

# Effective Diagnosis, Treatment, and Monitoring of Hypertension in Primary Care: Training Workshop

## Session

# 3

## Treatment of hypertension

Content should be adapted with country-specific information prior to use.  
**Red text** denotes places where modification may be required. Guidance on how to adapt the training is provided in the Course Overview.

# Competency and objectives

## **Expected competency on completion of session**

*Ability to treat patients with hypertension using standardized protocol, follow-up for adherence to treatment, and manage associated co-morbidities to achieve target blood pressure (BP) control.*

## **In this session, you will gain knowledge on:**

- Essential treatment components
- Who should receive treatment
- Medications used for treating hypertension
- Treatment targets
- Special considerations
- Compliance with long-term follow up and medication adherence

# Hypertension treatment

Hypertension treatment and management can be successful if it is:

- Available
- Affordable
- Adjustable

# Essential treatment components

1. Simple, detailed **protocols**
2. Administrative and operational procedures in place to enable **task-sharing**
3. Regular and uninterrupted supply of **medications**
4. **Patient-centered services** that reduce barriers to adherence
5. An information system that allows **real-time feedback** to facilitate continuous programme improvement

# Who should be screened

- Screen all adults  $\geq 18$  years old for elevated BP
- If BP is elevated, repeat screening at least one week later
- Provide lifestyle counselling for patients with BP of SBP 130-139 mmHg and/or DBP 80-89 mmHg with no other CVD risk factors

**Pharmacologically treat all individuals whose BP  $\geq 140$  mmHg and/or  $\geq 90$  mmHg after diagnosis confirmation at follow-up visit.**

# Available medications for treating hypertension

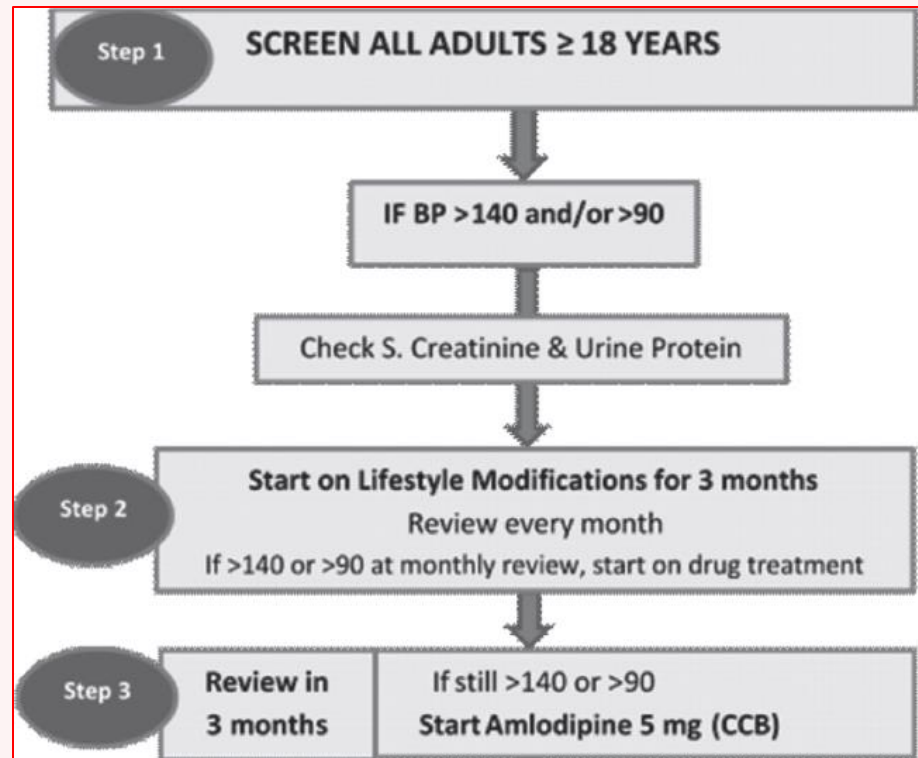
## Main classes of common treatment medications:

1. Angiotensin Converting Enzyme inhibitors (ACE inhibitors) and Angiotensin Receptor Blockers (ARBs)
2. Calcium Channel Blockers (CCB)
3. Diuretics

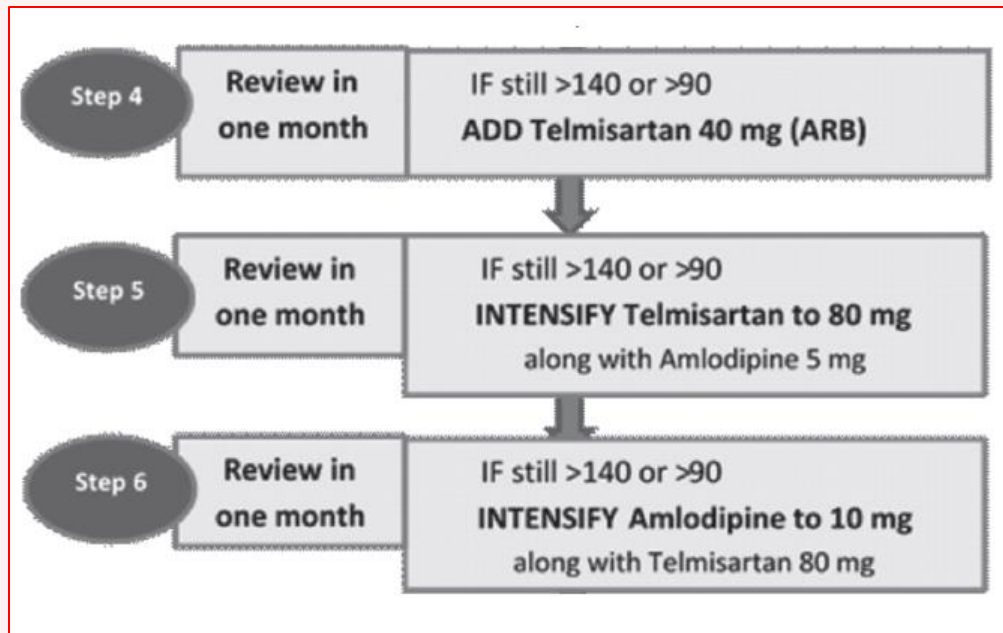
Others (e.g. vasodilators, centrally acting agents, beta blockers) can be considered in specific cases.

