

# From measurement to profiles, phenomena and indices: a workshop of the European Society of Hypertension

Eoin O'Brien

*Blood Pressure Monitoring* 2005, 10:291–295

Blood Pressure Unit & ADAPT Centre, Beaumont Hospital and the Royal College of Surgeons, Dublin, Ireland

Correspondence and requests for reprints to Eoin O'Brien, Blood Pressure Unit & ADAPT Centre, Beaumont Hospital, Dublin 9, Ireland  
Tel: +353 1 2803865; fax: +353 1 2803688; e-mail: eobrien@iol.ie

## Workshop proceedings

A workshop entitled 'From measurement to profiles, phenomena and indices' was held in Milan in June 2005 at the 15th European Meeting on Hypertension of the European Society of Hypertension. Since its foundation in 1998, the Working Group on Blood Pressure Monitoring of the European Society of Hypertension has held annual meetings devoted to blood pressure measurement and *Blood Pressure Monitoring* has published over 90 papers from these proceedings [1–92]. In addition, the Working Group has published a number of 'statement' papers directed towards practising doctors with the aim of improving the measurement of blood pressure in clinical practice [93–98]. These papers and those published in this issue reflect the underlying ethos of the Working Group, which is that accurate and informative measurement is mandatory for the diagnosis and management of hypertension and for research into hypertension. If the measurement of blood pressure is inaccurate, it follows that all other considerations, be they related to patient management or scientific enquiry, must be inappropriate and erroneous.

At the recent Milan meeting Stergiou and colleagues [85] (Athens, Greece) presented evidence to show that using ambulatory blood pressure measurement, the new phenomenon of masked hypertension occurs not only in adults, but also in children. Both white-coat and masked hypertension occur in 10–15% of children, but whereas white-coat hypertension appears not to be associated with target organ damage, masked hypertension in children is characterized by increased left ventricular mass, making it important to follow-up such children and possibly initiate treatment.

Angeli and colleagues [86] (Perugia, Italy) produced evidence to suggest that antihypertensive drug treatment might be unnecessary in many individuals with white-coat hypertension, but cautioned that some individuals with the condition may be at increased cardiovascular risk because of concomitant risk factors such as diabetes, cigarette smoking or elevated cholesterol. They concluded that randomized intervention studies are urgently

needed in individuals with white-coat hypertension in order to compare a regimen based on lifestyle measures alone against one with lifestyle measures and antihypertensive medication. In the meantime, current evidence would suggest that lifestyle modifications might be reasonable in the low-risk stratum of individuals with white-coat hypertension, whereas antihypertensive medication might be necessary in those with co-morbid conditions and target organ damage.

Longo, Dorigatti and Palatini [87] (Padova, Italy) acknowledged that blood pressure control was the mainstay of stalling the progression of cardiovascular disease, but asked what the consequences might be if the diagnosis of true hypertension was missed by clinic blood pressure in individuals with masked hypertension? They concluded that as masked hypertension is a strong predictor for cardiovascular disease, this condition should be sought by using ambulatory blood pressure measurement in individuals at increased cardiovascular risk and in those who are more likely to have high blood pressure outside the clinic; failure to identify and treat masked hypertension might result in occult target organ deterioration and the development of cardiovascular complications in these individuals.

In the J-HOME study, Obara, Imai and colleagues [88] (Sendai, Japan) examined the use of home blood pressure measurement in diagnosing white-coat hypertension and masked hypertension, and found that white-coat hypertension occurred in almost 15% and masked hypertension in nearly 23% of individuals. In keeping with other evidence, white-coat hypertension appears to be a relatively benign condition, whereas masked hypertension carries a poor prognosis, similar to that of sustained hypertension.

Jhalani, Pickering and colleagues [89] (Columbia University) showed that the white-coat effect is associated with anxiety and increased blood pressure expectancy in the doctor's office, and concluded that if patients' expectations of high blood pressure readings could be modified in a positive direction, this might reduce the anxiety experienced in the clinic environment, and

provide the means for blood pressure measurements that are less susceptible to white-coat error.

