

Evidence Based Guideline

Ambulatory Blood Pressure Monitoring

File Name: ambulatory_blood_pressure_monitoring
Origination: 7/1982
Last CAP Review: 4/2011
Next CAP Review: 4/2012
Last Review: 3/2012

Description of Procedure or Service

Ambulatory blood pressure monitors (24-hour sphygmomanometers) are portable devices that record blood pressure repeatedly while the patient is involved in daily activities. There are various types of ambulatory monitors; this policy addresses fully automated monitors, which inflate and record blood pressure at pre-programmed intervals.

Ambulatory blood pressure monitoring (ABPM), typically done over a 24-hour period with a fully automated monitor, provides more detailed blood pressure information than typically obtained during office visits. The greater number of readings with ABPM ameliorates the variability of single blood pressure measurements, and is more representative of the circadian rhythm of blood pressure compared to the limited number obtained during office measurement.

There are a number of potential applications of ABPM. One of the most common is evaluating suspected “white-coat hypertension” (WCH), which is defined as an elevated office blood pressure with normal blood pressure readings outside the physician’s office. The etiology of WCH is poorly understood but may be related to an “alerting” or anxiety reaction associated with visiting the physician's office.

In evaluating patients having elevated office blood pressure, ABPM is often intended to identify patients with normal ambulatory readings who do not have sustained hypertension. Since this group of patients would otherwise be treated based on office blood pressure readings alone, ABPM could improve outcomes by allowing these patients to avoid unnecessary treatment. However, this assumes patients with WCH are not at increased risk for cardiovascular events and would not benefit from antihypertensive treatment.

This guideline does not directly address other uses of ABPM, including the use of ABPM for the evaluation of ‘masked’ hypertension. Masked hypertension refers to normal BP readings in the office and elevated BP readings outside of the office. This phenomenon has recently received greater attention, with estimates that up to 10-20% of individuals may exhibit this pattern. Other potential uses of ABPM include monitoring patients with established hypertension under treatment; evaluating refractory or resistant blood pressure; evaluating whether symptoms such as lightheadedness correspond with blood pressure changes; evaluating nighttime blood pressure; examining diurnal patterns of blood pressure; and/or other potential uses. Many ambulatory blood pressure monitors have received clearance to market through the U.S. Food and Drug Administration (FDA) 510(k) marketing clearance process. As an example of an FDA indication for use, the Welch Allyn ABPM 6100 is indicated “as an aid or adjunct to diagnosis and treatment when it is necessary to measure adult or pediatric patients’ systolic and diastolic blood pressures over an extended period of time. The system is only for measurement, recording, and display. It makes no diagnosis.”

******Note: This Evidence Based Guideline is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.***

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Evidence Based Guideline for Ambulatory Blood Pressure Monitoring

Automated ambulatory blood pressure monitoring over a 24-hour period is recommended for patients with elevated office BP, when performed one time to differentiate between 'white coat' hypertension and true hypertension, and when the following conditions are met:

- Office blood pressure elevation is in the mild to moderate range (<180/110), not requiring immediate treatment with medications;
- There is an absence of hypertensive end-organ damage on physical examination and laboratory testing.

Medical Evidence regarding Ambulatory Blood Pressure Monitoring indicates it is not recommended in the following situations

Other than listed above, uses of ambulatory blood pressure monitoring for patients with elevated office BP, including but not limited to repeated testing in patients with persistently elevated office BP, is not recommended.

Benefits Application

This guideline relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this guideline.

