Why hypertension control programs are important?

Dr Taskeen Khan
Medical officer: CVDs
WHO HQ, Geneva, Switzerland

Integrating non-HIV Services into HIV Programs

April 15-18, 2024 | Nairobi, Kenya

Dr Tedros Adhanom Ghebreyesus
WHO Director-General

“Hypertension control programmes remain neglected, under-prioritized and vastly underfunded. Strengthening hypertension control must be part of every country’s journey towards universal health coverage, based on well-functioning, equitable and resilient health systems, built on a foundation of primary health care. ”

Background

- More people die each year from cardiovascular disease than from any other cause.
- Hypertension – raised blood pressure – significantly increases the risk of diseases of the heart, brain, kidneys and other organs.
- Around 1.28 billion adults aged 30–79 years worldwide have hypertension (HTN).
- 1 in 3 adults have hypertension
- 4 out of 5 are not receiving the care needed to keep their hypertension under control

Why hypertension?

- It is the single most prevalent risk factor globally
- Treating hypertension has the largest impact on health life years gained
- It requires no laboratory or specialized testing or equipment – just a BP cuff
- It is simple to treat – you just require 3 drugs
- The drugs for hypertension are safe without much side effects
- Treating hypertension is one of the most important interventions for people living with diabetes
- It is a pathfinder to universal health coverage
- We start with hypertension and then build services to integrate diabetes, cancers, CRDs one step at a time
- It is the most prevalent risk factor amongst PLHIV, an estimated 27% of people living with HIV on antiretroviral therapy (ART) also have hypertension

Saving lives - Health gains from blood pressure control

Health gains (2023–2050) from improved population blood pressure control to > 50% by 2050

Outcome	Projected number (progress scenario)
Nonfatal myocardial infarctions averted	79 million
Nonfatal strokes averted	120 million
Nonfatal cases of heart failure averted	17 million
Cardiovascular deaths averted	76 million

A good BP control program has:

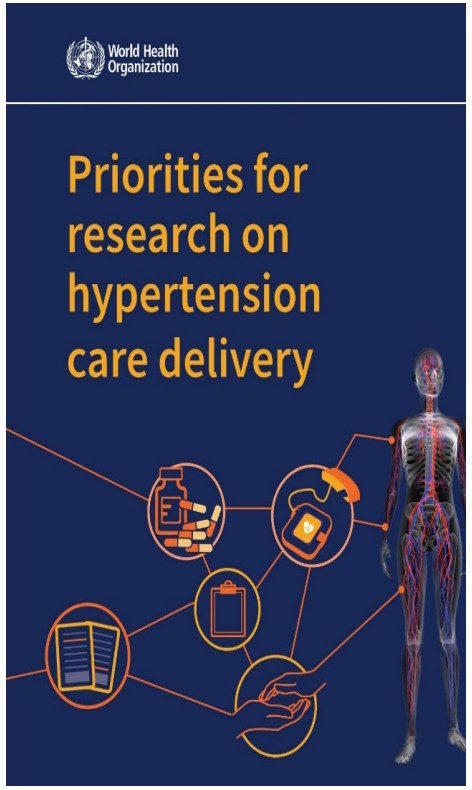
- Simple drug and dose specific protocol
- Access to validated BP devices
- Adequate availability of the drugs as defined in the protocol
- Team based approach and use of non physician healthcare workers
- Information system that can capture the control rate of patients visiting the facility

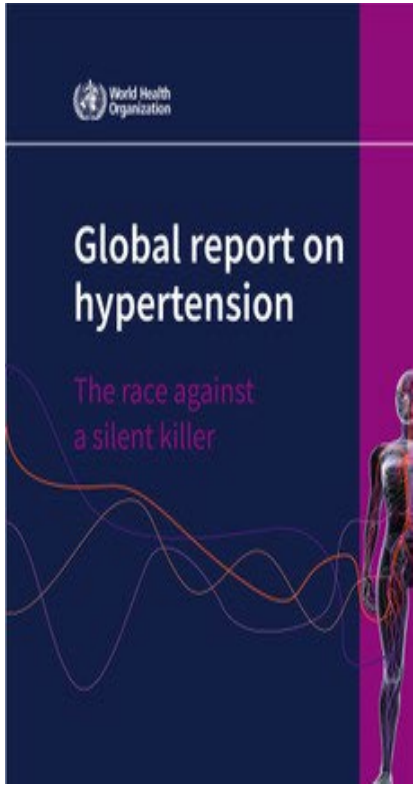
Hypertension programs should be:

