

DISCLAIMER: The information contained in this document originates from a third party and is intended to provide guidance and, generally, allows for professional discretion and/or deviation when the individual health care provider, or if applicable, the “Approver” deems appropriate under the circumstances. Baylor Scott & White Quality Alliance recommends following the third party guideline and to support alignment has summarized key findings from the third party as described in this Guideline Alignment.

<b>Title:</b>	Hypertension Management for Adults ≥18 and ≤85
<b>Applicable to:</b>	Providers managing patients with hypertension
<b>Source(s):</b>	International Society of Hypertension (ISH) – see note in <a href="#">REFERENCES</a>
<b>Read Full Guideline:</b>	<a href="#">2020 International Society of Hypertension Global Hypertension Practice Guidelines</a>
<b>Developer(s):</b>	BSWQA Primary Care Subcommittee
<b>Approver(s):</b>	BSWQA Quality Improvement Committee (minor changes approved 12/2023) BSWQA Board of Managers (minor changes approved 2/2024), Nidhi Sodhi, MD- Medical Director - HP
<b>Document Number:</b>	BSWQA.CLE.003.S
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## SUMMARY

### Key Points for Practice

- Use an average threshold of 140/90 mm Hg for office diagnosis of hypertension, but 135/85 mm Hg for home and 130/80 mm Hg for 24-hour ambulatory monitoring.
- Initial assessment in a patient who is hypertensive should evaluate for cardiovascular risk and any hypertension-mediated organ damage.
- Consider lifestyle interventions for three to six months before medication in patients with grade 1 hypertension and no comorbidities.
- After starting medication, target blood pressure is less than 140/90 mm Hg within three months, and after three months reduce target to less than 130/80 mm Hg in patients younger than 65 years.
- Treatment of common and other co-morbidities, resistant hypertension, and hypertensive urgencies addressed in guidelines.

Optimal care refers to evidence-based standards of care articulated in recent guidelines, whereas essential standards recognize that optimal standards would not always be possible. Hence essential standards refer to minimum standards of care.

## FACTS AND FIGURES

**Figure 1: Classification of Hypertension Based on Office Blood Pressure (BP) Measurement**

Category	Systolic (mm Hg)		Diastolic (mm Hg)
Normal blood pressure	< 130	and	< 85
High-normal blood pressure	130-139	and/or	85-89
Grade 1 hypertension	140-159	and/or	90-99
Grade 2 hypertension	> 160	and/or	> 100

**Figure 2: Criteria for Hypertension Based on Office-, Ambulatory (ABPM), and Home Blood Pressure (HBPM) Measurement**

Setting	SBP/DBP, mmHg
Office blood pressure	> 140 and/or > 90
ABPM:	
• 24-h average	> 130 and/or > 80
• Day time (or awake) average	> 135 and/or > 85
• Night time (or asleep) average	> 120 and/or > 70
HBPM	> 135 and/or > 85

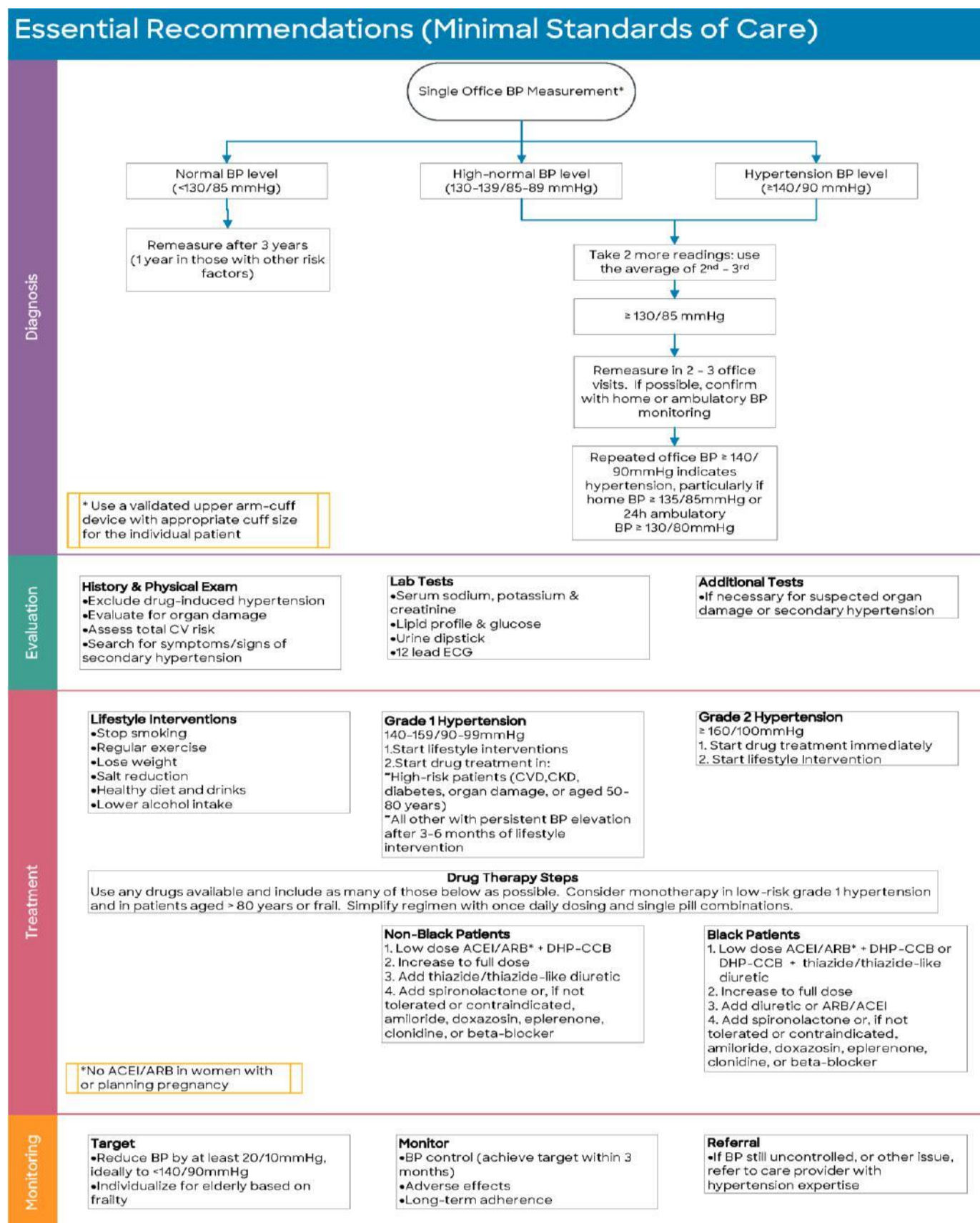
**Figure 3: Recommendations for Office Blood Pressure Measurement**

