

*The 2013-14
Annual Report*



THE GEORGE INSTITUTE
for Global Health

*15 Years!
Results + Impact*



"15 years ago we set up The George Institute as a vehicle that could drive meaningful change to healthcare, and directly and immediately impact the lives of millions of people around the world. We are so proud to see how much the Institute has achieved in such a short time and the genuine passion for global health that is at the core of everything we do. This would not have been possible without the unyielding dedication of our team, supporters and partners over the years."

Professor Robyn Norton and Professor Stephen MacMahon, Principal Directors, The George Institute for Global Health

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The George Institute for Global Health is a global, not-for-profit medical research organisation, affiliated with leading academic partners, with major centres in Australia, China, India and the United Kingdom.

Our Mission is to improve the health of millions of people worldwide.

Our affiliations



北京大学医学部
PEKING UNIVERSITY HEALTH SCIENCE CENTER



The George Institute for Global Health ABN 90 085 953 331. We are a registered charity in Australia and the United Kingdom.

George Clinical Pty Ltd ABN 33 098 184 528.

All amounts are in Australian dollars unless otherwise indicated.

Chair and Principal Directors' report

It has been 15 years since the establishment of The George Institute in Sydney, with the support of the University of Sydney.

From modest beginnings we have become a global organisation, producing research findings that are changing the ways in which healthcare is delivered worldwide and improving the lives of millions of people. However, with five billion people on the planet still living without access to adequate healthcare, there is much more that we must do if we are to bring about the big changes required to achieve our mission.

As a consequence, we continue to undertake large-scale research aimed at finding the causes of common, serious diseases and ill-health, as well as studies that identify how best to prevent and manage these conditions. However, we also have an expanding portfolio of research and enterprises that aims to find innovative low-cost solutions to improving the delivery of evidence-based healthcare in a range of settings, and especially for populations in resource-poor environments.

Our achievements have been recognised by others, and for the fourth year in a row, The George Institute was listed in the SCImago Institutions Rankings as one of the world's top 10 research organisations for impact. In addition, the National Health and Medical Research Council's (NHMRC) 'Measuring Up Australia 2013' report saw the Institute ranked first among Australian research organisations.

Our activities span the globe

The George Institute team in Australia continues to spearhead our research funding and research outputs, publishing not only in the most prestigious medical journals in the world, but also in the popular press. In large part this is because our research findings often provide evidence that challenges current clinical practice, such as the use of paracetamol to reduce back pain (see page 12), as well as commonly held understandings about disease risk, such as the view that the impact of diabetes on the risk of cardiovascular disease (CVD) is the same for men and women (see page 9).

Our teams in China, India and the UK are growing and have had a significant number of successes in securing large-scale funding to address important global and local health issues. In the UK, we received substantial funding for innovative research into the management of chronic heart failure. The United States National Institute of Mental Health provided significant support to our team in China for a large study focusing on the treatment of depression in individuals with acute coronary syndromes (the I-CARE study, see page 16). Additionally, both The Wellcome Trust/DBT India Alliance and Grand Challenges Canada provided funding to our India office, to facilitate the extension of our systematic medical appraisal, referral and treatment (SMART^{health}) systems for individuals with common mental disorders. (see page 18).

George Clinical also continues to grow, with increased revenue during the past year, new research hubs in the UK and Taiwan and business development operations in the US. It has also established new partnerships in Japan to complement existing activities in India, China, Australia and East Asia.

New leaders, new ideas

During the past year, The George Institute attracted new leaders from a variety of fields. In particular, we welcomed Paul McClintock AO and Russell About as Non-Executive Directors of the Board. We were also pleased to have finalised the appointment of Professor Terry Dwyer AO as Executive Director of our office in the United Kingdom. Professor Dwyer, who joined us from early July 2014, is a world-renowned expert on non-communicable paediatric diseases, who is leading a first-of-its-kind global study on the causes of childhood cancer.

Richard Mills, formerly of The World Bank, joined us as the Director of Global Communications, John McCaffrey joined as our new Director of Global Development and Sarah Hazell as Director of Global Human Resources.

