

GLOBAL HEALTH at the george

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SECURING A BETTER FUTURE FOR INDIGENOUS CHILDREN

IT'S A CONDITION AFFECTING COMMUNITIES AND CHILDREN WORLDWIDE. FETAL ALCOHOL SPECTRUM DISORDERS (FASD) IS AN UMBRELLA TERM FOR A RANGE OF CONDITIONS ARISING FROM PRENATAL EXPOSURE TO ALCOHOL, WHICH CAN CAUSE LIFE-LONG DAMAGE TO THE BRAIN. FASD IS 100% PREVENTABLE. HOWEVER, THE LEGACY OF ALCOHOL USE DURING PREGNANCY - NAMELY THE NUMBER OF CHILDREN AFFECTED BY FASD - REMAINS LARGELY UNKNOWN.

While FASD is seen in all populations, some Indigenous communities are struggling to cope with the number of children thought to be affected. For many families and communities caring for these children, life without adequate support becomes intolerable. The impact on Indigenous culture is particularly concerning, as many affected children lack the capacity to remember their traditional language, teachings and stories, and are unable to pass these on to future generations.

International studies suggest that rates of FASD are higher than those of Down's syndrome and spina bifida, and that FASD is the most common cause of intellectual impairment. But our limited ability to diagnose FASD has meant that estimates in prevalence, particularly in Australia, are likely to be inaccurate because of under-recognition and under-reporting. What experts do know is that early diagnosis and intervention can provide support and improve quality of life.

Safe alcohol levels in pregnancy

There are no easy solutions to prevent FASD, especially as alcohol is widely used in many societies. In some countries up to 60% of women drink alcohol in pregnancy and although most will abstain or reduce their intake after realising they



A happy, healthy child in the Fitzroy Valley, Western Australia

are pregnant, a significant proportion will continue to drink, some at high levels.

There is a lack of clarity in existing FASD research on whether there is a safe level of alcohol consumption in pregnancy, and what this level may be. This has led to confusion for women and a dilemma for health professionals regarding the right message for their patients. What is known is that every woman responds differently to alcohol and that damage to the unborn child cannot be predicted. As a result, guidelines from the National Health and Medical Research Council of Australia recommend that not drinking alcohol is the safest option.

Changing attitudes – An Indigenous community leading the way

A small group of Indigenous women in Fitzroy Crossing – in remote north-western Australia – are finding their own approach to addressing the problem of FASD.

In 2007, their community took action

This is not a problem that is unique to Indigenous communities. It may be this Indigenous community that shows the country - and the world - how we can deal with this condition and its tragic consequences.

Mick Gooda, Aboriginal and Torres Strait Islander Social Justice Commissioner

to reduce the devastating impact of alcohol. Their decision to seek alcohol restrictions was a bold move that met with vocal opposition. But the success of this measure can be seen through a 50% reduction in hospital admissions, a 27% reduction in alcohol-fuelled violence, and a 14% increase in school attendance. By restricting access to alcohol and changing attitudes to alcohol consumption across the community, they have begun the fight against FASD.

Although prevention is the goal, the community has prioritised assessing and supporting children affected by FASD. As a result, Nindilingarri Cultural Health Services invited The George Institute and the University of Sydney to work with them to identify the number of affected children. The team will then work with the whole community, including parents, carers, health professionals, teachers and community members, on prevention and

education programs. The early stage of the study is underway, and will be followed by a comprehensive clinical assessment for all children, provided further funding is secured.

The strength of the Fitzroy Valley strategy to address FASD is that it is led by a strong Indigenous community committed to improving the lives of their children and future generations.

The research team includes Ms Maureen Carter, Ms June Oscar, A/Prof Jane Latimer, Prof Elizabeth Elliott, Dr James Fitzpatrick, Dr Manuela Ferreira, Ms Juliette O'Brien and Ms Meredith Kefford.

Valuable support has been provided for the Indigenous health program at The George Institute from Bellberry Limited, as well as an Australian charitable trust that wishes to remain anonymous. If you would like to support the Indigenous health program, please contact Chris Ostendorf on +612 8238 2402 or costendorf@george.org.au.

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UNDER PRESSURE: HEART HEALTH

Worldwide, more people die from cardiovascular disease than any other cause. Alongside smoking, this is predominantly due to high blood pressure, which alone claims more than seven million lives annually.

Poor diets and insufficient physical activity are key drivers of the blood pressure problem – which is true not only for developed countries, but also for the great majority of developing countries including India and China.

