

NON-COMMUNICABLE DISEASES MAKE HISTORY AT UN SUMMIT



ONLY ONCE BEFORE IN THE HISTORY OF THE UNITED NATIONS, HAS THE GENERAL ASSEMBLY FOCUSED ON A HEALTH ISSUE. IN 2001 THE GLOBAL RESPONSE TO HIV/AIDS WAS DEBATED IN A HIGHLY POLITICALLY AND PUBLICLY CHARGED ENVIRONMENT, FOR WHAT WAS PERCEIVED TO BE THE GREATEST IMMEDIATE THREAT TO HUMAN HEALTH AT THE TIME. THE UNANIMOUSLY ENDORSED DECLARATION THAT EMERGED FROM THIS MEETING SET OUT SPECIFIC ACTIONS AND TARGETS FOR ALL UN MEMBER STATES. WHILE CHALLENGES REMAIN, SUCH ACTIONS HAVE SUBSTANTIALLY IMPACTED ON THE GLOBAL THREAT OF HIV/AIDS.

Ten years later, on 19-20 September 2011, the General Assembly put the world's

leading causes of death and disability on the table at a High Level Meeting, and called on heads of state to stand tall against the onslaught of non-communicable disease.

Director-General of the World Health Organization, Dr Margaret Chan called it a watershed moment for the United Nations, an opportunity to "stop and reverse the non-communicable disease disaster".

Non-communicable diseases (NCDs) claim 36 million lives annually, and principally includes cardiovascular disease, diabetes, cancers and many related conditions that are, in fact, preventable.

On the world stage, NCDs are increasingly being recognised for the true villain they are. Robber of economic growth, NCDs do not only claim nine million lives of people under the age of 60, but are responsible for nearly 80% of deaths in developing countries.

The George Institute's Chief Scientific Officer, Associate Professor Anushka Patel, who attended the Assembly, said while it was important to raise the issue at the high profile event, clear action remains to be seen. She said the universally adopted Political Declaration that emerged unequivocally recognised the major threat to improved health outcomes and economic development posed by NCDs, especially in poorer countries. However, the WHO and UN member states must translate the political document into action plans with measurable and time-limited outcomes before the UN meeting is declared a success.

"All speakers and attendees agreed and acknowledged the devastating effect non-communicable diseases are having on the world. However, as negotiations were conducted in advance of the meeting, the political declaration is weaker than what is required to address this major health threat. What is missing are the specific targets that were so prominent in the political declaration that followed the HIV/AIDS summit 10 years ago."

Associate Professor Patel acknowledges the positive outcomes of the summit, including

a set of lengthy recommendations focused on reducing risk factors and creating health-promoting environments, strengthening national policies and health systems, improved international collaboration, and research and development that is monitored and evaluated.

"Importantly, these recommendations recognise the need for a whole government, multi-sectorial approach to dealing with non-communicable diseases. A broad approach to dealing with these conditions is vital, and must extend into other areas such as food manufacturing, urban planning, environment, trade and agriculture", Associate Professor Patel added.

The Summit recommendations also stress the support needed for research into the prevention and control of non-communicable diseases. Principal Director, Professor Robyn Norton says the recommendations clearly align with the work of The George Institute, "These recommendations endorse the work we continue to deliver, particularly in the area of healthcare innovation including the polypill and smartphone technologies".

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NUMBER ONE IN THE WORLD FOR RESEARCH IMPACT

A new international report on the impact of scientific research has ranked The George Institute for Global Health as the research institute whose publications have had the greatest worldwide impact.

The 2011 report from the independent European agency, Scimago, ranked more than 3,000 research institutions on the basis of scientific publications from 2005-2009.

Principal Directors, Professor Stephen MacMahon and Professor Robyn Norton said the result reflected the Institute's long-established commitment to conducting research designed specifically to address major global health challenges.

"It is extremely gratifying to receive independent confirmation that we are delivering on our promise to provide evidence that will have an impact on the health of millions of people worldwide," Professor MacMahon said.

"We have deliberately targeted health issues facing the world's largest populations, as well as those affecting Australians. Our approach has been to develop and evaluate pragmatic solutions for common serious conditions ranging from injuries in children to strokes in older people," Professor Norton said.

The report can be found at www.scimagoir.com.

