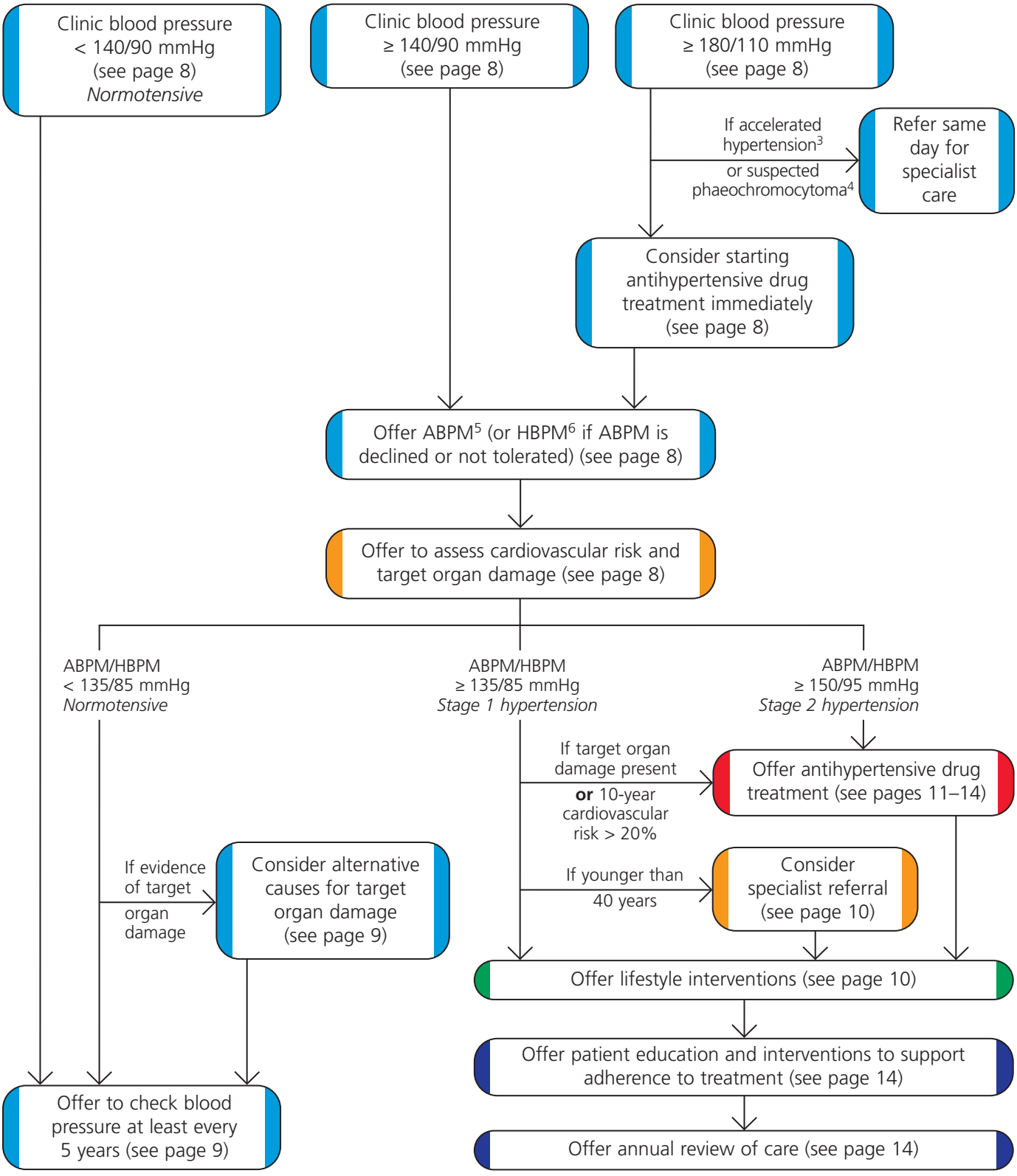
Care pathway for hypertension



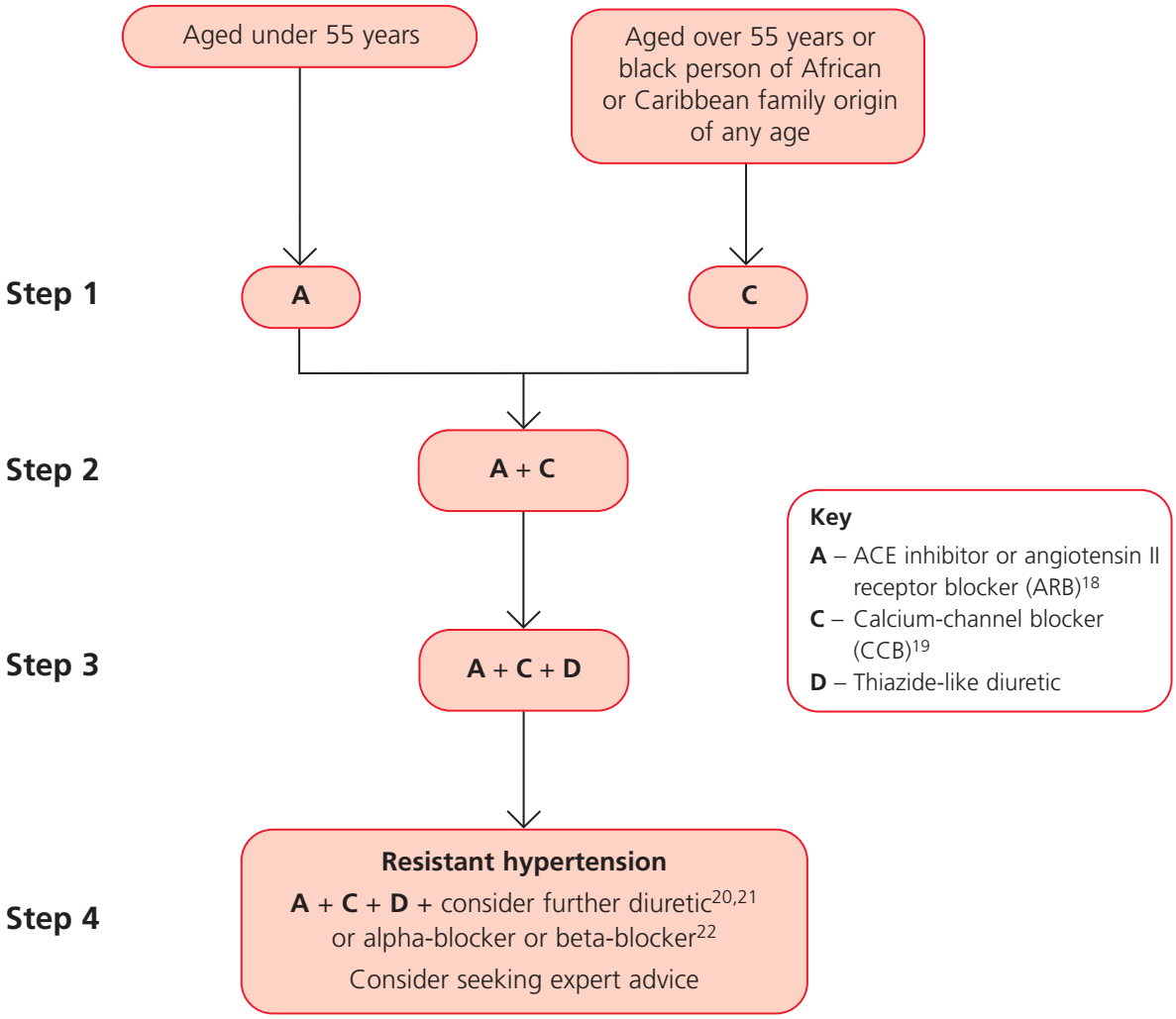
[3] Signs of papilloedema or retinal haemorrhage.
[4] Labile or postural hypotension, headache, palpitations, pallor and diaphoresis.
[5] Ambulatory blood pressure monitoring.
[6] Home blood pressure monitoring.

Summary of antihypertensive drug treatment

Also see 'Initiating and titrating antihypertensive drug treatment' on pages 11–12.

BHS British Hypertension Society

NHS National Institute for Health and Clinical Excellence



[18] Choose a low-cost ARB.
[19] A CCB is preferred but consider a thiazide-like diuretic if a CCB is not tolerated or the person has oedema, evidence of heart failure or a high risk of heart failure.
[20] Consider a low dose of spironolactone[21] or higher doses of a thiazide-like diuretic.
[21] At the time of publication (August 2011), spironolactone did not have a UK marketing authorisation for this indication. Informed consent should be obtained and documented.
[22] Consider an alpha-blocker or beta-blocker if further diuretic therapy is not tolerated, or is contraindicated or ineffective.

Key priorities for implementation *continued*

Choosing antihypertensive drug treatment

- Offer people aged 80 years and over the same antihypertensive drug treatment as people aged 55–80 years, taking into account any comorbidities.

