

## NICE updates its guidance on management of hypertension

NICE has published updated guidance on the management of hypertension (clinical guideline 127, August 2011)<sup>1</sup>. This update was made in collaboration with, and is endorsed by, the British Hypertension Society (BHS).

Among other things, important changes from previous guidance include:

- Using ambulatory or home blood pressure monitoring to confirm the diagnosis of hypertension.
- Offering treatment with a calcium-channel blocker<sup>a</sup> (C) as first choice step 1 antihypertensive for people aged over 55 years and black people of African or Caribbean family origin of any age.
- Offering an ACE inhibitor or a low-cost angiotensin-II receptor antagonist (A2RA<sup>b</sup>) as step 1 antihypertensive drug for non-black people younger than 55 years.
- Offering an ACE inhibitor or low-cost A2RA in combination with C for people of any age if this is necessary to achieve suitable blood pressure reduction (step 2 drug treatment).
- Offering chlortalidone or indapamide in preference to bendroflumethiazide or hydrochlorothiazide if diuretic therapy (D) is to be changed or initiated:
  - as an alternative to C at step 1 or step 2 if C is not tolerated or the person has oedema, evidence of heart failure or a high risk of heart failure, or
  - in combination with C and an ACE inhibitor or low-cost A2RA if necessary to achieve suitable blood pressure reduction (step 3 drug treatment).
- Offering spironolactone 25 mg once daily as first choice additional treatment (if the person's blood potassium level is 4.5 mmol/L or less) at step 4.

### Notes

- a. See the BNF and summaries of product characteristics for details on appropriate calcium-channel blockers for hypertension and their suitability for individual patients.
- b. The NICE guidance uses the abbreviation ARB for 'angiotensin receptor blocker' instead of A2RA for 'angiotensin-II receptor antagonist'.

An algorithm describing the recommended approach to drug treatment is given in **Figure 1**. Hypertension as a clinical topic is featured in a NICE Pathway.

### Action

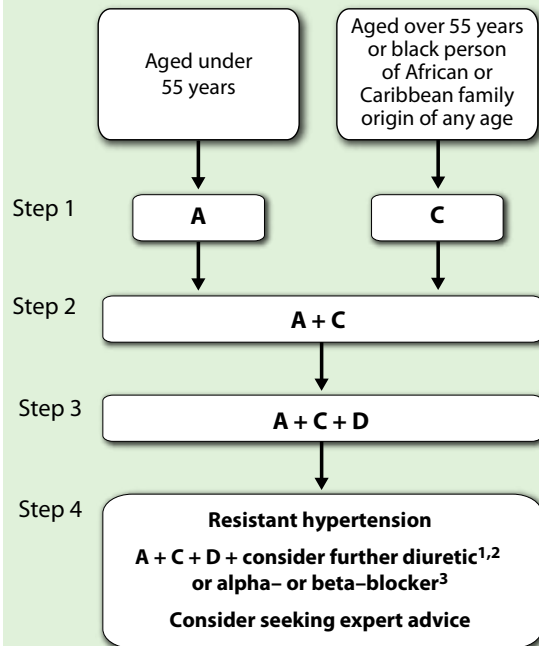
Active plans need to be made locally to move practice towards the new guideline as soon as possible. In particular:

- Use of ambulatory blood pressure monitoring (ABPM) in accordance with the new guideline should be introduced as soon as practicable.
- Healthcare professionals taking blood pressure measurements need adequate initial training and periodic review of their performance to ensure they use immaculate technique.
- Healthcare providers must ensure that devices for measuring blood pressure are properly validated, maintained and regularly recalibrated according to manufacturers' instructions. The BHS provides a list of validated monitors.
- If an A2RA is used, it should be a low-cost A2RA.
- The recommendation to consider a low-cost A2RA as an alternative to an ACE inhibitor does **not** extend to other conditions such as heart failure or diabetes, where ACE inhibitors remain the first choice renin-angiotensin system (RAS) drug.
- ACE inhibitors and A2RAs should not be used in combination to treat hypertension.
- The guidance specifically states that people who are already having treatment with bendroflumethiazide or hydrochlorothiazide and whose blood pressure is stable and well controlled should continue treatment with this drug: their diuretic should **not** be switched routinely to indapamide or chlortalidone.
- Similarly, the guidance does **not** include a recommendation that people who are already having treatment with diuretics and whose blood pressure is stable and well controlled should have their treatment switched to a calcium-channel blocker.
- Although beta-blockers are not a preferred initial therapy for hypertension, they may be considered in some patients (such as women of child-bearing potential and others in whom RAS drugs are contraindicated). Beta-blockers may also be indicated in other conditions, such as angina (see

