CLINICAL PRACTICE UPDATE

The 2025 Hypertension Guideline

What primary care needs to know

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No disclosures

First major update since 2017 · AHA / ACC and 11 collaborating societies

Jones DW, et al. 2025 AHA/ACC Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. J Am Coll Cardiol / Circulation / Hypertension. 2025.

WHY THIS UPDATE MATTERS

A huge burden, and a wide care gap

~120M
U.S. adults have hypertension

<60%
are aware of their condition

~50%
are receiving treatment

1 in 5
have their BP at goal

The opportunity

- Hypertension is the most common and most modifiable risk factor for cardiovascular disease — yet control rates remain stuck.
- The 2025 guideline keeps the core principles of 2017 but shifts toward risk-based, patient-centered care: better risk estimation, earlier secondary-cause work-up, stronger out-of-office monitoring, and team-based delivery.
- Benefits of better control now extend beyond heart, stroke, and kidney — to a measurable reduction in dementia risk.

WHAT CHANGED

The 2025 update at a glance

AREA	2017		2025
Risk estimation	Pooled Cohort Equations	→	**PREVENT calculator (10- & 30-yr total CVD risk)**
Drug-start decision	Threshold-based	→	**Risk-based: tie initiation to estimated CVD risk**
Secondary work-up	Selective PA screening	→	**Screen all stage 2 / resistant HTN — any K^+**
Diagnosis & follow-up	Office BP, HBPM supportive	→	**HBPM / ABPM central to dx & titration**
Terminology	“Hypertensive urgency”	→	**“Severe hypertension” (>180/120, no acute TOD)**
Resistant HTN	Medication optimization	→	**+ Renal denervation as Class IIb adjunct**

CLASSIFICATION & TARGETS

Thresholds hold — the goal sharpens

BP categories (unchanged from 2017)

Normal	< 120 and < 80 mm Hg
Elevated	120–129 and < 80 mm Hg
Stage 1	130–139 or 80–89 mm Hg
Stage 2	≥ 140 or ≥ 90 mm Hg

TREATMENT GOAL

< 130 / 80

reaffirmed for most adults, with **encouragement to reach < 120/80**

Goal individualized (not <120/80) for:

- Residents in institutional / nursing care
- Limited life expectancy
- Pregnancy (separate targets — see later)

The diagnostic threshold for hypertension remains ≥ 130/80 mm Hg.

KEY DEFINITIONS

Two terms, defined

Essential hypertension

Persistently elevated blood pressure with no single identifiable cause. Also called primary hypertension, it accounts for roughly 90–95% of cases and reflects a mix of genetic, lifestyle, and vascular factors.

Diagnosed after secondary causes have been reasonably excluded.

Resistant hypertension

BP that stays above goal despite three antihypertensive agents at optimal doses — ideally including a diuretic — or BP that requires four or more agents to control.

Confirm with out-of-office readings and rule out white-coat effect and nonadherence before labeling as resistant.

RISK ESTIMATION

PREVENT replaces the Pooled Cohort Equations

WAS: Pooled Cohort Equations

- 10-year ASCVD risk
- Ages 40–79, not on a statin
- Did not account for kidney function or social factors

NOW: PREVENT

- 10- and 30-year TOTAL CVD risk (MI, stroke, heart failure)
- Ages 30–79 — captures younger adults earlier
- Adds kidney function, statin use, and social drivers of health

Why it matters for you

PREVENT gives a more accurate, individualized estimate of total cardiovascular risk — and that number now drives when you start drug therapy. Embedding it in your EHR / decision support makes it usable at the point of care.

RISK-BASED TREATMENT

The PREVENT equations

What it is

- AHA tool (Predicting Risk of cardiovascular disease EVENTs) estimating 10- and 30-year risk
- Predicts total CVD — heart attack, stroke, AND heart failure — in one calculation
- Validated for adults aged 30–79 without known cardiovascular disease
- Race-free; adds kidney (eGFR) and metabolic (BMI) factors — the CKM framework
- Optional inputs (UACR, HbA1c, social deprivation index) refine the estimate

- https://professional.heart.org/en/guidelines-and-statements/prevent-calculator

How the 2025 guideline uses it

- Calculate 10-year total CVD risk to guide BP treatment decisions
- Start medication if risk is ≥ 7.5%, or if clinical CVD, diabetes, or CKD is present
- If risk is < 7.5%, trial lifestyle modification for 3–6 months first
- Begin medication if BP remains elevated after that lifestyle trial
- Recalibrated on contemporary data — often yields lower numbers than the old PCE, with matching lower thresholds

INITIATING THERAPY

When to start medication

Higher-risk adult

Known CVD, diabetes, CKD, or ≥ 7.5% 10-yr CVD risk

Start a medication at BP ≥ 130/80

Lower-risk adult

< 7.5% 10-yr CVD risk

Lifestyle first for 3–6 months; add a medication if still ≥ 130/80

Stage 2 (≥ 140/90)

Regardless of risk score

Start TWO first-line agents — ideally a single-pill combination

Single-pill, fixed-dose combinations improve adherence and shorten time to control versus separate prescriptions.