CHRONIC & CRITICAL CONDITIONS

ESTABLISHING THE EVIDENCE BASE: DIABETES RESEARCH IN CHINA

China has now overtaken India as the country with the most people living with diabetes. According to the International Diabetes Federation, the disease affects 1 in 10 adults in China, and costs around US\$26 billion a year in treating the condition.

For developing countries, the concern is the large number of people who remain undiagnosed. In China an estimated 60.7% of people are undiagnosed, likely due to a lack of resources and education. However, the longer someone is undiagnosed, the greater the challenge in treating them, increasing the pressure on families and health systems. Less prevalent is type 1 diabetes, yet in China, little is known about the condition that is fatal unless treated with daily injections of insulin, mainly in young children.

To better understand how the condition is affecting Chinese communities, The George Institute China has established a new diabetes research program. Chief Scientist, Professor Ji Linong and Associate Research Professor, ZHANG Puhong were appointed in May 2011 and have since assembled a team that is focused on two large-scale projects.

Thanks to support from the International Diabetes Federation and Chinese Diabetes Society, the team are

conducting a comprehensive survey of patients living with type 1 diabetes. Nineteen tertiary, secondary and primary hospitals across two cities, Beijing and Shantou, are collating data on the coverage, cost and care of type 1 diabetes. Government officials, over one hundred medical staff, and nearly seven hundred patients have already been interviewed. Based on results of this large pilot, the team aims to secure further funding to increase the scale of the program.

Secondly, a large-scale Observational Registry for Basal Insulin Treatment (ORBIT) study was launched in November 2011. This study will investigate the real world use of basal insulin, to clearly identify the clinical effect of the treatment, and how it may improve management of diabetes in adults.

"Around 200 hospitals from different parts of China will take part in this study, and 20,000 patients with type 2 diabetes will be enrolled over the next twelve months", said Professor Ji. "We will compare a number of available treatments, to assess the effectiveness of each one and identify the factor associated with efficacy", he added. The study participants will be followed for six months.

60 SECONDS WITH....



PUHONG ZHANG PhD
SENIOR RESEARCH FELLOW
DIRECTOR OF DIABETES RESEARCH PROGRAM
THE GEORGE INSTITUTE, CHINA.

When I was a child I wanted to be a physicist

If I could meet anyone famous, it would be Einstein

I never leave home without ID card

On Sundays, I do some household work

My ideal holiday destination would be Australia

My biggest achievement has been establishing a famous World Wide Web based network to facilitate the management of hypertension and diabetes

I work at The George Institute because it gives me the possibility to fulfill my career dreams

DAVID'S STORY: "I OWE A LOT TO RESEARCH"

I WAS VERY FIT. RUNNING 20KM A WEEK. I WAS TRIM AND HEALTHY AND SHOCKED TO FIND OUT I HAD A HEART CONDITION AT 37.

It turns out I was also extremely lucky. I was in training for a half marathon, and mid-training session felt a funny sensation in my chest. I noticed my heart rate monitor was showing 196 beats per minute, and I felt as if someone had knocked the wind out of my chest. I thought I was having a heart attack. Eventually the sensation subsided, but left me pretty shaken.

I visited my GP to ask to see a cardiologist. I had no reason to be worried, and was advised not to bother. However, something told me to investigate this further, as I really wanted clearance to continue training for the half-marathon.

Within minutes of conducting the test, the cardiologist diagnosed me with a serious heart condition. Hypertrophic cardiomyopathy (HCM) is a condition in which part of



the heart muscle becomes thick. The thickening makes it harder for blood to leave the heart, forcing the heart to work harder to pump blood. The high heart rate can become uncontrollable, resulting in death.

No more running, no more half-marathon. Oh, and your relatives need to be tested immediately, including your daughters.

The biggest shock came though, when I was admitted to hospital for more tests under general anesthetic. My heart stopped during the procedure, and they had to jump start my heart back into action. Within a week, I had a defibrillator inserted – an ipod-like heart tracker, that scans every heart beat of everyday and hits you with an electrical pulse that shocks the heart if it stops. I hear it's like being kicked in the chest by a horse.

A week later I was back at work.

