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Primary Care Hypertension Guidelines: What's New for Primary Care

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Hypertension remains the leading modifiable risk factor for cardiovascular disease and mortality, yet recent data demonstrate declining rates of hypertension treatment and control in Canada. Because most hypertension care occurs in primary care, improving population-level outcomes requires guidance that is pragmatic, streamlined, and easily implemented into routine primary care practice. To address this need, Hypertension Canada has released a new Primary Care Hypertension Guideline, developed as part one of a two-part guideline strategy and informed by contemporary evidence and extensive input from primary care providers and patients. This article highlights the most clinically relevant updates from the 2025 Hypertension Canada Primary Care Guideline for front-line clinicians. Major changes include adoption of a lower blood pressure threshold (≥130/80 mmHg) to define hypertension, selective initiation of pharmacotherapy based on blood pressure level and cardiovascular risk, and a simplified target of systolic blood pressure <130 mmHg for most patients when tolerated. The guideline emphasizes accurate blood pressure measurement, routine use of out-of-office monitoring, and foundational lifestyle modification for all individuals with hypertension. Importantly, for patients requiring medication, early initiation of low-dose single-pill combination therapy is recommended to improve blood pressure control and reduce therapeutic inertia. These recommendations are embedded within the World Health Organization's HEARTS framework, providing standardized diagnostic and treatment algorithms tailored to Canadian primary care. Together, these updates are intended to simplify hypertension management, enhance guideline uptake, and improve cardiovascular outcomes at the population level.

Background

Hypertension remains the most prevalent modifiable risk factor for cardiovascular disease and cardiovascular mortality worldwide.[1,2] In Canada, approximately one in four adults lives with hypertension, imposing a substantial burden on individuals, families, and the healthcare system.[3] Canada has historically been recognized as a global leader in hypertension awareness, treatment, and control.[4] However, this success has faded over the past decade. Recent national data demonstrate declining rates of hypertension treatment and control, raising concerns about increasing cardiovascular morbidity and mortality.[5,6]

Several factors have been proposed to account for this regression, including uncertainty and inconsistency surrounding optimal blood pressure thresholds, increasingly complex guideline recommendations, limited uptake of evidence into routine clinical practice, and insufficient engagement with front-line primary care providers. Given that the vast majority of hypertension diagnosis and management occurs in primary care settings, improving population-level blood pressure control relies heavily on making hypertension care simpler, more pragmatic, and easier to implement into everyday practice.

In response, Hypertension Canada has adopted a new two-part guideline strategy.[7] Alongside its forthcoming comprehensive guideline topics, a dedicated Primary Care Hypertension Guideline has been developed to provide streamlined, evidence-based, and implementation-ready recommendations tailored to real-world primary care settings.[8] This article highlights the key updates in the 2025 Hypertension Canada Primary Care Guideline and explores their practical implications for clinicians.

Why a Primary Care Focus?

Primary care serves as the cornerstone of hypertension management. Family physicians, physician assistants, nurse practitioners, nurses, and pharmacists diagnose hypertension, initiate treatment, adjust therapy, and provide long-term follow-up for the vast majority of patients with elevated blood pressure. Yet, traditional hypertension guidelines, including prior versions from Hypertension Canada, have often been lengthy, highly technical, and cumbersome to apply in busy clinical settings. Feedback from Canadian primary care providers and patients has consistently emphasized the need for guidance that is simpler, clearer, and more actionable. The 2025 Primary Care Guideline was intentionally designed to address this gap by focusing on the most common clinical scenarios encountered in primary care and by prioritizing recommendations most likely to influence outcomes at the population level.[8]

Importantly, this guideline is not intended to replace clinical judgment or to be applied to every patient. Rather, it provides a practical framework for managing the majority of adults with hypertension, while acknowledging that more complex cases may require individualized decision making or specialist involvement.

