Antihypertensive Drug Treatment
Management of Primary Hypertension in Adults
(Based on NICE Clinical Guideline 127, Published August 2011)
(NB: Please also refer to the CCG guidelines of managing hypertension in patients with type 2 diabetes and managing hypertension in patients with CKD)

Patients younger than 55 years

Patients 55 years or older or black patients of any age

ACE inhibitor (CCG guidance use ramipril or lisinopril 1st line)

Calcium Channel Blocker (CCG guidance – use amlodipine maleate 1st line (may appear as ‘amlodipine’ on GP system)

Not controlled

ACE inhibitor + Calcium Channel Blocker

Not controlled

ACE inhibitor + Thiazide-like diuretic (CCG guidance – use indapamide 2.5mg once daily 1st line) + Calcium Channel Blocker

Not controlled

CONSIDER

Further diuretic therapy with:-
- Spironalactone 25mg once daily if blood potassium ≤ 4.5mmol/l
- Higher dose thiazide-like diuretic if blood potassium > 4.5mmol/l

CONSIDER SEEKING SPECIALIST ADVICE

CONSIDER

Beta blocker
OR
Alpha blocker

If BP remains uncontrolled

If further diuretic therapy not tolerated / contraindicated or ineffective

Diagnosing hypertension

Measure blood pressure in both arms
- 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 ≥ 140/90 mmHg, offer ABPM to confirm diagnosis
- If patient unable to tolerate ABPM, HBPM is a suitable alternative

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.

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.

Definitions:-

**Stage 1 hypertension:** Clinic BP ≥ 140/90 mmHg and subsequent ambulatory blood pressure monitoring (ABPM) daytime average or home blood pressure monitoring (HBPM) average is ≥ 135/85 mmHg.

**Stage 2 hypertension:** Clinic BP ≥ 160/100 mmHg and subsequent ABPM daytime average or HBPM average is ≥ 150/95 mmHg.

**Severe hypertension:** Clinic systolic BP ≥ 180 mmHg, or clinic diastolic blood pressure ≥ 110 mmHg.

When to start 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:-
  - Target organ damage
  - Established cardiovascular disease
  - 10-year cardiovascular risk ≥ 20%
- Offer antihypertensive drug treatment to any age with stage 2 hypertension.
- For people < 40 years of age with stage 1 hypertension and no evidence of target organ damage, cardiovascular disease, renal disease or diabetes, consider seeking specialist evaluation of secondary causes of hypertension and a more detailed assessment of potential target organ damage. This is because 10-years cardiovascular risk assessments can underestimate the lifetime risk of cardiovascular events in these people.
- 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