



Self-Measured Blood Pressure Monitoring at Home: A Joint Policy Statement From the American Heart Association and American Medical Association

Executive Summary

With 116.4 million adults estimated to have hypertension, improving the diagnosis, treatment, and control of the condition is critical for achieving the American Heart Association's impact goals and improving the cardiovascular health of all Americans. Self-measured blood pressure (SMBP) monitoring, defined as the regular measurement of blood pressure by the patient outside the clinical setting, either at home or elsewhere, shows significant promise for assisting in better hypertension diagnosis and management. The joint policy statement from the American Heart Association and American Medical Association serves as a review of evidence in support of SMBP and offers policy mechanisms and guidance to adequately and equitably address barriers to the implementation of SMBP monitoring. Recommendations include promoting patient and provider education on SMBP, strengthening our health IT capacity, incorporating SMBP readings into clinical performance measures, investing in SMBP cointerventions, and increasing coverage for patient- and provider-related costs.

Overview

Self-measured BP monitoring is a validated approach to measure out-of-office BP and is recognized to be part of hypertension diagnosis and treatment.

Higher self-measured BP is associated with increased cardiovascular risk, independent of office BP.

There is lack of strong evidence showing that self-measured BP monitoring is superior to ABPM and vice versa for predicting cardiovascular risk.

Indications

Diagnosis of white-coat hypertension and masked hypertension and identification of white-coat effect and masked uncontrolled hypertension

Evaluating BP in response to treatment

Confirming the diagnosis of resistant hypertension

Detecting morning hypertension

The 2017 Hypertension Clinical Practice Guideline considered self-measured BP monitoring to be a more practical approach than ABPM in clinical practice, particularly for individuals taking antihypertensive medication

Technique and device accuracy

Use upper arm self-measured BP monitoring devices and appropriately sized cuffs

Use a standardized protocol for BP measurement and monitoring

Use validated devices

Use devices that store readings (preferred, if available)

BP readings should be printed or preferably transferred electronically to healthcare providers through the electronic health record (if available).

Effectiveness on lowering BP

The use of self-measured BP monitoring without co-interventions versus usual care is associated with moderate reductions in SBP and DBP at 6-months.

The use of self-measured BP monitoring with co-interventions versus usual care is associated with moderate reductions in SBP and DBP and improved BP control at 12-months.

The benefits of BP lowering and BP control are greatest when self-measured BP monitoring is conducted along with co-interventions.

Cost and cost-effectiveness

Self-measured BP monitoring is cost-effective when compared with office BP monitoring or usual care in individuals with high office BP.

Most of the studies examined the value of using self-measured BP monitoring for hypertension management. In contrast, fewer studies have examined the value of using self-measured BP monitoring for hypertension diagnosis.

There are scarce data on the cost-effectiveness of self-measured BP monitoring for diagnosing and managing masked hypertension among individuals without high office BP.

Prevalence and frequency of self-measured BP monitoring use in the United States

The use of self-measured BP monitoring reported by individuals is common.

The use of self-measured BP monitoring reported by providers is common.

The percentage of individuals and providers using self-measured BP monitoring for recommended indications and with a standardized protocol is unknown.

Barriers to widespread use of self-measured BP monitoring

Patient barriers include performing overly rigid protocols over a long period of time, lack of education about benefits of self-measured BP monitoring, lack of feedback and recognition from providers, and out-of-pocket costs for conducting self-measured BP monitoring.

Provider barriers include concerns about inaccuracy of devices, low adherence to self-measured BP monitoring schedules by patients, concerns about patient anxiety associated with self-measured BP monitoring, increased burden on practices and staff, requirement for additional time to interpret readings, and lack of reimbursement for devices.

Health care system barriers include lack of systems for self-measured BP readings to be transferred from devices to electronic health records, and lack of infrastructure to implement co-interventions.

Coverage and payment for self-measured BP monitoring

Although small in scope, a number of private and commercial payers and Medicaid plans provide coverage for self-measured BP monitoring.

Medicare provides reimbursement for the collection and interpretation of physiologic data including BP monitoring via CPT code 99091.

Two CPT codes, effective starting January 1, 2020, will support self-measured BP monitoring.

In November 2018, the National Association of Chronic Disease Directors, in conjunction with Centers for Disease Control and Prevention, published a Request for Proposals, entitled "Coverage and Reimbursement Analysis of Self-measured BP Monitoring, January 2019–July 2019."

ABPM: ambulatory blood pressure; BP: blood pressure; DBP: diastolic blood pressure; and SBP: systolic blood pressure.