Bilo, Parati and colleagues [90] (Milan, Italy) presented data showing that 24-h blood pressure variability is markedly influenced by the size of nocturnal blood pressure fall and its inclusion in the calculation of 24-h blood pressure variability may lead to overestimation of this phenomenon. They propose that 24-h SD should be calculated as the weighted mean of daytime and nighttime values, thereby excluding the influence of the nocturnal fall in blood pressure on overall blood pressure variability.

### Website for blood pressure measurement: [www.dablededucational.org](http://www.dablededucational.org)

The Advisory Board of the dablededucational website, which includes all the members of the Working Group, were informed that the website is growing in popularity with both manufacturers of blood pressure measuring devices and consumers, both lay and medical. The website presently receives about 70 000 visits per month from over 6000 organizations in 115 countries from all continents. The website is consulted by many international societies and the website library, which is updated regularly, now contains over 400 references on blood pressure measurement.

### Change of Working Group Chairman

In keeping with the ethos of the European Society of Hypertension that chairmanship of its Working Groups should rotate to encourage changing perspectives, I am pleased to hand over the Chair to my long-time friend and colleague Jan Staessen, knowing that in doing so, Jan will lead the Working Group to exciting and innovative concepts and projects. I would like to take this opportunity to thank my colleagues on the Working Group (list) for their loyal support, advice and, importantly for me, the friendships forged during my 8 years in office – friendships that will endure. I would like to especially thank Billy White, the editor of *Blood Pressure Monitoring*, who opened the pages of his journal to receive the proceedings of our workshops and symposia and, I like to think that in so doing, we facilitated the development of *Blood Pressure Monitoring* into the recognized repository for scientific papers relating to blood pressure measurement. It seems appropriate, therefore, to list the publications of the Working Group in this valedictory editorial.

### Working Group membership

*Roland Asmar*, Société Française D'Hypertension Artérielle, Paris, France.

*Lawrie Beilin*, School of Medicine & Pharmacology, Royal Perth Hospital Unit, Perth, Australia.

*Denis L. Clement*, Universitair Ziekenhuis, Gent, Belgium.  
*Peter De Leeuw*, Academisch Ziekenhuis, Maastricht, the Netherlands.

*Robert Fagard*, Katholieke Universiteit Leuven, Leuven, Belgium.

*Yutaka Imai*, Tohoku University Graduate School of Pharmaceutical Science and Medicine, Sendai 980–8574, Japan.

*Jean-Michel Mallion*, Centre Hospitalier Universitaire de Grenoble, Grenoble, France.

*Giuseppe Mancina*, Università Degli Studi di Milano-Bicocca, Monza, Italy.

*Thomas Mengden*, University Clinic Bonn, Bonn, Germany.

*Martin G. Myers*, Sunnybrook and Women's College Health Sciences Centre, Toronto, Canada.

*Eoin O'Brien*, Beaumont Hospital, Dublin, Ireland.

*Paul L. Padfield*, Western General Hospital, Edinburgh, Scotland.

*Gianfranco Parati*, University of Milano-Bicocca and Ospedale San Luca, Milan, Italy.

*Paolo Palatini*, Università di Padova, Padua, Italy.

*Thomas G. Pickering*, Behavioral Cardiovascular Health and Hypertension Program, Columbia Presbyterian Medical Center, New York, USA.

*Josep Redon*, University of Valencia, Valencia, Spain.

*Jan Staessen*, Katholieke Universiteit Leuven, Leuven, Belgium.

*George Stergiou*, Third University Dept of Medicine, Athens, Greece.

*Gert van Montfrans*, Academisch Medisch Centrum, Amsterdam, the Netherlands.

*Paolo Verdecchia*, Ospedale R. Silvestrini, Perugia, Italy.

*Bernard Waeber*, Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland.

*William White*, The University of Connecticut Health Center, Farmington, Connecticut, USA.

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