

Ambulatory Blood Pressure Monitoring

Policy ID:	HHO-DE-MP-1032
Approved By:	Highmark Health Options – Market Leadership
Provider Notice Date:	
Original Effective Date:	N/A
Annual Approval Date:	08/2022
Last Revision Date:	08/19/2021
Products:	Medicaid
Application:	
Page Number(s):	1-6

Disclaimer

Highmark Health Options medical policy is intended to serve only as a general reference resource regarding coverage for the services described. This policy does not constitute medical advice and is not intended to govern or otherwise influence medical decisions.

POLICY PURPOSE & STATEMENT

This policy is designed to address medical necessity guidelines that are appropriate for the majority of individuals with a particular disease, illness or condition. Each person's unique clinical circumstances warrant individual consideration, based upon review of applicable medical records.

The qualifications of the policy will meet the standards of the National Committee for Quality Assurance (NCQA) and the Delaware Department of Health and Social Services (DHSS) and all applicable state and federal regulations.

DEFINITIONS

Ambulatory Blood Pressure Monitoring (ABPM) – Measuring of blood pressure at regular intervals. This technique allows a doctor to assess your blood pressure during your routine daily living.

Highmark Health Options(HHO) – Managed care organization serving vulnerable populations that have complex needs and qualify for Medicaid. Highmark Health Options members include individuals and families with low income, expecting mothers, children, and people with disabilities. Members pay nothing to very little for their health coverage. Highmark Health Options currently serves Delaware Medicaid: Delaware Healthy Children Program (DHCP) and Diamond State Health Plan and Health Plan Plus members.

Ambulatory blood pressure monitoring is typically done over a 24-hour period with a fully automated monitor. This provides more detailed blood pressure information than a traditional reading 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 an office measurement.

Ambulatory Blood Pressure Monitoring (ABPM) maybe considered medically necessary for ANY of the following indications:

Adults

- Suspected white coat hypertension (WCH) with no evidence of end-organ damage;
 - The physician has performed at least three blood pressure measurements at least one (1) week apart in the office; and
 - Blood pressure measurements by nonphysicians (e.g., nurse, technician) in the office have been done and stage one hypertension readings have been obtained but <180/110, not requiring immediate treatment with medications; and
 - Member has repeated blood pressure measurements at home over at least one (1) month, and the diagnosis of hypertension remains in question: or
- Resistant hypertension in individuals who are being treated with three (3) or more medications: or
- Hypertensive individuals with hypotensive symptoms thought to be related to antihypertensive medications or neurological symptoms: or
- For individuals whose symptomatology (paroxysms of excessive sweating, palpitations, apprehension) suggest episodic hypertension secondary to an adrenal tumor and office blood pressure measurements are repeated normal: or
- For evaluation of syncope or near syncope when used in conjunction with a 24-hour Holter monitor to determine whether symptoms are the direct result of an arrhythmia: or
- To investigate blood pressure changes in individuals with nocturnal angina.

ABPM for any other indication is considered experimental/investigational and therefore, noncovered, because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

Children/Adolescents

ABPM may be considered medically necessary in children/adolescents greater than or equal to age five (5) in ANY of the following settings:

- Confirming the diagnosis of hypertension including differentiating true hypertension from “white coat” hypertension:
 - When office blood pressure measurements are in the elevated blood pressure category for one (1) year or more; **or**
 - When blood pressure measurements fall within the Stage 1 HTN category over three (3) clinic visits at least one (1) to two (2) weeks apart; or
 - When blood pressure measurements fall within the Stage 2 HTN category twice within one (1) week; or
- Assessing symptoms related to suspected drug-related hypotension; or
- Drug resistant hypertension, or
- To assess effectiveness of hypertensive treatment, or
- Children and adolescents with ANY of the following:
 - A history of aortic coarctation, or
 - A history of low birth weight, or
 - Chronic Kidney Disease (CKD) and structural renal abnormalities, or
 - Endocrine disorders associated with hypertension (e.g., Congenital adrenal hyperplasia, familial hyperaldosteronism, etc.), or
 - Genetic syndromes associated with hypertension (e.g., neurofibromatosis, Turner syndrome, Williams syndrome, sickle cell disease, etc.), or
 - Obesity, or
 - Sleep-Disordered Breathing (SDP), or
 - Type 1 Diabetes Mellitus (T1DM), or
 - Type 2 Diabetes Mellitus (T2DM).