Blood pressure, while one of the most widely recognised health risks, is also one of the most poorly understood – both by those suffering the consequences and those trying to prevent them. Amongst doctors and patients alike, blood pressure is seen as a problem only when it breaches a threshold, and is diagnosed as ‘hypertension’. For most of the last century, physicians have worked on this assumption. In fact, blood pressure causes disease as soon as it starts to rise, and causes significant health problems before it reaches the level traditionally diagnosed as hypertension.

This results in huge numbers of people with blood pressure levels that would previously have been considered ‘normal’ but who are in fact at a moderately increased risk. Half of all the strokes, heart attacks and diseases caused by blood pressure actually occur in people without hypertension.

Chronic diseases are rarely caused by one thing. It’s the combined effects of multiple, different factors including cholesterol, obesity and diabetes that determine heart health. While this concept is increasingly understood by researchers, it has not yet permeated to most of the clinical community.

A tool to help health professionals better understand risk and more effectively manage patients has been developed at The George. The tool calculates the cardiovascular risk of patients, using latest research and providing tailored, real-time advice for the patient sitting in front of them.

The George is also working on the polypill, which combines multiple preventative

therapies into a single pill, offering improved risk control. If combined with the better identification of those at risk and in need of therapy, we can start to close the evidence-practice gap – the yawning chasm between what research tells us we need to do to treat heart patients and what we actually manage to achieve.

Just as important as getting the medical management strategy right is improving community level risks. The impact of diet and physical activity on blood pressure is well understood but targeted in only a very cursory way. Adding a population health campaign that is a practical, cost-effective solution to exposures such as salt intake, obesity and physical activity to the current ‘clinical hypertension’ approach would increase costs minimally, but greatly increase the number of strokes and heart attacks prevented.

As with so much of medical science, discovering what to do is only half the challenge. Getting the new evidence translated into clinical practice and government policies is the real test. Strong leadership is required to move the cardiovascular prevention agenda forward. Consolidated guidelines delivered in easy-to-implement tools and a new focus on community based prevention, have enormous potential.

Innovative projects, like those listed in this article, are sometimes difficult to fund. It requires ‘out of the box’ thinking and traditional sources are often unable to try new things. The George has established an ‘Innovation Seed Fund’ to support such initiatives. If you would like to contribute to this fund, please contact Chris Ostendorf on +612 8238 2402 or costendorf@george.org.au.

Bruce Neal

Senior Director, The George Institute for International Health
Professor of Medicine, the University of Sydney
Chair, Australian Division of World Action on Salt and Health



CHRONIC DISEASE

EXPERT VIEW: STRESS AND STROKE

STROKE OCCURS ABRUPTLY AND OFTEN WITH DEVASTATING CONSEQUENCES. IN A NEW STUDY, THE GEORGE INSTITUTE DIRECTOR, PROFESSOR CRAIG ANDERSON, AND HIS COLLEAGUES FOUND THAT AN UNCOMMON BUT PARTICULARLY DEVASTATING FORM OF STROKE AFFECTING YOUNGER PEOPLE HAS NO LINKS TO STRESS – CONTRARY TO COMMON PERCEPTION.

Many people assume that stress is linked to stroke, what did you find?

Stroke occurs quickly with significant impact and people look for answers to why this is. Stress has been linked to blood pressure and headaches, and many assume that this may be relevant to stroke.

We focused on a less common type of stroke, called subarachnoid haemorrhage caused by a rupture of a cerebral aneurysm – like a blister in the brain. This type of stroke affects younger people out of the blue, who are in the prime of their life, and are otherwise well. Our research showed that stress didn’t have a major role to play in this form of stroke.

How did you investigate this?

Our study collected information on adverse life events in patients who had a subarachnoid haemorrhage. Our study interviewed a sample of 432 patients. We looked at stressful life events in the twelve months prior to their stroke. Patients were

asked if they were a victim of abuse, had experienced an injury or serious illness, had experienced financial difficulties or death of a family member or a friend. We are all under varying degrees of stress in our lives, but we looked objectively at what people would consider serious and stressful life events.

What causes this type of stroke?

The two definite causes of subarachnoid haemorrhage are smoking and high blood pressure, but there is likely to be some genetic factors. The more common type of stroke which is usually age related, is caused by high cholesterol and hardening of the arteries, and obviously heart disease itself.

How can stroke be prevented?

For individuals at high risk, whether due to their age or having heart disease or diabetes, it’s important to check blood pressure regularly and keep it under control with medication if required. Obviously avoiding cigarette smoking and leading a healthy lifestyle is key.

How can health systems effectively deal with stroke?

You’ve got to have a comprehensive health system to work effectively across all of the various facets.

Stroke is a preventable illness; therefore we need to have systems that effectively lower the risk of stroke in the community such as good management of risk factors

and effective education so that patients can detect signs of a stroke. From a health system perspective, fast ambulances and effective acute management in stroke care units are essential, as we have a small window of opportunity to lessen the impact on the brain. Links into

rehabilitation systems so that patients can return home or to work along with support and education for families is also important.

