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Hypertension Management in Primary Care Using Target:BP; Meeting Patient Goals and Quality Measures

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Executive Summary

Introduction of the Problem

Hypertension is one of the principal diagnoses in primary care, with a global morbidity of 49.6% in adults aged 20 and over (Centers for Disease Control [CDC], 2021). A diagnoses of hypertension accounts for as many as 32.8 million visits in primary care (CDC, 2021). Primary care providers need to identify, educate, manage, and follow up on patients with hypertension. As a method to achieve quality care and excellence and align with Medicare's performance measures, a program called Best-in-Class (BIC) was established in 2003 (Guth et al., 2016). Merit-based Incentive Payment System Clinical Quality Measure, Quality ID #236 (NQF0018), is Controlling High Blood Pressure. To address hypertension management and to align with BIC, a large Midwest non-profit organization developed performance measures for the primary care management of patients diagnosed with high blood pressure. The Principal Investigator (PI) designed a quality improvement project to improve health care outcomes for patients with high blood pressure by utilizing self-management support under the Target: BP program. Provider and staff education were given during an in-service using the American Heart Association's (AHA)/ American Medical Association's (AMA) Target: BP program.

Literature Review

In a review of literature, current clinical guidelines for hypertension and use of telemedicine for hypertension management were examined. Two quasi-experimental studies were reviewed. Levine, Dixon & Linder (2018), looked at asynchronous virtual visits offered as a follow-up option in place of in-person encounters for hypertension management at several primary care clinics. The evidence supported the findings that asynchronous virtual visits were equal to in-person office visits for blood pressure control while reducing the need for in-office

visits. Hammersley et al. (2020) concluded hypertension management could be successfully implemented in primary care practices through telemonitoring with participation of the staff and patients.

In a study by Rodriguez et al. (2019), primary caregivers were asked their perspective on how home-based self-monitoring blood pressure data (SMBP) could be incorporated or built into the electronic health record (EHR). Mileski et al. (2017) looked at the barriers and facilitators of utilizing telemedicine for hypertension management while Carter and colleagues (2018) looked at the differences between ambulatory blood pressure monitoring versus home blood pressure monitoring from a patient perspective.

The United States Preventative Services Task Force (USPSTF) published guidelines for "Screening for Hypertension in Adults" in 2021 (US Preventive Services Task Force et al., 2021). USPSTF recommendations for a diagnosis of hypertension included in office BP measurement and confirming blood pressure measurements with either ambulatory blood pressure monitoring (ABPM) or self blood-pressure measurements (SBPM). The 2017 ACC/AHA clinical practice guidelines for the Management of High Blood Pressure in Adults concluded that there were minor improvements in blood pressure after six months of self-measured BP, but not at 12 months. Findings by the authors suggested self-measured BPs may be helpful for some patients and their providers in addition to usual office care (Reboussin et al., 2018).

Evidenced-based conclusions can be made that home blood pressure measurements and telehealth follow-up can be useful and equivalent to in-person office visits for managing hypertension. ABPM is not as favored by patients as SBPM due to convenience and patients can buy equipment over the counter (Carter et al., 2018). Telehealth follow-up for hypertension

visits is consistent with primary care values and beliefs. Another recommendation is that providers have an integrated system in their electronic health record for blood pressure recordings to be documented either by the patient, staff, or themselves (Rodriguez et al., 2019). The use of the electronic health record to send and receive messages from patients has allowed this type of information, such as a list of blood pressures, to be shared between provider and patient. The evaluated evidence is positive for applying patient self-measured blood pressures outside the office and utilizing telehealth for follow up in primary care to diagnose and treat hypertension while ruling out white coat hypertension. Current clinical guidelines are also positive with the USPSTF recommending SMBP or AMBP as follow up to in office blood pressure readings prior to diagnoses of hypertension while the AHA/ACC guidelines conclude that SMBP may be an additional tool to use to evaluation hypertension for providers and patients.

Project Methods

The setting of this quality improvement project was in a primary care family practice office that employs three physicians and three nurse practitioners. The practice is part of one of the most extensive non-for-profit healthcare systems in the United States, serving a large community within the metropolitan area. This practice provides primary care to a current panel of approximately 7000 patients. Stakeholders included the primary care office, the providers, and the patient. Institutional Review Board (IRB) was sought prior to project implementation.

