

NICE guideline will revolutionise the way we manage hypertension



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The National Institute for Health and Clinical Excellence (NICE) has just published a draft for consultation of its 2011 guideline for the Clinical Management of Primary Hypertension in Adults. The NICE guidelines are recommendations for the care of patients with a variety of illnesses, so that best clinical practice is achieved in primary and secondary care in the NHS.

The stated mission of NICE is to “base [its] clinical guidelines on the best available research evidence, with the aim of improving the quality of healthcare”.

To achieve this, NICE uses predetermined and systematic methods to identify and evaluate the evidence relating to specific review questions. This body has gained such respect and scientific credibility over the years that its guidelines influence national policy on healthcare delivery across the world.

Consequently, the hypertension guideline is going to have a profound effect on how high blood pressure (BP) will be diagnosed and managed in primary care in the UK and Ireland in the future. Introducing the need for change, the guideline reminds us at the outset that at least one quarter of the adult population of the UK has hypertension, and that this figure rises to more than 50% in people 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 hypertension and its requirement for treatment will continue to rise. We are also reminded that high blood pressure is the major cause of stroke and that bringing BP down to normal prevents this catastrophic complication.

These admonitions apply equally to Ireland. Indeed, the Irish population aged 65 years or older has been estimated to have grown by around 107,771 persons in the period 1996- 2011, to represent in total about 14% of the general population. Nearly 25% of persons in

this group will be over 80 years, the majority of whom will have isolated systolic hypertension.

Conventional BP measurement

High BP continues to be diagnosed in primary care and in hospital clinics using the traditional technique of measurement with a mercury sphygmomanometer and stethoscope (or more lately with automated devices), despite the fact that this technique has been shown to be grossly inaccurate.

Since Riva-Rocci and Korotkoff gave us the technique of conventional BP measurement (CBPM) over a century ago, we have landed men on the moon, encircled Mars, invented the automobile and aeroplane and, most importantly, revolutionised the technology of science with the microchip.

Why, we might ask, has medicine ignored scientific evidence and technological advances for so long so as to perpetuate a grossly inaccurate measurement technique in both clinical practice and hypertension research?

It is a salutary thought that if (as conservative estimates show) white-coat hypertension is present in 20% of the population when BP is measured conventionally in primary care, and if masked hypertension is present in 10% of patients whose BP is measured in similar circumstances, it follows that hypertension is being misdiagnosed in as many as a third of all patients attending for routine BP measurement.

NICE recommends ABPM for diagnosis and treatment of hypertension.

Now all must change. The NICE guideline confirms the inaccuracy of conventional measurement: “These findings suggest that the current practice of using a series of CBPM alone for the diagnosis of hypertension leads to inaccurate diagnosis” and that “the current practice of using CBPM to define hypertension will lead to drug treatment being offered to a substantial number of people who are normotensive”.

The guideline has no hesitation therefore in stating emphatically that 24-hour ambulatory blood pressure measurement (ABPM) “should be implemented for the routine diagnosis of hypertension in primary care”. To be specific, the guideline stipulates: “If the first and second BP measurements taken during a consultation are both higher than 140/90mmHg, offer 24-hour ambulatory blood pressure monitoring to confirm the diagnosis of hypertension.”

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 undertook, therefore, the most detailed cost-benefit analysis ever conducted for ABPM and this showed clearly that the use of ABPM would result in substantial 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 hypertension based on a CBPM screening

measurement >140/90mmHg... This conclusion was consistent across a range of age/gender stratified subgroups.” The recommendation of NICE will be applied, quite rightly, to practice in Ireland. We should anticipate, therefore, the consequences for clinical practice.

Implementation of NICE recommendations

The NICE guideline readily admits that implementation of a recommendation — which means in effect that some 13 million patients with high blood pressure in the UK will have to be offered ABPM not only to confirm the diagnosis, but also for the follow-up assessment of treatment efficacy — will present “considerable challenges”. Some of the problems recognised by NICE are the training of healthcare professionals, the provision of sufficient numbers of validated ABPM devices and the need for staff to be “trained in their use and the interpretation of data generated by the reports”.

