### Key reasons why you should register NOW for the ISH 2012 meeting in Sydney:

- Over 60 invited speakers, including two Nobel Laureates
- Presentations from young and emerging stars including those in the Asia-Pacific region through union with APSH
- Innovative original research and expert overviews of major current and emerging issues
- High impact abstract submissions will be accepted until July 20th
- The conference venue around Darling Harbour is close to the famous Harbour Bridge and Opera House
- The Gala dinner when Hypertension Sydney takes over the historic Rocks area
- The buzz of two Australian football Grand Finals on the weekend prior to ISH 2012
- See more of Australia by attending one of the many first class pre and post meeting satellites
The Lancet will be represented in Sydney by two of their editors: Dr Richard Horton (Editor in chief) will participate in the ‘Bridging the Gaps’ sessions, while Dr. Stuart Spencer (Executive editor) will contribute to the debate on salt. Dr. Spencer will also provide advice to our Young Investigators on how to write a research paper and get it published in a good medical journal. This session ought to be of interest to more experienced researchers as well.

The incoming ISH president Ernesto Schiffrin will write the Editorial Commentary. Copies of this Lancet issue will be made available to all delegates at the ISH meeting in Sydney.

The ISH appreciates the close relationship with The Lancet and we have been assured that the journal continues to be interested in submissions of quality clinical research in hypertension to perpetuate this valuable relationship.

Most of this issue of Hypertension News has a focus on the ISH meeting in Sydney. I hope you will attend. The programme looks just wonderful and for the 1st time at an ISH meeting there are two Noble Laureates presenting!

Have a good read!

Lars H. Lindholm
Editor of HT News

By any measure, the richness of the contents of this issue speaks volumes about the health and the future of the ISH. There’s just so much happening!

The obvious excitement is looking towards the Sydney meeting which is everything we had hoped: first class science, fabulous international presenters, representation of our global constituency and our best and brightest young members all joining to tackle and debate the contemporary challenges in the world of blood pressure. Rather than using any more valuable column space, I'll leave you to explore the marvellous articles here yourself.

Stephen Harrap
President ISH

White Coat Hypertension in elderly with Isolated Systolic Hypertension

From the population-based 11-country International Database on Ambulatory Blood Pressure Monitoring in Relation to Cardiovascular Outcomes database (IDACO), Franklin and co-workers studied the prognosis of white coat hypertension in subjects with isolated systolic blood pressures (ISH).

Subjects with untreated ISH and white coat hypertension (WCH) had a similar low risk for cardiovascular events as normotensive untreated individuals. Subjects with antihypertensive treatment and an ambulatory blood pressure normalized to normotension had a higher risk for cardiovascular events than untreated normotensives. This was not unexpected. However, subjects with WCH and treated to normotension had a similar higher risk for cardiovascular events as those with sustained hypertension treated to normotension. Therefore, the authors suggest that the term white coat hypertension should be used with caution in patients treated for hypertension.


NOTES FROM THE EDITORIAL TEAM

Dear ISH member,

Over the years, the ISH has worked closely with The Lancet to promote and disseminate quality research in hypertension. This year, The Lancet is producing an issue which contains a series of review articles on different aspects on hypertension with focus on: i) the developing world, ii) future hypertension treatment, and iii) the two bad companions: diabetes and hypertension.

The ISH appreciates the close relationship with The Lancet and we have been assured that the journal continues to be interested in submissions of quality clinical research in hypertension to perpetuate this valuable relationship.

Most of this issue of Hypertension News has a focus on the ISH meeting in Sydney. I hope you will attend. The programme looks just wonderful and for the 1st time at an ISH meeting there are two Noble Laureates presenting!

Have a good read!

Lars H. Lindholm
Editor of HT News

MESSAGE FROM STEPHEN HARRAP (ISH PRESIDENT)

I’d like to congratulate Lars Lindholm and his Communication Committee and Helen Horsfield from our ISH Secretariat. The fruits of their tremendous labour can be seen in this “bumper” issue of Hypertension News.
**Membership Information**

**Membership Subscriptions 2012**

Please note (as stated in the Constitution): *Membership shall automatically cease upon failure to pay the annual subscription fee for two consecutive years.*

If you haven’t yet paid your membership fee this year and are interested in retaining your links to the Society, we would be delighted to receive your payment. Please visit the membership section of [www.ish-world.com](http://www.ish-world.com). Alternatively, contact the Secretariat to receive a payment form.

**Please help us to recruit new members**

We would welcome your assistance to help us recruit new members to the Society.

If you have a colleague who would like to become a member please ask them to complete the relevant downloadable Application Form found in the Membership section of the Society’s website.

**ISH Now Welcomes Membership Applications from Clinicians**

The ISH would like to announce the expansion of membership to recognise clinicians with a record of long-standing commitment and high-level contribution to blood pressure treatment.

See [www.ish-world.com](http://www.ish-world.com) for further information.

Please also remember to update the Secretariat with any changes to your contact details, especially your email address.

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**Call for Nominations: Deadline 2nd July**

**ISH 2012 Awards and Prizes & Council 2012**

Please send the Secretariat your nominations for members to receive the following awards for 2012:

- ISH Franz Volhard Award and Lectureship for Outstanding Research
- ISH Robert Tigerstedt Lifetime Achievement Award
- AstraZeneca Award
- Boehringer Ingelheim Developing World Award
- The Stevo Julius Award, supported by Novartis

For detailed information please view: [http://www.ish-world.com/Documents/ISH%202012%20Awards.pdf](http://www.ish-world.com/Documents/ISH%202012%20Awards.pdf)

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**Positions on the Scientific Council will become available at the next Scientific Meeting to be held in Sydney.** The Society is now inviting nominations to fill these positions.

The Council of the ISH is important as the key active body to further the aspirations and activities of the ISH. In doing so, *we’d hope that those on Council might reflect the diversity of ISH members in terms of geography and age.* In this respect, the contribution of younger members is crucial for the future of the ISH.

