Antihypertensive Drug Treatment - Management of Hypertension in Adults
(Pathway to support Telford Healthy Hearts Programme)

Patient diagnosed with essential hypertension

Offer lifestyle advice to all patients with hypertension

Use clinical judgement in relation to frailty and comorbidities before treatment titration

Type 2 Diabetes
Heart Failure
Previous MI
CKD with Proteinuria

YES

Angiotensin-converting enzyme (ACE) inhibitors or angiotensin II receptor blocker (ARB):
Ramipril or Lisinopril

Not controlled

Calcium Channel Blocker (CCB):
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Confirm resistant hypertension (elevated BP with ABPM or HBPM). Check for postural hypertension and discuss treatment adherence
Consider seeking expert advice OR adding:
- Low dose spironolactone if blood potassium ≤4.5mmol/l
- Alpha-blocker (Doxazosin) or beta blocker if blood potassium > 4.5mmol/l

Seek expert advice if BP is uncontrolled on optimal tolerated doses of 4 drugs

For diagnosis thresholds and blood pressure treatment targets see guidance below

TWCCG/HP Medicines Management – Approved October 2019
**Diagnosing hypertension**

*Measure blood pressure in both arms.*

If the difference in readings between arms is more than 15 mmHg on the second measurement, measure subsequent blood pressures in the arm with the higher reading.

- If ≥ 140/90 mmHg, take second measurement during consultation
- If second measurement substantially different from first, take 3rd measurement
- Record the lower of the last 2 measurements as the clinic BP

**Confirming the diagnosis**

- If clinic BP is between 140/90 mmHg and 180/120 mmHg, offer ambulatory blood pressure monitoring (ABPM) to confirm the diagnosis of hypertension.
- If ABPM is unsuitable or the person is unable to tolerate it, offer home blood pressure monitoring (HBPM) to confirm the diagnosis of hypertension.

**Using Ambulatory Blood Pressure Monitoring (ABPM) or Home Blood Pressure Monitoring (HBPM)**

**ABPM**

- Ensure at least 2 measurements per hour during persons usual waking hours
- Use the average of at least 14 measurements taken during waking hours to confirm diagnosis

**HBPM**

- For each BP recording, two consecutive measurements are taken, at least 1 minute apart with person seated
- BP is recorded twice daily, ideally in the morning and evening
- BP recording continues for at least 4 days, ideally for 7 days.
- Discard the measurements taken on the first day and use the average value of all the remaining measurements to confirm the diagnosis.

CONFIRM A DIAGNOSIS OF HYPERTENSION IN PEOPLE WITH:

Clinic BP of 140/90 or higher AND ABPM daytime average or HBPM average of 135/85 or higher

**If hypertension is not diagnosed**

- Offer to measure the person’s blood pressure at least every 5 years
- Consider measuring BP more often if the person’s clinic BP is close to 140/90 mmHg
- If there is evidence of target organ damage such as left ventricular hypertrophy, albuminuria or proteinuria, consider carrying out investigations for alternative causes of the target organ damage.
Starting antihypertensive drug treatment

- Offer antihypertensive drug treatment to **people aged under 80 years with stage 1 hypertension** who have one or more of the following (use clinical judgement for people with frailty or multimorbidity):
  - Target organ damage
  - Established cardiovascular disease
  - Renal disease
  - Diabetes
  - 10-year cardiovascular risk ≥ 10%
- Offer antihypertensive drug treatment to **adults of any age with persistent stage 2 hypertension**.
- Consider antihypertensive drug treatment in addition to lifestyle advice for younger adults with stage 1 hypertension and an estimated 10-year risk below 10%. Bear in mind that 10-year cardiovascular risk may underestimate the lifetime probability of developing cardiovascular disease.
- Consider starting antihypertensive drug treatment for people aged over 80 with stage 1 hypertension. Use clinical judgement for people with frailty or multimorbidity
- For adults aged under 40 with hypertension, consider seeking specialist evaluation of secondary causes of hypertension and a more detailed assessment of the long-term balance of treatment benefit and risks.
- In **severe hypertension** consider starting drug treatment immediately, without waiting for the results of ABPM or HBPM

Blood pressure targets

**Clinic blood pressure**
- People aged under 80 years: < 140/90 mmHg
- People aged over 80 years: < 150/90 mmHg

**Daytime average ABPM or average HBPM blood pressure during person’s usual waking hours**
- People aged under 80 years: < 135/85 mmHg
- People aged over 80 years: < 145/85 mmHg

Definitions

**Stage 1 hypertension**: Clinic BP ranging from ≥140/90 mmHg to 159/99 mmHg and subsequent ABPM daytime average or HBPM average blood pressure ranging from 135/85 mmHg to 149/94 mmHg.

**Stage 2 hypertension**: Clinic blood pressure of 160/100 mmHg or higher but less than 180/120 mmHg and subsequent ABPM daytime average or HBPM average blood pressure of 150/95 mmHg or higher.

**Severe hypertension**: Clinic systolic blood pressure of 180 mmHg or higher or clinic diastolic blood pressure of 120 mmHg or higher.