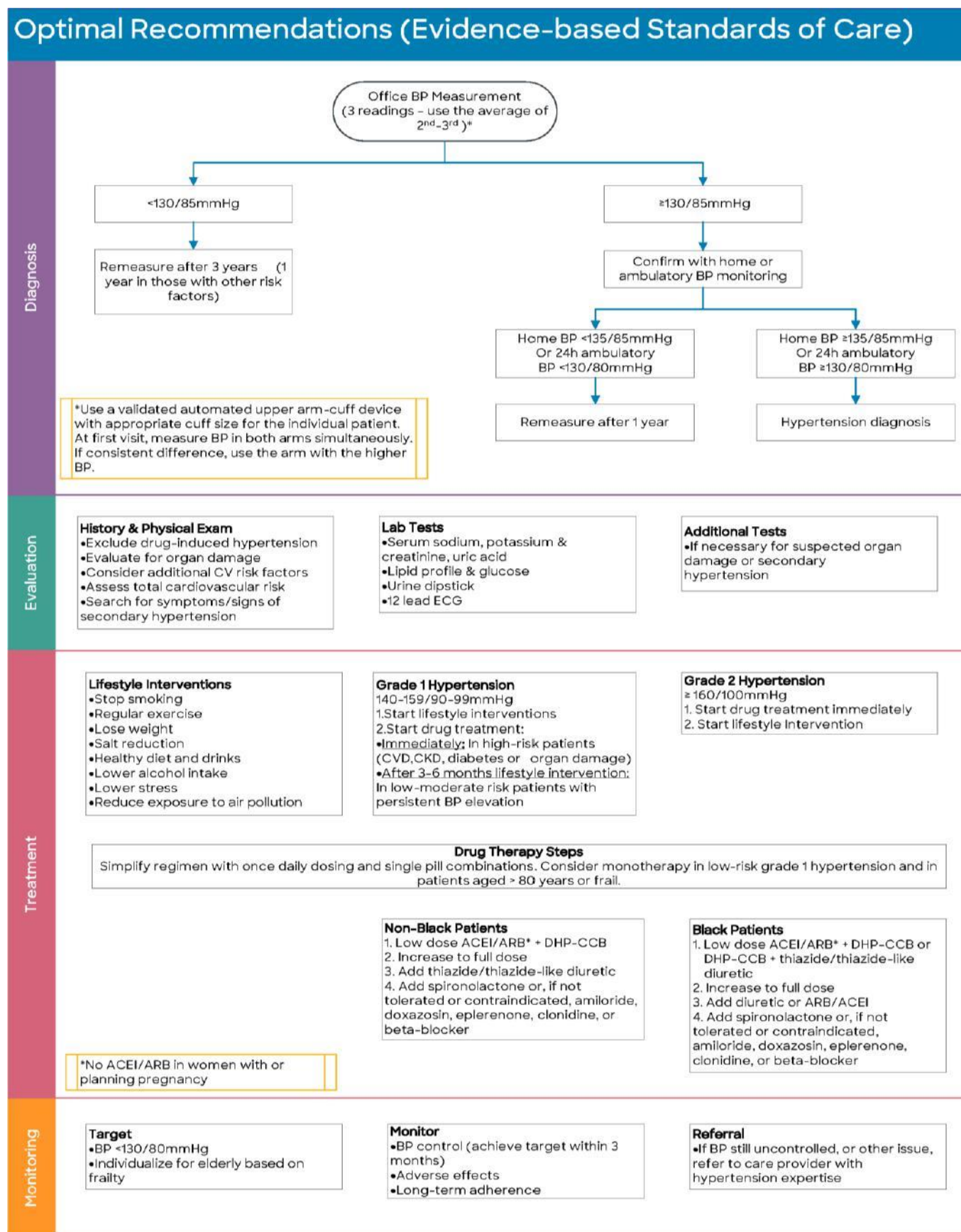
<b>Conditions</b>	<ul style="list-style-type: none"> <li>• Quiet room with comfortable temperature.</li> <li>• Before measurements: Avoid smoking, caffeine and exercise for 30 minutes; empty bladder; remain seated and relaxed for 3-5 minutes.</li> </ul>
<b>Positions</b>	<ul style="list-style-type: none"> <li>• Neither patient nor staff should talk before, during, and between measurements.</li> <li>• Sitting: Arm resting on table with mid-arm at heart level; back supported on chair, legs uncrossed and feet flat on floor</li> </ul>
<b>Device</b>	<ul style="list-style-type: none"> <li>• Validated electronic (oscillometric) upper-arm cuff device. Lists of accurate electronic devices for office, home, and ambulatory BP measure in adults, children, and pregnant women are available at <a href="http://www.stridebp.org">www.stridebp.org</a>.</li> <li>• Alternatively use a calibrated auscultatory device, (aneroid, or hybrid mercury sphygmomanometers are banned in most countries) with 1st Korotkoff sound for systolic blood pressure and 5th for diastolic with a low deflation rate.</li> </ul>
<b>Cuff</b>	<ul style="list-style-type: none"> <li>• Size according to the individual's arm circumference (smaller cuff overestimates and larger cuff underestimates blood pressure).</li> </ul>

