastern Shore.

Overall, the coalition has given patients access to a level of expertise and coordination not available without the partners' combined efforts. Each partner plays an important role in the success of the entire partnership.

The MLC has historically partnered with healthcare practices to track a number of NQF metrics and to provide training on the management of chronic diseases. Under the well-established MLC partnership, 52 practices are required to report on an annual basis. Data reporting is required on an annual basis for two reasons. First, data collection, aggregation, and reporting is time intensive, requiring a dedicated staff member to work approximately two days to collect and analyze the data. Second, it is difficult to determine improvement and success with any reliability within a timeframe of less than one year.

Of the 52 practices, 21 agreed to participate in the Million Hearts program, with an understanding that reporting would be conducted semiannually. These participating practices have a total of approximately 114,000 patients. Of these 21 practices recruited to the Million Hearts program, 18 submitted data and 17 submitted data that could be analyzed.

The strategies of MLC and its partners are to:

- increase the reporting, monitoring, and use of quality measures NQF 18 (HTN control) and NQF 59 (poor A1C control);
- improve identification of undiagnosed persons with high blood pressure, prediabetes, and diabetes in clinical settings;
- improve treatment and follow-up of persons with high blood pressure or diabetes;
- establish formal referral systems linking at-risk patients identified in the community to follow-up healthcare;
- engage non-physician team members in HTN and diabetes management in the healthcare system;
- increase HTN and diabetes awareness;
- increase prediabetes awareness;
- identify and promote community resources and programs for the prevention and control of high blood pressure, prediabetes, and diabetes;
- implement policies or systems in healthcare settings that encourage a multidisciplinary approach.

MLC began clinical practice-based, multilevel intervention strategies to address target Million Hearts initiatives. One of these strategies was to host a training session on changes between Joint National Committee report 7 and Joint National Committee report 8. MLC invited representatives from the National Institutes of Health to participate in this training. It also provided

comprehensive hands-on training to care managers that included blood pressure screenings, diabetes management, nutrition, and exercise. These trained managers returned to their practices to provide this training to their office medical assistants.

This comprehensive training is part of MLC's position that one chronic disease, such as HTN, cannot be addressed in a vacuum. Practices must institute a broader approach when treating chronic diseases that not only looks at blood pressure but also considers eating habits, exercise, obesity, tobacco use, and other risk factors.

MLC has been successful in instituting Million Hearts initiatives as a result of its existing system of practice interaction and collaboration. It has provided its framework to its partners for successful implementation of the Million Hearts program and has leveraged community resources regionally. MLC plays an active role in creating linkages to community resources, and each practice has the ability to access and use these resources. It has asked every practice to develop self-management strategies, and as a result, practices have responded with a variety of methods. Some utilized Million Hearts materials, some incorporated group visits, and others developed lists of community resources. All medical assistants in every practice were trained in patient education concerning the self-management of HTN and diabetes.

Some MLC member practices have achieved substantial accomplishments. As an example, one practice was recently recognized by the Office of the National Coordinator for Health Information Technology as a "Million Hearts Champion" after increasing HTN patient control rates from 48 percent to 81 percent over the course of two years. Improvement in HTN control is also evidenced in other participating member practices.

MLC also conducted a survey of participating Million Hearts practices. It found that eight out of ten respondents refer patients to a diabetes self-management program, and six out of ten practices refer patients to a diabetes prevention program. Seventy-two percent of respondents create a care plan for patients.

MILLION HEARTS AT MEDICAID

Medicaid has been a partner of the Maryland Million Hearts program in a variety of ways. In year one of the grant, Medicaid focused on patient adherence to antihypertensive treatment by sending letters to providers and pharmacists alerting them to noncompliant patients. It was also

instrumental in sharing NQF 18 data for each MCO with the Center for Chronic Disease Prevention and Control at DHMH.

In year two, Medicaid took on a different role in the Million Hearts program. It distributed Million Hearts grant funding to Amerigroup Community Care and Riverside Health of Maryland, both MCOs, to fund three programs. Amerigroup received funding for HTN and diabetes-related initiatives, while Riverside received funding for a diabetes-related initiative.