While many of our staff received accolades for their work during the year, we especially want to highlight that bestowed on our Director of the Critical Care and Trauma Division. Professor John Myburgh was recognised as an Officer in the General Division of the Order of Australia (AO) for distinguished service to medicine as an intensive and critical care practitioner, educator and researcher, and as an international innovator in patient management.

A special thanks

As always, our achievements would not be possible without the input of many. We are extremely grateful for the strong dedication and tremendous support of our Board of Directors, our staff and their families, and our supporters; whether in-kind or financial, this support is at the core of the Institute's 15-year success story and is what makes our research possible. We particularly wish to acknowledge our university affiliates—the University of Sydney, Peking University Health Science Center, and the University of Oxford, and especially the Oxford Martin School.

To the future

In the coming decades, we have much to do if we want to ensure the delivery of effective healthcare to disadvantaged populations across the world and to reduce the ever-growing rates of chronic disease and injury. Our high-calibre team have already demonstrated a capacity for innovative thinking and for finding new ways to address these problems, and as we move ahead, there is every reason to expect that the next 15 years will be as positive and productive as the last.

Michael Hawker AM (1)
Chair

Professor Stephen MacMahon (2)
Principal Director

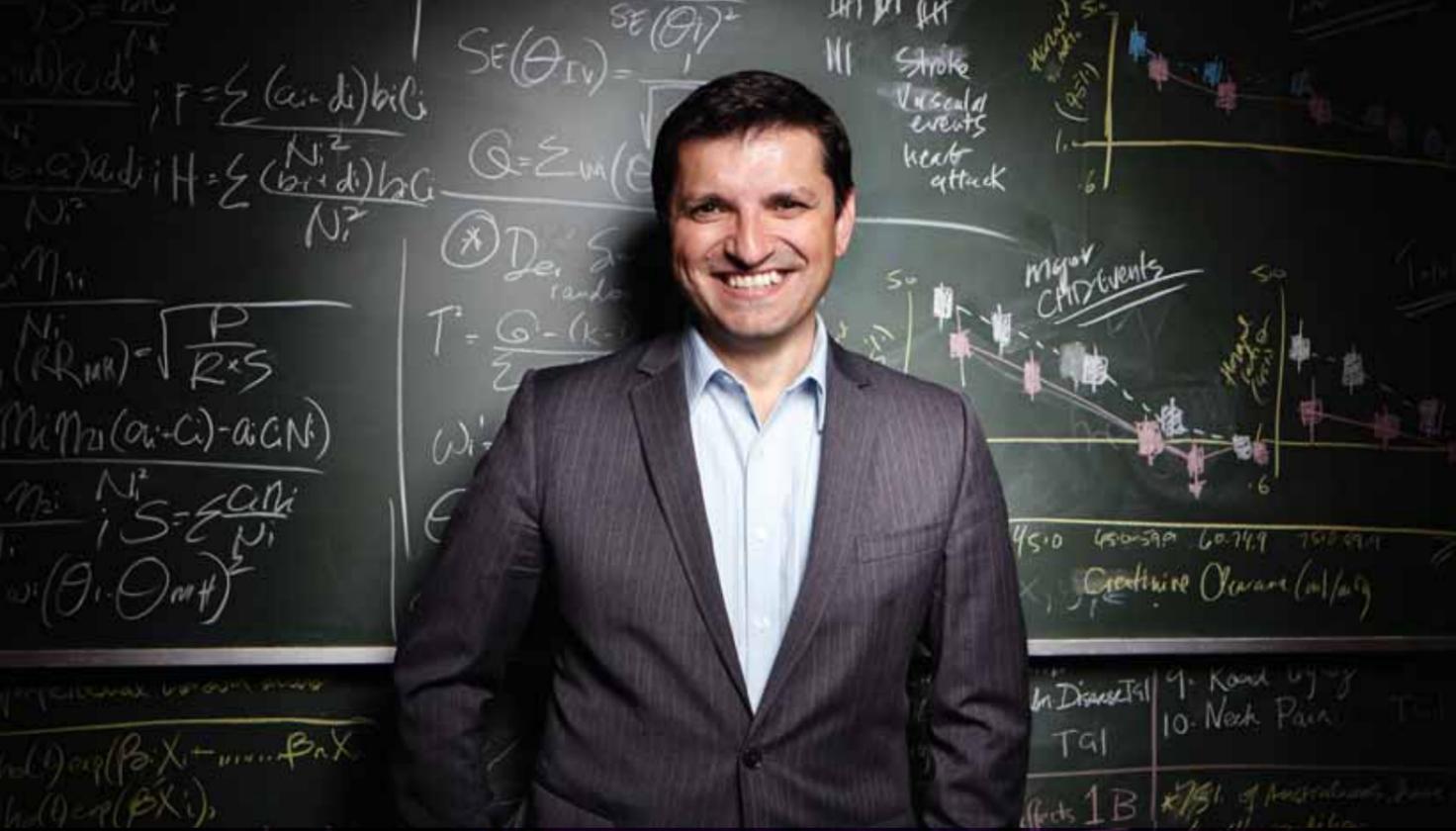
Professor Robyn Norton (3)
Principal Director