Members of Council have responsibilities as Trustees of the Society. This carries specific commitment to the business of the ISH and so nominees need to be able to devote time and energy to serve the needs of the ISH.

The ISH2012 program contains something for everyone – clinicians, research scientists and members of the allied health and corporate world.

State of the art lectures include:

1. Thoughts on Blood Pressure and Stroke
2. Identifying and characterizing genetic loci underlying coronary artery disease
3. A short history of the sympathetic nervous system: From Thomas Willis to radiofrequency ablation of the renal sympathetic nerves in hypertension
4. Gene mutations linked to hypertension
5. MicroRNA Control of Cardiovascular Disease
6. The Eye as a window to study the origin and manifestations of Hypertension
7. On and off target effects of renal and CV protective agents and how they each contribute to outcome: unmet needs
8. The kidney and hypertension

Absolute risk: Problems and solutions

Prof Rod Jackson - New Zealand
- Hypertension has been dead for over 20 years - why has it gone unnoticed by so many clinicians?

In the past, prevention of cardiovascular diseases (CVD) was predominantly focused on identifying and managing individual risk factors, for example high blood pressure. A superior, more holistic and better, targeted approach is to estimate absolute CVD risk calculated from all major determinants of CVD risk rather than blood pressure in isolation, and manage the individual accordingly. This session at ISH2012 will identify the problems and solutions in changing management, of an individual with elevated blood pressure, to an absolute risk approach.

Hypertension, Stroke and Cognition

Prof Bo Carlberg - Sweden
- Blood pressure treatment in acute stroke

Hypertension is the single most important risk factor for stroke. This session will explore strategies for stroke prevention and care, including blood pressure lowering therapies, anti-coagulation, and management of other cerebrovascular risk factors. Regimens for care immediately after acute stroke and for the prevention of recurrent stroke will be a focus. In addition the interaction between elevated blood pressure and brain function and cognition will be addressed.

New renal mechanisms of salt balance and hypertension

Prof Tom Coffman - USA
- Cell-specific actions of AT1 angiotensin receptors in hypertension

An inherent hunger for salt contributes to a healthy person consuming as much 8 to 12 grams a day, far in excess of their
requirements. Studies have shown that excess salt in the diet is linked to high blood pressure and premature death. The kidney with its ability to match sodium output to sodium intake plays an inextricable role in extracellular fluid homeostasis. Here, new renal mechanisms regulating salt balance will be presented and their potential as therapeutic targets discussed.

Cerebral blood flow, dementia and cognition

Prof Chris Tzourio - France

- Is hypertension associated with an accelerated ageing of the brain?

Emerging evidence suggests that anti-hypertensive treatment might be effective for the prevention of cognitive decline and dementia, especially in hypertensive patients with small artery dysfunction. New data will be presented in this ‘state-of-the-art’ symposia.

Myocardial regeneration

Prof Richard Lee - USA

- Cardiomyocyte Refreshment in Mammalian Myocardium

A healthy heart is not simply composed of myocytes, but an array of cell types that interact to form a highly organized and dynamic contractile structure. When cardiac tissue is damaged the normal architecture of heart disappears. This session focuses on regeneration of myocardial tissue. Come and learn what we know, what we don’t and where we should be heading.

Lifestyle and nutritional factors

Prof Marianne Gelenijinse - Netherlands

- Dietary influences on blood pressure

The complex relationship between physical activity, nutrition, and hypertension will be examined to determine how genetic and environmental factors interact to regulate body weight and body composition in humans as a basis for development of lifestyle interventions.

Satellite Symposia include:

ISH New Investigators’ Symposium
29 September, University of Sydney

This event follows on from the success of the 1st ISH New Investigators’ Symposium (held in Orlando during the AHA-CHBPR/IASH meeting in September 2011).

This will provide a forum for trainee/new members to network and exchange ideas. This is an opportunity for new investigators (from research higher degree students to 10-years postdoctoral) to present and discuss their work, make new friends, build research networks and establish collaborations that can last a lifetime. Most of all, to hear about some exciting research from across the globe.

Informal discussion sessions and a social event will provide the opportunity to exchange ideas on scientific or general interest topics. The meeting starts at 9.30 on 29th September and ends in the evening with an informal dinner.

Programme Highlights include:
- Young/new investigator talks (10 minutes each)
- Poster presentations
- Informal round table discussion sessions
- Meet a Journal Editor (Dr Stuart Spencer – The Lancet)
- Social activities: Drinks at the Clock tower followed by dinner in Sydney. Pizza Birra, Surry Hills (venue to be confirmed, additional cost)
- Panel discussion “Future of hypertension research”
- New Investigator Awards

Abstract Submission - DEADLINE August 30th

Abstracts should have been submitted through the main meeting website (for Hypertension Sydney 2012). However, late abstracts may still be emailed to ISH Secretariat until August 30th and will be considered as late breaking.
ISH Bridging the Gaps Symposium: Dealing with diversity in CVD risk in affluent countries

30 September, Sydney Convention & Exhibition Centre, Sydney, New South Wales
www.ish-world.com

With an increasing number of effective interventions, the challenge for health care is to be at its best where it is needed most - otherwise health systems will widen inequality. The gaps to be bridged include gaps in coverage, gaps in quality, gaps in coordination and gaps in continuity.

In the morning we shall review the challenges, drawing examples from South America, India, South Africa, the UK and Australia. In the afternoon, Norman Swan, the distinguished Australian broadcaster and scientific commentator will host a wide ranging discussion on how these gaps can be bridged, in practical, affordable and sustainable ways.

ATTENDANCE IS FREE OF CHARGE – ON A 1ST COME 1ST SERVED BASIS

The neuropathophysiology of hypertension - an emerging therapeutic target
25 - 28 September, Palm Cove, Queensland
www.neuropathISH2012.org

The program will cover advances and applications of renal denervation, cardiorenal syndrome and heart failure, central regulation of the autonomic nervous system, obesity and stress and will bring together clinical and preclinical investigators.

A unique opportunity to have dinner within the Cairns Zoo and to visit the Great Barrier Reef will be available for all delegates and their family.