Together with these two MCOs, Medicaid worked to implement the following strategies:

- increase the reporting, monitoring, and use of quality measures NQF 18 (HTN control) and NQF 59 (poor A1C control);
- improve treatment and follow-up of persons with high blood pressure or diabetes;
- engage non-physician team members in HTN and diabetes management in the healthcare system;
- increase HTN and diabetes awareness;
- increase prediabetes awareness;
- identify and promote community resources and programs for the prevention and control of high blood pressure, prediabetes, and diabetes;
- implement policies or systems in healthcare settings that encourage a multidisciplinary approach;
- use health information technology to facilitate bidirectional data sharing that supports care coordination and improves health outcomes.

Using grant money received from Medicaid, these MCOs have established unique Million Hearts initiatives. Amerigroup's primary initiative is to promote shared medical appointments with the aim of better serving patients with HTN and diabetes. Shared medical appointments are medical visits that target patients with a common diagnosis. These appointments allow patients to engage in peer-to-peer support, as well as educational sessions concerning diabetes, blood pressure control, healthy lifestyles, and self-management programs. The initiative is structured as five, two-hour sessions within a three-month period. During these appointments, diabetes and HTN screenings are conducted, along with physical exams, assessments, interactive presentations, and disease management education and counseling. The shared medical appointment strategy was implemented as a pilot program at Saint Agnes Hospital, and grant money will support expansion to PCPs in Baltimore City and Prince George's County. Amerigroup has reached 164 patients through shared medical appointments.

Riverside has developed a multilayered outreach campaign for their diabetes initiative. The types of outreach include mass mailings, phone calls, text messages, community events, social media, newsletters, and face-to-face encounters. Diabetes managers reach out to identified patients and address diabetes management by assessing risks, reinforcing treatment plans, providing education on self-management, and assisting with any barriers to healthcare access (for example, travel). Riverside specializes in complex case management, which includes providing education, coordination of services, advocacy, and emotional support. The initiatives also include routine physical exams conducted every three to six months.

Riverside conducted webinars with over 50 providers summarizing key care components of the 2015 ADA Standards of Medical Care in Diabetes. It also conducts provider outreach that includes medication monitoring to identify gaps in prescription refills. Riverside gives providers access to their diabetes self-management class directory for patient referrals. The diabetes classes are used to encourage self-management through education.

Because the final report was still pending at the time of the interview, no final outcomes can be reported here. However, both Amerigroup and Riverside prepared projected outcomes at the start of the grant. Amerigroup expects to develop and implement four new shared medical appointments to serve 80 members in Baltimore City and Prince George's County. It also anticipates training six internal and four external partner staff members to become registered health coaches. Amerigroup anticipates increasing the percentage of providers that utilize evidence-based guidelines and the percentage of members that feel more confident in managing chronic illness. Overall, Amerigroup hopes to improve diabetes (NQF 59) and blood pressure control (NQF 18) for 60 percent of attendees.

Riverside is projecting an increase in attendance at webinars by at least 50 primary care providers. It also anticipates increasing attendance at evidence-based diabetes self-management classes by 150 members. Riverside plans to decrease pharmaceutical gaps in care by 25 percent and provide outreach to 100 percent of members with diabetes. Finally, as part of their Million Hearts involvement, Riverside is hoping to increase the number of members that receive an A1C test.

MILLION HEARTS AT THE MID-ATLANTIC ASSOCIATION OF COMMUNITY HEALTH CENTERS

MACHC is a federally designated Primary Care Association for Delaware and Maryland FQHCs. All 15 FQHCs in Maryland are current members of MACHC. MACHC helps its members deliver quality and cost-effective healthcare to those in need.

MACHC is affiliated with the Maryland Million Hearts program through its development of a data warehouse that will standardize and aggregate health data from multiple EHR systems within Maryland's FQHCs. The centralized data warehouse will include key measures of interest to the Million Hearts program. It is the core of a MACHC initiative called the Community Care Informatics Center (CCIC). In addition to improving health outcomes through the data warehouse, MACHC's strategies are to increase reporting, monitoring, and use of quality measures NQF 18 (HTN control) and NQF 59 (poor A1C control), and to use health information technology to facilitate bidirectional data sharing that supports care coordination and improves health outcomes.