The purpose of this quality improvement project was to improve the medical group's Best-in-Class (BIC) hypertension scores while improving education to patients, providers, and staff using evidence-based guidelines. Provider education was presented in July 2021 based on standards outlined by the American Heart Association's/American Medical Association's

Target: BP program. The PI focused the education on Target: BP's - BP improvement program meeting the needs of uncontrolled high blood pressure. Additionally, the PI reviewed the treatment algorithm's current guidelines and reviewed three Target: BP's patient handouts on measuring BP, understanding BP numbers, and consequence of high BP. These patient education handouts were distributed to patients during office visits. The PI reviewed two case studies on how using telemedicine and SMBP can help guide patient treatment and meet MIPS/BIC scores. In September 2021, the PI provided education to the medical assistants (MA) on in-office blood pressure thresholds and accurate measurement of blood pressures.

Once patient education was completed, patients were asked to self-report BPs an appropriate number of times over course of weeks or months at the provider's discretions. These blood pressures could be reported through EHR by secure e-mail like messages by the patient or through a telemedicine visit. Patient's home blood pressure readings were reported back to the clinic staff promptly; so, real-time decisions and patient follow up could be made regarding their medication and BP management.

Evaluation

This project afforded providers and support staff an evidence-based practice project to improve provider knowledge and patient education on managing hypertension. The strengths of this project include no-cost, easily accessible program, guidelines, and materials from the American Heart Association/ American Medication Association's Target: BP program. The AHA handouts proved to be a great benefit to project participants and providers. The project provided increased awareness of current hypertension guidelines to patients as well as providers and MAs. Limitations of the project included scheduling conflicts with staff for educational sessions and staff turnover.

The Medical Group's "Best in Class" or BIC scores for the participating providers did improve overall for the MIPS Clinical Quality Measure, Controlling High Blood Pressure (Center for Medicare and Medicaid Services, 2020). Scores are reported as the number of patients that qualify for the measure and then the percentage of those patients seen by the provider that month that met the measure of BP management <140/90. The PI evaluated the average percentage of the five months for each provider in 2021 and then compared it to the average percentage of the same five months for each provider in 2020. Only one provider had a higher percentage of patients at goal in 2020 than in 2021 prior to the quality improvement project being implemented, and one showed no impact. The overall average improvement from 2020 to 2021 was 2.8% for all providers.

An indirect result of an unceasing pandemic is the new dependence of telemedicine and virtual visits by primary care providers. Telemedicine has become a standard and convenient method to help patients track and then report their home blood pressures to their primary care providers.

Impact on Practice

The biggest impact on the practice was the quality improvement process seen on hypertension management. Providers and medical assistants were educated on blood pressure guidelines and the need for accurate measurements. Additional education was delivered to project participants on self-measurement of blood pressures at home with recommendations per Target:BP on which brand of home blood pressure machines to buy. Combining self-measurement blood pressures with the use of telemedicine has been a useful tool to help patients and providers see the entire clinical picture and make informed decisions on medication management. Target BP's program utilizes evidence-based protocols, including correct

measurement of blood pressures in office and patient-measured blood pressures at home for diagnoses and management. Future efforts should focus on staff education and continued use of standardized patient handouts from Target: BP. Utilizing telemedicine to gain a comprehensive picture of the patient's hypertension will also be a critical component for the ongoing implementation of this quality improvement project.

Conclusion

Current guidelines and evidence support telemonitoring as an effective method to monitor and manage hypertension in primary care. Implementing the BP Improvement Program by the American Heart Association/ American Medical Association's Target: BP website provided an educational focus for hypertension management while improving care to the target patient population. Target BP's program utilizes evidenced-based protocols, including correct measurement of blood pressures in office and patient-measured blood pressures at home for diagnoses and management. By implementing a team-based approach, using evidence-based guidelines for treatment of hypertension, patient outcomes improved. Findings from this quality improvement project resulted in improved hypertension management improved and practice BIC scores improved as well.

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