"...Our high-calibre team have already demonstrated a capacity for innovative thinking and for finding new ways to address these problems, and as we move ahead, there is every reason to expect that the next 15 years will be as positive and productive as the last..."

Michael Hawker AM, Chair of the Board of Directors, The George Institute for Global Health

*15 Years!
Results + Impact*



"...My research is driven by the urgent need to find healthcare solutions that are safe, affordable and effective... it's about the care we need for the future..."

Professor Vlado Perkovic, Executive Director, The George Institute for Global Health, Australia

Our research...

Our vision is to be the world's leading research centre dedicated to developing effective and affordable solutions for the healthcare challenges of the 21st century, especially in resource-poor environments.

Chronic diseases and injury are the biggest health threats facing us and future generations, with the emerging markets and disadvantaged communities hit the hardest.

Five billion people have no reliable access to essential healthcare. Heart attack and stroke are the world's leading causes of death and in the next decade 100 million people will die from chronic diseases before they reach 60, while another 100 million people will die from unintentional injuries and violence.

Around the world, health systems are no longer coping with the burden of this scourge. Current approaches to care and prevention are not meeting demand.

Making sure people have the right treatment at the right time, developing effective injury prevention programs, saving precious healthcare dollars, or a combination of the above, The George Institute is committed to finding a solution.

Each research project, every researcher and employee, and every research dollar spent at The George Institute is focused on a single question—how do we make real impact at a community level?

Ranked among the top 10 research institutions in the world for scientific impact since 2011, we pride ourselves on our innovative research program, our can-do approach and our team comprising of some of the world's best.

For the past 15 years, our research has resulted in changes to medical guidelines and ways of thinking about some of the most common medical treatments around the world. But, there is so much more to do to improve the health of many millions around the world.

Q&A: Chief Scientist, Professor Anushka Patel

Our focus is on undertaking research with significant health outcomes, with a relatively short timeframe—whether that be for the individual patient or populations.

We don't work in laboratories or with microscopes—but directly with people, assessing the leading causes and treatments for disease and ill-health. Anushka Patel, Chief Scientist at The George explains...

Why is The George Institute's research necessary?

We recognise that the burden of chronic disease and injuries falls disproportionately on low- to middle-income countries and disadvantaged populations in wealthier countries. So that's where we focus our efforts.

Our research is also necessary as it is designed to directly impact policy and practice. A large focus of our work is developing sustainable and scalable solutions to ensure the delivery of affordable high-quality healthcare. Where relevant, our research also aims to directly influence government policies that impact the health of populations.

What are the main challenges facing researchers at The George Institute?

Government funding for research is increasingly constrained, which is making it harder and harder to rely upon traditional sources of funding. We are focused on large-scale studies that often involve thousands of patients. These can be expensive, especially when they involve monitoring immense populations in lower-income countries like China and India.

There are challenges around implementation too. We operate in a diverse range of countries and there are significant differences in the quality of infrastructure and the availability of resources for research. Even in high-income countries, there are settings where research infrastructure is poor.

What's the role of technology and innovation in your work?

They are indispensable. There is a very clear recognition that the medical solutions we have in high-income countries cannot be duplicated in lower- and middle-income countries, even if it might be considered appropriate to do so. We aim to bridge the gap by creating solutions that are appropriate to the population's social and economic circumstances. Technology and innovation are an essential part of this process.