The condition is hereditary, which shed light onto the deaths of my grandparents at such a young age. Thanks to research, we now know what this condition is. My brother was diagnosed, as well as his two daughters who have had to give up competition gymnastics. With regular monitoring we should all lead a very normal life.

I'm not going to sit around and feel sorry for myself, I'm so lucky to be alive. Many people living with HCM don't know they have it, and simply drop dead.

In the four years since, I have had no episodes or activity of any sort recorded on my device. Family always came first, but now it seems even more important to devote all that I do to ensure a secure upbringing for my kids.

Without research, my doctors would not have known how to treat or even diagnose my condition. Without research, I probably wouldn't be alive, and my daughters fatherless. I owe a lot to research.



INJURY, AGEING AND DISABILITY

HEALTH AUTHORITY PUTS FALLS RESEARCH INTO PRACTICE

AS THE WORLD'S POPULATION AGES, THE IMPACT FROM A MILLION SIMPLE STUMBLES OR BROKEN BONES WILL BECOME SUBSTANTIAL, AND HAS FORCED FALLS PREVENTION TO BECOME A PUBLIC HEALTH PRIORITY.

One-third of people aged 65 years and older will fall once or more in a year, and the impact can be significant. Falls and fractures can impact long-term health, lifestyle, families, as well as health services. Researchers at The George note that falls can result in injuries, a loss of confidence and a reduction in physical activity and community participation. In addition, falls are associated with a threefold risk of admission into aged care.

A recent systematic review update conducted by The George Institute and Universities of New South Wales and Sydney, identified the common themes and features of how best to prevent falls. They found that fundamental to avoiding falls is exercise. According to lead researcher

Associate Professor Cathie Sherrington, "A well designed exercise program can prevent falls in older people. But importantly we found that when the program included challenging balance, the prevention effects were bigger. This should include a moderate or high challenge to balance and be undertaken for at least two hours per week on an ongoing basis."

The outcomes of the review formed eight recommendations for best practice falls prevention programs. They include:

1. Exercise must provide a moderate or high challenge to balance
2. Exercise must be of a sufficient dose to have an effect
3. Ongoing exercise is necessary
4. Falls prevention exercise should be targeted at the general community as well as those at high risk for falls
5. Falls prevention exercise may be undertaken in a group or home-based setting

6. Walking training may be included in addition to balance training but high risk individuals should not be prescribed brisk walking programs
7. Strength training may be included in addition to balance training
8. Exercise providers should make referrals for other risk factors to be addressed.

Researchers are now assisting NSW Health with the implementation of these recommendations. This includes promoting exercise opportunities in the community through the Active and Healthy website, which enables health professionals and consumers to search for exercise programs in their local area (www.activeandhealthy.nsw.gov.au). Researchers also host regular workshops for health and fitness professionals on how to safely deliver appropriate exercise for older people and provide education sessions on exercise directly to groups of older people.

LARGEST EVER INVESTMENT IN GLOBAL STROKE RESEARCH

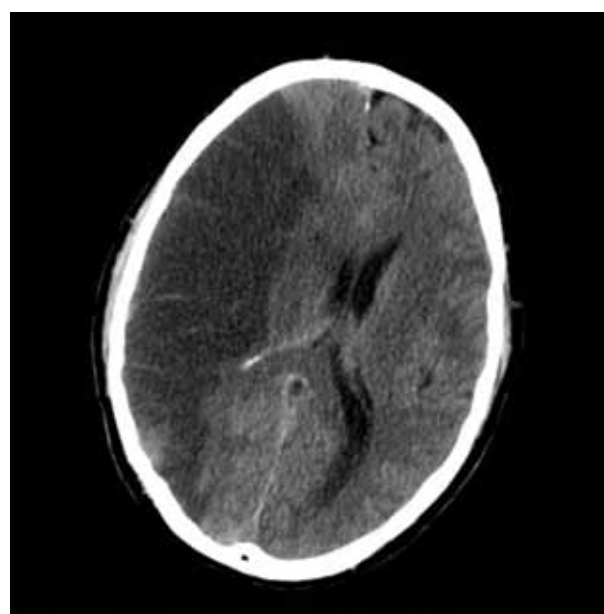
NEW STROKE RESEARCH TO BE UNDERTAKEN BY THE GEORGE INSTITUTE FOR GLOBAL HEALTH HAS BEEN AWARDED AU\$4.2 MILLION BY AUSTRALIA'S NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL, THE LARGEST EVER INVESTMENT FOR A RESEARCH PROJECT IN THIS AREA.