DRUG SELECTION

First-line agents & combinations

Established first-line classes

Thiazide / thiazide-type diuretics

e.g., chlorthalidone, indapamide, HCTZ

ACE inhibitors OR ARBs

Do not combine the two together

Dihydropyridine calcium channel blockers

e.g., amlodipine

Build the regimen

- Stage 2 → start with two classes, preferably one pill
- A typical pairing: ACEi/ARB + dihydropyridine CCB, or ACEi/ARB + thiazide
- Titrate using home readings; escalate rather than tolerate inertia
- Confirm true resistance before adding 4th agent — exclude white-coat effect & nonadherence

BEYOND BP — CARDIOMETABOLIC THERAPY

Role of GLP-1 RAs and SGLT2 inhibitors

GLP-1 receptor agonists

- Modest BP lowering (~2–5 mm Hg systolic), driven largely by substantial weight loss
- Proven cardiovascular benefit in type 2 diabetes and in obesity with established CVD
- Favored in patients with overweight/obesity, type 2 diabetes, or high CV risk
- Adjunct to first-line antihypertensives — not a substitute for guideline BP therapy
- Watch for GI side effects; titrate slowly. Reinforce lifestyle alongside treatment

SGLT2 inhibitors

- Mild BP reduction (~3–5 mm Hg systolic) via mild natriuresis and osmotic diuresis
- Strong cardiorenal protection: fewer HF hospitalizations, slower CKD progression
- Favored in heart failure, chronic kidney disease, or type 2 diabetes
- Complements RAS blockade and diuretics; useful in resistant, fluid-overloaded patients
- Monitor volume status and renal function; counsel on genital mycotic infections

DIAGNOSIS & MONITORING

Out-of-office BP takes center stage

Confirm the diagnosis

Use home (HBPM) or ambulatory (ABPM) monitoring to confirm hypertension before labeling and treating.

Titrate with HBPM

Structured home readings guide medication titration and keep patients engaged between visits.

Unmask the phenotypes

Exclude white-coat effect before intensifying; catch masked hypertension to avoid undertreatment.

Cuffless / wearable BP devices are NOT recommended

Evidence on accuracy is mixed and they lack external validation — do not use them to diagnose or manage hypertension.

FOUNDATIONAL THERAPY

Lifestyle remains first-line — now more directive

DASH-style eating
Vegetables, fruit, whole grains, low-fat dairy

Sodium restriction
Lower intake; pair with potassium-rich foods

Weight management
Sustained loss yields meaningful BP drop

Physical activity
Regular aerobic + dynamic resistance

Limit alcohol
Reduce intake to lower BP

Stress reduction
Structured techniques as adjunct

NEW

Potassium-based salt substitutes

Now endorsed for select patients to lower BP and cardiovascular events. Use caution in advanced CKD or reduced potassium excretion, and avoid combining with potassium-sparing agents.

SECONDARY HYPERTENSION

Screen for primary aldosteronism — widely

Why bother?

5–10%
of all hypertension

up to 20%
of resistant HTN

< 2%
of eligible patients are screened

Who to screen now

- **ALL stage 2 hypertension**
- **ALL resistant hypertension**

— regardless of potassium (most patients are normokalemic)

- Hypokalemia (spontaneous or diuretic-induced)
- Adrenal incidentaloma
- Obstructive sleep apnea
- Family hx of early HTN or stroke

How to screen

- Plasma aldosterone (PAC) + plasma renin activity (PRA) → ARR
- Suggestive: ARR ≥ 30 with PAC ≥ 10 ng/dL and renin suppressed (< 1)
- Continue ACEi / ARB / CCB during testing
- **HOLD MRAs (spironolactone, eplerenone) ≥ 4 weeks**
- Normalize K^+ and don't restrict salt before testing; positive screen → confirmatory testing & specialist referral