These have led, for example, to the development of new polypills, which offer a relatively cheap and easy way to treat heart disease in disadvantaged populations. It took a lot of research and development to develop a pill so simple to use; it's an innovative solution to a common problem.

It's just not possible to develop affordable and scalable solutions without being innovative.

Where to from here?

Our strategy for the coming years is to stay committed to research that has a real impact, be it on the individual patient or on an entire population.

Our research will continue to focus on the leading causes of ill-health and new treatments for these, as well as continuing to develop and implement new ways to supply affordable and scalable solutions for chronic diseases.

We've already got trials scheduled for 2015 which will focus on very common problems such as diabetes, kidney disease, falls prevention and critical care.

Of course, one way we've stayed at the cutting edge of medical research is by recruiting world leading scientists. I expect that The George Institute research team will expand further as we invest in the type of talent that breakthrough innovations require.

How would you describe the role of The George Institute?

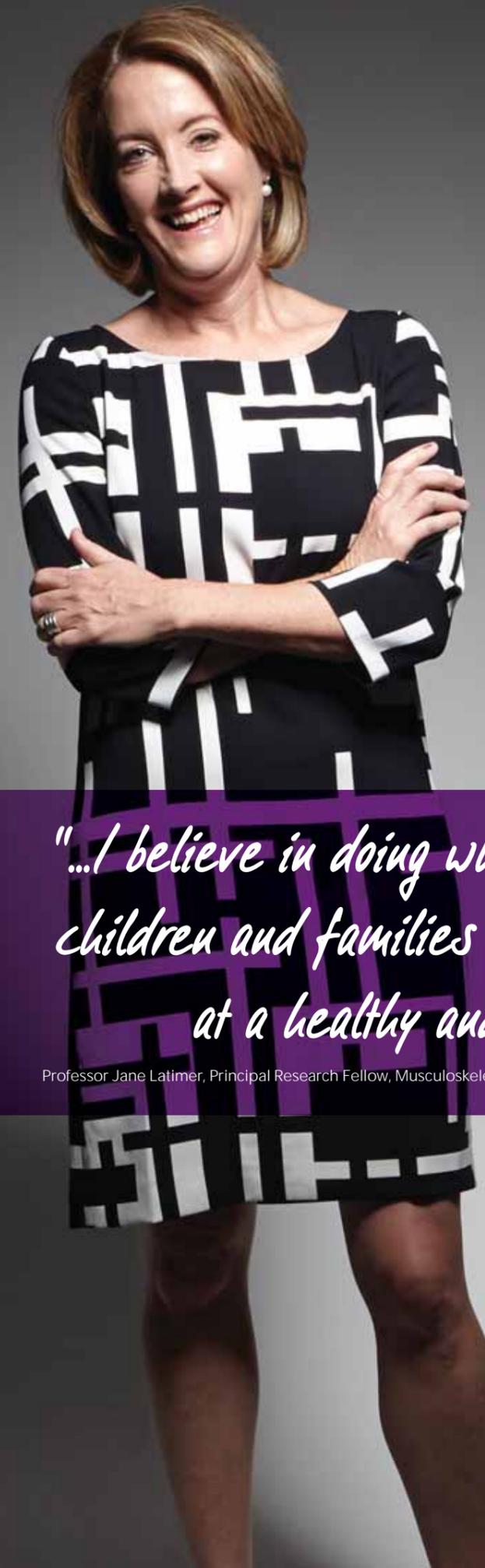
The increasing prevalence of chronic diseases requires a swift, concerted response and I'm confident that The George Institute will play a very important role in providing this. Our work really does have the potential to save lives.



"...The medical solutions we have in high-income countries cannot be duplicated in low- and middle-income countries ... It's just not possible to develop affordable and scalable solutions without being innovative..."

Professor Anushka Patel, Chief Scientist, The George Institute for Global Health

15 years...



"...I believe in doing what I can to make sure children and families have the best chance at a healthy and active life..."

Professor Jane Latimer, Principal Research Fellow, Musculoskeletal Division, The George Institute for Global Health, Australia

2M+ ESTIMATED PEOPLE WORLDWIDE WHO ARE RECEIVING REGULAR RENAL REPLACEMENT THERAPY

STUDIES SUGGEST THAT THE ACTUAL NUMBER OF THOSE WHO NEED IT IS CLOSER TO **20M**

Our research:

chronic & critical conditions

How can we transform the treatment of patients with chronic kidney disease?