For more information on the stroke research program at The George Institute, visit www.georgeinstitute.org.



Photo: Fairfax



INJURY AND MUSCULOSKELETAL

A PASSION FOR HEALTHY AGEING - CATHIE SHERRINGTON AT THE GEORGE

FOR DR CATHIE SHERRINGTON, ABRAHAM LINCOLN SAID IT ALL - IN THE END, IT'S NOT THE YEARS IN YOUR LIFE THAT COUNT. IT'S THE LIFE IN YOUR YEARS.

At least one third of people aged 65 and older fall at least once per year. As someone who enjoys the company of older people and is passionate about exercise, Cathie believes for an ageing population, physical activity is the key.

"Physical activity is crucial for maintaining mobility as we get older. Unfortunately as we age, we aren't as good at exercise as we might like, and this is why older people start to lead sedentary lifestyles - but exercise can counter age-related changes in physical ability and prevent falls."

"The bigger public health message is really about exercise. We have a long way

to go to get older Australians moving more. We tend to have the idea that we rest more as we age. Europe sets a great example, particularly the Netherlands, where exercise programs suitable for less mobile people are freely available."

With over ten years experience in physiotherapy, Cathie completed her Masters of Public Health and PhD at the University of New South Wales. She then moved into a research role at the University of Sydney. Cathie was recently awarded a National Health and Medical Research Council Senior Research Fellowship, and is currently part of the musculoskeletal team at The George Institute. "The team is all motivated to produce high-quality research to improve health. It sounds corny, but it's true!"

Cathie is currently leading two studies in falls prevention in Australia funded by the National Health and Medical Research Council. Her research is

focused on improving physical abilities and preventing falls in people who are at risk of falls or have a disability; one in people who have recently been in hospital and the other among people who have suffered a fracture from a fall.

In the future, Cathie and her team plan to develop similar research programs in India, China and Brazil specifically investigating falls and hip fracture. For now, Cathie balances a busy work and family schedule.

The George has recently articulated one of its key strategic research themes as 'Injury, Frailty and Disability'. As the population ages, the challenge of adapting policy, as well as economic, social and business perspectives, becomes increasingly urgent. For more information on our work in falls prevention and healthy ageing, please contact Cathie Sherrington on +612 9657 0300 or csherrington@george.org.au.

HILDA'S STORY



At 96 years old, Hilda Walker is wary about walking. After suffering a serious fall and breaking her shoulder, elbow and hip bones, Hilda has made a good recovery, but continues to suffer from serious pain and fear of falling again.

Six months after her fall, Hilda has participated in a trial to test the benefits of exercise for older falls patients. The trial is assessing a series of gentle home-based exercises among older people who have returned home from hospital after a fall. Researchers will measure physical ability, disability and further falls.

You can help people like Hilda remain active and retain their quality of life. To find out how, please contact Chris Ostendorf on +612 8238 2402 or costendorf@george.org.au.

MEDICAL INNOVATION 2010 - A GLOBAL PERSPECTIVE ON HEALTHCARE INNOVATION Oxford University, 17 March 2010

International health and medical experts attended the Medical Innovation 2010 Conference in March, hosted by The George Institute in partnership with the University of Oxford Centre for Entrepreneurship and Innovation (Saïd Business School).

Presenter and Principal Director, The George Institute, Professor Stephen MacMahon, said, "Worldwide we are facing reduced healthcare budgets and increased healthcare demands, yet in an environment in which it's politically and socially unacceptable for healthcare services to decline in quality or quantity."

"Healthcare innovation has an essential role in maintaining healthcare standards around the world. We really need to look at fundamental changes in the way we deliver healthcare."



Professor Sir John Bell (Regius Professor of Medicine at the University of Oxford), Professor Stephen MacMahon (Principal Director, The George Institute) and Professor Leonard Fass (Director Academic Relations at GE Healthcare)

REVIEW OF CHILD INJURY PREVENTION IN VIETNAM

Almost 8,000 children are injured each year in Vietnam according to a new review, by The George Institute and Hanoi School of Public Health. The major causes of injury-related death included drowning, road traffic injury, poisoning, falling, burns and animal bites - many of which can be prevented at a reasonable cost through adopting interventions based on education, training and environmental modifications. Vietnam authorities are now working to a national policy framework for legislative changes to support a number of injury prevention activities. For more information about this report, visit www.georgeinstitute.org.

CHANGING PRACTICE: TREATING KIDNEY FAILURE

Acute kidney injury is the rapid loss of kidney function, which affects a large number of intensive care patients across the world. Continuous renal replacement treatment replaces lost kidney function for people with severe acute kidney failure, and studies have produced conflicting results regarding the optimal intensity of renal replacement therapy.

