

Why should GPs use ambulatory blood pressure monitoring in their practice?

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Hypertension is a common disorder that affects 35% of the adult population of South Africa. According to all guidelines it is defined as a persistent elevation of blood pressure (BP) over certain norms. In South Africa this is >140/90 mmHg and is traditionally based on a series of office blood pressure measurements, repeated over a period of weeks or even months.

In 2011, the UK's National Institute of Health and Care Excellence (NICE) initiated a radical change of practice when it began advising that hypertension should rather be diagnosed on the routine use of ambulatory blood pressure monitoring (ABPM). Using ABPM can condense the diagnostic process to as little as a day or at most a week, and it is also a better predictor of target organ damage and cardiovascular risk.

Based on a substantial systematic review, the NICE concluded that ABPM improves sensitivity and specificity of diagnosis, and critically avoids the treatment of those who are not hypertensive. As many as 25% of those currently on treatment for hypertension, based on traditional assessment, may not be hypertensive due to the white coat effect. ABPM is cost-effective as the greatly reduced incidence of misdiagnosis more than counterbalances the additional cost of ABPM. This is supported by all major hypertension guidelines including the SA Hypertension Practice Guideline. Furthermore, NICE concludes that white coat hypertension confers no or marginal excess risk and that there is no proven benefit to its treatment, in addition to the 'disease labelling' factor having negative implications.



The appropriate diagnostic thresholds for mean daytime blood pressure based on ABPM are as follows:

Optimal:

< 120/80mmHg

borderline hypertensive: 120-135/80mmHg

hypertensive > 135/85mmHg.

The night-time BP should be < 120/70. Furthermore, the lack of night-time dipping is an adverse prognostic marker.

The main indications for ABPM are:

1. Stage 1 hypertension (140-160/90-100 mmHg) where there is no target organ damage where white coating may explain the elevation in BP.
2. A hypertensive patient, who remains uncontrolled, despite being on optimal treatment. Up to 20% of patients with so called resistant hypertension have pseudo-resistance due to superadded white coating.
3. Adherence testing - patients with resistant hypertension come to your surgery and take directly observed treatment and then the ABPM is applied.
4. It also be used in high risk patients despite optimal clinic blood pressure to assess out of office control. ABPM may detect masked hypertension (controlled clinic, uncontrolled ABPM) that may require escalation of therapy.

ABPM is not indicated for patients with significant arrhythmias

Key messages:

- The UK's NICE 2011 guideline recommending the routine use of ambulatory blood pressure monitoring (ABPM) represents the most radical change in practice in 100 years
- ABPM can accelerate the time to diagnosis and its greater sensitivity and specificity make it a better predictor of target organ damage and cardiovascular risk than office blood pressure measurement
- Other advantages include providing objective and high-volume data while the patient is engaged in normal activity in the environment where they live, as opposed to sitting still in the artificial context of an office
- Some 25% of those currently being treated for hypertension may be 'white coat' hypertensives. ABPM's ability to identify those being treated unnecessarily has significant cost-saving implications

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