More than two million people worldwide receive renal replacement therapy regularly, yet studies suggest that this number represents less than 10% of those who need it.

The George Institute's ACTIVE Dialysis trial is the largest study ever conducted into the possible influence of the duration of dialysis on health outcomes and quality of life for patients with kidney disease.

"For patients with kidney disease, the essential task of cleaning the body of impurities is not simple and radically changes the way they live their lives," says Associate Professor Martin Gallagher, Director of the Renal and Metabolic Diseases Division.

"Patients routinely undergo up to 18 hours every week of dialysis, a process where a machine cleans the body of toxins," says Martin. "This usually means three days per week of being hooked up to a machine, or three days per week where their daily lives are put on hold. If we are to ask patients to undergo this treatment we need to understand the best way to use it to improve their lives."

The Active Dialysis study is testing whether or not more intensive dialysis of 24 hours per week, delivered while the patient is sleeping, is not only effective in improving health, but can also improve their quality of life.

"Our researchers are also exploring new research techniques that could be cost-effective and extremely insightful," says Martin. "By linking existing large health and clinical trial data, we can better understand kidney disease and how to treat it, and more readily find answers to questions that would normally require more extensive and costly research."

For example, our researchers are using data linkage to investigate whether living in rural versus urban Australia has any implications for the health outcomes of people with kidney disease.

The data linkage technique, if it can be shown to provide useful information, will be relevant beyond kidney disease for assessing a range of current healthcare practices and the influence of these on patient outcomes.

Should clinicians modify body temperature after traumatic brain injuries and stroke?

Treating traumatic brain injuries and strokes are difficult work for even the best-equipped intensive care unit. Complicating clinicians' tasks is the fact that many people experience a high temperature after an injury to the brain and there is no consensus about whether healthcare staff should intervene. While some scientists believe the elevation of temperature may be a beneficial evolutionary adaptation that helps repair the damage, other research suggests high temperatures may be harmful. Reliable information that could inform clinical practice is currently unavailable for this common issue.

Our researchers are looking to clarify what clinicians should do in these circumstances. Our CLARITY project is reviewing temperature management practices across intensive care units in Australia and New Zealand, and our PARITY study aims to determine whether administering paracetamol intravenously reduces core body temperature following a traumatic brain injury.

"We hope these initial phases of research will be a sizeable step towards a large clinical trial to determine whether clinicians should or shouldn't modify the high temperatures many people experience after acquiring a traumatic brain injury," says Dr Manoj Saxena, Research Fellow at The George Institute, Australia.

"Information from these two research projects is helping us design one final pilot study and then we are hoping that we will be able to start a definitive clinical trial in two years' time," says Manoj. "This will be a fantastic achievement because the issue of modifying temperature in brain-injured people is relevant to a low-income, resource-poor setting as well as a high-income environment."

"High-quality knowledge on the effect of temperature on the recovery of patients with brain injuries is clearly needed and, when available, will affect an immediate and important change in clinical practice and potentially save many lives."



"...We came up with the idea to study the home monitoring of patients on dialysis to make treatment more accessible, improve satisfaction and outcomes. If people cannot get the support they need, our job is to find a way to get it to them..."

Professor Vivekanand Jha, Executive Director, The George Institute for Global Health, India

How can mobile technology be used to improve patient experience of home dialysis?

People with end-stage kidney disease can be treated either by dialysis or a kidney transplant. With only a limited number of donor kidneys available for transplant, most patients rely on dialysis for at least several years, a weekly cost of approximately US\$600 for standard dialysis prescription. Managing these patients at home is considered superior to in-hospital treatment. However, this has the disadvantage of reduced frequency of monitoring, especially when patients dialyse themselves at home in remote locations.

We are developing an innovative mobility solution on a tablet PC to support patients undertaking home-based peritoneal dialysis to allow them to interact remotely with their specialist, thus reducing physical hospital visits. This system (called Support-PD) has the potential to replace the current expensive specialist centred care with an innovative patient-centric mobile monitoring and interactive decision support system, and reduce a significant portion of the costs involved in treatment.

