



Health Impact Statement

Promote the Adoption of Evidence-based Quality Measurement at the Healthcare Professional Level

Problem

In the United States, cardiovascular disease is a highly prevalent chronic condition that affects millions of individuals. Cardiovascular disease is the leading cause of death in the United States and accounts for approximately one in three deaths.^{1,2} In Rhode Island (RI), more than half of the adult population (55.8%) has at least one chronic disease, including cardiovascular disease, and more than 1 in 4 adults have multiple chronic diseases.³

Despite the increasing health threat cardiovascular disease presents to thousands of Rhode Islanders, control of key cardiovascular disease risk factors remains poor. According to the Centers for Disease Control and Prevention (CDC), two major risk factors for cardiovascular disease are hypertension and high cholesterol.⁴ In 2017, approximately 1 in 3 Rhode Islanders reported ever being diagnosed with hypertension (33.1%), with the prevalence significantly higher among those below 400% of the federal poverty level (37.7%).⁵ The data also reported that nearly 1 in 3 RI adults said they were diagnosed with high cholesterol (30.8%). However, 15.4% of the adult population had not had their cholesterol tested for more than 5 years, with the rate of unknown cholesterol status significantly higher among Hispanics (22.8%) when compared to non-Hispanic White (13.4%) and Black (15.5%) residents.⁵

It is important that healthcare organizations adhere to evidence-based quality measurements to ensure their patients are receiving effective care for cardiovascular disease prevention and management. Many national healthcare programs promote the adoption of evidence-based quality measurement. For example, the Centers for Medicare and Medicaid Services produce quality measures that healthcare sites must report on if they serve patients enrolled in Medicare, Medicaid, or both.⁶ While it is important to track quality measures across all patients, this data must be further analyzed to ensure that high quality care is being delivered consistently and that no groups of patients are experiencing health disparities due to poor quality of care.

Intervention

The key intended outcomes that the Rhode Island Diabetes, Heart Disease, and Stroke Program (RIDHDS) had for this strategy were the following: 1. Increase reporting, monitoring, and tracking of clinical data for improved identification, management, and treatment of patients with high blood pressure and high blood cholesterol; and 2. Increase control among adults with known high blood pressure and high blood cholesterol. Through the Care+Community+Equity (CCE) program, RIDHDS created contracts with Federally Qualified Health Centers (FQHCs) to promote the adoption of evidence-based quality measurement at the healthcare professional level. As FQHCs, they serve medically underserved populations and provide care to all patients regardless of age or income level. The patient populations of these practices are disproportionately people of color. In addition, these practices are primarily based in health equity zones. Nearly all health equity zones have very high rates of families living below 400% Federal Poverty Level.

Most healthcare practices use electronic health records (EHRs) to manage patient information, but EHR software programs vary in their ability to report data that can be analyzed for disparities in patient care quality. As such, RIDHDS consulted with numerous partners to determine how best to assist FQHCs with gathering hypertension and cholesterol management clinical quality data from their EHRs.

The Quality Reporting System (QRS) is a Rhode Island data aggregation and data reporting "warehouse" used for clinical quality reporting by health insurance payers and healthcare professionals, and it offers robust data analytics capabilities.⁷ RIDHDS decided to create an optional scope of work for CCE practices interested in piloting the QRS to analyze their EHR data. To assist in this pilot, RIDHDS partnered with Advocates for Human Potential (an EHR consultant with extensive knowledge of clinical quality measurement), the Rhode Island Executive Office of Health and Human Services (the State agency overseeing the QRS), and IMAT Solutions (the software vendor responsible for designing and maintaining the QRS, as well as assisting healthcare sites in RI with connecting their EHRs to the QRS).

For CCE sites that chose not to use the QRS, RIDHDS partnered with the Care Transformation Collaborative of RI (CTC-RI) to provide Practice Facilitators who helped practices stratify quality measures beyond race and ethnicity, and get practices more acquainted with the possible uses of stratifying measures. Practice Facilitators created a project plan to help keep practices on track with their activities and provided a stratification template to help with the reporting process. CTC-RI also created an online CCE Data Portal where sites reported their quality measures on a quarterly basis. The portal provided a visual representation of the data, enabled comparisons across quality measures, and allowed sites to track their progress.

Health Impact

Over the past five years, RIDHDS and its partners have made significant progress toward promoting evidence-based quality measurement to eliminate healthcare disparities. In the first year, RIDHDS learned that CCE practices were using dashboards to monitor hypertension, but each practice utilized dashboards for different purposes, and fewer practices created dashboards to monitor cholesterol management (statin therapy). In the first two years, there were no CCE practices that opted to participate in this strategy. In the third year, five practices chose to participate in this strategy and, as a result, RIDHDS had access to approximately 53,808 patients. The five practices continued to participate in the fourth and fifth year, and by 2023, this work was reaching 63,285 patients across RI.