MACHC is awaiting final approval of participation contracts from the FQHCs. It currently has four executed participation agreements for the first cohort of the effort and expects a significant increase in the second wave of the project. However, each FQHC has verbally agreed to participate and help with the development of the data warehouse. MACHC has been successful in increasing collaboration among all health centers in Maryland.

MACHC is working with two data reporting tools from Azara Healthcare and i2i Systems to collect data from each FQHC's EHR system: Azara's Data Reporting and Analytics Solutions (DRVS) and i2i's i2iTracks. These data reporting tools will facilitate data validation and aggregation for the data warehouse. PopIQ, also developed by i2i Systems, will serve as the centralized data warehouse and will be the repository for de-identified patient data. PopIQ will collect, standardize, and aggregate data from DRVS and i2iTracks for easy, secure access and analysis.

To facilitate the establishment of the data warehouse, MACHC has formed a CCIC Advisory Council, which currently consists of members from every FQHC in Maryland. The first task of the council was to gather information and standardize measures and definitions across the FQHCs. A significant portion of MACHC's time thus far has been working with the FQHCs to develop these standardized measures and definitions for aggregation of data across all partners. The next step will be to validate the data to ensure that each FQHC's data meet the standardized reporting parameters. MACHC has assured each partner that proprietary information will not be at risk, because the data continue to belong to the individual FQHC. Currently, MACHC is beginning beta testing with two FQHCs.

This warehouse will significantly impact how FQHCs provide care across Maryland by enhancing quality-improvement efforts. The data will also help MACHC identify best practices across the state and will support strategic initiatives related to population health management and value-based purchasing. Once complete, the data warehouse will fill the major need for a comprehensive reporting system that can target chronic disease management.

MARYLAND MILLION HEARTS EVALUATION

Through semi-structured interviews and reviews of relevant documents conducted by the Schaefer Center evaluation team, a detailed understanding of the functionality, successes, challenges, and sustainability of the various Million Hearts initiatives across the state of Maryland was acquired. Key partners spoke to many topics, including funding, barriers, and the grant process. Throughout the information-gathering process, it became clear that all partners encountered similar challenges and, despite these challenges, implemented strategies that were impactful on the health of their respective communities. Each partner also shared advice, or lessons learned, to prospective Maryland Million Hearts partners.

This evaluation concludes with a series of recommendations borne out of the observed successes, challenges, lessons learned, and evaluator critiques of the Maryland Million Hearts program. The following information is not meant to single out any particular key partner's successes, challenges, or lessons but, instead, serves as an aggregate representation of all partner experiences.

SUSTAINABILITY, SUCCESSES, AND CHALLENGES

Most partners agree that the initiatives implemented through the Million Hearts grant must be sustained because of the value gained from targeting chronic diseases within the community. The identification and management of diabetes and HTN are essential to improving overall community health. Million Hearts funding has primarily been used in Maryland to enhance and extend the reach of existing initiatives aimed at HTN and diabetes.

However, in addition to enhancing existing initiatives, the Million Hearts grant has improved relationships and encouraged the formation of partnerships within communities. Many partners have had successes in linking clinical measures to community-based healthcare through their initiatives. Maryland Million Hearts has helped energize local communities to become involved in community health issues. Key partners have sought collaboration from hospitals, FQHCs, community groups, and local businesses to develop and implement initiatives. The greatest successes have been achieved by key partners who have formed effective partnerships with fellow grant recipients, non-grant recipients in the community, or both. These partnerships are characterized by intensive collaboration in nearly every aspect of the planning and implementation phases of Million Hearts initiatives.

The prevalence of chronic diseases in the community and the formation of strong partnerships together define the most often-mentioned reasons for key partners to sustain initiatives in the event the Million Hearts grant is no longer offered. Partnerships with strong financial support from organizational leadership have ensured their initiatives will be sustained regardless of Million Hearts funding. This is due partly to initiatives being developed with the community in mind and not necessarily with thoughts of grant funding. Other partners indicated that if Million Hearts funding became unavailable, they would seek alternative funding sources to sustain their initiatives. Some partners stated that they would sustain as many initiatives as possible, while others recognized that the reach of the initiatives would have to be scaled back if they were to no longer receive Million Hearts funding.