Evolving concepts of the renin angiotensin system.

With its long history, the renin angiotensin (RAS) still remains a very productive area of research, revealing new insights into its role in cardiovascular health and disease, and new therapeutic approaches to combat cardiovascular disease. We invite all cardiovascular physicians, researchers, and students to attend this conference. It will be held immediately prior to the main ISH meeting and will provide a window onto tomorrow’s cardiovascular therapies.

A number of key international and Australian experts in RAS research have agreed to speak at this meeting. In addition, speakers will be selected from submitted abstracts, and there will also be poster presentations. Therefore, we warmly invite you to come to Australia to hear the latest developments in the ‘Evolving concepts of the renin angiotensin system’, and to enjoy the spectacular region of the Hunter Valley.

Chairs: Robert Widdop (Monash University); Duncan Campbell (St Vincent’s Institute); Muscha Steckelings (Charité)

Cardiovascular genetics incorporating the 15th international SHR symposium & 48th Japanese SHR meeting
27 – 28 September, Melbourne, Victoria
http://www17.ocn.ne.jp/~shr/IntSHR/welcome.html

The meeting will discuss the latest developments in genomic discovery and the next steps in placing DNA variations in their phenotypic, pathophysiological and therapeutic contexts. For this reason the Cardiovascular Satellite is built around the theme ‘Association & Beyond’.

The Australian early origins of hypertension workshop in honour of the scientific contributions of Dr Eugenie Lumbers and Dr Caroline McMillen
27 – 29 September, Adelaide, South Australia

This meeting will allow researchers to consider the major contributions made to the field of fetal programming by Dr Eugenie Lumbers and Dr Caroline McMillen by highlighting work in their main areas of interest and next big questions that require investigation.

Hypertension management in acute stroke
28 – 29 September, Blue Mountains, New South Wales
georgeinstitute.org.au/hypertension-acute-stroke-satellite-meeting-2012

This pre-ISH Satellite Meeting on Hypertension management, an initiative of The George Institute for Global Health, aims to explore current knowledge regarding the management of hypertension in acute stroke and provide a stimulating venue to discuss ongoing and new avenues of research aimed at resolving such a critical issue in the care of patients with acute stroke. Lilianfels Blue Mountains Resort & Spa is a renowned haven of relaxation in one of Australia’s most beautiful destinations. The 5 star hotel is housed in a historic country mansion set amidst two acres of manicured gardens, overlooking some of the most spectacular scenery in the Blue Mountains, in New South Wales (NSW).
Physical activity, nutrition and a pinch of salt  
28 - 29 September, Sydney, New South Wales  
www.ish-satellite.platformtechnologies.org  
This meeting focuses on how key lifestyle factors such as physical activity, macronutrient intake, and dietary salt impact on cardio-metabolic disease development, progression and management and how these behaviours may be modified to enhance health outcomes.

Management of hypertension in primary care  
29 September, Sydney, New South Wales  
This meeting addresses management of high blood pressure in primary care/general practice. Attention is given to the measurement, diagnosis and management of hypertension within the setting of absolute cardiovascular disease risk & pharmacotherapy.

Central Haemodynamics: The 4th Pulse of Asia, Sydney  
29 - 30 September, Darling Harbour, Sydney, New South Wales www.centralhaemodynamics2012.org  
This meeting is being held in conjunction with our colleagues from the Pulse of Asia and comprises an exciting line up of international experts. Latest evidence on pathophysiological understanding and clinical application of central haemodynamics will be presented. Delegates are also invited to submit their work for presentation by poster, with several prizes to be awarded. In addition to scientific stimulation, the meeting will include a sight-seeing evening cocktail cruise on Sydney Harbour.

Measurement of blood pressure away from the clinic by either ambulatory blood pressure monitoring (ABPM) and home blood pressure monitoring is essential in the management of hypertension. Using ABPM can provide the diurnal variation in BP and short-term variability. It is the only means to measure blood pressure during sleep, termed “nocturnal BP” which provides additional information for cardiovascular risk. Our Satellite promises to provide attendees with the latest update on how ambulatory and home blood pressure can assist in managing the hypertensive patient. It will be held in our gorgeous harbour city, Sydney at the Darling Harbour Convention Centre. We have assembled an interesting program with state-of-the-art presentations by internationally and nationally recognised speakers and chairpersons from Japan, Canada, Italy, UK, Spain, Belgium and Australia.

The goal of the 4C Cardiology meeting is to select four key areas of cardiovascular medicine and then, with the help of international expertise, focus on contemporaneous hot topics, debates and cutting edge research in these selected areas. For 2012: Acute Coronary Syndromes, Heart Rhythm Disturbances, Heart Failure and ESC/ANZ Guidelines - Clinical Implications and Controversies. We have confirmed an outstanding roster of local and international experts in these areas as our Meeting Faculty and look forward to your attendance and contribution to this satellite meeting.

Master another risk factor  
5 - 6 October, Homebush, Sydney, New South Wales  
This two day intensive workshop will provide updates and training in key areas of lipids and cardiovascular disease, use case studies to illustrate issues and options, and allow significant time for interaction and discussion amongst attendees.

Aldosterone and salt: heart and kidney  
5 - 7 October, Palm Cove, Queensland  
www.aldosterone2012.org  
Come to Queensland’s spectacular far north to a meeting packed with state-of-the-art presentations on the role and interaction of aldosterone and salt in causing hypertension and non-BP dependent heart and kidney disease. The role of salt in hypertension remains a source of major controversy and interest. Recent insights into molecular mechanisms by which the kidney regulates sodium transport and hence blood pressure (including the “new genetics” of Gordon’s syndrome) provide some of the answers but also highlight important remaining questions. The role of aldosterone in hypertension, its disproportionate adverse consequences for cardiovascular and renal health, and the pathogenesis, diagnosis, and treatment of aldosterone excess, will all be discussed. KCNJ5 is the “game changer” in primary aldosteronism; what are the implications? From basic science to clinical diagnostics and management, a cast of over 30 internationally acclaimed speakers and chairs representing the USA, UK, Europe and Southeast Asia will ensure this to be one of the true highlights of ISH 2012. Abstracts are invited for poster presentation and prizes will be awarded to the meeting’s best!

