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Research Article

Critical and Comparative Analysis of the 2025 AHA/ACC/AANP/AAPA/ABC/ACCP/ACPM/AGS/AMA/ASPC/NMA/PCNA/SGIM Guideline for Hypertension and Other International Guides and Protocols

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Abstract

The 2025 AHA/ACC/AANP/AAPA/ABC/ACCP/ACPM/AGS/AMA/ASPC/NMA/PCNA/SGIM guideline for the prevention, detection, evaluation, and management of arterial hypertension introduces important updates compared with the 2017 version. Given the global impact of hypertension as a major cause of cardiovascular morbidity and mortality, and the coexistence of multiple international and national recommendations, the Mexican Expert Group on Arterial Hypertension (GREHTA) conducted a structured review and comparative analysis. We contrasted the 2025 AHA/ACC recommendations with those of the European Society of Hypertension (ESH 2023), the European Society of Cardiology (ESC 2024), the Latin American Society of Hypertension (LASH 2024), and the National Medical Care Protocol of Mexico (PRONAM 2025). Our goal is to provide clinicians with a clear, evidence-based synthesis to guide practical decision-making. Key topics include definitions and thresholds, diagnostic methods, cardiovascular risk stratification, therapeutic strategies, special populations, and resistant hypertension. GREHTA emphasizes a pragmatic, regionally adapted approach, highlighting early combination therapy, risk factor integration, and systematic follow-up.

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Introduction

Arterial hypertension remains the leading modifiable risk factor for cardiovascular disease and premature death worldwide. In Mexico, cardiovascular disease accounted for nearly 200,000 deaths in 2024, including cerebrovascular events. The publication of the 2025 AHA/ACC/AANP/AAPA/ABC/ACCP/ACPM/AGS/AMA/ASPC/NMA/PCNA/SGIM (AHA/ACC in brief) guideline [1], endorsed by multiple professional societies, provides updated recommendations based on evidence accumulated since 2015. To contextualize these updates, GREHTA analyzed their content in relation to the ESH 2023, ESC 2024, LASH 2024, and PRONAM 2025 guidelines [2-5].

Our objectives were:

1. To identify the main changes in the 2025 ACC/AHA guideline.
2. To compare its recommendations with other contemporary international guidelines.
3. To propose practical, regionally relevant adaptations for Mexican clinical practice.

Key innovations in the 2025 ACC/AHA guideline

- Terminology: Introduction of “severe hypertension” instead of “hypertensive urgency.”

- Routine evaluation for primary aldosteronism in resistant hypertension.
- Strong emphasis on potassium-enriched salt substitutes.
- Pharmacological treatment is considered for persistent BP ≥130/80 mmHg if lifestyle interventions fail or in high- or very high-risk patients
- Stage 1 monotherapy is reasonable if lifestyle interventions fail, although GREHTA advocates initial low-dose dual therapy in high-risk populations.
- Implementation of the PREVENT calculator, superior to PCEs, incorporating laboratory and social determinants.

Comparative analysis with other guidelines [2-5]

1. Definition and staging: 2025 ACC/AHA defines hypertension as BP ≥130/80 mmHg (office). ESH 2023, ESC 2024, LASH 2024, and PRONAM 2025 retain ≥140/90 mmHg, with treatment goals <130/80 mmHg if tolerated. KDIGO 2024 does not define general HTN, but emphasizes standardized SBP <120 mmHg in CKD patients.

2. Out-of-office measurement: ACC/AHA thresholds: ABPM ≥130/80 mmHg; HBPM ≥130/80 mmHg. European and Latin American guidelines: ABPM/HBPM ≥135/85 mmHg when the office cut-off is 140/90 mmHg (Table 1).

3. Cardiovascular risk stratification: ACC/AHA recommends the PREVENT tool (CVD, HF, includes HbA1c, UACR, social determinants). ESH/ESC employs SCORE2/SCORE2-OP with organ damage assessment. LASH and PRONAM adapt SCORE2 and HEARTS, respectively, to local settings; in addition, GREHTA emphasizes considering the degree of blood pressure elevation, number of cardiovascular risk factors, presence of target organ damage, and previous major cardiovascular event or end-stage of renal failure as keystone factors to determine cardiovascular risk level (2023 ESH table for risk stratification) (Table 2).

4. Therapeutic strategy: ACC/AHA: Initiate ≥140/90 mmHg for all; ≥130/80 mmHg if high-risk. First-line: thiazides, ACEi/ARB, CCBs. ESH/ESC: similar, but favor early dual therapy. LASH: promotes early multifactorial intervention with dual therapy. PRONAM: favors dual/triple therapy and emphasizes integrated care.

5. Special populations and resistant hypertension: ACC/AHA: Elderly <130/80 mmHg with individualization; pregnancy: ≥140/90 mmHg with safe drugs (labetalol, nifedipine, methyldopa). ESH/ESC: more flexible for the elderly (<140/90 mmHg). KDIGO: SBP <120 mmHg in CKD if tolerated. All recommend MRA (spironolactone) as fourth-line; ESC allows renal denervation in resistant cases (Table 3).