*(Consider side effects when choosing a medication.)*

# Endorsed protocol: Example from Kerala, India

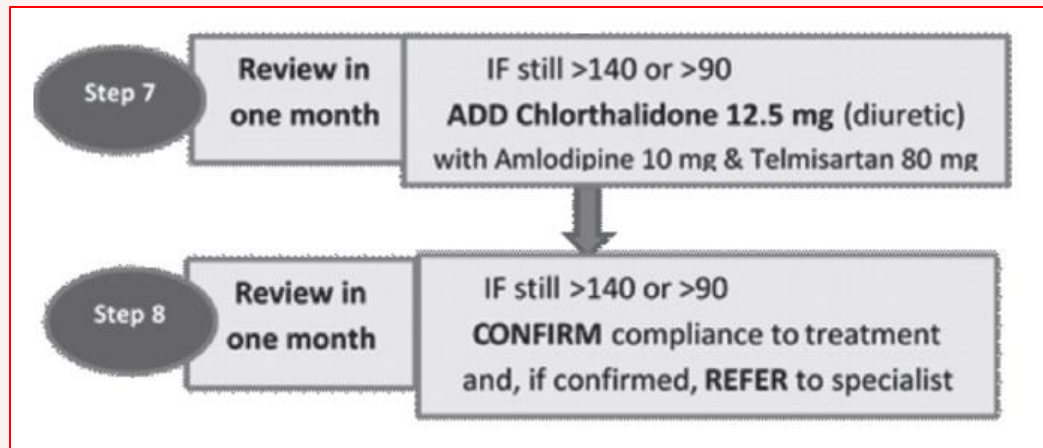


# Endorsed protocol: Example from Kerala, India





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# Drug selection and treatment targets

## Drug selection

- Most people need two or more classes of BP meds to reach target
- Two medications of same class are not advisable
- Taking ACE-Is and ARBs together is not advisable
- Reach intensification dose of first agent before starting another class

## Treatment targets

- General population: <140/90
- High-risk patients (e.g., individuals with diabetes, CAD, stroke, or CKD): <130/80

# Considerations for specific patients

## PROVISION FOR SPECIFIC PATIENTS

▶ **THIS PROTOCOL IS CONTRAINDICATED FOR WOMEN WHO ARE OR COULD BECOME PREGNANT.**

- Manage diabetes as indicated by national protocol.
- Aim for BP <130/80 for people at high risk, such as individuals with diabetes, CAD, stroke, or CKD.

## PROVISION FOR SPECIFIC PATIENTS

- Manage diabetes as indicated by national protocol.
- Aim for BP <130/80 for people at high risk, such as individuals with diabetes, CAD, stroke, or CKD.

People with history of atrial fibrillation or heart failure and cerebrovascular disease:

- Add beta blocker with initial treatment

# Advice on lifestyle management

## **Encourage patients to adopt a healthy lifestyle:**

- Advise patients to avoid tobacco use and limit alcohol intake
- Suggest ways to increase their physical activity
- Discuss modifications for a healthy diet

**Reducing risks by changing behaviours greatly improves health and the effectiveness of medication treatment.**

# EXERCISE 1



## Case scenarios: Treatment of hypertension

*Complete each case scenario as instructed.*

- 1. Read the assigned case scenario and answer the questions presented.*
- 2. When all groups have completed the task, the facilitator will lead a review of the responses.*

# Ensuring adherence to medication: Clinic level

## Existing health system strategies:

1. Standardized protocol
2. [Strategy 2]
3. [Strategy 3, etc.]

# Ensuring adherence to medication: Patient level

## **Patient education:**

- Clear prescription instructions
- Written and/or verbal education materials
- Medication side effects.

## **Patient reminders:**

- Medication reminders with alarms or applications
- System for patient monitoring and counselling.

## **Patient motivation:**

- Positive feedback
- Easily accessible medications.

# EXERCISE 2



## Discussion: Drug selection considerations

1. *How important is the choice of individual drugs in a drug class (i.e., Lisinopril v. Ramipril for ACEI)?*
2. *Why are beta blockers not included as a first- or second-line treatment, except for those who just had a heart attack?*
3. *What is the risk of hypokalaemia among patients receiving a diuretic?*



# EXERCISE 3



## Role play exercise: Adherence to treatment

*The facilitator will ask for two volunteers to act out this scene in front of the group.*

**Role 1:** *A patient who was diagnosed as having hypertension 6 months ago and was initiated on treatment. He/she has no symptoms and has inconsistently taken medication. BP is 150/102.*

**Role 2:** *A health care provider who needs to elicit the patient's history of taking medication and convince the patient to be consistent.*