International Society of Nephrology (ISN) forefronts - tubulointerstitial disease in diabetic nephropathy.  
5 - 7 October, Melbourne, Victoria. http://dir.isn-online.org/ISN/forefronts/intropages/core.htm  
The key purpose of the meeting is to familiarize nephrologists with emerging fields in research often outside the field of nephrology, which are likely to have a major impact on the future of their work.
A pub night was held during the European Society of Hypertension (ESH) London meeting and received great interest from those attending the meeting.

The Facebook page has nearly 300 supporters to date. It is being used as the main vehicle to promote the New Investigator Network and key initiatives such as Society membership as a Research Fellow and the New Investigators’ Symposium (See page 5).

A pub night was held during the European Society of Hypertension (ESH) London meeting and received great interest from those attending the meeting.

The ISH NIN webpages have been updated with a Spotlight section to feature ISH New Investigators of the Month and as follows.

Please contact the Secretariat should you be interested in highlighting your work (as an ISH Research Fellow), or the work of any young researcher in your institute/organisation.

April 2012

Name: Paraskevi Christofidou
Institutional Contact Information:
Department of Cardiovascular Sciences
University of Leicester, UK

May 2012

Name: Dylan Burger
Institutional Contact Information:
Kidney Research Centre, Ottawa Hospital Research Institute
Ottawa, ON, Canada

June 2012

Name: Anna-Clara Collén
Institutional Contact Information:
Department of Medicine, Sahlgrenska University Hospital / Östra, Gothenburg, Sweden

We have been delighted with the response and number of offers of assistance from senior ISH members. Seven new investigators are currently involved with the Scheme.

We welcome interest from further new investigators. Should you be interested, do not hesitate to contact the Secretariat.

We would like to thank committee members (Dylan Burger (Canada), Bo Carlberg (Sweden), Fadi Charchar (Australia), Maciej Tomaszewski (UK) and Praveen Veerabhadrappa (USA) for their enthusiasm and tireless energy.

Reported by Professor Gavin Norton
Cardiovascular Pathophysiology and Genomics Research Unit, Schools of Physiology and Medicine, Faculty of Health Sciences, University of the Witwatersrand, South Africa

Introduction
With the recent revisions made to the British National Institute for Health and Clinical Excellence (NICE) guidelines on the clinical management of primary hypertension in adults\(^1\) and the implications thereof, the Southern African Hypertension Society (SAHS) recently took the decision to revise its guidelines. The revised version of the SAHS guidelines\(^2\) accommodates a number of needs within South Africa.

The SAHS acknowledge the careful synthesis of the scientific evidence published in the NICE guidelines. However, the SAHS has attempted to place this evidence in the context of ever expanding resource-limited settings in South Africa; and the fact that the management of hypertension for the majority of South Africans is limited by scarce resources and skills available at the primary healthcare level.

The revised SAHS guidelines also recognise very diverse resources available to different sectors of the South African population and that although the pathophysiology of hypertension in black communities, which constitute the majority of the population of the country, is largely the same as in other communities; there are some differences that have important clinical implications.

This brief review will focus on some of the major differences that exist between the NICE and SAHS guidelines with respect to three key issues. These include the approach to the diagnosis of hypertension; drug initiation blood pressure (BP) thresholds; and the approach to drug therapy. The arguments for the SAHS following different approaches will be underscored.

Diagnosis of hypertension

The NICE guidelines which, based on significant scientific evidence and analysis of cost versus efficacy,\(^3\) indicate that if the office BP ≥140/90 mm Hg and <180/110 mm Hg, out-of-office BP measurements (day or home BP values ≥135/85 mm Hg) are required for the diagnosis of hypertension.\(^3\) These recommendations are founded on the significant prevalence of persons whom may have “white coat” hypertension; and the evidence that “white coat” hypertension may not carry the same level of risk as those with both an elevated in-office and out-of-office BP. In contrast, the SAHS, although acknowledging the superiority of out-of-office BP measurements for risk prediction, does not require these measurements for the diagnosis of hypertension.\(^2\)

The reasons for this approach by the SAHS are threefold.

First, the resources for this approach (validated ambulatory or home BP monitors which are very expensive in South Africa) are simply not available to the majority of South Africans and the initial cost to provide these resources is likely to impact on alternative areas of healthcare. Currently, healthcare budgets in many South African provinces are manifestly overspent and hence developing such resources is ill-timed. Whether healthcare budgets will improve, only time will tell, but in the meanwhile decisions are required that affect the majority of South Africans.

Second, there is no question that over the years significant evidence has accumulated to indicate that office or clinic BP measurements are excellent risk predictors. Thus, within available resources, the SAHS recognises in-office or clinic BP measurements as the most appropriate approach to the diagnosis of hypertension.

Third, no cost-effective analyses for the use of expensive out-of-office BP measurement devices have been conducted for developing communities and without this evidence the SAHS can make no informed decisions. The SAHS guidelines nevertheless encourage the use of ambulatory or home BP monitoring when these resources do exist and provide guidance as to when to monitor in these circumstances.\(^2\)

Drug initiation BP threshold

There are a number of similarities and differences between the NICE and SAHS guidelines with respect to decisions to initiate drug treatment. Both guidelines require immediate initiation of drug therapy in persons with an office or clinic BP ≥180/110 mm Hg (severe hypertension).\(^1,2\) Consistent with other European guidelines,\(^4\) the SAHS guidelines indicate that drug therapy should be initiated if
office or clinic BP ≥140/90 and <180/110 mm Hg if the absolute 10 year risk of a cardiovascular event is 20% or more, or if the office or clinic BP remains at ≥140/90 mm Hg and <180/110 mm Hg despite lifestyle modification over 6 months. In contrast, if office or clinic BP ≥140/90 or <180/110 mm Hg, the NICE guidelines also require a day or home BP ≥135/85 mm Hg. If out-of-office BP values are ≥135/85 mm Hg and the person has stage II hypertension, then the initiation of drug therapy is recommended. If out-of-office BP values are ≥135/85 mm Hg and the person has stage I hypertension then drug therapy is only initiated if patients have one of a number of additional features including a 10 year risk of a cardiovascular event ≥20%, target organ damage, cardiovascular disease, renal disease, or diabetes mellitus. Although there is no argument by the SAHS that the use of out-of-office BP monitoring would eliminate the treatment of persons with “white coat” effects whom are not at significant risk, for the aforementioned reasons it is not possible to develop nationwide out-of-office BP monitoring programs at present.