"We came up with the idea to study the home monitoring of patients on dialysis this past year as a way to make treatment more accessible, improve satisfaction with treatment and improve outcomes," says Professor Vivekanand Jha, Executive Director of The George Institute, India. "If people cannot get the support they need, our job is to find a way to get it to them."

"In the longer term we hope that this approach will help increase the percentage of people with advanced chronic kidney disease who can benefit from long-term home dialysis therapy. In India, this figure is as low as 10%," says Vivek.

With Support-PD, patients can use their tablets to obtain advice about their treatment, or contact their treating team who can view their readings remotely and discuss courses of action.

Who is more at risk of having a heart attack or stroke—men or women with diabetes?

Several studies have found that diabetes at least doubles a patient's risk of a coronary attack or stroke. But until now these studies had not explored differences in risk between the sexes.

A study completed in early 2014, involving 860,000 people, has shown that women have over 40% more excess risk of serious heart conditions after developing diabetes than men. The study closely follows another study of similar size that found that women had a 27% greater excess risk of stroke as a result of diabetes compared to men.

"Our findings show that we are underestimating the effects of diabetes on women's cardiovascular health," says Professor Mark Woodward, working at The George Institute in Oxford and Sydney.

"It has long been speculated that women have been relatively under-treated compared to men, and this may well explain some of the extra female disadvantage from diabetes. New research is required to understand biological mechanisms that may have an additional role."

Our researchers are now working to ensure that this sex discrepancy is incorporated into a new online algorithm that GPs and the general public can use to determine an individual's future risk of having a heart attack or stroke. This algorithm will enable medical treatment to be allocated in an equitable fashion, according to need, to women and men alike.

ABOUT 200,000
INDIANS EVERY YEAR DEVELOP KIDNEY FAILURE AND REQUIRE DIALYSIS THERAPY

70% WILL DIE DUE 2 LACK OF ACCESS 2 DIALYSIS



Can reducing the amount of salt we eat deliver major health benefits?

Around 1.65 million deaths worldwide each year are a direct consequence of eating too much salt. This is because salt pushes up blood pressure throughout life, and high blood pressure is the leading cause of death in the world—a major risk factor for stroke, heart attack and kidney disease. Reducing the amount of salt we eat should have dramatic effects on these risks and if a population-wide approach is used, the impact on chronic diseases is potentially enormous.

The World Health Organization has called for countries to reduce their salt intake by 30% by 2025 but missing pieces of data are hampering progress. Our researchers are working to fill these gaps by defining the best ways for nations to reduce salt consumption across their populations. Using rigorously designed studies we are evaluating the effects of reformulating foods to include less salt, clearer labelling of salt content and education of the community through novel engagement programs.

One such project is a large-scale trial in China investigating whether salt substitutes can reduce the risk of stroke. “We’re applying the same type of research techniques we normally use to test drug therapies, to evaluate this very low-cost dietary intervention,” says Professor Bruce Neal, Senior Director, Food Policy Division.

“If the study shows that salt substitutes are effective it will really put salt reduction at the top of everyone’s agenda. This trial is a once-in-a-lifetime opportunity to generate the type of evidence that can impact policy and practice globally.”

The Salt Substitute and Stroke Study is underway in rural areas of Northern China and will involve over 20,000 participants and 600 villages.

At a community level, The George Institute has endorsed a new initiative by Australian Grocer Coles—The Healthier Choices Aisle will help empower people to make healthier food choices. Our award-winning FoodSwitch app has been downloaded by more than 500,000 Australians, has been launched in New Zealand and the United Kingdom, and is due for release in India and China in 2015.

An evaluation of salt levels in six Australian fast food chains over the last few years was completed showing that on average fast foods have become less salty by about 2% each year. This is an encouraging trend, although many Australian fast foods remain very high in salt and there remains significant further work to be done in the food sector.

“...if average salt intake in China can be reduced by 1 gram there would be an approximate 5% reduction in deaths from cardiovascular disease. This would mean 130,000 fewer deaths from stroke and heart attack each year...”

