Blood Pressure Measurement Advisory

Discipline:	Integrated
ICD-10 Codes:	N/A
Origination Date:	2018
Review/Revised Date:	01/2026
Next Review Date:	01/2028

Challenges

- Hypertension is the most prevalent and modifiable risk factor for the development of cardiovascular disease (e.g. coronary artery disease, heart failure, stroke).[1] Yet, the vast majority of patients with hypertension (~80%) are unable to lower their blood pressure to recommended levels.[2]
- Blood pressure assessment is often incorrectly performed or not checked enough, both in clinical settings and at home.[3]
- The 2025 American College of Cardiology (ACC)/American Heart Association (AHA) Joint Committee guideline calls for a "multidisciplinary team-based…approach assessing and addressing patient needs…to reduce barriers to achieving hypertension control" [including an emphasis on lifestyle modifications].

Incidence & Risk Reduction

National data indicate that nearly half of the adult US population (48%) is hypertensive and only ~20% are able to lower their blood pressure to recommended levels.[2] Furthermore, contrary to prior years of progress, hypertension-related deaths have increased over the past decade.[4] Yet, hypertension is the most modifiable risk factor for the development of cardiovascular disease.[1]

Of particular import, small reductions have significance.[5] Note the reduced risk estimates for every 10mmHg reduction in systolic blood pressure:

- Heart failure (28%)
- Stroke (27%)
- All major cardiovascular events (20%)
- Coronary heart disease (17%)
- All-cause mortality (13%)

Assessment

Despite technological advances in blood pressure devices and numerous advisories on accurate assessment techniques, inadequate adherence to accurate blood pressure measurement protocols persists among healthcare professionals, including even cardiologists.[6] A 2020 Lancet

Commission released a position statement warning, "the accuracy of BP measurement is a serious and frequent problem of contemporary clinical practice..."[3] In a continuing effort to enhance accuracy, the 2025 ACC/AHA guideline highlights eight steps for proper in-office assessment (see Resources below). Home monitoring is also recommended (validated devices only), combined with frequent visits with multidisciplinary team members.

Failure to correctly take blood pressure can have serious implications. This measurement is an important indicator of cardiovascular health and can result in errors in treatment. When blood pressure is erroneously elevated, patients may be placed on antihypertensive medications they do not need, and when too low, appropriate treatment may not be instigated. Falsely elevated blood pressure readings can also create unneeded stress and anxiety for patients.

To enhance accurate measurement and reduce the potential impact of the white-coat effect, in office measurements should be performed using a validated automated office blood pressure (AOBP) device.[6]

Other Considerations

Patients may present with masked or white coat hypertension. Masked hypertension is where the readings are elevated at home, and normal in the office. White coat hypertension is where the readings are normal at home but elevated in the office. In both instances, monitoring with home and ambulatory readings are recommended.

White Coat Hypertension & White Coat Effect

Generally, white coat hypertension will present with readings from 130-160, and diastolic readings of 80-100. The classification is reserved for patients not being treated for HTN. Of note, it appears to only be of concern an increased risk for older adults who have high baseline CVD risk factors.[7] For patients currently on medication, the term white-coat effect is used.[1] Home monitoring with a validated device should be initiated.

Masked hypertension

A condition where patients have elevated BP readings at home but are within normal limits in the office; opposite to "white coat" hypertension. Recent estimates suggest it occurs in upwards of ~30% of patients with normal blood pressure readings in the office and carries an elevated risk of CVD.[8] With masked hypertension patients may be on medications and within control when monitored in the office, but pressures are higher when at home. Home monitoring with a validated device should be initiated.

Continuity

To provide more reliable information for diagnosis and management of hypertension, ensure that the same techniques are routinely followed by everyone at your office.

Referral

In adults with suspected hypertension, refer to our Hypertension Pathway.

Resources (From 2025 ACC/AHA Joint Committee guideline[1])

Classification of Hypertension

Classification	Systolic (mmHg)	Diastolic (mmHg)
Normal	<120	<80
Elevated	120-129 and	<80
Stage 1 hypertension	130-139 or	80-89
Stage 2 hypertension	≥140 or	≥90
Severe Hypertension (without Sx*)	>180 and/or	≥120
Hypertensive Emergency (with Sx*)	>180 and/or	≥120

*Symptoms (Sx): Chest pain, SOB, back pain, numbness, weakness, change in vision or difficulty speaking

***Checklist for proper BP assessment**

1. Patient should avoid caffeine, exercise, and smoking for ≥30min before measurement. Ensure the patient has emptied their bladder.
2. Use a blood pressure device that has been validated for accuracy (validatebp.org).
3. Use the correct cuff size on a bare arm.
4. The patient's arm should be supported at heart level.
5. Have the patient relax, sitting in a chair (feet on floor, legs uncrossed, and back supported) for at least 5 minutes of rest.
6. No talking (patient or clinician) during the rest period or measurement. Patient should not be using their phone.
7. Blood pressure measurement should be taken in a temperature-controlled room.
8. Take 2 or more blood pressure measurements; 1-minute apart & average the readings

*Applies to both auscultatory measurement or oscillometric devices. Note, auscultatory measurements has additional potential limitations (e.g. improper stethoscope placement, inappropriate cuff deflation rate).

BP Cuff Sizes

Recommendations: Adult (by arm circumference)	
22-26 cm	12x22 cm (small adult)
27-34 cm	16x30 cm (adult)
35-44 cm	16x36 (large adult)
45-52 cm	16x42cm (Extra Large)
Recommendations: Children (by age)	
Newborns and premature infants	4x8 cm
Infants	6x12 cm
Other children	9x18 cm

*Note that >50% of US adults with hypertension need a large or extra-large cuff[9]

PREVENT Equation

Estimates 10 & 30-year risk for CVD; See here for more info & to access the calculator

Access the 2025 ACC/AHA Joint Committee Guideline
Read more about the guideline on this brief summary page here; including:

- Key Highlights of the guideline
- Hypertension management checklist for clinicians
- Patient handouts & resources

Clinical Advisory Feedback

Heraya desires to keep our clinical pathways and advisories customarily updated. If you wish to provide additional input, please use the e-mail address listed below and identify which clinical pathway or advisory you are referencing. Thank you for taking the time to give us your comments.

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References

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