The HEARTS Framework

A defining feature of the new guideline is its integration of the World Health Organization's HEARTS framework, a globally recognized model for improving hypertension control at the population level.[9] The HEARTS framework emphasizes standardized diagnosis, simplified treatment algorithms, team-based care, and ongoing monitoring and evaluation. The framework was originally developed and implemented within the Kaiser Permanente health system, where hypertension control rates increased dramatically from approximately 44% to nearly 90% in just over a decade.[10,11]

Since its implementation, the HEARTS framework has been successfully adapted across diverse healthcare systems worldwide.[12] Importantly, HEARTS is not intended to function as a rigid protocol but rather as a flexible structure that can be adapted to meet the needs of a specific population to support consistency and efficiency of care. By embedding guideline recommendations within clear diagnostic and treatment algorithms, HEARTS aims to reduce therapeutic inertia, minimize unnecessary variation in care, and make it easier for clinicians to achieve blood pressure targets. The 2025 Primary Care Guideline's HEARTS-based diagnostic and treatment algorithms are displayed in **Figure 1** and **Figure 2**, respectively.[8]

A Lower Blood Pressure Threshold to Define Hypertension

One of the most notable changes in the 2025 guideline is the adoption of a lower blood pressure threshold to define hypertension: ≥130/80 mmHg when measured with a validated device under optimal conditions. This change represents a shift from previous Canadian guidelines and reflects accumulating evidence that cardiovascular risk begins well below traditional thresholds. Observational studies demonstrate a continuous relationship between blood pressure and cardiovascular events well below the traditional blood pressure threshold of 140/90 mmHg,[13] while randomized trials show meaningful reductions in cardiovascular events with blood pressure lowering in adults with systolic blood pressure starting at or above 130 mmHg.[14] For primary care providers, this change emphasizes earlier detection of patients at increased cardiovascular risk. While the revised definition will increase the number of individuals labelled as having hypertension, the goal is not over-treatment but rather earlier engagement in risk reduction, often through lifestyle modification alone.

Accurate blood pressure measurement is central to this approach. The guideline strongly recommends the use of validated automated blood pressure devices and standardized measurement techniques. Out-of-office blood pressure monitoring, either ambulatory or home-based,

