# Implementing Team-Based Care Models to Improve Blood Pressure Control

Between 2013 and 2018, the percent of Federally Qualified Health Centers and clinics working with MPRO that adopted a team-based care model to address blood pressure control increased significantly. Adoption of team-based care resulted in 700,000 patients receiving care and improvement in blood pressure awareness.

## Problem

In 2013, an estimated 34.6 percent of Michigan adults reported having high blood pressure (HBP). This figure was significantly higher for low-income households with annual earnings under $20,000 (40.9 percent) and African-Americans (41 percent). About half of individuals with HBP were not managing their condition to a level considered less risky, or "controlled," through diet, exercise and/or medication. [1] Over a third of people who do not have hypertension under control are unaware that they even have the condition.

HBP is one of the most important risk factors for heart disease and stroke, the number one and four causes of death in Michigan. In 2013, heart disease and stroke claimed the lives of nearly 29,000 Michigan residents, over thirty percent of all deaths in the state. Studies have shown that even small reductions blood pressure could reduce heart disease and stroke deaths by 25 percent. From an economic perspective, cardiovascular diseases are estimated to cost over $23 billion per year in medical costs in Michigan by 2020. [2]

Strategies to prevent, lower or control high blood pressure require a comprehensive approach that may include medication treatment and lifestyle changes including diet, physical activity, and smoking cessation. These changes can be difficult to put into practice, and evidence shows that a team-based approach involving patients, primary care providers, nurses, pharmacists, community health workers and other professionals is an effective way to improve blood-pressure control. The strategy recognizes the important role that environmental, physical and social factors – have in determining health and well-being.

## Intervention

From 2013-2018, the Michigan Department of Health and Human Services (MDHHS) was awarded federal funding to address chronic conditions in the state, including the implementation of team-based care models in health systems across the state. A core part of Michigan's team-based care approach was simplifying the sharing of care information and data. The MDHHS provided funding for quality measure reporting and other activities to the Michigan Primary Care Alliance (MPCA), which works with Federally Qualified Health Centers (FQHCs) that serve low-income and uninsured adults. The MPCA assisted FQHCs in the transition to Patient-Centered Medical Homes, a form of team-based care. In addition, the MDHHS partnered with MPRO, Michigan's quality improvement organization, to assist in promoting best practices related to team-based care work flows in over 190 clinics throughout Michigan.

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## Intervention (continued)

The 1305 grant also provided funding for innovative local initiatives in high need areas of the state. In Ingham County, the MDHHS supported work involving the Michigan Pathways to Better Health (MPBH) project, which focused on implementing care coordination between social and health services in three HUBs across the state. Community Health Workers linked individuals with high blood pressure and other chronic conditions to health and social services and provided monitoring data to the MDHHS. The project improved bidirectional communication, referrals, and streamlined data collection on screening, referrals and patient encounters with community health workers. In Muskegon County, 1305 funding helped a nonprofit agency, Christians for Health, provide free blood-pressure screenings to low-income individuals and provide referrals to primary care physicians, food pantries, and other local resources.

## Health Impact

Data from MPCA showed that over the five years of the grant, the number of FQHCs adopting team-based care to improve blood pressure control made significant improvement, from 14 of 35 (40 percent) in 2013 to 33 of 38 (87 percent) in 2016. Clinics working with MPRO saw even greater gains, from 15 of 120 (13 percent) in 2014 to 108 of 145 (74 percent) in 2017. These changes affected over 700,000 unique patients receiving care.

Over the course of three years, the project in Muskegon County conducted thousands of screenings, and referred nearly 4,000 individuals with high blood pressure to two FQHCs and other community resources. In an effort to serve as many individuals as possible, Christians for Health conducted outreach in barbershops, community events and other non-traditional sites across Muskegon County. The organization's main needs pantry was located in Muskegon Heights, a predominantly African American community with a poverty rate of over 43.5 percent. [3] Health plans participating in the MPBH HUBs also worked with primarily low-income populations over the course of the grant and adapted to the changing health insurance landscape in the state. Patients of the MPBH HUBs data showed significant increases in awareness of high blood pressure over the course of the project. At baseline, only 47.7 percent of patients with hypertension reported they were aware of their condition, while 49.8 percent reported awareness 2.5 years later. In that same time period, 2,500 more participants initiated a blood pressure self-management plan. In addition, MPBH participants made major reductions in costly emergency department visits and hospitalizations. Preliminary analyses suggest that despite starting out with significantly higher levels of healthcare utilization than a comparison group of similar individuals, MPBH participants had comparable hospitalization rates by the end of the second year of the project.

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## References and Notes

1. During 1305 grant activities, controlled HBP was defined as 140/90 mm Hg or less. New American Heart Association guidelines released in 2017 now define controlled is defined as 130/80 mm Hg. or less.
2. Calculated using CDC Chronic Disease Cost Calculator, https://www.cdc.gov/dhdsp/programs/spha/cost_calculator.htm. Costs for cardiovascular disease include diseases of the heart (congestive heart disease, congestive heart failure, and other heart disease), Stroke, and an estimate of high blood pressure costs that avoids double-counting of costs with other chronic diseases.
3. https://www.census.gov/quickfacts/fact/map/muskegonheightscitymichigan/IPE120216