

New China Research Center to address threat of chronic disease

Delivering high-quality health research evidence is now a priority in China, in order to tackle what has fast become the leading cause of death – chronic disease. Many of these deaths are preventable, and a new Center recently launched in China marks an important milestone in improving health care in this booming nation.

Four days of events and seminars launched the China International Center for Chronic Disease Prevention in Beijing in November.

The Center, hosted at The George Institute, China in partnership with Peking University Health Science Center, conducts high-impact, targeted research to address the threat of chronic disease in China.

As Professor Han Qide, Vice Chairman of the Standing Committee of the National People's Congress and President of Peking University Health Science Center noted when launching The George Institute in China in 2007, chronic disease now causes 80 percent of deaths in China. The new Center is intended to address the need for more appropriate, effective and efficient health policy and research for the control of conditions such as stroke, heart disease, high blood pressure, kidney disease and diabetes.

The George Institute, China Director Professor Yangfeng Wu said the burden of chronic disease in China was enormous and rising. To reduce the burden and improve the health of millions of people who are already suffering or will do so, all sectors of the society needed to work together – government, industry, academia and community and other organisations, he said. The Center would join forces in not just



targeted research but capacity development and policy engagement, said Professor Wu.

The threefold aim of the new Center is to implement targeted health research projects with measurable impacts on health outcomes in local communities; to develop local leadership and capacity for ongoing, sustainable change, and to raise awareness of the importance of chronic disease prevention and treatment through advocacy and engagement with policy makers. Center Director Professor Lijing L. Yan said innovation, impact and sustainability would underpin each aspect of the program.

Highlighting the burden of chronic disease across the world, Principal Director of The George Institute for International Health, Professor Stephen MacMahon said the expected global rise in patients dying from cardiovascular diseases over the next few decades is enormous.

“There are very large numbers of high-risk patients in locations where access to treatment and services is limited. Targeted research is critical for the development of affordable, effective and safe solutions. The establishment of the new Center will enable health agencies

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and government to make decisions based on the best available medical research evidence.”

Professor Yan said the Center was unique in having a large partner network with six international and six Chinese institutions, including Peking University Health Science Center in China and Duke University in the USA. Each of the institutions has significant reputations with the range of skills and relationships needed to meet the Center's goals. “We expect our international partners to play a key role in transferring world-class knowledge and skills to China through research collaborations and the many training programs we will conduct”, Professor Yan said.

The Beijing based Center is funded by the National Heart, Lung and Blood Institute of the US National Institutes of Health and UnitedHealth Group. To read more about the Center's partner network and projects, visit www.george.org.cn.



Above: Professor Han Qide, Vice Chairman of the Standing Committee of the National People's Congress and President of Peking University Health Science Center and Dr John Yu, Chair of The George Institute

Below: Images from the Health Policy Roundtable, which took place on 19 November 2009 in Beijing.



Cardiovascular study receives funding from the European Commission

A new study aimed at finding better ways to deliver inexpensive, effective drug treatments for preventing cardiovascular events in people at high risk, has received funding from the European Commission.

The UMPIRE (Use of a Multidrug Pill in Reducing Cardiovascular Events) study, coordinated by Imperial College, London is a collaboration between three European centres and three institutions in India - The George Institute, the Public Health Foundation of India, and the Centre for Chronic Disease Control. This three-year study will involve 2000 patients (including 1000 in India) and could provide valuable information on a novel strategy for delivering cardiovascular preventative care.

The UMPIRE project aims to evaluate whether provision of a cardiovascular polypill (containing low dose aspirin, a statin and two blood pressure lowering medicines) compared with usual care, improves adherence to indicated therapies and clinical outcomes among high-risk cardiovascular patients.

Further aims are to measure prescription of combination therapy, barriers to adherence, quality of life, safety, cardiovascular events, health care resource consumption and cost-effectiveness. The results will be used to develop recommendations and to assess whether results are similar in Europe and India. Parallel polypill projects running in Australia and New Zealand will afford the opportunity of pooling data to assess effects on cardiovascular outcomes and enhance the impact of the trial.