"The analysis we conducted, with collaborators including the Veteran Affairs research group in the USA, has confirmed that increasing the intensity of renal replacement therapy is no more beneficial for acute kidney injury patients."



Min Jun
PhD candidate, Renal Division
The George Institute

"These findings are anticipated to have a major impact on the treatment of kidney failure patients. They confirm that aggressive continuous renal replacement therapy, in acutely ill patients in intensive care units, does not improve the chances of survival."

"Severe acute kidney injury affects around 5% of patients in intensive care settings. This analysis does not negate the importance of renal replacement therapy in the treatment of these patients. However, with severe acute kidney injury resulting in death for about 50% of patients, we must give priority to developing and testing interventions to improve patient outcomes."



Professor Alan Cass
Senior Director, The George Institute

These findings were recently published in the *Clinical Journal of the American Society of Nephrology*.



Dr Chen (far right) and Dr Liu (second from right) with American colleagues in Boston

HEALTHCARE INNOVATION

UNMASKING CHINA'S SECRET KILLER

IN CHINA, CARDIOVASCULAR DISEASE IS A SECRET KILLER. IT IS THE MOST COMMON CAUSE OF DEATH FOR WOMEN, BUT THE MAJORITY OF WOMEN ARE UNAWARE OF ITS CAUSES, SYMPTOMS AND EFFECTIVE PREVENTION METHODS. MOST PEOPLE STILL BELIEVE BREAST CANCER IS THE BIGGEST THREAT TO WOMEN.

This lack of understanding has become a major obstacle for health specialists dealing with cardiovascular disease in China.

As part of a women's heart health focus at The George Institute, China, two leading Chinese cardiologists recently visited major research centres in America. Dr Meilin Liu, Deputy Director in the Department of Geriatrics at the First Hospital of Peking University, and Dr Yundai Chen, Director of the

Cardiovascular Department at the PLA General Hospital, visited some of America's leading health practitioners. The visit was supported by Sister to Sister: The Women's Heart Health Foundation and The George Institute, China, with funding from the American Women for International Understanding and UnitedHealth Group.

The ten-day visit was extremely beneficial, said Dr Liu. "We found there were also problems with understanding and preventing the disease in the US, but they have built up a comprehensive system to publicise, treat and prevent the disease."

The two doctors visited the George Washington University Hospital, the National Heart, Lung and Blood Institute, National Institutes of Health, Adventist Healthcare, Brigham and Women's Hospital of Harvard University Medical School and Cedars-Sinai Medical Center.

Dr Chen said: "The non-government organisations in America can run a campaign and use their influence to lobby the government to adjust policy. In China, we mostly rely on the government to initiate change. So our first task is to make the government realise this is an important issue," she added.

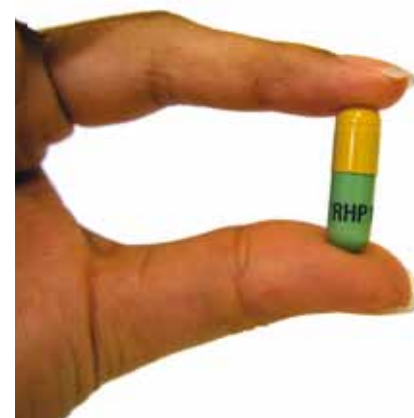
"We are clinical cardiologists who are now becoming advocates for women's heart health. We are trying to promote a healthier lifestyle to China's hundreds of millions of women. After all, preventing is more important than curing," Dr Liu and Dr Chen both commented.

The George Institute, China is committed to raising public awareness and encouraging prevention and high-quality research to improve women's heart health in China.

For more information on our programs in China, visit www.george.org.cn or contact Prof Yan Lijing at ylijing@george.org.cn.

FOUR-IN-ONE POLYPILL TRIAL UNDERWAY IN INDIA

RESEARCHERS ARE SET TO EXPLORE WHETHER A NEW, LOW COST, ONCE-A-DAY 'POLYPILL' COULD REDUCE THE RISK OF HEART ATTACKS, STROKES AND OTHER CARDIOVASCULAR PROBLEMS, IN A NEW INTERNATIONAL TRIAL. THE NEW 'RED HEART PILL' CONTAINS LOW-DOSE ASPIRIN, A STATIN AND TWO BLOOD PRESSURE LOWERING MEDICINES.



The George Institute, India, with the Public Health Foundation of India and collaborators will oversee the project in India - where the impact of such an affordable treatment could benefit many.

"In India, 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", said Associate Professor Anushka Patel, Acting Director, The George Institute, India.

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