The experiences of the five CCE practices participating in this strategy, as well as their final quality improvement plans, are summarized below.

- **One practice explored stratifying hypertension control data by gender and tobacco use**, but this analysis did not reveal any major disparities. The team then shifted to look at statin therapy use among diabetic patients. The 2018 ACC/AHA/MS guidelines recommend moderate-intensity statin therapy for adult patients ages 40-75 with diabetes mellitus.⁸ The practice's analysis revealed that the use of statin therapy among eligible female patients between ages 45-49 was considerably lower than that of eligible male patients in the same age group. The team decided to work closely with their pharmacist to focus on eligible female patients, determine what barriers exist to starting statin therapy, and work with healthcare professionals to initiate statin therapy.
- **Another practice analyzed data on statin therapy use among patients who had diabetes and were at high risk for cardiovascular events.** The practice found statin therapy use was unusually low among the youngest age group (people ages 40-49). For females, average statin use was 65.6%, but among females ages 40-49, use was 37.5%. For males, average use was 68.9%, but among males ages 40-49, use was 40.6%. The team prioritized scheduling appointments for these patients if they had not seen their healthcare professional the previous three months, as well as providing education on statin therapy.
- **Another practice analyzed hypertension control data by stratifying by age and sex; race and ethnicity; cooccurring mental or substance use disorders; smoking status or nicotine dependence; and body mass index.** While this did reveal interesting and unexpected patterns in hypertension control, no actionable disparities were identified. However, like the previously mentioned practices, this practice found issues with low statin therapy use among younger age demographics with diabetes. The practices began conducting targeted outreach to patients who could be on statin therapy, as well as provided enhance training to healthcare professionals on their new statin treatment workflows.
- **Another practice also looked at statin therapy use among people with diabetes by stratifying by smoking status; cooccurring mental health diagnoses; race and ethnicity; service location; age and sex; and healthcare professional.** Like the other practices, this practice identified that the females ages 40-45 had much lower statin therapy use (47% compared to an average of 76% across all patients). The team initiated a plan involving their Quality Improvement Committee, Medical Director, Clinical Director, and nursing staff to outreach to female patients with diabetes about their cholesterol levels and recommend statin therapy. It is worth mentioning that after the first two CCE practices identified lower statin therapy use in their younger diabetic populations, the other two CCE practices using QRS were motivated to investigate statin therapy use in their own patient populations. The fact that all four practices found the same trend among their diabetic populations indicates how this work can reveal hidden disparities not only in individual practices but also in potential systemic issues in healthcare in RI.
- **The final practice analyzed hypertension control data by stratifying by smoking status; cooccurring mental health diagnoses; race and ethnicity; age and sex; and number of blood pressure readings taken during most recent visit.** For patients ages 18-85 with a hypertension diagnosis, if a blood pressure reading is taken during a visit and found to be out of control (>140/90mmHg), clinical protocol requires taking a second blood pressure reading to verify that hypertension is not in control. The team found 201 instances where a second blood pressure reading should have been collected but was not. The team investigated the data further to ensure these were true instances where a necessary second blood pressure was missing. There were only nine records in which a second blood pressure reading was not necessary or feasible, and the team found that the issue extended across two thirds of all healthcare professionals, indicating a widespread issue. The practice initiated enhanced healthcare professional education on the protocol requiring two blood pressure readings and how to properly record the blood pressures in their electronic health record.

The COVID-19 pandemic was a significant barrier that delayed the work of this strategy. As a result of the lack of in-person medical visits, many patients had missing blood pressure control readings, and practices experienced notable declines in hypertension control rates amongst their patient populations. In addition, RIDHDS staff were deployed to the pandemic response, which delayed most activities related to evidence-based quality measurement. The lack of program staff made it extremely difficult to support practices in their CCE contracts and push forward the implementation of the QRS. These barriers impacted program efficiencies by affecting the management of CCE contracts and data infrastructure.

Health Impact (continued)

Through this work, CCE practices have served as the precedent of measure validation for other healthcare organizations connected to the QRS. Practices have also created workflows that contribute to sustainability by serving as examples to other healthcare organizations. In addition, the use of stratification through CCE and the QRS has and will continue to have practices adjust internal workflows and processes that will solidify the use of quality measure. There have been team members emerge from the QRS activities who are passionate about the work and the future of quality measures that improve patient care in Rhode Island.

References

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