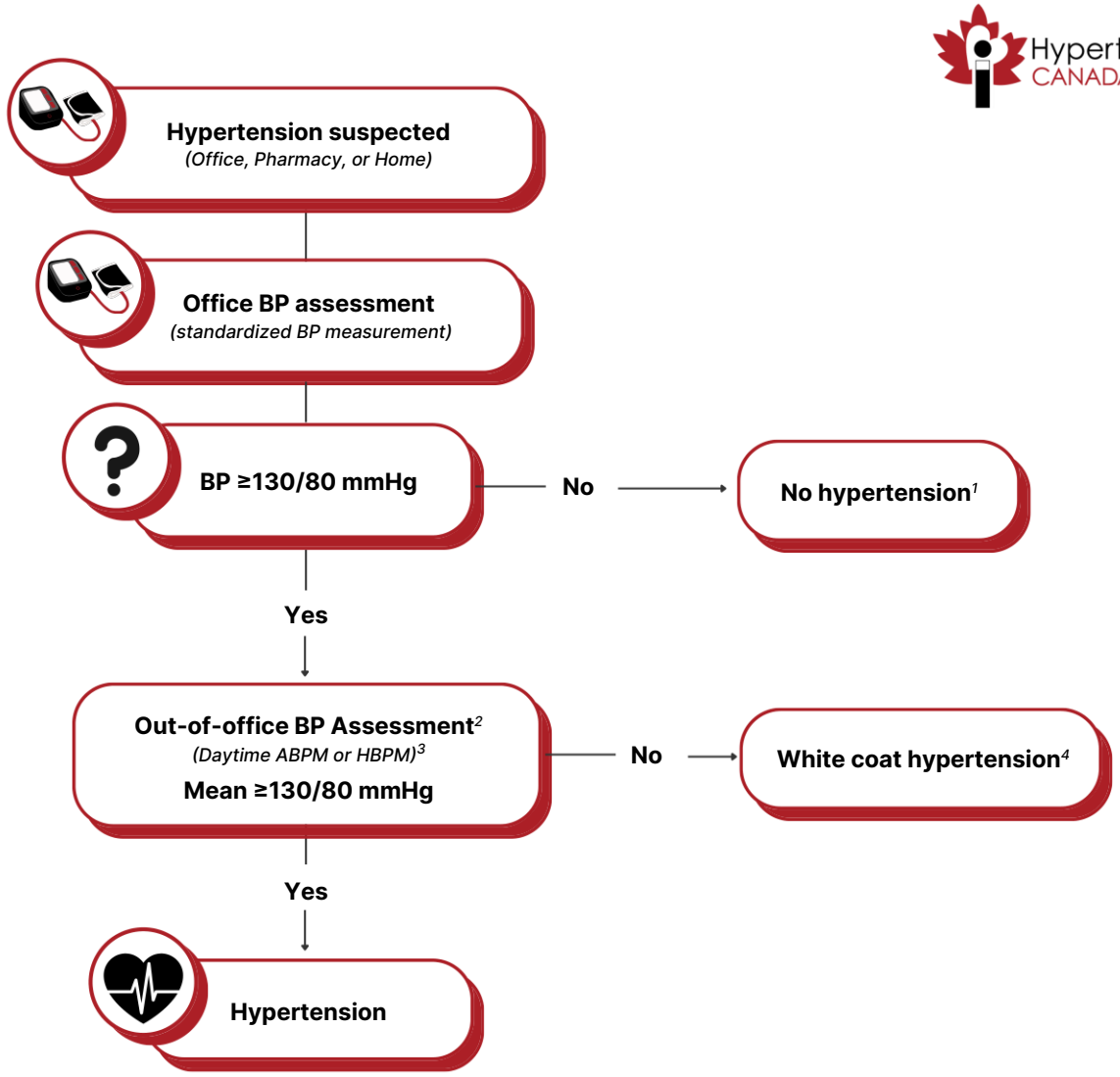

Figure 1. Suggested algorithm for the diagnosis of hypertension in primary care; *adapted from Goupil R et al. CMAJ. 2025;197(20):E549-E64)*.

1) Continue yearly or opportunistic BP monitoring; perform out-of-office BP assessment if masked hypertension is suspected.
2) If unavailable or infeasible, repeat office BP assessment at a separate visit.
3) Use Hypertension Canada-recommended or other validated home BP devices.
4) Continue yearly or opportunistic BP monitoring.

Abbreviations: ABPM: ambulatory blood pressure monitor; **BP:** blood pressure; **HBPM:** home blood pressure monitor.