Billing/Coding/Physician Documentation Information

This guideline may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: 93784, 93786, 93788, 93790

Scientific Background and Reference Sources

BCBSA Medical Policy Reference Manual - 12/95

Medical Policy Advisory Group - 1/99

Specialty Matched Consultant Advisory Panel - 8/2000

Medical Policy Advisory Group - 10/2000

Specialty Matched Consultant Advisory Panel - 8/2002

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.02, 10/08/02

Specialty Matched Consultant Advisory Panel - 6/2004

Canadian Coordinating Office for Health Technology Assessment (CCOHTA). (2003, January) 24-hour ambulatory blood pressure monitoring. Retrieved November 15, 2005, from <http://www.ccohta.ca>

California Technology Assessment Forum. (2004, October 20) Utility of ambulatory blood pressure monitoring. Retrieved November 15, 2005, from <http://www.ctaf.org>

Ambulatory Blood Pressure Monitoring

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.02, 5/23/05

Appel L, Robinson K, Guallar E. Utility of Blood Pressure Monitoring Outside of the Clinic Setting. Evidence Report/Technology Assessment No. 63 (Prepared by the Johns Hopkins Evidence-based Practice Center under Contract No 290-97-006). AHRQ Publication No. 03-E004. Rockville, MD: Agency for Healthcare Research and Quality. November 2002. Retrieved October 12, 2007 from <http://www.ahrq.gov/downloads/pub/evidence/pdf/utbp/utbp.pdf>

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.02, 4/17/07

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.02, 7/10/08

Specialty Matched Consultant Advisory Panel – 3/2010

Specialty Matched Consultant Advisory Panel review 4/2011

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.02, 12/8/11

Medical Director review 3/2012

Policy Implementation/Update Information

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| 7/82 | Original policy: Experimental/Investigative |
| 11/84 | Reaffirmed |
| 4/86 | Evaluated: Investigational |
| 3/88 | Evaluated: Investigational |
| 12/95 | Evaluated: Reaffirmed |
| 1/99 | Reaffirmed: Medical Policy Advisory Group |
| 8/00 | Specialty Matched Consultant Advisory Panel. Changed from investigational to not medically necessary. |
| 9/00 | System coding changes. |
| 10/00 | Medical Policy Advisory Group review. No changes to policy. Approve. |
| 11/01 | Coding Format Change. |
| 11/01 | Revised coding format change. |
| 9/02 | Specialty Matched Consultant Advisory Panel review. Duplicate codes removed from the Billing and Coding Section. Added, "There are no controlled studies to demonstrate the value of ambulatory blood pressure monitoring over home blood pressure monitoring in terms of clinical management or outcomes." to Policy Guideline section. |
| 12/03 | Benefits Application and Billing/Coding sections updated for consistency. |
| 7/29/04 | Specialty Matched Consultant Advisory Panel review 6/28/2004 with no changes made to policy criteria. References added. |
| 3/16/06 | Specialty Matched Consultant Advisory Panel review 2/27/06. No changes made to policy criteria. Rationale added to Policy Guidelines section. Policy number added to Key |

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Words. References updated.

- 4/7/08 References updated. Specialty Matched Consultant Advisory Panel review 3/12/08. No change in policy statement. (adn)
- 4/27/10 Description section revised. Specialty Matched Consultant Advisory Panel review 3/24/10. Removed Medical Policy number. No changes in policy statement. (mco)
- 7/6/10 Medical Policy changed to Evidenced Based Guideline.(mco)
- 5/10/11 Specialty Matched Consultant Advisory Panel review 4/2011. No change in guideline statement. (mco)
- 3/20/12 Description section updated. “When Recommended” section revised to state: “Automated ambulatory blood pressure monitoring over a 24-hour period is recommended for patients with elevated office BP, when performed one time to differentiate between ‘white coat’ hypertension and true hypertension, and when the following conditions are met: Office blood pressure elevation is in the mild to moderate range (<180/110), not requiring immediate treatment with medications; There is an absence of hypertensive end-organ damage on physical examination and laboratory testing.” “When not Recommended” section revised to state: “Other than listed above, uses of ambulatory blood pressure monitoring for patients with elevated office BP, including but not limited to repeated testing in patients with persistently elevated office BP, is not recommended.” References updated. Medical Director review 3/2012. (mco)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.