ABPM in children and adolescents should be used by experts in the field of pediatric nephrology and pediatric cardiology who are experienced in its use and interpretation.

ABPM for any other indication is considered experimental/investigational and therefore, non-covered, because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

Noncovered services

Noninvasive assessment of central blood pressure (e.g., SphygmoCor System) is considered experimental/investigational and therefore noncovered because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

Adults

BP Classification	Systolic BP, mm Hg*		Diastolic BP, mm Hg*
Normal	<120	and	<80
Prehypertension	120-129	and	<80
Stage 1 Hypertension	130-139	or	80-89
Stage 2 Hypertension	>140	or	>90

Children

For Children aged one (1)- < 13 Years of Age	For Children Aged ≥13 Years of Age
Normal BP: <90th percentile	Normal BP: <120/<80 mm Hg
Elevated BP: ≥90th percentile to <95th percentile or 120/80mm Hg to <95th percentile (whichever is lower)	Elevated BP: 120/<80 to 129/<80 mm Hg
Stage 1 HTN: ≥95th percentile to <95th percentile + 12 mmHg, or 130/80 to 139/89 mm Hg (whichever is lower)	Stage 1 HTN: 130/80 to 139/89 mm Hg
Stage 2 HTN: ≥95th percentile + 12 mm Hg, or ≥140/90 mm Hg (whichever is lower)	Stage 2 HTN: ≥140/90 mm Hg

Coding

Table	Style
93224	External Electrocardiographic Recording Up to 48 Hours By Continuous Rhythmrecording And Storage; Includes Recording, Scanning Analysis With Report, Review And Interpretation By A Physician Or Other Qualified Health Care Professional
93225	External Electrocardiographic Recording Up to 48 Hours By Continuous Rhythmrecording And Storage; Recording(includes Connection, Recording, And Disconnection
93226	External Electrocardiographic Recording Up to 48 Hours By Continuous Rhythmrecording And Storage; Scanning Analysis With Report
93227	External Electrocardiographic Recording Up to 48 Hours By Continuous Rhythmrecording And Storage; Review And Interpretation By A Physician Or Other Qualified Health Care Professional

93784	Ambulatory Blood Pressure Monitoring, utilizing Report-generating Software, Automated, Worn Continuously for 24 Hours or Longer; Including Recording Scanning Analysis, Interpretation And Report
93786	Ambulatory Blood Pressure Monitoring, Utilizing Report-generating Software, Automated, Worn Continuously for 24 Hours or Longer; Recording Only
93788	Ambulatory Blood Pressure Monitoring, Utilizing Report-generating Software, Automated, Worn Continuously for 24 Hours or Longer; Scanning Analysis With Report
93790	Ambulatory Blood Pressure Monitoring, Utilizing A System Such As Magnetic Tape And/or Computer Disk, For 24 Hours or Longer; Review with Interpretation and Report

Screening for high blood pressure in adults: U.S. Preventive Services Task Force (USPSTF) recommendation statement. 2015.

The USPSTF found convincing evidence that ABPM is the best method for diagnosing hypertension. Elevated ambulatory systolic blood pressure was consistently and significantly associated with increased risk for fatal and nonfatal stroke and cardiovascular events, independent of office blood pressure. For these reasons, the USPSTF recommends ABPM as the reference standard for confirming the diagnosis of hypertension.