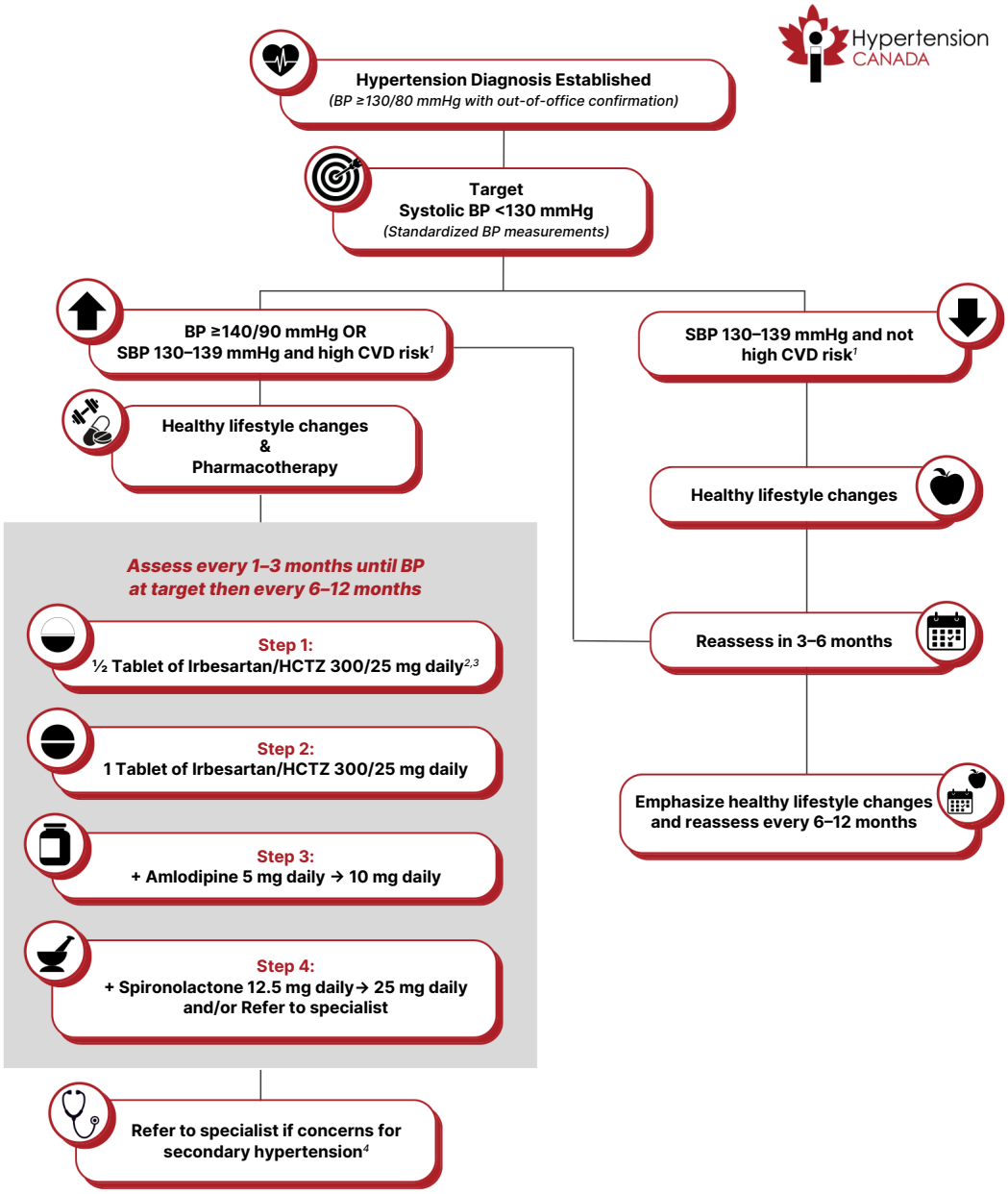

Figure 2. Suggested algorithm for the treatment of hypertension in primary care.; *adapted from Goupil R et al. CMAJ. 2025;197(20):E549-E64).*

1) High CVD risk conditions include established cardiovascular disease (coronary heart disease, heart failure, cerebrovascular disease, and peripheral arterial disease), type 1 or type 2 diabetes mellitus, chronic kidney disease (eGFR <60 mL/min/1.73 m2 or albuminuria ≥3 mg/mmol), 10-year Framingham Risk Score ≥20%, and age ≥75 years.

2) Initial single-pill combination therapy is preferred if available and covered. If unavailable, two separate pills can be used as an alternative, with preference given to a long-acting thiazide-like diuretic over a thiazide diuretic. In patients at high risk of symptomatic hypotension, treatment initiation with a single agent is reasonable. This algorithm is not intended for use during pregnancy. ACEIs and ARBs should be avoided/discontinued in all individuals who are pregnant or trying to become pregnant.

3) Acceptable alternative single-pill combinations available in Canada are listed in Table 4 of the original guideline manuscript.[8]

4) Features suggestive of secondary hypertension include unexplained sudden worsening of hypertension, hypokalemia, adrenal nodule, abdominal bruit, acute kidney injury following hypertension treatment, severe/malignant hypertension, hypertension at a young age, and resistant hypertension.

Abbreviations: ACEI: angiotensin-converting enzyme inhibitor; **ARB:** angiotensin II receptor blocker; **BP:** blood pressure; **CVD:** cardiovascular disease; **eGFR:** estimated glomerular filtration rate; **HCTZ:** hydrochlorothiazide.

is encouraged to confirm the diagnosis of hypertension and to identify white coat and masked hypertension, both of which are common and clinically relevant.[15,16]

Not All Hypertension Requires Pharmacotherapy

Despite the lower diagnostic threshold used to define hypertension, the guideline clearly distinguishes diagnosis from pharmacotherapy initiation. Not all patients with blood pressure ≥130/80 mmHg require antihypertensive medication. Pharmacotherapy is recommended for:

- All adults with blood pressure ≥140/90 mmHg, regardless of cardiovascular risk.
- Adults with systolic blood pressure 130–139 mmHg who are at high cardiovascular disease risk, such as those with established cardiovascular disease, diabetes mellitus, chronic kidney disease, or a 10-year Framingham Risk Score ≥20%.

