

Increasing Utilization of Electronic Health Records to Improve Cardiovascular Health

Between 2013 and 2017, the adoption of Electronic Health Records in Federally Qualified Health Centers and MPRO clinic partners increased steadily with the introduction of Meaningful Use incentive programs. Those that utilized clinical decision tools saw further improvements in control of patients' blood pressures.

Problem

In 2013, an estimated 34.6 percent of Michigan adults reported having high blood pressure (HBP), also known as hypertension.¹ HBP is one of the most important risk factors for heart disease and stroke, the number one and four causes of death in Michigan. HBP is known as “the silent killer,” as there are few signs of the condition.^{2,3} The good news is that many risk factors that increase the likelihood of HBP are preventable. Studies have shown that even small reductions in blood pressure could reduce heart disease and stroke deaths by 25 percent.⁴


Health Information Technology (HIT) and electronic health records (EHRs) represent important tools to identify, monitor and treat HBP. Evidence shows that EHR systems improve HBP control by improving the exchange of information between patients, providers and health systems. As initiatives like the Medicaid and Medicare's Meaningful Use (MU) incentive programs shift providers towards increasing use of HIT and value-based reimbursement, the need to adopt HIT and quality improvement strategies becomes increasingly critical. Clinics serving patients most at risk for HBP are often the least equipped to implement these changes, as they suffer from limited resources, high staff turnover, and competing priorities. This is particularly true in Michigan due to the complexity of the HIT landscape in the state: as of 2018, there are 140 different EHR vendors offering 254 different products, with 506 versions of the software in use.⁵ The lack of communication between these EHRs makes hypertension control difficult, as information may not be shared with all health professionals working with patients.

Intervention

In 2013, the Michigan Department of Health and Human Services (MDHHS) received the State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health grant, also known as 1305. A key goal of the award was to increase use of HIT related to heart disease and stroke prevention in health systems. In order to achieve this, the MDHHS partnered with the Michigan Center for Effective IT Adoption (MCEITA) and MPRO, Michigan's Healthcare Quality Improvement Organization, to provide technical assistance on using HIT and to monitor and improve quality measure reporting statewide. The MDHHS also provided funding to the Michigan Primary Care Association (MPCA), to provide data and serve as a liaison between the state, MCEITA, MPRO and Federally Qualified Health Centers (FQHCs) that serve low-income and uninsured patients.


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Intervention (continued)



To improve effective use of EHRs, the MDHHS and MCEITA provided primary care practices with education and training on using HIT to identify and treat patients with HBP. HIT assistance included training on electronic tools to help provider decision-making, online patient portals, automatic reminders, and guidance on how to correctly record information in EHRs. In addition to direct support to practices throughout the state, the resources produced are publicly available through an online “University.” To strengthen the case for HIT in Michigan, MCEITA also conducted a thorough analysis on the use of HIT to improve HBP outcomes from 2013-2018. The MDHHS’s partnership with MPRO included the development of educational tools to improve patients’ management of HBP to a less risky level, known as blood pressure control. MPRO also provided direct technical assistance to over 190 clinics across the state, including training on the HIT mentioned above. Beginning in 2017, MPRO also used the Million Hearts® Hypertension Prevalence Estimator Tool in 26 practices across the state. The ultimate goal of this tool is to help practices use clinical data to identify patients with high blood pressure who have not been diagnosed and treated by a physician. In many cases, this can be a large percentage of a clinic’s patients.

Health Impact



Since going live in 2016, webinars produced by the MDHHS and MCEITA on using HIT to improve cardiovascular health outcomes totaled nearly 5,000 views. Between 2013 and 2017, data from the MPCA show that the percent of FQHCs with EHRs appropriate for treating patients with HBP increased from 91 to 100 percent, in addition to three additional sites being added. In 2017, these FQHCs served nearly 650,000 patients. Over the same time period, MPRO clinic partners with EHRs appropriate for HBP increased by over 21 percent, from 117 in 2013 to 142 in 2017. The 142 clinics served nearly 70,000 more patients in 2017 than their counterparts in 2013, a 157 percent increase.

MU data also showed significant improvements between 2013 and 2016. Reporting on MU measure NQF 0018, which tracks the number of patients who have controlled hypertension, increased from 40 of the clinics MPRO worked with in 2013 to 109 in 2016. Statewide, the number of health systems in the Medicaid EHR incentive program increased reporting on NQF 0018 from 32 in 2012 to 231 in 2016, an increase of over 620 percent. MCEITA’s analysis of Michigan data showed that using HIT and choosing to report on clinical quality measures also had a positive impact on patient health. Data showed that incorporating provider education recommended by HIT into patients’ clinic visits resulted in improvements in patients’ blood pressure to a less risky, or “controlled” level. Providers who utilized clinical decision support tools also had 8 percent more patients with controlled hypertension than those who did not use the technology (64 versus 56 percent). Data suggested that providers continued improvement through multiple years of participating in the program, as 63 percent of patients treated by providers who reported to MU for a second time had their blood pressure under control, two percent more than patients treated by first-time participants (61 percent).

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References

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