

Is Ambulatory Blood Pressure Monitoring right for your practice?



Overview

Evidence from the front lines supporting use of ambulatory blood pressure monitoring (ABPM) and what you need to know.

This edition focuses on the following topics:

- What is ambulatory blood pressure monitoring (ABPM)
- Incidence of hypertension in America
- Why is traditional blood pressure monitoring sometimes not enough
- Indications
- Economic considerations
- Setting up an ABPM program

What is Ambulatory Blood Pressure Monitoring?

Ambulatory blood pressure monitoring measures blood pressure at regular intervals over a 24-hour period while a patient continues with activities of daily living. A specialized monitoring device is programmed to take blood pressures at pre-determined intervals, during both sleep and awake cycles, resulting in a comprehensive picture of a patient's blood pressure rather than a few measurements taken while the patient is sitting in a healthcare provider's office.



Incidence of hypertension.

Nearly half of American adults (47% or 116 million) have hypertension⁽¹⁾ making it the most common condition seen in care⁽²⁾ and why it is likely first identified in this setting. Roughly 1 in 3 US adults with hypertension are unaware they have the disease, and of those being treated, only 1 in 4 adults (24%) with hypertension have it under control.⁽¹⁾

Hypertension can damage artery and blood vessel walls over time and affect many organs within the body such as the heart, brain, kidney and eyes.⁽³⁾ Despite several treatment options being available, adequate control is still low in many people with hypertension.⁽¹⁾ This greatly increases the risk for heart disease and stroke, the first and third leading causes of death in the US.⁽⁴⁾



Why is blood pressure monitoring sometimes not enough?



While patients can check their blood pressure at home or at the drug store, clinicians still rely mostly on in-office blood pressure readings for hypertension management. But readings can be inaccurate for a variety of reasons, including white coat hypertension and masked hypertension.⁽⁵⁾ At home monitoring is superior to office readings in predicting future cardiovascular events, morbidity, mortality, and target organ damage, and there is increasing evidence supports the 24-hour ambulatory blood pressure monitoring (ABPM) approach.⁽⁵⁾ Evidence has been accumulating over the past decade demonstrating results of ABPM as superior to office blood pressure in predicting cardiovascular outcomes.⁽⁶⁾

When is APBM indicated?

There are several clinical indications for ABPM including to rule out white coat hypertension, which affects approximately 20% of adults.⁽⁷⁾ This can enable a healthcare provider to determine whether a patient's in-office blood pressure elevations reflect an anxious state instead of a quiet resting state that is required for an accurate blood pressure recording.⁽⁷⁾ These patients have similar cardiovascular risk to patients with normal blood pressures and typically do not need medications.

ABPM can also detect the reverse condition, masked hypertension, where the patient has a normal blood pressure during the examination but uncontrolled blood pressure at home.⁽⁸⁾ Out-of-office measurements are highly recommended as an adjunct to office measurements by almost all hypertension organizations.⁽⁹⁾ ABPM also has been shown to provide greater prognostic ability in estimating cardiovascular risk.⁽¹⁰⁾ A study published in the British Medical Journal concluded that neither clinic nor home measurement had sufficient sensitivity or specificity to be recommended as a single diagnostic test.⁽¹⁰⁾ And that ambulatory monitoring before the start of lifelong drug treatment might lead to more appropriate targeting of treatment, particularly around the diagnostic threshold.⁽¹⁰⁾

In an article published in the American Heart Association Hypertension, ABPM is currently considered the gold standard for the correct diagnosis of hypertension.⁽¹¹⁾ Ambulatory blood pressure provides extensive information on several BPM parameters other than the average blood pressure, including blood pressure variability, morning blood pressure surge, blood pressure load, and nocturnal fall in blood pressure. Monitoring blood pressures during sleep can only be accomplished with ABPM. And asleep systolic blood pressure is the most significant blood pressure derived risk factor for cardiovascular events.⁽¹⁹⁾ Some consider ABPM to complimentary to home blood pressures rather than competitive.⁽¹²⁾



Economic considerations.

Despite the clinical advantages of ABPM, clinicians may face economic challenges incorporating it into their practices.⁽¹²⁾ ABPM devices cost about \$2,000 to \$2,500 each, not including the cost of software as well as training time for staff on how to use the software. A practice with a significant number of commercially insured patients could generate a net of about \$100 per test, which translates to a practice exceeding the upfront investment cost after approximately 50 tests.⁽⁵⁾ For practices with a significant number of Medicare and Medicaid patients, it could be more challenging to justify the investment.

SAMPLE REIMBURSEMENTS

Shown below are ABPM reimbursements at a university-affiliated clinic in 2019. Actual amounts vary by insurer, location, etc.

Primary Insurance	ABPM Reimbursement
Commercial 1	\$248.09
Commercial 2	\$172.16
Commercial 3	\$163.93
Commercial 4	\$124.44
Medicaid	\$63.29
Medicare	\$60.00

Implementing Ambulatory Blood Pressure Monitoring in Primary Care Practice (aafp.org).

Spacelabs Healthcare ABPM solutions.

Here are some key things to consider as reported by the American Association of Family Practice if considering setting up an ABPM program⁽⁵⁾ and how Spacelabs Healthcare ABPM Solutions can help you get you there.



Step 1: Determine practice goals

- Is this to serve an unmet demand, or will one goal be to raise awareness first about ABPM and its role in hypertension diagnosis?