Partners were generally split down the middle when asked if the funding amount was appropriate. Some partners remarked that the grant was sufficient to cover their initiatives, while others reported that considerable in-kind resources were necessary. The most frequent use of in-kind resources was directed at supporting staff and performing the administrative tasks of managing the grant and meeting reporting requirements.

Some of the key partners were not able to realize the full potential of community partnerships, leading to the abandonment of certain initiatives. These partners were not able to implement initiatives that were mutually beneficial to them and their community partners. Some key partners assigned a higher priority to Million Hearts initiatives than to the community partners they recruited. At times, community partners were not motivated to seek the same outcomes as the key partners, because there was no cognizable return on their investment of time and staff.

Similarly, communication and trust with community partners were major challenges faced by some key partners. Partners reported experiencing communication errors, barriers, or shortcomings when recruiting community partners or when implementing initiatives with them. Part of this challenge was finding a common dialogue among a group of partners from diverse professional backgrounds and differing perspectives. Communication and trust became issues in some partnerships where community partners did not have a significant role in the planning and development of the initiatives.

One of the key partners conducted mandatory monthly face-to-face meetings with community partners as a requirement for the receipt of funding. These meetings allowed the community partners to come together as a group and build working relationships for successful implementation of the initiatives. This particular key partner established trust with its community partners and found that its initiatives were much more likely to be sustained in the long term.

Aside from a few key partners who had difficulty matching priorities with some of their community partners, nearly every key partner said that the leadership of their organization and their partner organizations had a stake in the sustainability of initiatives. Many partners described the leadership of both their organization and their partner organizations as being eager, knowledgeable, and supportive. More often than not, the community partners' priorities directly aligned with the priorities of the key partners. Additionally, some community partners were able to use their involvement in the Million Hearts program to satisfy other internal goals and objectives that fell outside the scope of key partner initiatives.

Partnerships with hospitals, FQHCs, and PCPs have resulted in the development of referral and bidirectional data-sharing systems between multiple community partners. These partnerships have also led to team-based care management for chronic diseases. In one instance, hospital pharmacists were engaged to consult with individual hospital-based primary care providers to improve medication management of patients with HTN. Pharmacists were able to access medication records, comment on the medication regimen, and counsel the provider. The introduction of pharmacist consultation has proven to be a valuable addition to the team-based care model in addressing the management of chronic diseases.

Additionally, hospitals, FQHCs, and PCPs have taken the lead in identifying residents with HTN and diabetes in communities and recruiting them into Million Hearts initiatives. These partners have contributed to the successful development of standardized tools and procedures used to screen, diagnose, treat, and monitor chronic diseases. These tools include referral forms, mechanics of blood pressure measurement, and educational materials. Hospitals, in particular, have played a key role in increasing awareness of chronic diseases through the development and distribution of chronic disease community resource inventories for community members.

The faith-based community's role has also been key to enhancing the reach of initiatives to community members. Faith-based organizations have played an instrumental role in identifying participants, hosting screenings, and providing manpower to fulfill the objectives of the initiatives. The faith-based community provides access to a pool of individuals who interact with them on a regular basis, thus facilitating the initial identification of those at risk and providing a venue for follow-up within parish settings.

However, despite the ability of many key partners to utilize community partners to recruit participants, formulate procedures, and establish referral systems, establishing bidirectional data sharing among community partners has been difficult, as some partners do not have the required technological capabilities. Certain key partners have been able to establish bidirectional data sharing with community partners; however, all key partners noted that the lack of reliable and

consistent electronic sharing of information is a major challenge. Many partners have made laudable efforts to ease the challenge of exchanging health information electronically. For example, one partner is working with an independent contractor to develop a platform that will allow the sharing of information among the local health department, community nurse, physician, and patient to monitor and control HTN. Still, some partners have not even attempted bidirectional data sharing because of the perceived complexity, expense, and privacy issues involved. Concerns and disagreements over HIPAA compliance are a major roadblock for some partners, resulting in hesitation to establish any bidirectional data-sharing system.

