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NEW HYPERTENSION GUIDELINES

New guidelines for the management of hypertension were published to update the NHLBI publication (e.g., JNC 7). This new guideline provides information from studies of office-based blood pressure (BP)-related risk of cardiovascular disease (CVD), ambulatory blood pressure monitoring, and new targets for blood pressure goals. This issue of *CLIPs* briefly summarizes topics related to the pharmacological management of hypertension in the most recent guidelines. If you need further information, please contact the Center for Healthcare Innovation and Patient Outcomes Research (CHIPOR) at chipor@samford.edu.

Whelton PK, Carey RM, Aronow, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the prevention, detection, evaluation, and management of high blood pressure in adults. Hypertension. 2017.

Introduction

- A total of 5 drug classes have been shown to prevent CVD in high quality trials compared to placebo (e.g., diuretics, ACEIs, ARBs, CCBs, and BB). Some agents have been reported to provide additional benefit than others for specific CVD events.
- Tables 1 and 2 provide the categories of BP in adults and the threshold/goals of blood pressure in patients with hypertension.

Table 1: Categories of BP in adults

BP category	SBP		DBP
Normal	<120 mm Hg	and	<80 mm Hg
Elevated	120-129 mm Hg	and	<80 mm Hg
Hypertension			
Stage 1	130-139 mm Hg	or	80-89 mm Hg
Stage 2	≥140 mm Hg	or	≥90 mm Hg

Table 2: Blood pressure thresholds and goals of pharmacological therapy in patients with hypertension

Clinical Condition	BP Threshold, mm Hg	BP Goal, mm Hg
General		
Clinical CVD or 10-year ASCVD risk ≥10%	≥130/80	<130/80
No clinical CVD and 10-year ASCVD risk <10%	>140/90	<130/80
Older persons (≥65 years of age; noninstitutionalized, ambulatory, community-living adults)	≥130/80 (SBP)	<130 (SBP)
Specific comorbidities		
Diabetes mellitus Chronic kidney disease Chronic kidney disease after renal transplantation Heart failure Stable ischemic heart disease Secondary stroke prevention (lacunar) Peripheral arterial disease	≥130/80	<130/80
Secondary stroke prevention	≥140/90	<130/80

ASCVD indicates atherosclerotic cardiovascular disease; BP, blood pressure; CVD, cardiovascular disease; and SBP, systolic blood pressure

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Initial BP medication choice

- Initial management options for first-line treatment of hypertension include thiazide diuretics, calcium channel blockers (CCBs), and ACE inhibitors or ARBs (angiotensin receptor blockers).

Choice of initial monotherapy versus initial combination therapy

- Initiation of drug therapy with 2 first-line agents of different classes is recommended in adults with stage 2 hypertension and an average BP more than 20/10 mm Hg above their BP target.
- Initiation of single antihypertensive drug therapy in patients with stage 1 hypertension and BP goal <130/80 mm Hg is reasonable with dosage titration and addition of other agents to achieve the target BP.
- Follow up should be initiated monthly until blood pressure control is achieved.

Recommendations for patients with stable ischemic heart disease

- BP target of <130/80 mm Hg is recommended.
- Patients should be treated with medications (e.g., Guided directed management and therapy [GDMT] beta blockers, ACE inhibitors or ARBs) for compelling indications (e.g., previous MI, stable angina) as first-line therapy, with the addition of other drugs as needed.
- BB and/or CCB may be considered in patients with CAD (without heart failure with reduced ejection fraction) who had a MI more than 3 years ago and have concomitant angina.

Recommendations for patients with heart failure

- BP target of <130/80 mm Hg is recommended.
- Patients should receive a GDMT titrated to attain a BP <130/80 mm Hg.
- Nondihydropyridine CCBs are not recommended.
- Diuretics should be used in patients with HF and preserved ejection fraction (EF). ACEIs or ARBs and BB may be used after volume overload has been managed.

Recommendations for patients with chronic kidney disease (CKD)

- BP target of <130/80 mm Hg is recommended.
- Treatment with ACEI is recommended in patients with HTN and CKD (stage 3 or higher or stage 1 or 2 with albuminuria [≥300 mg/d, or ≥300 mg/g albumin-to-creatinine ratio in the first morning void]). ARBs are reasonable if ACEIs cannot be tolerated.

Recommendations for the management of HTN in patients with acute ischemic stroke (p. 109)

- Patients who are eligible for TPA (tissue plasminogen activator) should have their BP slowly lowered to <185/110 mm Hg before thrombolytic therapy.
- Restarting antihypertensive therapy is reasonable during hospitalization in patients who are neurologically stable.

Recommendations for the management of HTN in patients with secondary stroke prevention

- Patients who experience a stroke or transient ischemic attack should be restarted on antihypertensive therapy after the first few days of the index event. Treatment should be a thiazide diuretic, ACEI, or ARB or combination treatment.

Recommendations for the management of HTN in patients with diabetes

- First line antihypertensive agents (i.e., diuretics, ACEI, ARBs, CCBs) are useful.
- ACEIs and ARBs may be considered in patients with albuminuria.

Summary

- New practice guidelines have provided different thresholds for BP monitoring.
- Gaps in the current literature still exists as the optimal time to initiate therapy has yet to be elucidated.

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New hypertension guidelines. *CLIPs- Current Literature and Information for Pharmacists.* 2017 Dec 4;21(12):1-2.