An important issue which was considered by the SAHS is that the current NICE guidelines only offer drug therapy to patients with grade I hypertension who fulfill in-office and out-of-office BP criteria and whom are also at a high risk. Although the SAHS accepts that this decision is based on the lack of evidence in favour of treating average or moderate risk patients with grade I hypertension, the SAHS also has to consider the possibility that risk stratification for most patients in resource limited primary health care settings may not be optimal. For example, the chances of assessing target organ damage, when blood tests and electrocardiography are not available in nurse-driven primary health care clinics, diminishes the chances that correct risk stratification will occur. The SAHS has therefore erred on the side of caution and have indicated that patients with a clinic or in-office BP ≥140/90 mm Hg and <180/110 mm Hg, should receive drug therapy after a 6 month period of lifestyle modification. If lifestyle therapy achieves the target BP, this would be at minimal cost to the healthcare sector. If lifestyle therapy does not achieve target goals, at least low cost drug therapy would have been initiated after a relatively short period of time in those who are likely to benefit. This approach is in-keeping with previous European guidelines.

Approach to drug therapy

The NICE and SAHS also share similarities and differences with respect to the approach to the initiation of therapy. Many of the differences are based on an acknowledgement of the International Society on Hypertension in Blacks (ISHIB) guidelines on the part of the SAHS. Both the NICE and the SAHS guidelines recommend a stepwise approach, but the SAHS suggests that combination therapy is employed in those with a BP that is >20/10 mm Hg above goal. This is in-keeping with ISHIB guidelines and the numerous publications that show that more than two-thirds of hypertensives require two drugs or more to achieve BP control.

Based on the best available scientific evidence to support these choices, the NICE guidelines indicate that angiotensin-converting enzyme inhibitors (ACEIs) or angiotensin receptor blockers (ARBs) should be first-line therapy in uncomplicated hypertension; that calcium channel blockers (CCBs) should be first-line therapy in those over 55 years of age and in blacks, and that thiazide-like agents should be used in those with evidence of or a high risk of heart failure. The NICE guidelines also indicate that in blacks ARBs should be the second line of therapy. In contrast, the SAHS takes a broader view and indicates that either an ACEI, thiazide-like or thiazide diuretic agent, or CCB can be initiated in uncomplicated hypertension; that in blacks either a thiazide or thiazide-like diuretic or CCB may be initiated; and that where a compelling indication exists appropriate therapy should be initiated. Thus, the SAHS allows for more flexibility in the initial choice of therapy except where compelling indications exist. The approach employed by the SAHS is for a number of reasons.

First, the SAHS guidelines acknowledge that a high prevalence of salt-sensitive hypertension exists in black communities and hence that thiazide or thiazide-like diuretics should be considered as first-line therapy in this population. The choice of diuretic or CCB as first-line therapy in blacks is in-keeping with the ISHIB guidelines. Second, the SAHS is required to accommodate the needs of various components of the healthcare sector in South Africa, where for example, some classes of agents may be more readily available in some as opposed to other areas. In this regard, in South Africa, although indapamide (thiazide-like diuretic) is available to both the public and private sectors, the reality is that low-dose hydrochlorothiazide is more readily available. The SAHS recognises the lack of evidence in favour of low-dose thiazide diuretic agents for outcomes and the potential limitations of this approach in comparison to thiazide-like diuretic agents, but can only recommend thiazide-like in place of thiazide diuretics once there is certainty that this approach will not result in an avoidance of the use of diuretic agents simply because there is limited availability. Third, the SAHS does not follow a prescriptive approach to second-line therapy, except where compelling indications exist. This to some extent is driven by the lack of evidence to support the use of one class over another as second-line therapy in black patients.

Conclusions

The NICE guidelines have been developed on the basis of a careful analysis of the best available scientific evidence and what is likely to be the most cost-effective care for the United Kingdom. Members of the SAHS acknowledge the careful thought that has gone into this analysis. Nevertheless, the SAHS has an obligation to support evidence-based approaches which are within the means of developing communities within South Africa. The revised SAHS guidelines largely reflect this approach.
The ISH and the Asia Pacific Society of Hypertension in co-operation with the National Heart Foundation of Bangladesh (Hypertension committee) and assisted by a grant from Servier (Asia) conducted a two day meeting in Dhaka at the time of World Hypertension Day. Chief Guest at the inaugural session was the Minister for Foreign Affairs of Bangladesh, Dr Dipu Moni accompanied by the Senior Secretary for Health Md. Humayun Kabir.

DAY 1

The meeting on day 1 was a workshop attended by about 50 people and directed at understanding the problems that faced the region related to blood pressure and cardiovascular disease. The meeting was opened by Professor Khandaker, Chairman of the hypertension committee who expressed his gratitude for support provided by ISH, APSH and Servier that enabled this conference attended by specialists from the surrounding countries Nepal, East India, Pakistan, Bhutan and Myanmar to take part.

Rashid Rahman from Malaysia presented the evidence that cardiovascular disease was the most important cause of mortality in the world and that high blood pressure was the most important contributor on a population basis to this epidemic. Furthermore he emphasized that this problem was present in virtually all societies even those at the least developed stage. There were differences in incidence of the various problems that make up cardiovascular (also cerebral) deaths related in part to food intake of a society with hemorrhagic stroke initially a most common problem, particularly in China but as diet altered ischemic events of the heart and the brain increased. In South Asia and in people of Indian extraction diabetes and associated complications become a major problem. The prevalence of hypertension rose in most instances when a population became urbanized but rural regions were not, in general, protected from the problem but lagged behind.

