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Could Simple EMR Advisories Be Enough to Boost Hypertension Detection in Primary Care?

Jennifer Larson July 08, 2025

Could a simple advisory or alert in the electronic medical record (EMR) be the key to more frequent diagnosis and effective treatment of high blood pressure (BP)? While it could help, some physicians say it's not sufficient to solve the persistent problem of hypertension.

However, such alerts could be part of an effective approach to catching more cases of hypertension and helping people manage their high BP.

Tackling High BP

Hypertension is well-known as a "silent killer." Left untreated, it raises the risk for heart attack, stroke, and other life-threatening events without causing any symptoms.

Hypertension is also a widespread problem. The CDC estimates that about 120 million adults in the US have high BP, defined as having a systolic BP higher than 130 mm Hg or a diastolic BP greater than 80 mm Hg (or taking medication to lower their BP).

However, only about 1 in 4 adults with high BP actually have their BP under control.

According to the results of a recent quality improvement study in *JAMA Network Open*, using technology to prompt team-based care can improve primary care hypertension control and diagnosis in the ambulatory setting.

The researchers tested an intervention consisting of a high BP advisory in the EMR, along with team training, audit, and feedback. If an elevated BP reading (systolic BP \geq 140 mm Hg or diastolic BP \geq 90 mm Hg) was entered into the EMR, the medical assistant received an advisory to recheck the patient's BP. If the BP continued to be elevated, the EMR prompted a clinician-facing advisory, along with an order panel link.

"This study demonstrates that a paired human-technology intervention focused on team-based care and EMR integration is a fruitful approach to improving population health metrics," the authors wrote.

"Anything that is done to alert the clinician is appropriate because of clinical inertia," said Luke Laffin, MD, co-director of the Cleveland Clinic's Center for Blood Pressure Disorders in Cleveland, Ohio. "There's a lot of clinical inertia in hypertension care. It breaks that inertia. I'm not surprised that this intervention works."

The Value of an Alert

The idea of incorporating this type of alert into the EMR system is feasible, according to Brian Barr, MD, cardiologist at the University of **Maryland** Medical Center and assistant professor of medicine at the University of **Maryland** School of Medicine in Baltimore.

"Most modern EMRs — such as Epic, Cerner, Athenahealth, and others — are equipped with customizable clinical support tools that allow for automated reminders, alerts, and health

maintenance prompts," Barr said, adding that configurations could allow for notifications for missing BP readings or lack of documentation of BP within a particular time period.

Alerts could also be quite useful to busy primary care physicians who see patients for a multitude of reasons.

"It's a reminder not to get distracted by the chief complaint syndrome," said Brent Smith, MD, a family physician in Greenville, Mississippi, and member of the board of directors for the American Academy of Family Physicians. "It forces us not to overlook hypertension when there are other things that brought them into the doctor's office."

Using this type of tool could also identify patients with multiple elevated BP readings but no formal hypertension diagnosis, said Barr. That information could also allow physicians to follow patients more closely and confirm elevated BP in multiple settings — not just in the office, according to Blair Suter, MD, cardiologist with The Ohio State University Wexner Medical Center in Columbus, Ohio.

"It could be the canary in the coal mine," he said. "It could really be the sign of things to come or to progress to."

However, healthcare organizations must also be cautious about the possibility of contributing to electronic health record alert fatigue and instead find a balance that allows the use of technology to improve patient care without increasing the alert burden on clinicians.

The authors of the study also acknowledged that some clinic managers had sustainability concerns about the time needed for BP rechecks. "[A]fter the rollout, some clinics piloted scheduling patients 10 minutes ahead of the clinician visit to increase previsit time for [medical assistants] to manage this and other population health initiatives," they wrote.

"I think that rather than just having alerts, where people tend to get alarm fatigue, it might be more useful to focus on how we're collecting the data and how reliable it is and how much of a true reflection it is of the patient's true blood pressure when they're not in the office," said Jeremy Bock, MD, interventional cardiologist and endovascular specialist at VHC Health in Arlington, Virginia.

At-Home Monitoring

Indeed, even if alerts do help, the challenge of getting patients to monitor their BP regularly at home does persist. At-home checks can seem non-urgent to them, especially if they are already taking an antihypertensive medication and feel fine.

Kristen Trom, DO, family physician with Inspira Health in Mullica Hill, New Jersey, said that her organization's EMR uses an alert, but it's still a challenge to get patients to monitor their BP at home and take their medication. "Resistance to starting medication can be a major challenge," she said. "Many of these patients have never been on medication before and prefer not to start."

"It's trying to find that balance between being nonintrusive and also being part of their daily routine," said Laffin.

Physicians may need to spend more time emphasizing the importance of at-home BP monitoring and ensure patients know how to do it correctly. Prevention efforts can be time-consuming, noted Bock, but they can also improve patient-provider relationships and patient satisfaction.

One important element of that process is reminding patients to use a validated BP cuff. Suter recommends directing patients to the website validateBP.org, which is also suggested by the American Heart Association.

Future Possibilities

Time is often the biggest impediment for primary care providers. Eventually EMRs may be configured — along with

Al — to incorporate the most effective cues and advisories, and then filter the information that would be most helpful for the physician, Smith said.

"It is getting better, and it has potential for the future," he said.

Barr added that other efforts could bolster such improvements. For example, clinic-level interventions also play a major role.

"Standardized blood pressure measurement protocols, routine use of home blood pressure monitoring, automated follow-up scheduling, and nurse-led hypertension visits can all support timely diagnosis and management," Barr said.

"Engaging patients through portal alerts, educational messaging, and self-reported blood pressure entries adds another layer of protective care. Together, these strategies help close care gaps and support earlier identification and treatment of hypertension, ultimately improving long-term cardiovascular outcomes."

Credits

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