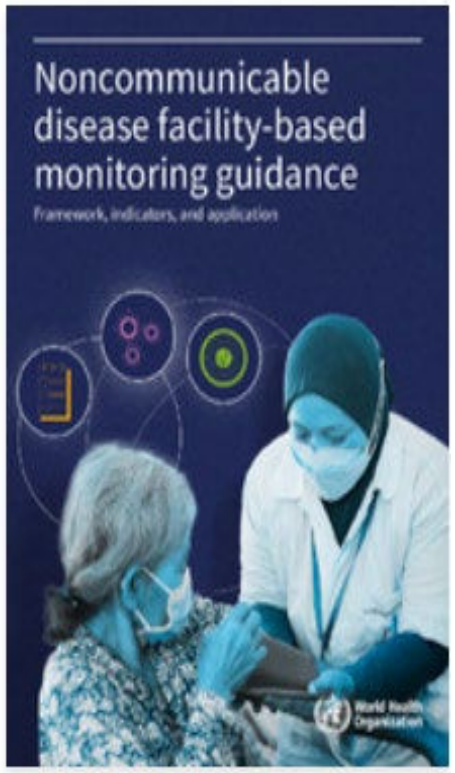
- Scaled
- Institutionalized & Integrated
- Measurable
- Practical
- Lasting
- Easy

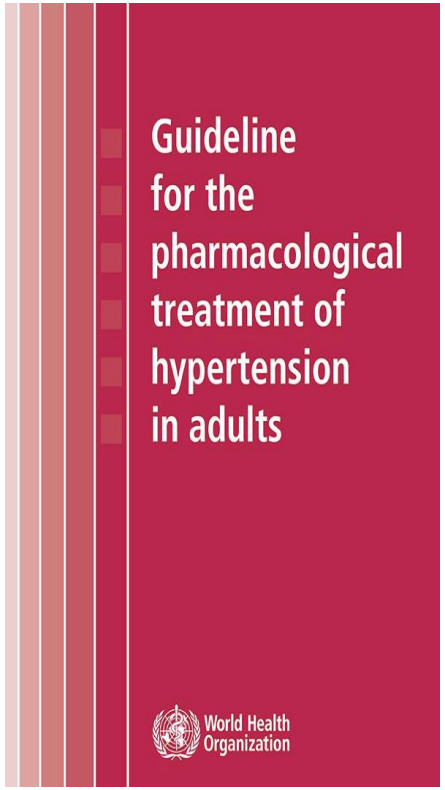
World Health Organization

The new products that WHO has to offer guidance on hypertension programs









World Health Organization

Guideline for pharmacological treatment of hypertension in adults, 2021

Includes recommendations on:

1. **Blood pressure threshold for initiation of pharmacological treatment**
2. **Laboratory testing**
3. **CVD risk assessment**
4. **Drug classes to be used as first-line agents**
5. **Combination therapy**
6. **Target blood pressure**
7. **Frequency of assessment**
8. **Treatment by nonphysician professionals**

1. Recommendation on blood pressure threshold for initiation of pharmacological treatment
WHO recommends initiation of pharmacological antihypertensive treatment of individuals with a confirmed diagnosis of hypertension and systolic blood pressure of ≥140 mmHg or diastolic blood pressure of ≥90 mmHg.
WHO recommends pharmacological antihypertensive treatment of individuals with existing cardiovascular disease and systolic blood pressure of 130–139 mmHg.
WHO suggests pharmacological antihypertensive treatment of individuals without cardiovascular disease but with high cardiovascular risk, diabetes mellitus, or chronic kidney disease, and systolic blood pressure of 130–139 mmHg.
2. Recommendation on laboratory testing
When starting pharmacological therapy for hypertension, WHO suggests obtaining tests to screen for comorbidities and secondary hypertension, but only when testing does not delay or impede starting treatment.

3. Recommendation on cardiovascular disease risk assessment

WHO suggests cardiovascular disease risk assessment at or after the initiation of pharmacological treatment for hypertension, but only where this is feasible and does not delay treatment.

4. Recommendation on drug classes to be used as first-line agents

For adults with hypertension requiring pharmacological treatment, WHO recommends the use of drugs from any of the following three classes of pharmacological antihypertensive medications as an initial treatment:

1. thiazide and thiazide-like agents
2. angiotensin converting-enzyme inhibitors (ACEis)/angiotensin receptor blockers (ARBs)
3. long-acting dihydropyridine calcium channel blockers (CCBs).