Mohammad Ishaq from Pakistan, Sailesh Mohan from India, MR Pandey from Nepal and KMHS Sirajul Haque presented data from their countries related to prevalence and also some details of programs to alleviate the problem that are in place or proposed.

Trefor Morgan from Australia emphasized the problem that had been expressed by Rashid Rahman and furthermore indicated some costs involved in hypertension management. The expenditure on hypertension management in the USA per individual exceeds the total health care budget of most developing and middle developed nations. A program based on detection and management has undoubtedly, improved clinical

ASIA AND AUSTRALASIA

Prevention and Management of Hypertension, Bangladesh, 17-18 May 2012

Locally organized by Professor Khandaker, Professor Malik and Dr Sohel Reza Choudhury
International Co-ordinator Trefor Morgan

References


outcome, reduced problems caused by high blood pressure and individuals live longer but long term problems such as cardiac failure, renal failure and dementia still occur. This strategy does not address the problem of people with sub-optimal blood pressure but below most drug treatment thresholds (SBP >115 < 140 mmHg). This is important because up to 50% of blood pressure related complications occur in people in this BP range. He presented evidence that lifestyle alterations are a major cause of increased levels of BP and that interventions can reduce community BP levels. He emphasized that we must reduce all risk factors that contribute to cardiovascular disease (smoking, obesity, cholesterol, diabetes, lack of physical activity) but emphasized that in most populations, not necessarily in individuals, blood pressure above the optimal level was the most important contributor to this problem and should be addressed. While not ignoring the contribution of other factors he emphasized the importance of sodium restriction accompanied by increased potassium intake to reduce blood pressure. The approach should probably be applied population wide as up to 75% of individuals will develop hypertension if they live to 75 years. The alternative of applying it to high risk individuals is a separate option but at present apart from family history we cannot predict such people accurately. This may alter in the future. We know what can be done in primary prevention of hypertension, diabetes and cardiovascular disease. The problem is to implement such programs.

Neil Poulter from the UK discussed what should be done when a diagnosis of hypertension is made. Most guidelines have overall similarities but there are differences.

The common value of most for initiating therapy is a SBP>140mmHg, however the NICE (UK) guidelines recommend starting therapy at a SBP of 160 mmHg unless the person has a 10 year risk of events >20%. The other guidelines while using 140mmHg as the level for initiating therapy use risk factor assessment to indicate that in many situations therapy with drugs is not initiated at that level of BP. NICE guidelines suggest that the initial drug chosen should be chosen according to the age or ethnicity of subjects. People older than 55 years and people of African origin respond poorly to blockade of the renin angiotensin system and beta blockers but respond well to diuretics and calcium channel blockers. In the older age group they come down in favour of calcium channel blocking drugs as they appear to have a superior outcome to diuretics. In the younger age group they suggest that blockade of the renin angiotensin system is more appropriate than beta blockers as the outcome data is better. However the important aspect is to lower BP and if the first drug does not work a second drug should be added. Thus if a person is on two drugs these will be a calcium channel blocking drug and a RAS blocker in both age groups. When this occurs it is preferable to give it as a combined tablet. Neil Poulter also stated that the recommendation is to use a thiazide-like diuretic rather than a thiazide as the evidence seems to indicate better outcome with chlorothalidone and Indapamide than has been achieved with hydrochlorothiazide. From the ASCOT study the use of perindopril and amlodipine in combination was very successful. The ACCOMPLISH study showed that benazapril with amlodipine was superior to benazapril with a thiazide diuretic. No matter what combination is used it is essential to use longer acting drugs so that they can be given once a day and achieve 24 hour BP control. If blood pressure is still not controlled the third drug to be used should be a thiazide-type diuretic. Subsequent drugs to be added include spironolactone which produces good results. If the patient has still not reached goal, alpha blockers and beta blockers may be added.

These are guidelines and it is essential to tailor your therapy according to the individual circumstances, the social fabric and the economic circumstances of a person and a country. The critical aspect is to lower blood pressure.

Tazeen Jafer from the Aga Khan University in Pakistan and now at the Duke-NUS graduate school in Singapore presented her work examining strategies to improve the delivery of hypertension care to poor communities in Pakistan.

Two strategies were examined alone and in combination in a carefully structured comparison trial. Physicians were trained in hypertension management; lay health care workers involved in the ladies program were used to reinforce advice. Use of either tactic alone proved no better than standard care but the combination of the two had a very beneficial outcome and was deliverable at a low cost with a projected cost of $151 per DALY averted. Such programs incorporating the use of primary contact medical people have a great potential to deliver hypertension care and hypertension preventative messages to impoverished people around the world.

*A high light of the day was the active participation of the audience in the program with many questions and comments.*
The second day was a meeting with a larger audience (200) in the more usual lecture format. Trefor Morgan and Neil Poulter discussed similar topics to the previous day. Rashid Rahman discussed curable forms of hypertension. The local faculty discussed management of hypertension in people with renal failure, cardiac failure, diabetes and acute stroke. Sohel Choudhury extended the information about epidemiology of hypertension in Pakistan and Md Zakir Hossain discussed the difficulties of managing hypertension in a rural community.

The problems associated with this and the relationship to the income of individual and the population are major and are difficult for those from developed countries to appreciate. When the average income in a country is about $700 even medication costing $5 per month is expensive and poses problems for the patient and their doctor.

Trefor Morgan and Rashid Rahman visited Rangpur and Chittagong respectively to give talks to audiences of local doctors totalling 200.

The hypertension committee of the National Heart Foundation of Bangladesh have decided to develop specific extensions of the guidelines adapting them to local conditions. This is part of an ambitious program to ensure that hypertension services and cardiovascular prevention programs can be delivered throughout the country. The plan is to use the NICE guidelines and modify according to the local circumstances. In the first instance it is likely that most attention will be paid to detection and initiation of therapy rather than treating to goal. However, in Bangladesh, there is a wide disparity of income and a wide range of options need to be pursued.