Led by Professor Craig Anderson the project will compare the effectiveness of two new approaches in which standard treatments are currently administered to patients within the first few hours after the onset of stroke in hospital.

"Our previous stroke research has demonstrated that the key with stroke is to treat it quickly and intensively. The goal of this new research is to investigate the potential to deliver cheaper, safer and more effective treatment for patients suffering ischaemic stroke.

Most strokes are ischaemic due to a clot in an artery producing rapid reduction in blood flow to the brain. The clot-busting drug rtPA is the only proven medical treatment for ischaemic stroke, but it is expensive, unavailable to many people, does not always work, and has a risk of bleeding in the brain. This study aims to determine whether a lower dose of rtPA and the early control of elevated blood pressure are beneficial in patients.

Stroke affects millions of people worldwide lowering their life expectancy and quality of life, as well as costing families



and the healthcare systems billions of dollars each year in costs such as income loss and medical expenses.

"This will be high-impact research in which Australia will now be leading the world," said Professor Anderson.

The study is titled 'Enhanced Control of Hypertension and Thrombolysis in Stroke Disease' (ENCHANTED) and will assess 5000 patients in over 100 hospitals worldwide.

The Institute is thrilled to be able to continue to look for better ways to treat people affected by stroke and kidney disease, as well as look for cheaper and simpler ways to deliver these healthcare solutions to those who need it most.

NEW RESEARCH INTO MULTIPLE SCLEROSIS

In 2012, the Institute will commence a landmark research project on Multiple Sclerosis (MS). An estimated 2,500,000 people are living with MS worldwide. We know that MS is on the rise, people are living longer with the condition and that environment factors, such as a person's geography plays a key role. The study will provide contemporary data on the frequency and burden of MS, and deliver an understanding of the environmental triggers through investigations of the disease in Asian migrants. The Institute will be working with Royal North Shore Hospital and University of Sydney to better understand this mysterious disease.

MICK GOODA SUPPORTS THE GEORGE AS AMBASSADOR



The Institute welcomed renowned Aboriginal and Torres Strait Islander Social Justice Commissioner, Mick Gooda to its support base in October 2011.

Mick Gooda has extensive knowledge of the social and economic diversity faced by Aboriginal and Torres Strait Islander Australians, and appreciation for collaborative high-quality, high-impact research. In his role as George Institute Ambassador he will support our endeavours in Aboriginal and Torres Strait Islander health research, working closely with the Aboriginal and Torres Strait Islander health research committee.

Mick's biography of high-profile roles over the past 25 years has consistently recognised the impact of laws and policies on Aboriginal and Torres Strait Islanders. Most notably, his leadership as Chief Executive Officer at the Cooperative Research Centre for Aboriginal Health (CRAH) in the last decade, proved invaluable to the health research agenda for Aboriginal and Torres Strait Islander peoples. Mick is a descendent of the Gangulu people of central Queensland.

Our Principal Directors, Robyn Norton and Stephen MacMahon, along with the Co-Chairs of the Aboriginal and Torres Strait Islander Health Research Committee, Suzanne Ingram and Sue Murray, look forward to working with such a leader to build research capability and strength with communities across Australia.



DISADVANTAGED POPULATIONS

THE MILLION INDIAN TEENAGERS STUDY

THE DEATH RATES FOR TEENAGERS IN INDIA ARE AMONGST THE HIGHEST WORLD, AND LITTLE RESEARCH HAS BEEN DONE TO FIND OUT WHY THIS IS AND HOW TO PROVIDE APPROPRIATE HEALTHCARE FOR ADOLESCENTS.

The fact is that teenagers make up a significant proportion of India's population. As they age their health status is vitally important, as the impact it has on economic growth and health systems could be enormous. For this reason, more information is needed on the health landscape of young adolescent Indians.

The George Institute, India is currently developing plans for The Million Teenagers Study – an ambitious study of one million adolescents to better understand the causes of death, illness, disability and future disease in adult life. The key to such a large study is collaboration, and the Institute has worked with key partners over the last year including hosting a workshop with the Centre for Chronic Disease Control in New Delhi to help build the network

that will support such a large-scale study. "There is a lot of support to establish a study of this kind, as it will provide information that will help shape the future health of all Indians," said Dr Pallab Maulik, Head of Research and Development at The George Institute, India.