5. Recommendation on combination therapy
For adults with hypertension requiring pharmacological treatment, WHO suggests combination therapy, preferably with a single-pill combination (to improve adherence and persistence), as an initial treatment. Antihypertensive medications used in combination therapy should be chosen from the following three drug classes: diuretics (thiazide or thiazide-like), angiotensin-converting enzyme inhibitors (ACEis)/angiotensin-receptor blockers (ARBs), and long-acting dihydropyridine calcium channel blockers (CCBs).
6. Recommendations on target blood pressure
WHO recommends a target blood pressure treatment goal of <140/90 mmHg in all patients with hypertension without comorbidities.
WHO recommends a target systolic blood pressure treatment goal of <130 mmHg in patients with hypertension and known cardiovascular disease (CVD).
WHO suggests a target systolic blood pressure treatment goal of <130 mmHg in high-risk patients with hypertension (those with high CVD risk, diabetes mellitus, chronic kidney disease).

7. Recommendations on frequency of assessment
WHO suggests a monthly follow up after initiation or a change in antihypertensive medications until patients reach target.
WHO suggests a follow up every 3–6 months for patients whose blood pressure is under control.
8. Recommendation on treatment by nonphysician professionals
WHO suggests that pharmacological treatment of hypertension can be provided by nonphysician professionals such as pharmacists and nurses, as long as the following conditions are met: proper training, prescribing authority, specific management protocols and physician oversight.

Recommended patient-care pathway: *not* using single-pill combination

Treat adults with BP ≥140 mmHg or ≥90
(SBP ≥130 mmHg for those with CVD, DM, CKD).

↓

Start with medications from any of the following three classes of pharmacological antihypertensive medications as an initial treatment:
1) thiazide and thiazide-like agents, 2) ACEi/ARB, and 3) long-acting dihydropyridine CCB.

↓

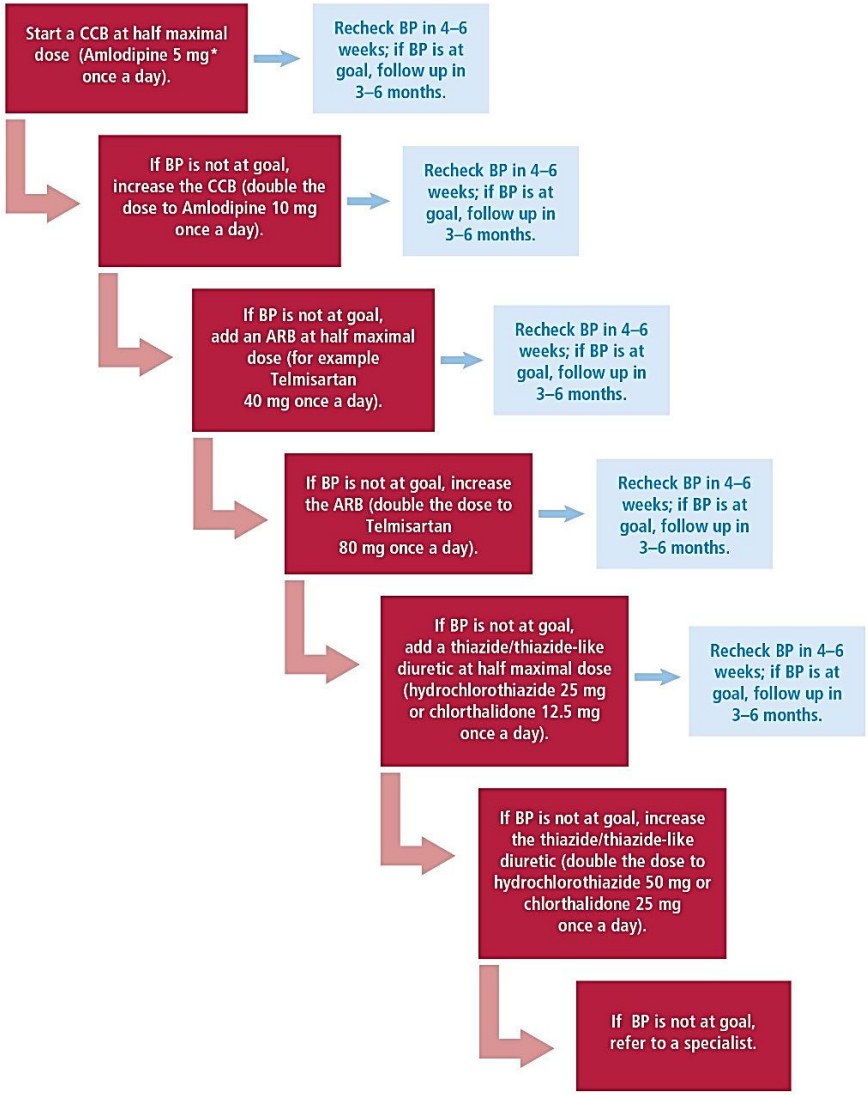
Treatment targets: <140/90 mmHg
(SBP <130 mmHg for high-risk patients with CVD, DM, CKD).