Acting Executive Director of The George Institute, India, Associate Professor Anushka Patel says that in an area of the world where rates of cardiovascular disease are rapidly increasing, reliable evidence about the effectiveness of new strategies to provide cost-effective preventative therapies to those at greatest risk are urgently required. “We believe the UMPIRE trial will provide such evidence for a polypill-based strategy.”

New intensive care study set to change clinical practice: *Study confirms aggressive kidney treatments not justified*

Severe acute kidney injury requiring dialysis to replace kidney function affects around 5% of patients admitted to Intensive Care Units (ICUs) and results in death for about 50% of patients.

Continuous renal replacement treatment replaces lost kidney function for people with acute kidney failure. To date, the optimal intensity of therapy has been unclear, but due to a new large study, researchers have confirmed that there is no difference between higher and lower intensity treatments.

"We assessed 1508 critically ill adults with acute kidney injury. 747 were randomly assigned to a higher-intensity therapy, and 761 to a lower intensity therapy. There were no benefits seen among patients assigned to a higher intensity program of dialysis. In countries where continuous renal replacement therapy is now the preferred form of renal replacement therapy in the ICU, our study has significant implications for clinical practice", said Professor Alan Cass, The George Institute.

Researchers set out to see if the higher intensity treatment (40ml per kilogram of body weight per hour) compared to a lower intensity treatment (25ml per kilogram of body weight per hour) would reduce mortality within 90 days of presenting to intensive care settings. Patients presented to the ICU with acute kidney failure due to a range of causes, including severe infection, complications after major surgery or illness, with cardiovascular disease or surgery being the common precipitating factor, and trauma.

"Notably, this study found no significant benefit of high-intensity treatment for acute kidney injury patients, and there was also no evidence of significant harm. Importantly,



survivors from both groups had a very low rate of dependence of ongoing dialysis at 90 days, which is extremely positive. We intend on following these patients in the future to assess their ongoing quality of life to show the impact these treatments could have on resources and broader hospital management", said Professor Rinaldo Bellomo, Australian and New Zealand Intensive Care Society.

"The results of this landmark study also confirm that the use of low-intensity renal replacement therapy is associated with substantial cost savings in critically ill patients without compromising survival or rate of recovery of kidney failure", Professor Bellomo added.

The RENAL (Randomised Evaluation of Normal versus Augmented Level) Replacement Therapy study is a multi-centre, randomised controlled trial and is a collaboration of the Australian and New Zealand Intensive Care Society Clinical Trials Group (ANZICS CTG) and The George Institute. The study was conducted in 35 intensive care units in Australia and New Zealand. This study was supported by grants from the National Health and Medical Research Council of Australia and the Health Research Council of New Zealand.

Indigenous Australians at risk of cardiovascular disease are not receiving best practice care



Heart attacks, strokes and other vascular diseases are a major driver of the life expectancy gap between Indigenous and non-Indigenous Australians. Indigenous Australians are 2.6 times more likely to die from these conditions. A new study highlighting significant gaps in the identification and treatment of cardiovascular disease in Indigenous Australians has important national implications.

In parallel with a separate study on risk assessment and treatment in mainstream general practice, it highlights the need for wide scale reform to ensure that people at the highest risk of having a stroke or heart attack are identified early and provided with optimal care.

Absolute risk management in cardiovascular disease recognises that risk factors should not be regarded in isolation but need to be considered as a whole so that risk can be properly assessed and treatment can be targeted to those most likely to benefit.

“The recognition of absolute risk has been around for a while but we wanted to test how much it is being practised at the coal face”, said Dr David Peiris, Senior Research Fellow at The George Institute, a GP and an author on both studies.

Key Kanyini findings

An audit of a random sample of 1165 health care records was conducted with seven Aboriginal community controlled health services and one state government Indigenous health service spread across NSW, Queensland and central Australia. This study, known as the Kanyini audit, is the first leg of the Kanyini Vascular Collaboration, a national health services program established to improve vascular disease outcomes for Indigenous people. The collaboration includes The George Institute, the Baker IDI Heart and Diabetes Institute, Aboriginal communities, government and other organisations.