RESISTANT HYPERTENSION

How to evaluate

1 — Rule out pseudo-resistance

- Confirm true elevation with home or 24-hour ambulatory BP — exclude white-coat effect
- Verify medication adherence (pill counts, pharmacy refills, single-pill combinations)
- Check technique: correct cuff size, proper positioning, no recent caffeine or activity
- Confirm the regimen is optimized — ≥3 agents at full dose, including a diuretic
- Review interfering substances: NSAIDs, decongestants, oral contraceptives, steroids, alcohol, stimulants, licorice

2 — Work up secondary causes

- Screen for primary aldosteronism in everyone — plasma aldosterone-to-renin ratio
- Basic labs: electrolytes, creatinine/eGFR, urinalysis with albumin-to-creatinine ratio
- Assess for obstructive sleep apnea; screen for renovascular disease where suspected
- Consider pheochromocytoma, thyroid disease, and Cushing syndrome by clinical clues
- Look for target-organ damage: ECG/echo (LVH), retinopathy, and kidney involvement

RESISTANT HYPERTENSION

Renal denervation — a new Class IIb option

What it is

A catheter-based procedure that ablates renal sympathetic nerves — now a Class IIb ("may be considered") adjunct, not a cure or a replacement for medication.

Consider for adults who:

- Remain uncontrolled (office SBP 140–180, DBP ≥ 90) despite optimized therapy, OR
- Cannot tolerate multiple agents
- Have suitable renal anatomy and eGFR ≥ 40; white-coat effect and nonadherence excluded first

Typical effect

3–6 mm Hg

reduction in 24-hour systolic BP; ~60–70% of patients achieve a meaningful ≥ 5 mm Hg drop.

Before you refer

- Specialist evaluation to confirm eligibility
- Experienced interventionalist performs it
- Shared decision-making — long-term outcome data still limited

TERMINOLOGY & INPATIENT CARE

“Severe hypertension” — resist the reflex

Language update

~~“Hypertensive urgency”~~ → **“Severe hypertension”**

Markedly elevated BP (> 180/120 mm Hg) WITHOUT acute target-organ damage.

Don’t treat the number alone

In hospitalized adults (non-pregnant, non-stroke) with severe HTN and no acute target-organ damage, avoid intermittent IV or oral antihypertensives given solely to push the number down acutely.

Instead

- Assess for symptoms or signs of acute organ damage. If present → hospitalize and treat with IV therapy (true hypertensive emergency).
- If no acute damage → restart / optimize oral therapy and arrange prompt outpatient follow-up, avoiding unnecessary admissions and rapid swings.
- Reliable out-of-office BP and a clear follow-up plan beat reactive dosing.

TAILORING CARE

Special populations — targets that differ

Diabetes & CKD

Prefer ACEi or ARB if albuminuria ≥ 30 mg/g or eGFR < 60.
Goal SBP < 130; encourage < 120.

Cognition

Firm SBP goal < 130 — strengthened, to lower risk of mild cognitive impairment and dementia.

Pregnancy

Treat SBP ≥160 / DBP ≥110 within 30–60 min; chronic HTN goal < 140/90; ASA from ~12 wks. Avoid ACEi/ARB, DRIs, atenolol, MRAs, nitroprusside.

BRINGING IT HOME

What to change Monday morning

1. Use PREVENT (not the Pooled Cohort Equations) to estimate risk — and let that risk drive when you start a drug.
2. Confirm with home or ambulatory BP before labeling or intensifying; lean on HBPM for titration.
3. Start stage 2 (≥140/90) with two agents — ideally a single-pill combination.
4. Screen every stage 2 / resistant patient for primary aldosteronism, regardless of potassium.
5. Keep lifestyle first-line; consider potassium-based salt substitutes for the right patients.
6. Don’t reflexively treat asymptomatic severe HTN in the hospital — look for organ damage, then plan follow-up.

The bottom line

Same thresholds, smarter targeting. The 2025 guideline asks us to match treatment intensity to each patient's cardiovascular risk, confirm BP out of the office, treat stage 2 with combinations, look harder for primary aldosteronism, and deliver it all through team-based care.

Reference

Jones DW, Ferdinand KC, Taler SJ, et al. 2025 AHA/ACC/AANP/AAPA/ABC/ACCP/ACPM/AGS/AMA/ASPC/NMA/PCNA/SGIM Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. J Am Coll Cardiol / Circulation / Hypertension. 2025.

Slides prepared for a primary-care audience — confirm dosing and individualized targets against the full guideline text.