Reported by Professor Trefor Morgan  
General Secretary APSH and Chair - ISH Asia & Australasia Regional Advisory Group

CENTRAL AND SOUTH AMERICA

20th Argentina Congress of Hypertension

The Argentina Society of Hypertension held the 20th Argentine Congress of Hypertension in the city of Buenos Aires from 12 – 14 April. This meeting slogan was ‘From the essential to the secondary’.

The Organizing Committee was chaired by Dr. Marcos Marin, while the Scientific Committee was led by Dr. Pablo Rodriguez. The ambitious scientific program included plenary lectures, round tables, discussion panels, breakfast with experts, interactive rounds of clinical case discussions, presentations of brief communications, and electronic poster sessions. Approximately 120 national speakers and international special guests participated in the scientific program to include: Professors Giuseppe Mancia, Brian Williams, Jan Staessen, Antonio Coca, Gary Desir, Alberto Morganti, Jeffrey Garvin, José Boggia, Marcelo Carattino, Oscar Carretero, León Ferder, Geraldo Lorenzi-Filho, Juan Gaspar, Mariela Méndez, Pablo Ortiz, and María José Campagnole-Santos.

Joint Symposia were made with the American Physiology Society, the Italian Society of Hypertension, the Inter-American Society of Hypertension and the Latin American Society of Hypertension.

The congress was attended by approximately 2,000 physicians and researchers, and awards were given for the best original research papers presented as both oral and poster presentations. To add to this, the Annual Fellowships to Promote Hypertension Research were presented as the Argentina Society of Hypertension distributes 10% of the income of its congresses to support epidemiological, clinical and basic research.

Free subjects awarded at the meeting

- Award "Prof. Dr. Carlos Maria Taquini" for the Best Work in Basic Research in Hypertension: Hsp70 in the regulation of the subunits Nox4/p22phox NAD(P)H oxidase and the cytoskeleton in VSMC of SHR cells treated with losartan.
- Lorenzo Gil, AF, V. Bocanegra, Rinaldi Tosi ME, Cacciamani VE, Benardon ME, Valles P. Area of Pathophysiology, University of Medical Sciences, UN Cuyo. IMBECU, CONICET, Mendoza.
• Award "Prof. Dr. Juan Carlos Fasciolo" for the Best Work in Clinical Research in Hypertension
Variables associated with the vulnerability of atherosclerosis in a hypertensive population.
Gonzalez S., F. Inserra, Forcada, P., E. Cavanagh, J. Chiabaut Svane, Castellaro C.
Obregon S., D. Olano, Hita A., Kotliar C. Noninvasive Vascular Mechanics Laboratory,
Hypertension Center, Department of Cardiology, Austral University Hospital.

• Best Poster Award in Clinical Research in Hypertension
Cognition and vascular risk factors: an epidemiological approach.

• Annual Fellowships to Promote Hypertension Research
Moderate zinc deficiency during prenatal and postnatal growth: impact on the function and
morphology of the cardiovascular system in adult life
Tomat A.

• Melanocortin system involvement in regulating gene expression of TRH in the SHR rat diencephalon
Landa S.

Reported by Professor Daniel Piskorz
President, Argentina Arterial Hypertension Society

The congress was endorsed by the European Society of Hypertension (ESH) and International
Society of Hypertension (ISH). Patron of the  

CONCLUSIONS:
1. Considering a similarity of relevant epidemiological data on the prevalence of arterial hypertension in Serbia and region, a principal task of the Balkan countries is to undertake a systematic epidemiological research on the prevalence of arterial hypertension and the consequences in the population.

2. All regional countries should be associated into a Balkan Network, considering their related geographical aspects and similar lifestyle habits of the populations of this region.

3. Having our practical experiences in mind, especially the difficulties in the classification of the patients according to numerical values of blood pressure and difficulties in making a decision about the treatment of arterial hypertension, the Society has suggested a novel classification of increased blood pressure, which could be applied together with existing ones.

Classification of arterial hypertension according to blood pressure level and target organ damage

Group A - Patients with increased blood pressure without target organ damage (subclinical and clinical manifested organ damage)
Group B - Patients with increased blood pressure and subclinical target organ damage, without clinically manifested organ damage
Group C - Patients with increased blood pressure and clinically manifested organ damage
4. The importance of preventive measures in the correction of lifestyle habits causing arterial hypertension (smoking cessation, stress reduction, decrease of salt intake and increase of physical activity) cannot be underestimated. Environmental and occupational risk factors (noise exposure, air pollution, occupational stress, non-physiological working conditions) were markedly highlighted. In addition, the non-pharmacological measures are of great importance in the treatment of arterial hypertension.

- The Society should initiate a social action to eliminate the influence of hazardous environmental factors (air pollution and noise exposure) causing increased blood pressure;
- A national program to limit nutritive sodium intake must be established;
- Children older than four should have their blood pressure measured at least once a year, preferably by ambulatory blood pressure monitoring;
- Future guidelines for treatment of arterial hypertension should oblige physicians to advise patients how to improve their lifestyle habits - to cease smoking, decrease sodium intake and increase physical activity;
- In newly diagnosed 1 grade hypertenisons without other cardiovascular risk factors or target organ damage, the treatment should begin with non-pharmacological measures - correction of body weight, decrease of salt intake, smoking cessation, increase of physical activity level;
- Physicians should insist on the continuance of these non-pharmacological measures during pharmacological treatment of arterial hypertension.

5. In order to establish subclinical target organ damage (particularly changes on blood vessels) standard procedures should include methods for arterial stiffness and pulse wave velocity assessment. Common protocols for follow-up of hypertensive patients must be established in collaboration with other countries in the region.

6. Considering a lack of generally accepted values of optimal blood pressure in patients with peripheral arterial disease, a special approach to the treatment of hypertension in this patient group was proposed.