The same problems face clinical practice in Ireland but, unlike the UK, ABPM has become increasingly available in primary care, often with the support of the pharmaceutical industry. Indeed, Ireland was the first European country to show that ABPM could be used effectively in primary care to achieve better blood pressure control in patients with hypertension.

The RAMBLER study in 2006 showed that ABPM allowed patients with inadequate blood pressure control to be identified and, in some cases, prevented from unnecessarily commencing antihypertensive medication, and that blood pressure control was improved in those managed with ABPM compared with conventional measurement. This led the authors of the RAMBLER study to conclude that “ABPM appears to have a significant impact on decision-making of general practitioners and on the medical management of patients with hypertension in the community”.

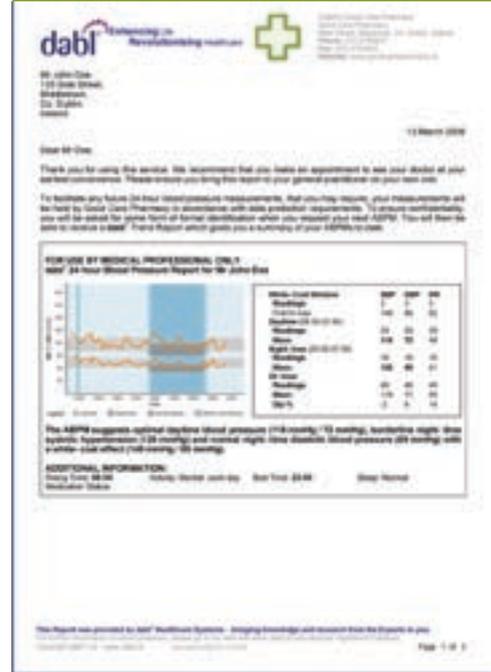
The RAMBLER II Study using the dabl interpretive reporting system and central analysis to assess the feasibility of ABPM in more than 100 primary care practices is presently being analysed. Although general practitioners in Ireland use ABPM more than their colleagues in the UK, the reality is that the new Minister for Health, Dr James Reilly, will have to make funding available for

the widespread use of the technique in primary care. However, he should not see this as a deterrent, but rather welcome it as a means for preventing stroke and heart attack, with the potential for enormous savings in the future. If blood-pressure control was achieved in Ireland, some 5,000 strokes per annum could be prevented! However, the daunting reality is that less than a third of patients on treatment have their blood pressure controlled.

The role of pharmacies in providing ABPM

Whereas primary care practices will be the main providers of ABPM (provided adequate reimbursement is made available) pharmacies are now proving to be valuable alternative providers. Indeed recent commentaries in the Journal of the American Medical Association have deplored the underutilisation of highly skilled pharmacists in the provision of health care and have shown, moreover, that when pharmacists become engaged in the management of hypertension BP control improves. Recently ABPM has been introduced to pharmacists in Ireland using the dabl system (www.dablhealth.com) of analysis and reporting. (see Figure 1) If ABPM in a pharmacy is normal the patient is instructed to bring the report to his/her general practitioner at their next attendance but if the ABPM is reported as abnormal instruction is given to make an appointment as soon as possible. To-date the feedback from patients and referring general practitioners is very positive. The advantages of ABPM in pharmacies are:

- Greater availability of ABPM to the public
- Ready access to a local and convenient pharmacy
- Provision of an interpretative report to the patient who is informed as to the degree of blood pressure control
- Close collaboration between the pharmacist and the patient’s general practitioner
- Provision of a trend report (See Figure 2) to patients having a repeat ABPM so as to indicate the response to blood pressure lowering medication
- Availability of data to provide demographic information on national blood pressure trends



One of the major features of being able to engage hypertensive patients in the management of their illness is how much more compliant with management and treatment they become when they are actively informed as to the state of their blood pressure control. Pharmacists can play a major role in this process.