For patients with systolic blood pressure of 130–139 mmHg who are not at high cardiovascular risk, the emphasis is on lifestyle modification, with planned blood pressure reassessment over time. This distinction is critical in primary care, where avoiding over-treatment and polypharmacy is a legitimate concern.

Lifestyle interventions remain foundational for all patients with hypertension, regardless of whether pharmacotherapy is indicated. Evidence supports meaningful blood pressure reduction through dietary sodium reduction, increased dietary potassium intake, achievement of a healthy weight, regular physical activity, reduction in alcohol intake, and smoking cessation. Importantly, lifestyle changes may reduce or delay the need for medication and enhance the effectiveness of pharmacotherapy when it is required.

A Single Blood Pressure Target for Most Patients

Another key innovation in the guideline is the recommendation of a single systolic blood pressure target of <130 mmHg for most adults with hypertension, provided treatment is well tolerated. This simplified approach responds directly to feedback from primary care providers who requested clearer and more consistent targets. Evidence from large randomized trials and meta-analyses shows that achieving systolic blood pressure below 130 mmHg substantially reduces major adverse cardiovascular events and mortality compared with higher targets.[14] While even more intensive targets (e.g., <120 mmHg) may confer additional benefit in select high-risk populations, they are more difficult to achieve in routine practice and are associated with higher rates of adverse events.[17] The <130 mmHg target represents a balance between efficacy, safety, and feasibility.

The guideline also acknowledges that this blood pressure target may not be appropriate for all patients. Factors such as frailty, orthostatic hypotension, fall risk, comorbidities, and patient preferences must be considered. In such cases, clinicians are encouraged to individualize care and aim for the lowest blood pressure that is safely achievable.

An Emphasis on Single-Pill Combination Therapy

One of the most practice-changing recommendations in the guideline is the strong endorsement of low-dose combination therapy as initial pharmacologic treatment, ideally delivered as a single-pill combination. Most patients with hypertension require more than one medication to achieve blood pressure control, particularly with lower blood pressure targets.[18] Starting therapy with combination treatment increases the likelihood of early blood pressure control, reduces therapeutic inertia, and minimizes the need for frequent dose-titration visits.[19] The guideline recommends initial therapy using two of the following three complementary first-line antihypertensive drug classes:

1. Angiotensin-converting enzyme inhibitors or angiotensin II receptor blockers
2. Thiazide or thiazide-like diuretics
3. Long-acting dihydropyridine calcium channel blockers

Beta-blockers are no longer recommended as first-line antihypertensive agents unless a specific clinical indication is present (e.g., arrhythmia, post-myocardial infarction, heart failure).

Single-pill combinations offer several advantages that are highly relevant in primary care, including improved adherence, faster blood pressure control, fewer clinic visits, and lower overall costs compared with free drug combinations.[19] Importantly, evidence suggests that upfront combination therapy is associated with reductions in cardiovascular hospitalizations and all-cause mortality.[20] For patients whose blood pressure remains above target, the guideline recommends escalation to triple therapy using the same three complementary first-line drug classes, with spironolactone suggested as the preferred fourth-line agent for managing resistant hypertension.

Summary

The 2025 Hypertension Canada Primary Care Guideline represents a meaningful shift toward simpler, more pragmatic hypertension management. Key updates (including a lower diagnostic threshold of ≥130/80 mmHg, selective initiation of pharmacotherapy, a single blood pressure target of <130 mmHg, and early use of single-pill combination therapy) are grounded in contemporary evidence and designed for real-world primary care practice settings. By integrating these recommendations within the HEARTS framework, the guideline prioritizes standardization, efficiency, and population-level impact while preserving flexibility for individual patient care. Successful implementation has the potential to reverse declining hypertension control rates in Canada and to substantially reduce the burden of cardiovascular disease. For primary care providers, the messages are clear: measure blood pressure accurately, intervene earlier, treat decisively when indicated, and simplify care wherever possible. Hypertension control remains one of the most powerful tools we have to improve long-term health outcomes, and primary care remains at the heart of that effort.

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