

What needs to happen for self-measured blood pressure to take root

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Strong evidence indicates that self-measured blood pressure (SMBP) monitoring can—with clinical support—help lower blood pressure, help control BP, confirm hypertension diagnoses and rule out false positives. But little information has been available on the frequency in which health care professionals recommend patients use SMBP, the uptake of SMBP among people with hypertension, including where they do it and how they share their results with their care teams.

A study, published in the *American Journal of Hypertension*, sought to provide clarity on some of these points. It examined the use of SMBP among U.S. adults with hypertension, and it is thought to be the first state-level study from a population-based survey of self-measured blood pressure recommendation, use, location and data sharing methods.

Lots are doing it, but ...

The study's researchers looked at data from the Behavioral Risk Factor Surveillance System—a system of health-related telephone surveys that collect data about U.S. residents regarding their health-related risk behaviors, chronic health conditions and use of preventive services. In 2019, for the first time, the survey included an optional SMBP module.

Twenty states and the District of Columbia opted to include the module, which assessed whether nearly 160,000 participants were advised by health professionals to use SMBP.

The findings showed the prevalence of self-reported hypertension was about 34%. Among those respondents who reported having hypertension, about 70% received recommendations from a physician or other health professional to check their BP outside the office. Some 61% reported

checking their blood pressure outside of the office regardless of whether their health professional recommended they do so or not.

“While many of these findings are encouraging, there are ample areas for improvement,” wrote the authors, who include Gregory Wozniak, PhD, vice president of health outcome analytics at the AMA and researchers from the Division for Heart Disease and Stroke Prevention in the National Center for Chronic Disease Prevention and Health Promotion at the U.S. Centers for Disease Control and Prevention.

In addition, among those who checked their BP outside the office, 85.6% checked it at home and 85.8% shared their readings with their health care team. Nearly three-quarters shared their blood pressure readings in person, but just 7% shared them via the internet or email, and the remaining 5.4% did so by phone.

“The observed difference of recommendation and use by age, race/ethnicity, level of education and health insurance status could be due to lack of knowledge of hypertension management, access to devices and ability to use technology,” they noted.

What needs to happen next

First, while validated BP devices are proven accurate, the kiosks found in pharmacies, grocery stores and worksites often aren’t among them.

“Thus, taking one’s BP using a validated BP device at home is preferred,” the authors wrote.

Also, while recording BP information manually can be useful in guiding clinical management, secure electronic transfer of SMBP readings to health professionals is preferable. Some newer technology enables values to be imported from devices into EHRs, but better interoperability is needed.

Meanwhile, cost barriers for SMBP devices need to be eliminated, the authors noted.

“Increasing device coverage and reducing cost-sharing of devices by public and private insurers, especially during this era of rapidly expanding telemedicine use, can support broader uptake,” they wrote.

The authors also shared several limitations of their study, including that the response rate was 52.2%, which could affect generalizability of the findings.

They are now looking at an additional analysis of patients without a diagnosis of hypertension. A



recent study, co-authored by Wozniak and published in *PLOS One*, found the highest return on investment for SMBP was during the diagnosis phase.

More help here

Go to US Blood Pressure Validated Device Listing (VDL™) for a list of BP measurement devices that have been validated in the U.S.

Additionally, visit the AMA's 7-Step SMBP Quick Guide for evidence-based tools resources and implementation tools for training patients in SMBP.