NEW PAPERS

2025 AHA/ACC multi-society guidelines for hypertension: Recommendations for the US – Messages to the world

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INTRODUCTION

We believe most colleagues were curious to read the new American guidelines for hypertension. Not only because the history of American guidelines is older than half a century, with the first Joint National Committee (JNC) report published in 1977, but also because the Americans often introduce new concepts and definitions and tend to provide clear and practical recommendations. Thus, although their guidelines are intended for medical practice within the US healthcare system which has much more resources than most places in the world, it is always interesting and useful to see how our US colleagues see the translation of the current research evidence into hypertension care in clinical practice and what changes they propose for hypertension management.

It is not the scope of this short article to present all the AHA/ACC multi-society guidelines, or to compare them to other recent guidelines, but to highlight some important recommendations which deserve to be considered in defining optimal practices that meet patients' needs in different regions and healthcare systems around the world.

MESSAGE 1: The American plan

An important element of the 2025 AHA/ACC multi-society guideline is that it was developed in collaboration with and endorsed by 11 other USA-based organizations whose representatives included physicians, cardiologists, geriatricians, general practitioners, nurses, and pharmacists. The writing committee included cardiologists, nephrologists, internists, epidemiologists, practice nurses, a neurologist, a gerontologist, a clinical pharmacist, a physician associate, and a patient advocate. This is important considering the size of the problem among US adults, with prevalence of hypertension (with the US definition of BP ≥130/80

mmHg) estimated at 50% of men (59 million) and 44% of women (56 million). If you add to this those with "elevated BP", then probably less than one third of the adult population in the US have "normal" BP according to US definitions. Thus, many different healthcare professionals need to be engaged to tackle hypertension, not only cardiologists, nephrologists, and those with special interest in hypertension.

The development of these recommendations certainly required considerable time and effort and collective work by many expert scientists devoted to hypertension and cardiovascular medicine research. Like the recent ESH and the ESC guideline papers, this manuscript is long (80 full journal text pages, plus references and other information). The authors probably realised that only a few of the huge number of healthcare professionals who deal with hypertension will read the full paper. Thus, they start the guideline by presenting "What Is new" and 10 top take-home messages.

MESSAGE 2: Blood pressure measurement and diagnosis

Blood pressure devices: In line with European and other societies, the new American guideline recommends a standardized methodology for office BP measurement, preferably using validated automated cuff BP devices, and advises healthcare professionals to avoid cuffless devices.

Out-of-office blood pressure: In 2017, ACC/AHA made it crystal-clear that treatment initiation and titration should not be based exclusively on office BP measurements, and that in most cases 24h ambulatory (ABPM) or home BP monitoring (HBPM) is required. According to their 2025 guidelines ABPM/HBPM is needed in (i) untreated and treated individuals with office BP 130-159/80-99 mmHg (to exclude white-coat hypertension), or <130/80 mmHg (to exclude masked hypertension), (ii) untreated with white-coat or masked hypertension (to exclude transition to sustained hypertension), and (iii) in resistant hypertension (to exclude the white-coat effect). Thus, most of the 47% of US adults with hypertension and of those with elevated BP need ABPM/HBPM, which is almost two-thirds of the adults (except those with too low or too high BP).

ABPM vs HBPM: The 2025 guidelines gave an "evidence advantage" to ABPM due to "more data linking it to cardiovascular events", and an "application priority" to HBPM, recommending it for both the initial diagnosis and for treatment titration, whereas ABPM is primarily recommended for confirming the initial diagnosis. They also acknowledge that HBPM is more practical than ABPM and may be more reproducible and accessible.

HBPM is widely available in several countries, is preferred by most patients compared to ABPM, seems to have similar prognostic ability as ABPM, and has been shown to improve medication adherence and hypertension control. On the other hand, ABPM is rarely available and infrequently used when available. Thus, HBPM is far more feasible for wide clinical use, and therefore it is the most realistic 'central' method for decision making in hypertension in clinical practice.

MESSAGE 3: When to screen for primary aldosteronism

The American guidelines extended the list of indications for screening as presented in **Table 1**. However, they do not endorse other recent recommendations to screen 'everybody' with high BP, which is unrealistic in most settings around the world. Screening is now recommended while continuing antihypertensive drugs (except MRAs and beta-blockers which reduce renin and can give false positive results), which is particularly useful as many of these patients have high BP levels. Reviewing the list, it is clear that many more

Table 1. Indications to screen for primary aldosteronism[1]

1.	Resistant hypertension, even without hypokalemia
2.	Hypokalemia, spontaneous or diuretic induced
3.	Sleep apnea
4.	Incidentally discovered adrenal mass
5.	Family history of early-onset hypertension,
6.	Stroke at age <40 years
7.	To be considered also in stage 2 hypertension

patients with aldosterone dysfunction are likely to be identified with future screening.

MESSAGE 4: How to identify patients at high risk

The American guideline recommends using the AHA Predicting Risk of CVD Events (PREVENT) model to estimate 10-year cardiovascular risk for adults with hypertension without clinical cardiovascular disease.[2] It also assesses atherosclerotic cardiovascular disease risk and heart failure risk. The PREVENT model incorporates novel optional kidney and metabolic predictors (urinary albumin/creatinine ratio, HbA1c, BMI) and a social deprivation index to enhance equity in risk assessment.[2] It can be used to estimate 10 and 30-year total cardiovascular disease risk in people aged 30-79 years, with high-risk threshold at 10-year risk >7.5%.

MESSAGE 5: Blood pressure level to start treatment

The American guideline recommends that treatment should be promptly started in all adults with BP >140/90 mmHg and in those at high-risk with BP >130/80 mmHg. And they recommend the same BP threshold for starting treatment in lower risk patients, but after a few months of lifestyle modification (**Table 2**).

