

## DC Identifies Patients with Uncontrolled and Undiagnosed Hypertension

Through the ASTHO Million Hearts State Learning Collaborative, the District of Columbia Department of Health (DC DOH) and healthcare partner sites across DC are establishing baseline rates of undiagnosed and uncontrolled hypertension among patients from an at-risk population to target intervention efforts.

### OVERVIEW

Cardiovascular disease is the number one cause of death among DC residents (27.8 percent of total deaths in 2010), and the second leading cause of hospitalizations (5,583 hospitalizations in 2010).<sup>1</sup> African American residents are almost three times more likely to die from heart disease than their white counterparts (333.0 deaths per 100,000 compared to 116.6 deaths per 100,000). Death rates are also significantly higher among residents of Wards 5 and 7,<sup>1</sup> with these two wards accounting for 35 percent of all deaths. Hypertension is a major contributing factor to the morbidity and mortality associated with heart disease. An estimated 41.5 percent of Ward 7 residents and 39.3 percent of Ward 5 residents have high blood pressure.<sup>2</sup>

Through the ASTHO Million Hearts State Learning Collaborative, which is supported by CDC, DC is working to improve hypertension management among its highest-risk population: African American residents ages 18 and older living in Wards 5 and 7. This population is estimated to include 35,149 individuals, or 5.5 percent of the total DC population. Led by DC DOH, an interdisciplinary team of stakeholders is working to identify patients with uncontrolled and undiagnosed hypertension to provide targeted interventions and referrals to community resources.

### STEPS TAKEN

DC DOH is working with healthcare sites, including community health centers, in Wards 5 and 7 to establish a baseline number of patients in the target population with undiagnosed hypertension (defined as patients with three or more visits in a one-year period with blood pressure measurements of 140/90 or greater and no diagnosis of hypertension). Using the [Plan, Do, Study, Act \(PDSA\) quality improvement model](#), the team's goals include:

- Assess the ability of healthcare sites to identify patients within the target population with uncontrolled or undiagnosed hypertension.
- Create uncontrolled and undiagnosed patient panels.
- Assess the feasibility of monthly data runs to track progress in patient panels.

In the first PDSA cycle, healthcare sites with access to health information technology (health IT) and quality improvement (QI) staff pulled data from their electronic medical record (EMR) systems for a one-year measurement period, which was 2012. In a second PDSA cycle, they pulled the same data for the "last quarter," a three-month measurement period from November 2013 to January 2014.

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<sup>1</sup> The District of Columbia is divided into eight geographical areas called "Wards."

They used the data to establish the following metrics:

- Number of patients served by their site.
- Number of patients served who were diagnosed with hypertension (have a diagnosis of hypertension in their EMR).
- Number of patients in the target population (defined above).
- Number of patients in the target population who were diagnosed with hypertension.
- Number of patients in the target population who had undiagnosed hypertension (defined above).

The DC DOH staff provided technical assistance and funding to the healthcare sites through its CDC-funded ASTHO Million Hearts State Learning Collaborative grant. In addition, ability to pull and report on the data required clinic staff expertise, time, and buy-in.

## RESULTS

To date, six community health center sites have reported data and found in the 2012 target population: (1) 59,101 total patients; (2) 11,706 patients diagnosed with hypertension; and (3) 6,074 patients with undiagnosed or uncontrolled hypertension.

In the last quarter target population, the sites found: (1) 9,806 total patients; (2) 4,258 patients diagnosed with hypertension; (3) 1,166 (41%) patients with uncontrolled hypertension; and (4) 12 (<1%) patients with undiagnosed hypertension.

## NEXT STEPS

- Obtaining baseline data from the rest of the partner clinical sites. For some sites, this will require getting additional buy-in from health IT and QI staff.
- Running a third PDSA cycle with the sites using the *Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure* guidelines to classifying undiagnosed hypertension.
- Working with additional healthcare partner sites across DC to scale up the baseline data collection process. DC has 14 hospitals, 51 health centers (including six federally qualified health centers), 8,000 physicians, and six government agencies with public health functions. DC DOH will play a critical role in this work by sharing information with other health systems and partners, such as the DC Primary Care Association.
- Use regular data reports to track progress among uncontrolled and undiagnosed patient panels.
- Use the data to identify two separate cohorts of patients with uncontrolled or undiagnosed hypertension to run parallel interventions. One of these interventions will use a team-based care model to target walk-in patients, who may be transient and may not be seen in the office often enough within the one-year time frame to diagnose them accurately. Looking at walk-in patients by zip code will also help identify hypertension “hot spots” within DC.

# Million Hearts Success Story



## LESSONS LEARNED and RECOMMENDATIONS

Lessons learned include:

- The healthcare partners' capacity to pull useful baseline data varies. Community health centers seemed to encounter fewer challenges to extracting and reporting EMR data than hospital systems. This is likely due to the type of EMR system used and technical support community health centers receive from partners.
- Buy-in from in-house health IT and QI staff is critical to generating and sharing timely data reports.

Recommendations from DC DOH staff include:

- Meet partners where they are. Don't use a "one size fits all" approach.
- Allow partners to take ownership in deciding what PDSA cycles or interventions would work best for their sites because their buy-in is necessary for sustainability.
- Picking partners wisely can determine the course of the project. For example, leveraging university partners can help with evaluation and standardizing interventions.
- Framing EMR data extraction and reporting as a critical component of QI initiatives may be helpful to get healthcare partner buy-in.

## FOR MORE INFORMATION

Robin Diggs Outlaw, MPH  
Program Manager, Cardiovascular Disease and  
Diabetes Program  
District of Columbia Department of Health  
(202) 442-9130  
robin.diggs@dc.gov

Tahra Johnson  
Senior Analyst, Evidence-Based Public Health  
ASTHO  
(571) 527-3152  
TJohnson@astho.org

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<sup>1</sup> District of Columbia Department of Health. "2011 Annual Health Report: Behavioral Risk Factor Surveillance System." Available at <http://doh.dc.gov/node/614392>. Accessed 3-13-2014.

<sup>2</sup> Ibid.