GREHTA recommendations for Mexico [6-11]

- Hypertension diagnosis in-office remains ≥140/90 mmHg, except in high-risk patients (≥135/85 mmHg).
- Early initiation of low-dose dual therapy is preferred over monotherapy.
- Systolic blood pressure between ≥135 mmHg and <140 mmHg requires drug therapy with low-dose dual therapy if high risk is present.
- Statin therapy is indicated in >90% of Mexican hypertensive patients, regardless of baseline LDL, because in Mexico most patients are of intermediate or higher cardiovascular risk.
- Albuminuria and GFR <60 ml/min should be classified as target-organ damage, not just risk markers.
- Out-of-office monitoring (ABPM or HBPM) must be standard for diagnosis and follow-up.
- Comprehensive risk stratification should incorporate the MACARENAH framework.
- Triple drug therapy must be used if the dual strategy fails or in those patients with high and very high cardiovascular risk and systolic blood pressure level ≥160 mmHg as the initial strategy.

Table 1: BP measurement and diagnostic thresholds (office, HBPM, ABPM).

Guideline	Office	HBPM	Daytime ABPM	Night ABPM	24h ABPM
2025 AHA/ACC	Elevated 120–129/<80; Stage 1 ≥130/80; Stage 2 ≥140/90	≥130/80	≥130/80	≥110/65	≥125/75
2023 ESH	≥140/90 (Grades 1–3)	≥135/85	≥135/85	≥120/70	≥130/80
2024 ESC	'Elevated' 120–139/70–89; HTN ≥140/90	≥135/85	≥135/85	≥120/70	≥130/80
2024 LASH	Follows European thresholds	≥135/85	≥135/85	≥120/70	≥130/80
2025 PRONAM	Hypertension ≥140/90	≥135/85	≥135/85	≥120/70	≥130/80

Table 2: Cardiovascular risk tools, initiation thresholds, and treatment goals.

Guideline	Risk Tool	Drug Initiation Threshold	Target BP
2025 AHA/ACC	PREVENT (CVD/HF)	≥140/90 for all; ≥130/80 if high risk	<130/80 (individualize in frailty/pregnancy)
2023 ESH	SCORE2/SCORE2-OP	≥140/90; earlier if high risk or organ damage	First <140/90, then <130/80 if tolerated
2024 ESC	SCORE2/SCORE2-OP/Diabetes	≥140/90; earlier if ≥10% risk	<130/80 if tolerated
2024 LASH	Global risk and HMOD	Similar to Europe, promote early multifactorial intervention	<130/80 preferred if tolerated
2025 PRONAM	HEARTS	≥140/90 for all	<130/80 for all

Table 3: Special populations, secondary hypertension, and resistant hypertension.

Population	AHA/ACC 2025	ESH 2023 / ESC 2024	LASH 2024	KDIGO 2024	PRONAM 2025
Elderly/Frailty	<130/80, individualize	<140/90 first; then <130/80	Similar to ESH	Symptom-guided titration in CKD	Monotherapy in frailty >85y
Pregnancy	Start ≥140/90; safe drugs	Similar thresholds	Similar thresholds	—	Specialist referral, <140/90
Diabetes	Start ≥130/80 if high risk	≥140/90; <130/80 if tolerated	Frequent early combination	If CKD, SBP <120	<130/80 + glucose/lipid goals
CKD	<130/80; aldosteronism evaluation	Push <130/80 if tolerated	Focus on albuminuria	SBP <120 standardized	Refer to specialist, <130/80
Secondary HTN	Screen broadly (OSA, PA)	Clinical suspicion, specialist referral	Systematic protocol	—	Suspect in >40y, refer
Resistant HTN	Triple base + MRA; consider devices	Spironolactone; RDN (IIb)	Similar to ESH/ESC	MRA cautiously; chlorthalidone is useful	Triple base + MRA

- If GFR <60 ml/min and albuminuria are present, the recommended diuretics are thiazide-like, especially chlortalidone.

Discussion

Despite differences in diagnostic thresholds, there is a broad international consensus on the importance of early risk stratification, lifestyle modification as the foundation of treatment, and combination therapy to improve control rates. The main divergence lies in diagnostic cut-offs: ACC/AHA adopts 130/80 mmHg, while European and Latin American guidelines retain 140/90 mmHg. GREHTA supports the latter for Mexico, given healthcare resource constraints, but recommends earlier pharmacological intervention in high-risk groups [6-11]. We emphasize that non-pharmacological measures such as diet and exercise should be initiated and maintained in all patients with HTN [12,13]. New techniques with artificial intelligence are in progress and will greatly help in future diagnosis and treatment. Finally, we emphasize that the modern approach to HTN must be holistic, taking into account the metabolic, adiposity, cardiac, arterial, renal, enterohepatic, and neurological-behavioral (MACARENAH) aspects for real and effective control in HTN [11].

Conclusion

The 2025 ACC/AHA guideline introduces significant innovations, notably the PREVENT tool and broader emphasis on risk-based intervention. When contrasted with ESH, ESC, LASH, and PRONAM, most recommendations converge, though diagnostic thresholds differ. GREHTA advocates early dual therapy, integration of statins, and the MACARENAH model for risk stratification to address the high burden of hypertension in Mexico.

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