Using ambulatory blood pressure measurement according to NICE Guidance reduces misdiagnosis and allows better targeted treatment, saving between about £50 and £320 per patient over his or her lifetime

All information was correct at the time of publication (November 2011)

Figure 1. Summary of drug therapy guidance<sup>1</sup>



**Key:**

- A = ACE inhibitor or low-cost A2RA. Consider a low-cost A2RA, in preference to an ACE inhibitor, in combination with a calcium-channel blocker in black people of African or Caribbean family origin at step 2.
- C = Calcium-channel blocker. This is preferred but consider a thiazide-like diuretic if a calcium-channel blocker is not tolerated or the person has oedema, evidence of heart failure or a high risk of heart failure.
- D = Thiazide-like diuretic. Offer chlorthalidone (12.5–25 mg once daily) or indapamide (1.5 mg modified-release or 2.5 mg once daily) in preference to bendroflumethiazide or hydrochlorothiazide if diuretic therapy is to be changed or initiated.

**Notes:**

1. Consider a low dose of spironolactone or higher dose of a thiazide-like diuretic.
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.
3. Consider an alpha- or beta-blocker if further diuretic therapy is not tolerated, or is contraindicated or ineffective.

Active plans need to be made locally to move practice towards the new guideline as soon as possible

recently updated NICE guidance<sup>2</sup>), heart failure or after a myocardial infarction (MI), which are outside the scope of this guidance, and with which hypertension may co-exist. The guidance does **not** recommend discontinuing the beta-blocker in these circumstances, nor in patients with hypertension without these other conditions whose blood pressure is stable and well controlled.

- Prescribers and prescribing managers should note the current difference in cost between the modified-release and standard-release indapamide products available, and the difference in costs of generic and branded calcium-channel blockers<sup>3</sup>.

The cost-effectiveness modelling study underpinning the recommendations on blood pressure measurement in the updated guidance<sup>1</sup> has recently been published (see MeReC Rapid Review No. 4624)<sup>3</sup>. It concludes that, when used to diagnose hypertension after an initial raised reading in the clinic, ABPM reduces misdiagnosis and allows better targeted treatment, thereby reducing overall cost (saving between about £50 and about £320 per patient over his or her lifetime).

For more detail on the NICE hypertension guideline see MeReC Rapid Review No. 4470, where the following are addressed:

- Why NICE considers ACE inhibitors and A2RAs to be equivalent
- Using the diuretics chlorthalidone or indapamide in preference to bendroflumethiazide or hydrochlorothiazide
- Using an A2RA in preference to an ACE inhibitor (in combination with C) in black people of African or Caribbean family origin at step 2
- Using C over D treatment at step 1 for people aged over 55 years and black people of African or Caribbean family origin of any age
- Why NICE prefers A+C over A+D at step 2
- Why NICE recommends spironolactone as first choice addition at step 4

More information on hypertension can be found on NHS Evidence. The NICE implementation tools may also be of use, in particular the ABPM implementation podcast. The NPC e-learning materials on hypertension are being updated to reflect the new NICE guidance.

**References**

1. NICE. Hypertension: clinical management of primary hypertension in adults. Clinical guideline 127. August 2011
2. NICE. Management of stable angina. Clinical guideline 126. July 2011
3. Lovibond K, Jowett S, Barton P, et al. Cost-effectiveness of options for the diagnosis of high blood pressure in primary care: a modelling study. *Lancet* 2011;378:1219–30