Digital patient communication: A new best practice for managing hypertension

Integrating digital patient communication and at-home monitoring has proven to be effective for hypertension diagnosis and treatment.

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Approximately half of all adults in the United States have hypertension, or higher-than-normal blood pressure, costing the nation an estimated $131 billion annually. With its human and economic impact, controlling hypertension is a healthcare and community imperative.

Individuals with hypertension have a systolic blood pressure above or equal to 130 mmHg, a diastolic blood pressure above or equal to 80 mmHg, or take medication for the condition, according to the CDC. Undetected or uncontrolled over time, hypertension can lead to heart attack, stroke, heart failure, kidney disease or failure, peripheral artery disease, vision loss and sexual dysfunction – complications that take a considerable toll on a patient's morbidity, mortality and quality of life, as well as the cost of healthcare.

Despite hypertension's looming health and obvious financial impacts, U.S. healthcare has generally been slow to adopt new guidance on novel approaches to its diagnosis and management. This February,

however, in recognition of American Heart Month, let's opt for innovation in healthcare technology when it comes to caring for our hearts – namely, digital patient communication.

Remote patient monitoring makes headway to improve diagnosis and management of hypertension

Controlling blood pressure is the most effective way to lower cardiovascular risk, and a vital part of care delivery is understanding the most impactful and accessible way to help hypertensive patients manage their blood pressure. However, while home-based blood pressure monitors (HBPM) exist for the diagnosis and management of hypertension, providers and patients haven't widely adopted or integrated these tools.

To learn more about the efficacy of remote patient monitoring (RPM) with HBPMs, a recent pilot study evaluated integrated digital patient communication and at-home monitoring and aimed to determine whether identifying hypertension via HBPM and personalized patient support messaging was more accurate in diagnosing and treating hypertension than only periodic measurements in a clinical setting.

The HBPM technology in question, the Controlling Blood Pressure Pathway (CBPP) by Twistle, uses asynchronous, secure text messaging to engage patients by enrolling, educating and reminding them of the importance of out-of-office blood pressure management. The CBPP prompts patients each day via text message to check their blood pressure. Patients can manually enter their HBPM readings or have them automatically uploaded using a connected HBPM device.

The CBPP couples real-time blood pressure interpretation and guidance with periodic patient education on lifestyle modification to lower blood pressure. When a patient completes a 14- or 30-day cycle, the daily out-of-office blood pressure readings are automatically sent to the provider's EHR along with a calculated mean (average) systolic and diastolic blood pressure result. The integration of HBPM data in the patient's electronic record then streamlines provider review and care management during a follow-up office or telehealth visit.

How well does RPM perform in hypertension?

Early and intermediate research into the CBPP shows promising findings. In the study above, two pilot sites (Family Doctors in Massachusetts, and Ashley Clinic in Kansas) enrolled 1,254 patients in the program. The practices sought to improve patient outcomes and performance with CMS' electronic clinical quality measure (eCQM) 165v9, Controlling High Blood Pressure, by increasing the number of hypertensive patients with a blood pressure reading below 140/90 mmHg.

Participating patients received a combination of RPM and asynchronous secure messages to accurately diagnose hypertension and provide support between in-person visits. Results after just one cycle of the CBPP were favorable:

- 80% to 85% of patients had a mean systolic blood pressure (SBP)/cardiovascular risk factor diastolic blood pressure (DBP) of less than 140/90.
- 40% to 45% had a mean SBP/DBP of less than 130/80.

For patients completing just one CBBP cycle, 80% to 85% had a mean SBP/DBP of less than 140/90. In other words, 80% to 85% who were not "controlled" based on the in-office blood pressure reading were actually "controlled" when monitored at home.

Better hypertension management drives positive ROI

In addition to improved health outcomes (i.e., lower blood pressure across patient populations), both pilot sites have had a positive net income three months after starting the CBPP. The organizations attribute the income to these factors:

- The ability to bill for follow-up office or telehealth visits to review the patient's engagement
- Visibility into RPM data
- RPM data-driven treatment plans that employ complex medical decision-making

The CBPP program has yielded an average additional income of $7,000 to $7,500 per provider per year after all associated expenses, including the cost of the patient engagement platform's CBPP and the supplemental staffing hours for follow-up visits. This ROI does not include the potential to use RPM billing codes or any potential increased reimbursement each site may receive through improvement in their Controlling Blood Pressure eCQM CMS165v9 results.

The new best practice for hypertension

Along with ROI, the value of improved hypertension management is high. According to the National Institutes of Health (NIH), every 10% increase in hypertension treatment overall could prevent an additional 14,000 deaths per year. Among individuals younger than 80 years, every 10% increase in treatment of elevated low-density lipoprotein cholesterol or aspirin prophylaxis would prevent 8,000 deaths annually. Combining these interventions could prevent between 50,000 to 100,000 deaths per year in those under the age of 80 and 25,000 to 40,000 deaths per year in those under the age of 65. The CBPP study's early clinical results make a strong case for embracing and implementing HBPM and patient engagement as a best practice for diagnosing and treating hypertension.