key points

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Ambulatory blood pressure monitoring (ABPM) is more accurate than both clinic and home monitoring in diagnosing hypertension. A diagnostic strategy for hypertension using ambulatory monitoring following an initial raised clinic reading would reduce misdiagnosis and cut NHS costs.

If the first and second blood pressure measurements taken during a consultation are both ≥140/90 mmHg, 24-hour ABPM should be used to confirm the diagnosis of hypertension. Home monitoring can be used to confirm the diagnosis if the patient cannot tolerate ABPM. In cases of severe hypertension (clinic BP ≥180/110 mmHg) and evidence of target organ damage, antihypertensive drug treatment should be started immediately without waiting for the results of ABPM or home monitoring.

ABPM estimates true mean BP more accurately than clinic measurement because multiple readings are taken. It has been shown to have better correlation with a range of cardiovascular outcomes and end organ damage. Out-of-office methods can enable a diagnosis to be made more quickly. The benefits of these techniques, in particular ABPM, include the correct diagnosis of white coat hypertension and improved diagnostic accuracy. The weight of evidence suggests ABPM is the best prognostic indicator, followed by home then clinic monitoring.

A differentiation is made between those at high cardiovascular risk and those with BP as a sole risk factor. Stage 1 patients should only be offered antihypertensives if they have increased cardiovascular risk due to concurrent diabetes, chronic kidney disease, established CVD, target organ damage or a 10-year CVD risk >20%. Stage 2 patients should all be offered antihypertensives following ABPM or home monitoring, irrespective of their background cardiovascular risk.

The systematic review did not consider the implications for clinical practice in terms of the best method of monitoring treatment effects. It is hoped that more evidence will be available regarding this for the next NICE guideline update.