Kanyini is a term used by a number of language groups in central Australia which can be translated as “to have, to hold and to care”.

The Kanyini audit found substantial gaps in both screening and prescribing for Indigenous people at high risk of cardiovascular disease. 53% were not adequately screened for cardiovascular disease risk according to national guidelines.

Under-screening was significantly associated with younger age and less frequent attendance at health services, though not with remoteness of location. “Quite a lot of people are getting quite haphazard screening. They might receive some things but not a comprehensive overview of their vascular health”, said Dr Peiris. However, in an encouraging finding, the use of Medicare Health Assessments was associated with significantly smaller screening gaps.

Of those with cardiovascular disease, 60% were prescribed a combination of blood pressure medicines, statins and anti-platelet agents, and of those high risk individuals without cardiovascular disease, 44% were prescribed blood pressure medicines and statins. Around one-third of high-risk people were classified by both National Heart Foundation guidelines and Pharmaceutical Benefits Scheme subsidy criteria as not qualifying for statin therapy.

Although these gaps are large, a key finding was that patient management was substantially better at Indigenous health care sites than in the parallel study conducted in mainstream general practices. In the mainstream GP study, only 46% of people with cardiovascular disease were prescribed appropriate therapy,

and only 20% of high-risk individuals without cardiovascular disease were prescribed blood pressure medicines and statins.

A new way to diagnose cardiovascular risk

Dr Peiris emphasised that, although measuring vascular risk is essential, it “doesn’t necessarily confer better performance or better patient outcomes on their own. Making that link between measuring and doing something about it is needed”.

He said conflicting and multiple guidelines were a barrier to the uptake of absolute risk-based management. While new assessment guidelines were a step in the right direction, unified treatment guidelines were still some years away. GPs meanwhile were confronted with a confusing array of information when deciding on treatments.

To help bridge the gap, researchers at The George Institute have developed and tested

an electronic decision support tool for health practitioners which analyses patient details and generates an absolute risk assessment and management plan. This will ensure easier adherence to guidelines. The Baker IDI Heart and Diabetes Institute is developing integrated models of care for vascular disease involving nurse-led specialist clinics. In addition, both institutes are testing a polypill which combines four proven risk reduction medicines into one low-cost pill which is easy to prescribe, administer and take.

“There remains significant gain that can be achieved in reducing the enormous burden of heart disease in our community, simply by identifying and managing risk with the tools and therapies we already have at our disposal”, said Dr Alex Brown, Chief Kanyini Investigator, the Baker IDI Heart and Diabetes Institute.

The polypill: addressing cardiovascular risk in Indigenous Australians

The George Institute and partner institutes are planning a clinical trial involving Aboriginal and Torres Strait Islander people at high risk of cardiovascular disease. The study will assess whether a single, combination polypill (containing aspirin, a cholesterol lowering medicine and two blood pressure lowering medicines) will result in better patient acceptability and adherence, and lower blood pressure and cholesterol levels when compared with standard care.

Fixed-dose combination therapy with a polypill is simply a new way of providing these guideline-indicated medications and represents a major new opportunity to address cardiovascular care. It has been proposed that a polypill could improve adherence to recommended treatment by reducing the overall complexity of dosing regimens for doctors and patients, and improve access to treatment by reducing costs. The Kanyini polypill trial will rigorously test these assumptions. Improving access to effective cardiovascular medications has considerable potential to improve population health, and in particular, to help reduce variations in the gap relating to inequities in health care access within the Australian population.

The George Institute, the Baker IDI and Monash University are working with several partners in urban, rural and remote areas of Australia. This study will involve 600 Aboriginal and Torres Strait Islander people and 400 others. Currently nine Aboriginal Medical Services and several mainstream general practices are on board, and recruitment is due to begin in December 2009. More information on the Kanyini studies is available at www.kvc.org.au.