↓

Follow up monthly after initiation or a change in antihypertensive medications until patient reaches target.
Follow up every 3–6 months for patients with BP under control.

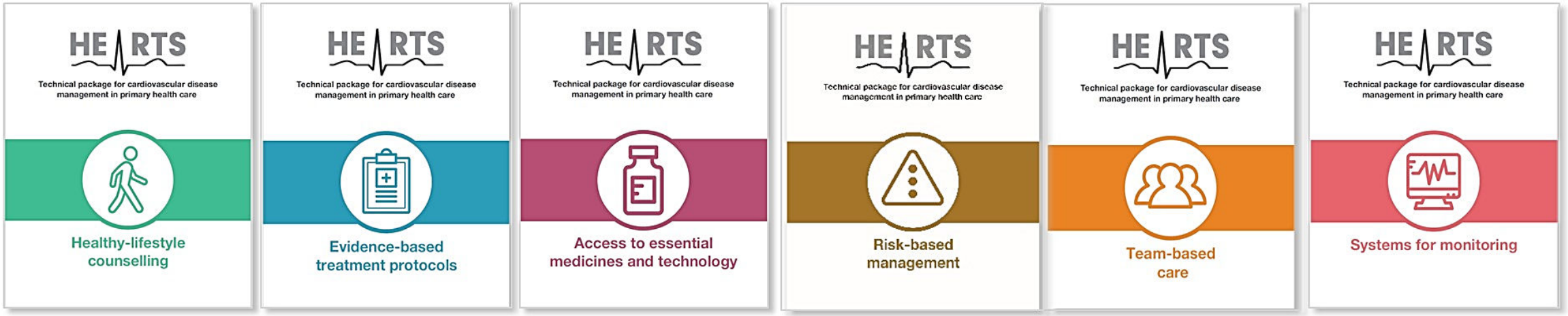
- Pharmacological treatment to be initiated when:
  - A diagnosis of HTN has been made
  - BP level is high or there is accompanying evidence of end organ damage
- Patient should be counselled about starting medication
- Basic lab testing and CVD risk assessment to take place only if it does not delay treatment.
- Consider using diuretics or CCB in patients 65 years or older, or those of African or Afro-Caribbean descent, beta-blockers (BBs) post MI, ACEis/ARBs in those with diabetes, heart failure or CKD.

Protocol 2: Initiation of treatment *not* using a single-pill combination



- A CCB, rather than a thiazide-type diuretic or ACEi/ARB, was selected as first-line medication if one agent is used, to avoid the need for electrolyte measurements or to alleviate concerns regarding potential change in glomerular filtration rate.
- Drugs affecting the renin–angiotensin system (ACEis, ARBs, and aliskiren) have been associated with serious fetal toxicity, including renal and cardiac abnormalities and death; they are contraindicated for use during pregnancy.

HEARTS technical package



The HEARTS technical package provides cost-effective strategies that can be implemented at the primary health care level to control blood pressure and prevent heart attack, stroke and other complications. It was launched in 2018, since then we have updates with the products demonstrated above.

HEARTS around the world

Since 2016 the HEARTS technical package, endorsed by 11 partner organizations, has been used by an increasing number of countries (approximately 40) to strengthen CVD management in primary health care settings.

The barangay health workers' role in hypertension control in the Philippines

Using clinically validated automated devices in primary health care settings: HEARTS in the Americas

National scale up of HEARTS in Cuba

Strengthening supply chain : India hypertension control initiative

Source: The Indian Hypertension Control Initiative

icap Global Health

THE CQUIN NETWORK

www.cquin.icap.columbia.edu

Thank You!

World Health Organization