Researchers are now focused on securing funds for a vanguard phase in the coming year, which will include 10,000 adolescents from six urban, semi-urban and rural regions of India, who will be followed for an average period of two years. This phase will provide an opportunity to understand major logistic issues that will be faced in the conduct of the main cohort study and to plan strategies to overcome such obstacles. In addition, specific questions about adolescent mental health and injury will be addressed in the vanguard phase.

If you would like to support the development of this landmark study, and play a role in improving the future health of India's teenagers, please contact Associate Professor Anushka Patel on apatel@georgeinstitute.org.

HEALTHCARE INNOVATION

MAJOR UK GOVERNMENT FUNDING TO SUPPORT GEORGE CENTRE FOR HEALTHCARE INNOVATION

THE NEW GEORGE CENTRE FOR HEALTHCARE INNOVATION, WHICH IS A MEMBER OF THE OXFORD MARTIN SCHOOL AT THE UNIVERSITY OF OXFORD, WILL BENEFIT FROM PART OF A £800 MILLION FUNDING ANNOUNCEMENT BY THE UNITED KINGDOM (UK) NATIONAL INSTITUTE FOR HEALTH RESEARCH TO BOOST RESEARCH AND ALLOW THE DEVELOPMENT OF GROUND BREAKING MEDICINES, TREATMENTS AND CARE FOR PATIENTS.

One of several recipients, the George Centre will benefit from £100 million earmarked for research at Oxford to develop a program of work focused on population and prevention chronic disease. Researchers will lead one of three strands of work titled 'Methodology and technology development for enhanced care integration', which fundamentally is looking for creative and cost-effective ways to deal with health issues.

According to leading researcher Dr Kazem Rahimi, "The idea behind this strand of work is to create an incubator for innovative ideas for health and social services across healthcare in the UK. We will be initially working in hospital settings and aim to develop ideas that can be applied across the entire health system."

COMING SOON: A HEALTHY FOOD APP FOR SMART SHOPPERS



A new smartphone application (app) will soon be available to help Australian shoppers make smarter food choices. The app, will take the mystery out of nutrition labels and give shoppers easy, smart food choices when it comes to salt, sugar and fat.

The new app has been under development with our partner Bupa, one of Australia's leading healthcare organisations, which shares a commitment to promoting healthier behaviours. Supporting this initiative is Australia's Division of World Action on Salt and Health, AWASH and leading expert on salt and cardiovascular health, Professor Bruce Neal. "This app will change the way people shop for food, and really shows how healthcare researchers and leading healthcare organisations can come together to develop a smart innovation that has potential to improve the health of millions," said Professor Neal.

The app is due to be released in December 2011.

THE GEORGE INSTITUTE FOR GLOBAL HEALTH

Postal Address: PO Box M201, Missenden Road NSW 2050 AUSTRALIA

AUSTRALIA (HOSPITAL)
Level 10, King George V Building
Royal Prince Alfred Hospital
Missenden Road, Camperdown
Sydney NSW AUSTRALIA
Telephone +61 2 9993 4500
Facsimile +61 2 9993 4501
info@georgeinstitute.org.au

AUSTRALIA (CITY)
Level 7, 341 George Street
Sydney NSW AUSTRALIA
Telephone +61 2 9657 0300
Facsimile +61 2 9657 0301

CHINA
Room 1302, Tower B
Horizon Tower
No. 6 Zhichun Road, Haidian District
Beijing 100088
PR CHINA
Telephone +86 10 8280 0577
Facsimile +86 10 8280 0177

INDIA
Plot No. 839C
Road No. 44 Jubilee Hills
Hyderabad 500 033
INDIA
Telephone +91 40 2355 8091
Facsimile +91 40 2354 1980

UNITED KINGDOM
George Centre for Healthcare Innovation
University of Oxford, Richard Doll Building
Old Road Campus, Roosevelt Drive
Oxford OX3 7LF UNITED KINGDOM
Telephone +44 207 313 4420
Facsimile +44 207 313 4426
www.georgeinstitute.org



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