Finally, every partner remarked that applying for and obtaining the Million Hearts grant was a relatively simple and straightforward process. Many partners benefited from resources provided by DHMH and described the department as being responsive, helpful, and accessible via group conferencing and individual phone calls. Some of the partners specifically mentioned key partner conference calls as being helpful in that they were able to share and learn new and effective strategies.

Overall, partners have leveraged Million Hearts funding to enhance existing initiatives and establish sustainable programs and partnerships within their communities. Partnerships with hospitals, FQHCs, PCPs, and faith-based communities have proven especially helpful in identifying and monitoring community members with chronic diseases. Key partners who focus on forming cohesive and collaborative partnerships with community partners, and who effectively utilize grant resources, are best suited to continue to have a meaningful impact as they address chronic diseases in the community.

LESSONS LEARNED

Key partners in the Maryland Million Hearts program are serving thousands throughout the state. Recognizing that bidirectional data sharing is essential to addressing and managing chronic diseases, they are forging ways to establish bidirectional data sharing to promote a healthier community by assuring that care is delivered in new, innovative, and effective ways. Partners should aim to use preexisting tracking software that allows for bidirectional data sharing and access to records information in ways that are useful to their initiative. For example, partners with limited funding to devote to data sharing should explore the Heart360 platform offered by the American Heart Association.

Through key partner experiences over time in tracking challenges and achieving successes, they have been able to impart advice and guidance to prospective or current partners in the Million Hearts program. Perhaps the most important key partner guidance is that all chronic diseases are

interrelated. Thus, one chronic disease cannot be addressed without incorporating a comprehensive awareness of comorbidities and common risk factors.

Multiple key partners recommended the use of resources offered by the American Heart Association to avoid reinventing the wheel. Partners should devote time to informing themselves about existing resources before embarking on major projects. Specifically, one partner encouraged others to conduct literature reviews and to look for similarities in the research between their community and similar communities with successes.

Health departments were viewed as playing an important role in distributing information on the Million Hearts program. They navigate current or prospective members towards successful initiatives. Health departments already involved in the Million Hearts program are a valuable resource and provide assistance to other key partners in the program.

Some key partners made note of the necessity to work with the systems already in place at community partner organizations. Key partners should not disrupt the operations of organizations; rather, they should adapt their approaches to fit the already established framework of community partner organizations. Key partners also stressed that one key to success is for community partners or partner practices to realize a cognizable benefit from their participation.

Many key partners also expressed the importance of bringing together community partners early in the process in order to develop a collective plan from the start. They stressed the importance of allowing community partners to voice their expectations for the initiatives. At the same time, key partners emphasized the setting of realistic and attainable goals.

All key partners highlighted the importance of partnerships with community organizations and noted that initiatives are not possible without strong partnerships. In order to build strong relationships with community organizations, key partners advised against taking a defensive approach based on “turf” or “territory.” In other words, do not view community partners as competitors but, rather, as assets. Likewise, key partners stated the importance of going where the need is and not just where district or boundary lines are drawn.

Finally, partners stated that chronic health issues cannot be solved through healthcare services alone. They advised prospective partners to educate the community on the integral role they can play in the self-monitoring of their health. This means integrating a continuum of care that provides sufficient resources and support to foster the goals of self-management and accountability.

MARYLAND MILLION HEARTS EVALUATOR RECOMMENDATIONS

Based on the information gathered, the research team has developed the following recommendations:

1. Reexamine reporting requirements, frequency, and format
2. Target PCPs
3. Provide federal HIPAA training sessions
4. Engage home health agencies as partners
5. Actively engage family and significant others in case coordination and support
6. Provide training to address the cultural diversity of communities
7. Implement participant surveys
8. Engage community libraries

#1: Reexamine reporting requirements, frequency, and format

Key partners felt they dedicated too much time on monthly PDSA reports only to convey no change. Given this, the anecdotal PDSA requirement should be aligned with the quarterly data-reporting requirement. This structure will allow partners to (1) decrease their monthly workload and (2) align anecdotal data with quantitative data, thus providing a clearer picture of the progress being made on a particular initiative. Additionally, a final annual report can synthesize the anecdotal and quantitative data to show overall progress.