Step 1 treatment

- Offer step 1 antihypertensive treatment with a calcium-channel blocker (CCB) to people aged over 55 years and to black people of African or Caribbean family origin of any age. If a CCB is not suitable, for example because of oedema or intolerance, or if there is evidence of heart failure or a high risk of heart failure, offer a thiazide-like diuretic.
- If a diuretic treatment is to be initiated or changed, offer a thiazide-like diuretic, such as chlortalidone (12.5–25.0 mg once daily) or indapamide (1.5 mg modified-release or 2.5 mg once daily) in preference to a conventional thiazide diuretic such as bendroflumethiazide or hydrochlorothiazide.
- For people who are already having treatment with bendroflumethiazide or hydrochlorothiazide and whose blood pressure is stable and well controlled, continue treatment with the bendroflumethiazide or hydrochlorothiazide.

Step 4 treatment

- For treatment of resistant hypertension at step 4:
  - Consider further diuretic therapy with low-dose spironolactone (25 mg once daily)[2] if the blood potassium level is 4.5 mmol/l or lower. Use particular caution in people with a reduced estimated glomerular filtration rate because they have an increased risk of hyperkalaemia.
  - Consider higher-dose thiazide-like diuretic treatment if the blood potassium level is higher than 4.5 mmol/l.

[2] At the time of publication (August 2011), spironolactone did not have a UK marketing authorisation for this indication. Informed consent should be obtained and documented.

Monitoring treatment

- Use clinic blood pressure measurement to monitor the response to treatment.
- For people identified as having a 'white-coat effect'[23], consider ABPM or HBPM as an adjunct to clinic blood pressure measurements to monitor the response to treatment.

Blood pressure targets

Clinic blood pressure

- People aged under 80 years: lower than 140/90 mmHg
- People aged over 80 years: lower than 150/90 mmHg

Daytime average ABPM or average HBPM blood pressure during the person's usual waking hours

- People aged under 80 years: lower than 135/85 mmHg
- People aged over 80 years: lower than 145/85 mmHg

Patient education and adherence to treatment

- Help people to make informed choices by providing guidance and materials about the benefits of drugs and the unwanted side effects sometimes experienced[24].
- Tell people about patient organisations that have forums for sharing views and information[24].
- Offer an annual review of care to monitor blood pressure, provide people with support and discuss their lifestyle, symptoms and medication[24].

Interventions to support adherence to treatment

- Only use interventions to overcome practical problems associated with non-adherence if a specific need is identified[25].
- Target the intervention to the need. Interventions might include:
  - suggesting that people record their medicine-taking
  - encouraging people to monitor their condition
  - simplifying the dosing regimen
  - using alternative packaging for the medicine
  - using a multi-compartment medicines system[25].

[23] A discrepancy of more than 20/10 mmHg between clinic and average daytime ABPM or average HBPM measurements at the time of diagnosis.
[24] This recommendation was developed for the original 2004 guideline.
[25] This recommendation is taken from 'Medicines adherence' (NICE clinical guideline 76, 2009), available from **www.nice.org.uk/guidance/CG76**

Diagnosing hypertension

Measuring the clinic blood pressure

- Measure blood pressure in both arms.
  - If the difference in readings between arms is more than 20 mmHg, repeat the measurements.
  - If the difference in readings between arms remains more than 20 mmHg on the second measurement, measure subsequent blood pressures in the arm with the higher reading.
- If blood pressure measured in the clinic is 140/90 mmHg or higher:
  - Take a second measurement during the consultation.
  - If the second measurement is substantially different from the first, take a third measurement.

  Record the lower of the last two measurements as the clinic blood pressure.

Confirming the diagnosis

- If the clinic blood pressure is 140/90 mmHg or higher, offer ABPM to confirm the diagnosis of hypertension.
- If a person is unable to tolerate ABPM, HBPM is a suitable alternative to confirm the diagnosis of hypertension.
- While waiting to confirm the diagnosis, carry out investigations for target organ damage and a formal assessment of cardiovascular risk (see page 10).

Severe hypertension

- Consider starting antihypertensive drug treatment immediately, without waiting for the results of ABPM or HBPM, for people with severe hypertension.

Specialist investigations

- Refer people to specialist care the same day if they have:
  - accelerated hypertension (blood pressure usually higher than 180/110 mmHg with signs of papilloedema and/or retinal haemorrhage) **or**
  - suspected phaeochromocytoma (labile or postural hypotension, headache, palpitations, pallor and diaphoresis).
- Consider the need for specialist investigations in people with signs and symptoms suggesting a secondary cause of hypertension.