- Treatment of arterial hypertension in patients with peripheral arterial disease decreases cardiovascular morbidity and mortality.
- The “ideal” blood pressure values in patients with peripheral arterial disease should be defined.

7. The importance of noninvasive diagnostic procedures was elaborated. Thoracic bioelectrical impedance using impedance cardiology for assessment of haemodynamic parameters with integrated “beat-to-beat” blood pressure measurement (finger pletismography) and oscillometric blood pressure measurement with ECG control and oxygen saturation level enables us to:

- Make the diagnosis of arterial hypertension on time, and to determine the type of hypertension (white-coat hypertension, masked hypertension, orthostatic hypertension, dysfunction of the autonomous nervous system, syncope);
- Choose adequate therapy and to regulate arterial blood pressure better;
- Diagnose the dysfunction of the autonomous nervous system in patients with diabetes.

8. The Society has also suggested the foundation of a regional Center for the diagnostics, research and treatment of blood pressure disorders, a highly specialized multidisciplinary service that would employ leading specialists (cardiologists, endocrinologists, nephrologists, neurologists, clinical pharmacologists, psychiatrists, specialists in nutrition, vascular surgeons) and which would be equipped with up-to-date medical equipment.

Reported by Professor Dragan Lovic
President, Serbian Society of Hypertension
The scientific sessions of the 2012 World Congress of Cardiology (WCC), organised by the World Heart Federation (WHF), were held in Dubai from 18-21 April. Around 10,000 delegates registered for the meeting which included hypertension as one of 12 headline topics.

The scientific meeting proper was spread over 3 days (April 19-21) and had up to 22 parallel sessions running at any one time with the day (running from 8.30 am to 5.30 pm) subdivided into 4 2-hour sessions. Hence there were well over 200 sessions at the meeting of which 12 were dedicated to hypertension.

Inevitably at a meeting not primarily focussed on hypertension very little new ground breaking data were presented from a hypertension viewpoint and not many of the big names in hypertension were present. Perhaps one of the highlights - certainly a highly controversial issue - was the meta-analysis comparing mortality effects of ACE inhibitors and ARB’s in hypertension trials. These data presented by Professor Mourad and co-workers suggested that only ACE inhibitors significantly improved mortality in these trials. An interesting finding - but as long as the ON-TARGET results remain as our only head to head comparison of ACE-inhibitors and ARBs, it is difficult to be adamant re the differential benefits of the 2 drug classes on overall cardiovascular events.

There was a debate session - including 2 debates. In the first debate the importance of proteinuria in the management of hypertension was questioned. Surely the fact that proteinuria predicts CV risk is not questionable? The other side of the coin appears to be that there is a clear disconnect between lowering proteinuria and achieving CV protection as witnessed by ON-TARGET and ROAD-MAP among several other examples.

One session focussed on ‘how to’ in different clinical scenarios, and another session highlighted Polypills in hypertension. The increasing use of single-pill combinations of drugs seems logical and inevitable so long as costs can be controlled but as this session displayed, reaching agreement among “experts” around the world as to what the optimal confirmation of antihypertensive agents is clearly not even close! One session was allocated to blood pressure variability - one of the more interesting and recently raised research areas. Sadly Peter Rothwell was not there to present the really novel aspects of his work in relation to long term variability rather than beat-to-beat or 24 hour variability.

In short the hypertension components of these WCC scientific sessions were not terribly exciting and audiences were skimpy in those hypertension sessions I attended.

I wonder if WCC and WHF would consider liaising with the ISH to help put together a more exciting hypertension component to their next programme of scientific sessions which is scheduled for May 2014 in Melbourne, Australia?

Reported by Professor Neil Poulter
ISH Council member & Communications Committee member, UK
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## UPCOMING MEETINGS

### 2012

**Hypertension - a clinical update for physicians**
[http://events.rcplondon.ac.uk/detals.aspx?e=2719](http://events.rcplondon.ac.uk/detals.aspx?e=2719)

**XXV World Congress of the International Union of Angiology**
[www.iua2012.org](http://www.iua2012.org)

**2012 American Physiological Society Conference**
[www.the-aps.org](http://www.the-aps.org)

**British Hypertension Society Annual Scientific Meeting**
[www.bhsoc.org](http://www.bhsoc.org)

**2012 High Blood Pressure Research Scientific Sessions Conference**
[http://my.americanheart.org](http://my.americanheart.org)

**ISH Hypertension Sydney 2012**
[www.ish2012.org](http://www.ish2012.org)

**1st International 4 Corners of Cardiology Meeting**

**22nd International Congress on Thrombosis**

**2nd UK Symposium on Renal Denervation**
[www.bhsoc.org/default.stm](http://www.bhsoc.org/default.stm)

**Artery 12**
[www.arterysociety.org](http://www.arterysociety.org)

**2nd Annual Canadian Hypertension Congress (CHC)**
[www.hypertension.ca/chs](http://www.hypertension.ca/chs)

**4th World CODHy Congress**
[www.codhy.com/2012](http://www.codhy.com/2012)

**The World Congress of Clinical Lipidology**

### 2014

**Hypertension Sydney 2012 Meeting**
**29 September - 4 October**
**Sydney, Australia**
[www.ish2012.org](http://www.ish2012.org)

**2016**
**Seoul, Korea**

**2018**
**Beijing, China**

### 2012 Meetings

- **29 June**
  - London, UK

- **1 - 5 July**
  - Prague, Czech Republic

- **7 - 10 July**
  - Omaha, Nebraska, USA

- **10 - 12 September**
  - Cambridge, UK

- **19 - 22 September**
  - Washington, D.C., USA

- **5 - 6 October**
  - Melbourne, Australia

- **6 - 9 October**
  - Nice, France

- **10 October**
  - London, UK

- **18 - 20 October**
  - Vienna, Austria

- **25 - 28 October**
  - Toronto, Canada

- **8 - 11 November**
  - Barcelona, Spain

- **6 - 9 December**
  - Budapest, Hungary

**Join us in Sydney ......**
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