Step 2: Determine eligibility criteria for ABPM

- Depending on its goals, each practice can establish different criteria to decide which patients may benefit from ABPM.
 - This adjacent table details common indications and insurance coverages for ABPM.⁽⁵⁾

COMMON ABPM INDICATIONS AND INSURANCE COVERAGES		
Indication	Covered by Medicare / Medicaid	Covered by Commercial Insurers
White coat hypertension	Yes	Usually
Masked hypertension	Yes	Usually
Resistant or labile hypertension	No	Usually
Nocturnal hypertension	No	Usually
Post-prandial or orthostatic hypotension or syncope	No	Usually

CMS COVERAGE INDICATIONS FOR ABPM*	
For diagnosis of suspected white coat hypertension	Elevated average office BP (per new American Heart Association guideline) on two separate visits with at least two separate measurements made at each visit and with at least two BP measurements outside the office < 130/80 mm Hg
For diagnosis of suspected masked hypertension	Average office systolic BP 120-129 mm Hg or diastolic BP 75-79 mm Hg on two separate office visits with at least two separate measurements made at each visit and with at least two BP measurements outside the office 130/80 mm Hg
* Patient is covered for one test per year.	

Implementing Ambulatory Blood Pressure Monitoring in Primary Care Practice (aafp.org).

Step 3: Create an ABPM team

- Clinical staff do not need special certification. Nurses and medical assistants can be trained to fit a patient for an arm cuff and prepare the monitoring device.
- Front desk and administrators should be consulted early to ensure smooth billing and compliance.
- Spacelabs Healthcare provides pre-install and go-live support, our team will partner with you to define the most efficient workflows. We pride ourselves on our technical and clinical support well beyond installation.

Step 4: Select an ABPM device and software

- Select a vendor with a long track record of success.
 - Spacelabs ambulatory blood pressure devices are built on more than 40 years of ABPM technology innovation.
 - Spacelabs ABPM has been used in over 500 clinical studies including the landmark DASH⁽¹³⁾, SYST-EUR⁽¹⁴⁾ and AASK analyses.⁽¹⁵⁾

- Select ABPM devices that have undergone independent validation testing.
- Spacelabs ABPM devices have been tested and validated against the top three recognized international protocols. AAMI/ANSI/ISO 81060* (adults and children)⁽¹⁶⁾, British Hypertension Society⁽¹⁷⁾ and the European Hypertension Society⁽¹⁸⁾.
- Ensure the ability to network your ABPM reporting to facilitate data sharing and EMR integration.
 - Spacelabs Sentinel Cardiology Information Management System fully integrates your devices and data into powerful yet simple to use web-based software package.
- Look for features that increase patient compliance.
 - Spacelabs ABPM devices are compact in design, light weight and quiet. OnTrak includes comfort settings and child mode that control initial inflation pressure, reducing patient anxiety and enhancing compliance.
- The device should provide activity graphs that can help clinicians understand sleep/wake cycles.
 - Spacelabs' OnTrak includes an accelerometer than can help clinicians understand sleep/wake cycles based on patient activity.

Step 5: Create an ABPM protocol

- Determine how clinicians will order and schedule patients.
 - Spacelabs clinical support team can help ensure a seamless fit into your clinician workflow.
- Create a pre-monitoring checklist that includes device availability and initialization.
- Create instructions for applying the device to patients and for the retrieval/return of device.

Step 6: Prepare and interpret results (include network sharing)

- Create a procedure for importing stored device data, ensuring an adequate number of readings is included (no universally agreed upon amount, but current convention is at least 20 awake readings), and saving it securely.
 - Spacelabs Clinical Education Specialists can help determine the best configuration for your patient population.
- Interpret report and determine diagnosis.

Outpatient providers are more likely to be the first to recognize and manage hypertension. Ambulatory blood pressure monitoring has proven benefits for patient care and — with the right payer mix and the right personnel — can be a financially sustainable addition to a practice. From strategic planning through post-installation support and continuous improvement, count on Spacelabs TeamUp strategies experts to help you achieve your clinical and business ambitions when implementing an ABPM program in your practice.



KEY POINTS

Ambulatory blood pressure monitoring (ABPM) is an evaluation method in which patients are fitted for an arm cuff connected to a device that checks their blood pressure regularly over 24 hours while at home.

ABPM is considered more accurate than in office readings in some patients as it can exclude white coat hypertension and masked hypertension.⁽⁷⁾

ABPM also allows for evaluation of patients' blood pressure while they are awake and asleep, which can be valuable cardiovascular risk assessment.⁽¹⁹⁾

Start up costs are a barrier to adding ABPM to some practices, but clinicians with several commercially insured patients can recoup those costs relatively quickly.



Trusted and proven Ambulatory Blood Pressure Monitoring.

As healthcare organizations increasingly seek technology that facilitates evidence-based, data-driven decisions, healthcare executives are turning to Spacelabs Arrhythmia Diagnostics and Ambulatory Blood Pressure Monitoring to support efforts to improve the delivery of patient care, increase caregiver satisfaction and reduce costs. Our ABPM solutions, combined with the Sentinel cardiology information management system, provide a secure and scalable solution for all your hypertension needs regardless of clinic location.

If you are interested in learning more about Spacelabs Healthcare and its ABPM products and services, please visit our website at <https://spacelabshealthcare.com/abp> or contact us at 1-800-522-7025. We can arrange an on-site discussion or video conference at your convenience.

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