Staff Profile



DR. SOPHIA ZOUNGAS
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Senior Research Fellow in
Cardiovascular and Renal Divisions

An academic endocrinologist with expertise in clinical trials and epidemiology, Dr Sophia Zoungas is a Conjoint Senior Research Fellow at The George Institute for International Health and School of Public Health and Preventive Medicine, Monash University.

After the completion of her Doctor of Philosophy in 2006, Sophia’s work was acknowledged with two original papers published in international journals, and her coordination of the ASFAST trial in patients with end-stage renal disease led to a seminal publication.

Prior to working at The George Institute, Sophia was appointed Deputy Director of Diabetes Services and Research at Southern Health. During that time she established ambulatory diabetes services that now provide multi-disciplinary care to a catchment area of more than 2 million patients.

Sophia’s role at the Institute is to lead and develop projects around prevention and management of diabetes and its complications. Sophia says she was attracted to working at the Institute because they offered significant post doctoral opportunities. “My main interests are in renal and cardiovascular disease. I also wanted to work on large-scale projects around diabetes and its complications”, she says. Sophia directs projects from divisions working on cardiovascular, renal, and metabolic health. She also spends time working in the Department of Diabetes at St Vincent’s Hospital as a consultant endocrinologist and in private practice. Sophia is developing a significant profile as a diabetes researcher with a major cardiovascular interest. In 2008 she was awarded an NHMRC Post-Doctoral Health Professional Fellowship and has made presentations at major national and international meetings in the last few years. In her new role as a senior clinician researcher at The George Institute, she is further developing expertise in management of large-scale international studies and meta-analyses.

Food policy for good health, learning from the UK



As evidence mounts worldwide of the increasing incidence of diet-related illnesses, food policy is rapidly becoming a focus of The George Institute.

“It is inevitably going to be one of our priority areas”, says Jacqui Webster, Senior Project Manager of the Australian Division of World Action on Salt and Health (AWASH) for The George Institute.

In October The George Institute brought together a group of organisations and individuals active in the food policy arena to discuss the current Australian state of play. A key aim was to consider how government might be influenced to take action on important issues such as food composition, food labelling and the marketing of foods to children.

The sense which emerged from the lively discussion, chaired by Professor Bruce Neal, with representatives from the National Heart Foundation of Australia, consumer



advocacy group Choice and the New South Wales Cancer Council along with nutrition advocates, was that Australia lacks government leadership on food policy which is fragmented, disjointed and inconsistent.

The presence from the United Kingdom of Jeanette Longfield MBE, Director of Sustain, the alliance for better food and farming, as guest speaker at the discussion provided the opportunity to compare Australia’s situation with that of the United Kingdom.

Sustain is a unique advocacy organisation representing around 100 national public interest organisations. It seeks to improve food policy by facilitating information exchange, advising and negotiating with regulatory agencies, and encouraging businesses to produce, process and market

foods which are good for health and the environment.

No equivalent organisation exists in Australia, though the participants at the lunch seminar expressed keen interest in meeting on an ongoing basis for informal networking to share information on food policy developments.

The recent announcement of a Food and Health Dialogue between the Department of Health and Ageing, the food industry and public health organisations is welcome, according to Ms Webster. But she says the lack of transparency about the objectives and work program is frustrating, and it is questionable whether the necessary regulatory systems are in place to drive forward the changes required to seriously

Coffee & tea protective against diabetes?

tackle diet related diseases such as obesity.

The UK Food Standards Agency was set up as a policy-making body independent of existing government ministries to cut through the conflicts and contradictions evident when governments seek to protect the interests of both consumers and farmers in food production.

In Australia, food policy potentially cuts across several government portfolios, including health, agriculture, consumer affairs, Treasury and the environment. The enforcement body, Food Standards Australia New Zealand (FSANZ) lacks policy making powers, Ms Webster said.

In developing a wider strategy on food policy, The George Institute will take account of issues and ideas generated by the October discussion. Also under consideration is how to extend the model established for the AWASH campaign on salt reduction to other problematic ingredients and food composition issues, such as trans-fats, saturated fats, added sugar and portion sizes.

