Hypertension

ABPM saves not only money, but also lives

Prof Eoin O’Brien examines the evidence supporting the benefits of ambulatory blood-pressure management in terms of both cost-effectiveness and saving lives

I
n April of this year, I re-
viewed the recommen-
dations of the National Institute for Health and Clinical Excellence (NICE). The clinical management of primary hypertension in adults (JMT, April 8). This was circulated then in draft form so that the opinions of interested parties could be asked.

The final draft of the NICE recommendations has just been published and, despite considerable criticism and pressure from many groups, the recommendations on the use of ambulatory blood-pressure measurement (ABPM) have not been altered. Such is the reputation of NICE, which issues recommenda-
tions for the care of patients with a variety of illnesses so that best clinical practice is achieved in primary and sec-
ondary care in the most cost-effective manner in the NHS, that the hypertension recommen-
dations are going to have a profound effect on how high blood pressure (BP) will be di-
agnosed and managed in pri-
mary care across the world.

NICE recommendations

Introducing the need for change, the guidelines remind us at the outset that at least one-quarter of the adult popula-
tion of the UK have hyper-
tension and that this figure rises to more than 50 per cent over the age of 60 years. Moreover, as the demographics of the UK shift towards an older, more sedentary and obese population, the prevalence of hyper-
tension and its requirement for treatment will continue to rise. We are also reminded that high BP is the major cause of stroke and that bringing blood pressure down to nor-
mal prevents this catastrophic con-
sequence. These admoni-
tions apply equally to Ireland. Indeed, it is estimated that the Irish population aged 65 years or older has grown by around 977,771 persons in the period 1996-2011, to represent in total about 1 per cent of the general population, the majority of who will have isolated systolic hypertension.

The NICE guidelines con-
firm that the ABPM is the gold standard for BP measurement (CBPM): “These findings suggest that the current practice of us-
ing a series of ABPM alone for the diagnosis of hypertension leads to inaccurate diagnosis” and that “the current practice of using CBPM to define hyper-
tension will lead to drug treatment being offered to a substantial number of people who are normotensive”.

The guideline has no hesita-
tion, therefore, in stating em-
phatically that that 24-hour ABPM “should be implemented for the routine diagnosis of hy-
pertension in primary care”.

To be specific, the guideline stipulates: “If the first and sec-
ond blood pressure measure-
ments taken during a consulta-
tion are both higher than 140/90 mmHg, offer 24-hour ambula-
tory blood pressure monitoring to confirm the diagnosis of hy-
pertension.”

Evidence on cost-
effectiveness

The authors recognise, however, that this recommendation will have profound implications for the diagnosis of hypertension and that it must be based on very robust evidence. NICE un-
derstood, therefore, the most de-
tailed cost-benefit analysis ever conducted for ABPM and this showed clearly that the use of ABPM would result in substan-
tial savings to the NHS.

“This analysis suggests that ABPM is the most cost-effective method of confirming a diagnosis of hypertension in a population suspected of having hyper-
tension based on a CBPM screening measurement 140/90 mmHg…” This conclusion was consistent across a range of age/sex stratified subgroups.”

A further potential advan-
tage of ABPM was also noted in the NICE recommendations, namely that those patients who were being misdiagnosed as ‘hypertensive’ will “there-
fore avoid unnecessary drug treatment which will mean that they will not experience side effects, incur prescription costs or be labelled as having a medi-
cal condition, with the potential psychological and practical im-
pacts this can have”.

Other potential benefits of ABPM that have not been con-
nected by NICE are the sav-
ings to be made in having drug treatment targeted to achieve BP control and the substan-
tial savings to be made by the prevention of stroke and other cardiovascular consequences of hypertension with improved BP control. Nor has NICE con-
sidered the potential of treating noturnal hypertension, which is a major predictor of outcome. These potential advantages of ABPM are presently being studied.

NICE has the expertise to an-
alyse the very complex aspects of a variety of cost-benefit is-
sus relating to the provision of healthcare in the UK and it is unequivocal in stating that ABPM is not only cost-effective but that it will bring considerable-savings to the NHS.

Superiority of ABPM in diagnosis

In a further extensive study of the cost of ABPM just published in The Lancet, a Markov model-based probabilistic cost-effect-
tiveness analysis concluded that ABPM is the most cost-effective strategy for the diagnosis of hy-
pertension for men and women of all ages mainly because of its potential to reduce misdiagnos-
sis, and to direct better targeted treatment.

On the basis of these re-
sults, the authors recommend ABPM for patients before the start of antihypertensive drugs. Moreover, the study shows that home BP moni-
toring is not a substitute for ABPM.

The role of pharmacies

The NICE guidelines rec-
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