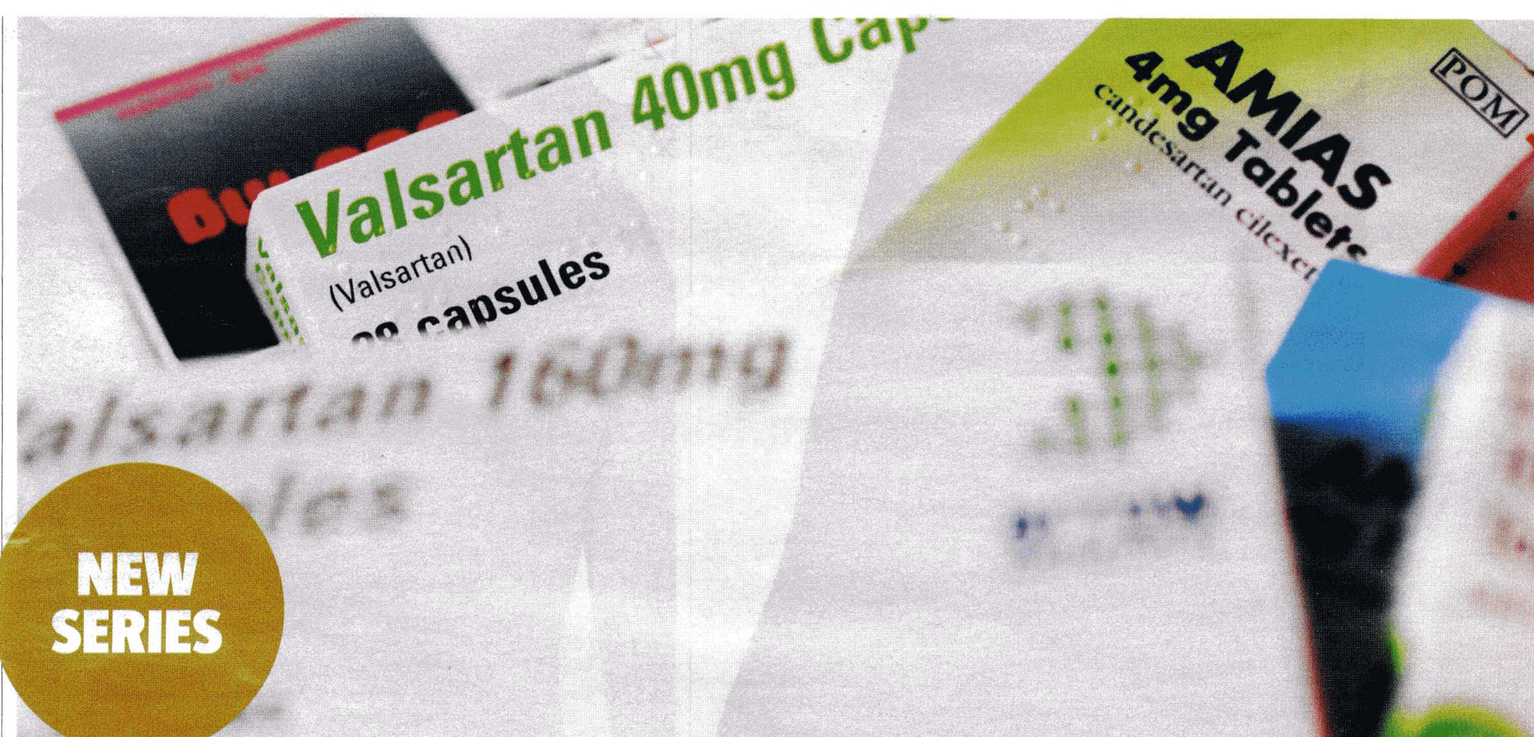

GUIDELINEUPDATE

NICE hypertension guidance

Cardiology hospital practitioner **Dr Matt Hughes** kicks off our new series reviewing major guidelines released over the past year

THE GUIDELINE

Hypertension: clinical management of primary hypertension in adults. NICE 2011;CG127

Hypertension is one of the most common conditions treated in primary care and affects a quarter of all adults and a half of those aged over 65.[1]

This article will outline the 2011 NICE guidance on the clinical management of hypertension in adults,[2] focusing specifically on the changes to previous NICE guidance on the subject published in 2006 and 2004.

Diagnoses to be based on ABPM

Probably the biggest change – and the most controversial new recommendation – is that all new diagnoses should be confirmed by ambulatory blood pressure monitoring (ABPM).

This has huge implications for PCTs or CCGs and it's a recommendation which – it could be argued – is not based on the most solid evidence base.

Although evidence exists to suggest ABPM is better than clinic readings in identifying people who are likely to have a cardiovascular event,[3] we know less about how it compares with home blood pressure monitoring.

A practice that does not carry out its own ABPM and still has to refer to an outpatient service would probably find it easier to buy a set of home monitors than to bring ABPM in house. But despite the lack of comparative data, home monitoring is only recommended if a patient cannot tolerate ABPM.

Patients should be told to record their blood pressure once in the morning and once in the evening – for seven days ideally, but for four days at least.

Two readings should be taken each time – at least a minute apart – and the patient should be seated each time.

When you look at the readings, ignore the first day and take an average of all the other readings.

New advice on surgery measurements

Automated devices may be inaccurate if the pulse is not regular, so check the pulse and measure blood pressure manually if it is irregular.