A number of government reports have already recognized the effectiveness of the AWASH campaign in working with the food industry towards achieving a healthier product range. Some 20 major food companies have committed to national salt reduction plans across their product portfolios and some have agreed to reduce salt content by 25 per cent across their range over the next five years.

Despite gaining industry awareness of and action on the issue, consumer awareness is still lagging. To set clear targets against which we can monitor industry progress, The George Institute believes a co-ordinated government leadership is required. Achieving this goal is a current key focus of the AWASH campaign.



Researchers at The George Institute have discovered that high consumption of coffee and tea is associated with a substantially reduced risk of type 2 diabetes. Associate Professor Rachel Huxley, The George Institute, says that people who consumed on average three to four cups of coffee a day had one-quarter lower risk of developing diabetes compared to non-coffee drinkers.

“In individuals drinking more than 3-4 cups of coffee per day the reduction in risk of developing diabetes was greater, up to 40% in those drinking more than six cups per day. Interestingly, similar reductions in risk were also observed for tea and decaffeinated beverages, suggesting that any diabetes-sparing effect is not driven primarily through caffeine.”

Researchers conducted a meta-analysis investigating the association between coffee, decaffeinated coffee and tea consumption with the risk of type 2 diabetes. Data from 18 previously completed research studies were analysed, providing a patient pool of 457,922. Results were consistent irrespective of variations in preparation, such as filtered versus unfiltered, cup size, strength, and the addition of milk or sugar.

“Although it is too early to advocate for increased consumption of these beverages, identifying the active components of these beverages would potentially open up new therapeutic pathways for the primary prevention of diabetes”, she added.

Globally, there are approximately 250 million people with diabetes and that number is estimated to increase by 65% to reach 380 million in 2025.

Study finds self-harm a risk factor for young driver crashes

Australia's largest study of young drivers has revealed that self-harm is a significant risk factor in car crashes that affect the wider community. The DRIVE study, conducted by researchers at The George Institute found that 4% of the 20,822 young driver participants reported self-harm and that this was associated with a significantly increased risk of car crashes compared with other young drivers.

Study author Dr Alexandra Martiniuk said the young drivers who engaged in self-harm – deliberately injuring themselves by such actions as cutting or burning – were at a 40% increased risk of a crash. "Self-harm is a significant issue for young Australians and we found a particularly worrying trend that most of the self-harm related crashes involved multiple vehicles. This amplifies the danger from these crashes, as it is not only young drivers who engage in self-harm who are at an increased risk but also all roads users", she said

The DRIVE study found that self-harm was more common among young drivers who were: female, Australian-born, living in rural or regional areas, spending more time driving per week, sleeping fewer hours, and reporting high levels of drug and alcohol use.

Dr Martiniuk said the study highlighted the need for programs managing road behaviour in young people with poor mental health. Globally, poor mental health and injuries are ranked as the first and second highest contributors of lost disability-adjusted life-years among young people.

Self-harm and suicide attempts are reported by up to 17% of people aged 14-25 years, but the actual figure is believed to be higher because of under-reporting. Prevalence may also be increasing, according to researchers.

Study authors (including epidemiologists, psychiatrists and youth psychologists) believe



the DRIVE study findings call for further research on the topic. "The first step is to raise awareness of the increased risk of car crash for self-harmers by informing general practitioners, teachers, parents and youth groups", she said. "This will help identify self-harming behaviour and prompt young people to seek appropriate treatment."

The DRIVE study follows recent changes to young driver legislation in Australia, including the introduction of stronger graduated licensing systems in various states. Restrictions on passenger numbers and night-time driving and zero tolerance to speeding are among the measures introduced.

The DRIVE study was funded by Australia's National Health and Medical Research Council, NRMA Motoring and Services, the NRMA-ACT Road Safety Trust, and the Roads and Traffic Authority (RTA) of NSW. It recruited 20,822 young drivers holding red P-plates in NSW, Australia aged 17-24.



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