Diagnosis Codes

C74.00	C74.01	C74.02	D44.7	D57.00
D57.01	D57.02	D57.1	D57.20	D57.211
D57.212	D57.219	D57.3	D57.40	D57.411
D57.412	D57.419	D57.80	D57.811	D57.812
D57.819	E05.00	E05.01	E05.10	E05.11
E05.20	E05.21	E05.30	E05.31	E05.40
E05.41	E05.80	E05.81	E05.90	E05.91
E10.9	E11.9	E21.0	E21.1	E21.2
E21.3	E21.4	E21.5	E24.0	E24.8

E24.9	E26.01	E26.02	E26.09	E66.8
E66.9	F84.3	G47.30	G47.31	G47.32
G47.33	G47.34	G47.35	G47.36	G47.37
G47.39	I10	I11.9	I15.0	I15.1
I15.2	I15.8	I15.9	I20.8	I95.0
I95.1	I95.2	I95.3	I95.81	I95.89
I95.9	N18.1	N18.2	N18.4	N18.5
N18.6	N18.9	N18.30	N18.31	N18.32
N26.2	Q78.1	Q85.00	Q85.01	Q85.02
Q85.03	Q85.09	Q93.82	Q96.0	Q96.1
Q96.2	Q96.3	Q96.4	Q96.8	Q96.9
R03.0	R55			

References

Centers for Medicare and Medicaid Services (CMS). National Coverage Determination (NCD). 20.19: Ambulatory blood pressure monitoring. [CMS Web site]. 07/01/03. Accessed 01/31/2014.

Piper MA, Evans CV, Burda BU, et al. Diagnostic and predictive accuracy of blood pressure screening methods with consideration of rescreening intervals: a systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2015;162(3):192-204.

O'Brien E, Dolan E. Ambulatory blood pressure monitoring for the effective management of antihypertensive drug treatment. *Clin Ther.* 2016;38(10):2142-2151.

Shimbo D, Abdalla M, Louise Falzon, Townsend R, Paul Muntner P. Role of ambulatory and home blood pressure monitoring in clinical practice. *Ann Intern Med.* 2015;163:691-700.

Turner JR, Viera AJ, Shimbo D. ambulatory blood pressure monitoring in clinical practice: A review. *Am J Med.* 2015;128(1):14-20.

Reino-González S, Pita-Fernández S, Seoane-Pillado T, López-Calviño B, Pértega Díaz S. How in-office and ambulatory BP monitoring compare: A systematic review and meta-analysis. *J Fam Pract.* 2017;66(1):5-12.

Muntner P, Lewis CE, Diaz KM, Carson AP, Kim Y, et al. Racial differences in abnormal ambulatory blood pressure monitoring measures: Results from the Coronary Artery Risk Development in Young Adults (CARDIA) study. *Am J Hypertens.* 2015;28(5):640-648.

Martin U, Haque MS, Wood S, Greenfield SM, Gill PS, et al. Ethnicity and differences between clinic and ambulatory blood pressure measurements. *Am J Hypertens.* 2015;28(6):729-738.

Siu AL, Force USPST. Screening for high blood pressure in adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med.* 2015;163(10):778-786.

Flynn JT, Kaelber DC, Baker-Smith CM, Blowey D, Carroll AE, et al. Clinical practice guideline for screening and management of high blood pressure in children and adolescents. *Pediatrics.* 2017;140(3).

Whelton PK, Carey RM, Aronow WS, Casey DE Jr, Collins KJ, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: Executive summary: A report of the American College of Cardiology/American Heart Association Task Force on clinical practice guidelines. *J Am Coll Cardiol.* 2018;71(19):2199-2269.

Kupferman J, Batsky D, Samuels J, Adams H, Stephen R. et al. Ambulatory blood pressure monitoring and neurocognitive function in children with primary hypertension. *Pediatr Nephrol* 2018;33:1765–1771.

National Institute for Health and Care Excellence. Hypertension in adults: diagnosis and management [NG136].2019; <https://www.nice.org.uk/guidance/ng1>

Muntner P, Shimbo D, Carey RM, et al. Measurement of Blood Pressure in Humans: A Scientific Statement From the American Heart Association. *Hypertension.* May 2019;73(5):e35-e66.

Yang WY, Melgarejo JD, Thijs L, et al. Association of Office and Ambulatory Blood Pressure With Mortality and Cardiovascular Outcomes. *JAMA.* 2019;322(5):409-420