If a patient has a first clinic reading of 140/90mmHg or more, take a second reading. If that reading is substantially different from the first, take a third and use the lowest of the last two as the clinic reading.

A 2004 recommendation on comparing standing and lying or seated blood pressure in people with symptoms of postural hypotension has been clarified.

Measure blood pressure with the patient seated or standing, then ask them to stand and wait at least a minute before measuring it again. If it has dropped by 20mmHg or more, you should review their medication and check standing blood pressure at subsequent visits.

Measure blood pressure in both arms and, if the difference is more than 20mmHg, repeat the measurement. If the difference remains, then use the arm with the higher reading at subsequent visits – remember to record it on the patient's notes.

If the clinic blood pressure is 140/90mmHg or higher – after following the process detailed above – the diagnosis should be confirmed by ABPM. At least two measurements an hour should be taken and at least 14 in total during waking hours.

Elsewhere there are useful clarifications – for instance, on manually checking blood pressure in a patient with an irregular pulse and more detailed advice on how to carry out a seated and supine blood pressure comparison.

Tighter criteria for referral

These recommendations have been updated from 2006 and some patients have been removed from the list to refer – such as those with unusual signs and symptoms, and those who need a more accurate estimation of blood pressure – now redundant.

Refer the same day any patient with:

- accelerated hypertension – blood pressure higher than 180/110mmHg with signs of papilloedema or retinal haemorrhage
- suspected phaeochromocytoma – labile or postural hypotension, headache, palpitations, pallor or diaphoresis.

Consider referring anyone with signs and symptoms suggesting an underlying cause of hypertension.

THE KEY CHANGES AT A GLANCE

- **If the clinic blood pressure is 140/90mmHg or higher, use ABPM to confirm the diagnosis.**
- **The average ambulatory blood pressure needs to be taken from at least 14 daytime measurements.**
- **Home blood pressure measurement – to a defined protocol – is an alternative for patients in whom ABPM is not possible.**
- **Consider starting an antihypertensive immediately in patients with a clinic reading of 180/110mmHg or over – these patients have severe hypertension.**
- **For people aged over 80 years, a target blood pressure of lower than 150/90mmHg is recommended – relaxed from 140/90mmHg.**
- **Thiazides should no longer be recommended first line for patients over 55 years of age and black people.**
- **Calcium channel blockers are the preferred option for these patients – and ACE inhibitors or ARBs for everyone else.**
- **Second-line treatment should be a thiazide-like diuretic like chlortalidone rather than a traditional diuretic like bendroflumothiazide.**

Earlier initiation of treatment

If the person has severe hypertension not requiring same-day referral – for example, a clinic blood pressure of 180/110mmHg or more – consider starting drug treatment immediately, without waiting for the results of ambulatory or home blood pressure monitoring.

Offer drug treatment to people younger than 80 years of age with stage 1 hypertension – a clinic blood pressure of 140/90mmHg or higher and subsequent ambulatory daytime average of 135/85mmHg or higher – plus one or more of the following:

- target organ damage
- established cardiovascular disease
- kidney disease
- diabetes
- a 10-year cardiovascular risk equivalent of 20% or more.

Offer drug treatment to people of any age with stage 2 hypertension – a clinic blood pressure of 160/100mmHg or higher and subsequent ambulatory daytime average of 150/95mmHg or higher – irrespective of any of the above factors.

A revised treatment algorithm

There are also fairly big changes to the treatment algorithm, with diuretics removed as a first-line option for black people and patients aged over 55. These patients should be offered a calcium channel blocker instead, but if the patient cannot tolerate one a diuretic can be considered.

If a diuretic is used, then conventional thiazide diuretics like bendroflumethiazide or hydrochlorothiazide should be avoided in preference for a thiazide-like diuretic such as chlortalidone or indapamide. But anyone already on a conventional diuretic and well controlled should continue.

The recommendation on first-line treatment in patients aged under 55 years was an ACE inhibitor in the 2006 guidance, but this has been updated to include a low-cost ARB as an option.

A calcium channel blocker is now the first-choice drug for anyone needing another antihypertensive, and only if patients cannot tolerate one is a thiazide-like diuretic recommended.

Relaxed targets in older patients

Aim for a clinic blood pressure below 140/90mmHg in patients aged under 80 years, but below 150/90mmHg in older patients.

For patients who don't meet this target on three drugs, consider referral, or low-dose spironolactone if serum potassium is under 4.5mmol/l or a higher dose thiazide-like diuretic if it is over this.

If the target is still not reached, then consider an a or ß-blocker, or refer.

Dr Matt Hughes is a GP and cardiology hospital practitioner

References

1 Department of Health. *Health survey for England*. 2009. ic.nhs.uk
2 NICE. *Hypertension: clinical management of primary hypertension in adults*. 2011;CG127
3 Hodgkinson J, Mant J, Martin U et al. Relative effectiveness of clinic and home blood pressure monitoring compared with ambulatory blood pressure monitoring in diagnosis of hypertension: systematic review. *BMJ* 2011;342:d3621

MORE ONLINE
Go to pulse-learning.co.uk for a case-based learning module on hypertension – worth a suggested 2 CPD hours – which includes all the recent developments, including the NICE guidance. You will also find an online-only Guideline update on eczema worth a suggested 1.5 CPD hours.