The PDSA format should be replaced with a more flexible, user-friendly reporting template. Due to a lack of understanding on how to complete PDSA reports, DHMH is not capturing all information on partner initiatives. If DHMH elects to continue PDSA reporting, more comprehensive key partner training is required. Key partners who collaborate closely with one another should be able to submit one combined reporting document. This will eliminate duplication of effort in reporting.

#2 Target primary care practices

Partners who aligned themselves with PCPs showed the most success in implementing their initiatives and recognized a positive impact on the health of their communities. Although there is value in community-based programs (for example, blood pressure screenings at local events, educational programs, posters, and flyers), these efforts can be self-limiting. Moreover, those screened for HTN in the community setting are likely to be lost to the healthcare system without strategies for referral and tracking. Key partners who developed and fostered partnerships with

PCPs have reached, and will continue to reach, a larger segment of the population; have measurable successes; and have made positive impacts in the diagnosis and treatment of chronic diseases in their communities. As such, the majority of key partner efforts should be directed to developing relationships with PCPs.

#3: Provide federal HIPAA training sessions

Confusion about complying with the HIPAA caused problems with the implementation phase of some key partner initiatives. The research team quickly identified the need for training sessions for some partners. Key partners should have a working understanding of privacy and confidentiality as it relates to the sharing of healthcare information.

#4: Engage home health agencies as partners

Key partners should be encouraged to engage home health agencies as a way to expand the reach of the Million Hearts program. Because of the nature of the work of home health agencies, home health nurses play an important role in identifying those patients who require continued interventions. Home healthcare is limited in terms of services and timeframes. As such, key partners could close the gap between discharge from home health services and hospital readmission. This would be an ideal situation to engage community health workers.

#5: Actively engage family and significant others in case coordination and support

One key to increasing community engagement and retaining participants throughout the course of partner initiatives is to actively engage family and significant others, including friends and caretakers. Beyond their moral support and encouragement, family and significant others can help solve transportation and childcare challenges, as well as other barriers that may impede continuity of care.

#6: Provide training to address the cultural diversity of communities

All partners involved in the Million Hearts program should be aware of the cultural and ethnic diversity of their communities. Training should be provided so that initiatives are implemented in a culturally and ethnically sensitive manner.

#7: Implement participant surveys

In areas where program evaluations are not already being performed, partners should be encouraged to introduce participant surveys to determine the strengths, weaknesses, and areas of improvement of their initiatives and whether or not resources are being effectively distributed.

#8: Engage community libraries

Many key partners have developed resources that are only accessible via the internet. However, there may be a segment of participants who do not have such access. Therefore, engaging community libraries would provide a venue for individuals to access web-based community resource inventories or chronic disease management software.

APPENDIX A: ACRONYMS

BCHD	Baltimore City Health Department
CCC	Check. Change. Control.
CCHD	Cecil County Health Department
CCIC	Community Care Informatics Center
CDSMP	Chronic Disease Self-Management Program
CMS	Centers for Medicare and Medicaid Services
CQMs	Clinical Quality Measures
DHMH	Department of Health and Mental Hygiene
DSME	Diabetes Self-Management Education
DSMP	Diabetes Self-Management Program
DSMS	Diabetes Self-Management Support
EHR	Electronic Health Record
EMR	Electronic Medical Record
FQHCs	Federally Qualified Health Centers
HIPAA	Health Insurance Portability and Accountability Act
HTN	Hypertension
KCHD	Kent County Health Department
MAC	Maintaining Active Citizens
MACHC	Mid-Atlantic Association of Community Health Centers
MCOs	Managed Care Organizations
MLC	Maryland Learning Collaborative
NQF	National Quality Forum
PCPs	Primary Care Practices
PDSA	Plan-Do-Study-Act
PRMC	Peninsula Regional Medical Center
QR	Quick Response
RAC	Resource Access Card
SMCHD	St. Mary's County Health Department
SPRINT	Systolic Blood Pressure Intervention Trial
THC	Total Health Care
TLC	Three Lower Counties Community Services
WCHD	Washington County Health Department
WICHD	Wicomico County Health Department