This recommendation requires an accurate estimation of BP, which is often overestimated in the initial assessment and can lead to overdiagnosis and overtreatment. The authors of the guideline acknowledge that too often BP is not properly taken, and recommend using standardized methodology, automated devices, and out-of-office BP evaluation (see above).

Table 2. Blood pressure level to start treatment[1]

Blood pressure	Population
>140/90 mmHg	• All adults
≥130/80 mmHg	• Those with diabetes, or CKD, or 10y CVD risk ≥7.5% (PREVENT)
	• Those with 10y CVD risk <7.5% (PREVENT) after 3-6-month lifestyle intervention

MESSAGE 6: Blood pressure goal of treatment

The American guidelines recommend that a BP of 130/80 mmHg is not acceptable for most adults. This is their single BP number for starting treatment and for controlling hypertension. They go a step further to 'encourage' reaching systolic BP <120 mmHg in most patients (**Table 3**).

This recommendation opposes the 2024 ESH guideline which recommends BP not to be reduced <120 mmHg. It is based on a recent metanalysis of 6 outcomes studies (80,220 patients followed for 3,2 years),[3] which compared the cardiovascular benefits and the adverse events of a systolic BP goal <120 vs. <130 mmHg. The results showed considerable benefits in reducing cardiovascular events with systolic BP <120 mmHg, together with increased risk of adverse events, and eventually an overall net benefit.[3]

The question now is how to select among our patients those who will most likely benefit from a more aggressive BP reduction, but without the risk of adverse events. With these lower BP targets, meticulous evaluation of BP for preventing treatment-induced excessive BP decline resulting in adverse effects, is now much more important than in the past.

Table 3. Blood pressure goal of treatment[1]

Overarching goal	BP <130/80 mmHg for all adults, except if (i) require institutional care, (ii) have limited predicted lifespan, (ii) are pregnant.	
Increased CVD risk	Encouragement to achieve BP <130/80 mmHg to reduce CVD events and total mortality.	Class of recommendation 1 (Strong)
Not increased CVD risk	Encouragement to achieve BP <120/80 mmHg may be reasonable to reduce risk of further BP elevation.	Class of recommendation 2b (Weak)

MESSAGE 7: When to start with mono- or combo- therapy

Most recent guidelines recommend starting with a 2-drug combination, preferrable in a single pill, in most patients, and present a list of cases in which starting with monotherapy is preferred. The 2025 American recommendation is as follows:

- **Stage 1 hypertension** (BP 130-139/80-89 mmHg): Reasonable to start with 1 drug
- **Stage 2 hypertension** (BP ≥140/90 mmHg): Start with 2-drug combination, ideally single-pill

The American guidelines give a simple recommendation, which is exclusively based on the BP level. Its implementation requires accurate BP evaluation, as BP is often overestimated at diagnosis, and individualisation by considering the overall health condition of each patient.

MESSAGE 8: When to consider renal denervation

The American guideline recommends considering renal denervation in patients with resistant hypertension (giving a strict definition) and in special cases with uncontrolled hypertension.

1. **Resistant hypertension:** ≥140/90 mmHg on ≥4 antihypertensive medications at optimal dosages (ACEi/ARB + CCB + thiazide-type diuretic + MRA).
2. **Uncontrolled hypertension:** BP ≥140/90 mmHg and unable to take antihypertensive medications at optimal dosages or additional medications.

With renal denervation now recommended by most scientific organisations and available in most countries, it is important for primary care doctors to have clear guidance on how to identify which of their patients cannot reach good BP control with drug treatment and should consider renal denervation, and refer them to an expert centre for reducing the excess risk due to uncontrolled BP.

MESSAGE 9: Framework to improve hypertension control

This is a very important section of the American guideline. The recommendations on 'when to do what' are important, but it is their efficient implementation in the general population that will reduce the burden of hypertension and its complications. Eight elements of success are discussed (**Table 4**) and all are very important as each of them represents an important cause of failure, or a useful tool for success. No country has enough doctors to deal with the large proportion of the general population with sustained or borderline hypertension, and a team-based approach involving non-doctor healthcare professionals is a necessity everywhere. The American guideline provides guidance on the responsibilities and roles for the members of the hypertension team.

Table 4. Framework to improve hypertension control[1]

1.	Team-based approach
2.	Accurate BP measurement
3.	Prompt treatment
4.	Patient engagement
5.	Ongoing review of home BP measurement
6.	Evaluate drug adherence + response
7.	Monthly visits until control
8.	Electronic health record - Telehealth

CONCLUSIONS AND PERSPECTIVES

The American guidelines for hypertension represent a half-century old story with eight Joint National Committee (JNC) reports followed by AHA/ACC reports. Several other organisations followed by publishing their own guidelines, and all of them together transformed the practice of hypertension care by establishing the use of evidence-based recommendations. Indeed, hypertension is a great case for evidence-based medicine, as results of many outcome studies are available to inform on the key decisions that the practising doctors routinely make in patients with hypertension. Along with the AHA/ACC, several organisations recently updated their recommendations, including the ESH, ESC, and other regional and national societies of hypertension.

ISH has a global mission, and we are sceptical about the disappointing rates of hypertension control in most countries, despite the solid evidence on the benefits of its optimal management and the availability of many effective drugs at low cost and of guideline statements with exceptional

quality in all regions. In 2020, ISH published its "Global Hypertension Practice" guidelines and introduced the concept of "Essential" and "Optimal" recommendations. Several practising physicians around the world found these recommendations very practical for their routine clinical work. We are currently working on a new model for disseminating our recommendations, aiming at improving their implementation in practice.

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