	<ul style="list-style-type: none"> <li>For manual auscultatory devices the inflatable bladder of the cuff must cover 75% - 100% of the individual's arm circumference. For electronic devices use cuffs according to device instructions.</li> </ul>
<b>Protocol</b>	<ul style="list-style-type: none"> <li>At each visit take 3 measurements with 1 min between them. Calculate the average of the last 2 measurements. If BP of first reading is &lt; 130/85 mm Hg no future measurement is required.</li> </ul>
<b>Interpretation</b>	<ul style="list-style-type: none"> <li>Blood pressure of 2-3 office visits &gt; 140/90 mm Hg indicates hypertension.</li> </ul>

**Figure 4: Office blood pressure targets for treated hypertension**

<b>Aim for BP control within 3 months</b>	
<b>Essential (minimum standards)</b>	<ul style="list-style-type: none"> <li>Target BP reduction by at least 20/10 mmHg, ideally to &lt; 140/90 mmHg</li> </ul>
<b>Optimal (evidence-based standards)</b>	<ul style="list-style-type: none"> <li>&lt; 65 years: BP target &lt; 130/80 mmHg if tolerated (but &gt; 120/70 mm Hg)</li> <li>&gt; 65 years: BP target &lt; 140/90 mmHg if tolerated but consider an individualized BP target in the context of frailty, independence, and likely tolerability of treatment</li> </ul>

**Figure 5: Essential Recommendations (Minimal Standards of Care)**

**Figure 6: Optimal Recommendations (Evidence-based Standards of Care)**

## RESOURCES

- [Blood Pressure Chart CTX](#)
- [Blood Pressure Chart NTX](#)

## REFERENCES

1. 2020 International Society of Hypertension Global Hypertension Practice Guidelines. Hypertension. 2020;75:1334-1357.
2. Richards, A., & Jones, A. L. (2021, June 15). Hypertension: New guidelines from the International Society of Hypertension. American Family Physician. <https://www.aafp.org/pubs/afp/issues/2021/0615/p763.html#:~:text=Key%20Points%20for%20Practice%201%20%20Use%20an,risk%20and%20any%20hypertension-mediated%20organ%20damage.%20More%20items>

*Note: The BSWQA elects to endorse the ISH guidelines despite minor concerns from the American Academy of Family Physicians (AAFP). A statement given by Michael J. Arnold, MD, the AAFP Contributing Editor is below:*

*“The ISH guidelines, which were assembled using reviews of the ACC/AHA guidelines and six other international guidelines, overcome this conflict by providing separate diagnostic thresholds based on measurement techniques. Treatment targets are 140/90 mm Hg for the initial months of treatment and for older adults, reflecting concerns noted by the AAFP. The AAFP will not endorse the ISH guidelines because of their summary nature, but the ISH guidelines provide family physicians with a concise guide for treating hypertension that aligns well with our clinical practice.”<sup>2</sup>*