

# The why, how, when and where of BP measurement



Continuing her CPD series from a new online initiative on hypertension, Valerie Ryan hears about the importance of starting from the right place on blood pressure measurement, from a talk by **Prof Eoin O'Brien**

## Learning objectives

- To understand the importance of blood pressure measurement in hypertension control;
- To be competent in the accurate standardised measurement of blood pressure (BP);
- To understand the importance of BP measurement in diagnosis and effective management strategies;
- To recognise when and where

BP measurement should be carried out.

In his talk, **Prof Eoin O'Brien** underlines the vital role of blood pressure measurement in the diagnosis and effective management of common diseases, and in blood pressure control. He calls for the setting up of a national registry to allow further research, and for a more positive and

aggressive approach to treatment of hypertension. He puts paid to the notion that hypertension should be viewed as a simple disease and discusses a range of settings where BP measurement could be carried out.

Blood pressure is the 'king' of prognostic markers, according to Prof O'Brien, and is essential for diagnosis. "We don't have

anything better than blood pressure at the moment to tell us what blood pressure tells us about the cardiovascular system," he said. He emphasises that it is only by controlling blood pressure that we will prevent the cardiovascular consequences of hypertension.

He reminds doctors of the dramatic shift of hypertension as a burden of disease impacting

on life expectancy, and lists the challenges this poses for a society in the midst of an epidemic of strokes and heart attacks.

Prof O'Brien details the medical, medico-legal and economic costs of "the most serious and most badly managed risk", one further complicated by the number of people who are unaware they have it, or who are left untreated when diagnosed, or treated inadequately. He also cites up-to-date figures and current studies to demonstrate how this also holds true even for centres of excellence.

Professor of Molecular Pharmacology at the Conway Institute of Biomolecular and Biomedical Research UCD, Prof O'Brien has published more than 600 scientific papers on hypertension research and has authored *Blood Pressure Measurement* and the popular *ABC of Hypertension*. This presentation outlines in unsettling detail the current statistics from international studies on the incidence of hypertension and the less than optimum levels of control achieved.

He warns that blood pressure control must be achieved and cautions that merely putting a patient on antihypertensive therapy is not enough.

The advantages and the limitations of the available methods of blood pressure measurement are highlighted throughout the presentation, supported by published statistics, international guidelines and recommendations. Prof O'Brien alerts doctors to the pitfalls of conventional clinical blood pressure measurement and argues the case strongly for Ambulatory Blood Pressure Measurement (ABPM) outlining the main clinical benefits.

He suggests what problems ABPM can identify as well as its role in assessing severity of hypertension, nocturnal hypertension and other conditions.

In the Q&A session following his talk, Prof O'Brien suggests how clinical BP measurement should be managed in practice.

He offers an analysis of the factors for the question, 'Why we are doing so badly?' and provides step-by-step advice on how better control using standardised methodology might be achieved.

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Prof Eoin O'Brien

The range of reports that can be produced from the "wealth of information" provided by ABPM is presented. The benefits to the doctor and to patients by the use of technology to generate consistent interpretive reports, treatment prompts and financial savings are highlighted.

## Sharing data

Prof O'Brien describes an initiative carried out at Dublin's Beaumont Hospital where the specialist centre linked with six primary care centres to share data on hypertension. He outlines the changes in treatment levels and the general improvement seen in management.

Furthermore, by harnessing technology and sharing data, Prof O'Brien sees the potential for "virtual clinics" and underlines the need to make ABPM patient friendly and suitable for all. He considers the ability to give one tablet to achieve blood pressure control as a major advance, and he offers specific guidance on combination therapy and appropriate doses to achieve control.

The importance of nocturnal blood pressure and its role as a predictor in cardiovascular events is also discussed. Advice is offered on the approach to treatment for nocturnal hypertension alongside controlled daytime hypertension and how treatment might be amended.

The up-to-date detailed recommendations for effective self blood pressure measurement (SBPM), and its place in blood pressure control, are also described.

● To view the online module visit [www.bp2tv.ie](http://www.bp2tv.ie). This review draws on an online educational tool supported by A.Menarini and Daiichi Sankyo, but the companies had no editorial influence on the content or editing of this article.