Professor Bruce Neal, Senior Director, Food Policy Division, The George Institute for Global Health, Australia

50 MILLION

THE NUMBER OF PEOPLE OVER THE NEXT DECADE WHO WILL DIE FROM UNINTENTIONAL INJURY AND VIOLENCE

Our research:

injury, ageing & disability

Can a new approach to managing back pain save billions of dollars?

In Australia back pain affects nearly 80% of Australian adults at some point in their lives and costs almost \$4.8 billion in healthcare each year. But is not just Australia where back pain is a problem: globally back pain is the leading cause of disability.

Our research has shown that there is an urgent need to change the approach to back pain management. Many people with back pain get the wrong care and that pattern is repeated around the globe. People miss out on the basics and instead get more complicated and costly management. For example in a recent review we demonstrated that epidural injections have at best a trivial short-term effect for back pain, yet each year in the USA there are 2.3 million epidural injections.

"It is well recognised that we are wasting lots of money; but the harm caused by the current approach is not widely recognised," says Professor Chris Maher, Director, Musculoskeletal Division, The George Institute, Australia and one of the world's top back pain researchers. "Most people would not know that prescription pain medicines such as opioids kill more people each year in the USA than heroin and cocaine combined. While opioid medicines are commonly used to manage long-term back pain we don't even know if they work for that purpose".

"A real priority is implementation research to change the care patients receive so that it better aligns with the evidence."

The George Institute has supported two reviews of the 53 'red flags' that lead primary care physicians to request expensive imaging tests for their patients. Australia's Medicare program spends \$220 million each year on MRIs, CT scans and x-rays for low back pain alone, and the majority of those tests are unnecessary. Our research shows that the red flag system can be vastly improved, paving the way for more streamlined and cost-effective approaches.

A major outcome for 2014 was the publication of the PACE trial in The Lancet demonstrating that paracetamol does not speed recovery or reduce pain in patients with acute low back pain. The surprising result received wide media attention around the world because it went against long-held views that paracetamol was a safe and effective treatment for back pain.

Current projects underway include a trial of treatment for sciatica and a trial evaluating prevention of back pain. We are also planning two trials in older people with back pain: one will look at analgesia for osteoporotic fractures of the spine and the other will evaluate a form of surgery for older people with back pain that is widely used but has never been adequately tested in a trial.

We are optimistic that a new understanding of back pain will assist both clinicians and their patients. "Back pain is now the leading cause of work loss in Australia," explains Chris. "There's never been a better time to improve the way we treat it."

4.8

BILLION DOLLARS

IS SPENT EACH YEAR ON BACK PAIN IN AUSTRALIA



"...By 2020, almost 10% of Indian people will be older than 60 and the number of hip fractures will reach 600,000. Unless family and hospital practices change, about 40% of people who experience hip fractures will die within a year..."

Professor Santosh Rath, Professorial Fellow, Global Surgery, The George Institute for Global Health, United Kingdom

How can we reduce hip fracture mortality rates and healthcare costs in India?

The Indian population is ageing and an increasing number of people are experiencing injury and poor health. By 2020, almost 10% of Indian people will be older than 60 and the number of hip fractures will reach 600,000. Unless family and hospital practices change, about 40% of people who experience hip fractures will die within a year.

We are working with hospitals in India to understand current ways of treating hip fracture and to evaluate whether by the use of evidence-based healthcare practices, the costs of treating hip fracture and related mortality rates can be reduced.

Such practices include coordinating families, physicians and surgeons to transport patients with hip fracture early to hospital after injury, multidisciplinary ortho-geriatrician care, and operating on patients within 48 hours, all of which are in line with international best practice guidelines.

This study is part of a broader review we are conducting in the state of Odisha on family behaviour and decision-making around healthcare. We hope for example this work will prompt policymakers to establish an Indian hip fracture registry that can help strengthen the health system and identify any gaps in care.

"We want to understand how people behave when seeking care for hip fractures and any barriers they might experience," says Professor Santosh Rath, The George Institute, United Kingdom.

"This will help us understand whether for example money is the main barrier for some people in obtaining care, and whether vouchers or universal healthcare would be a solution to improve access to the treatment they need."



"Injury is one of the most significant health challenges investment in injury prevention is critical, especially and disadvantaged populations where the toll of

we are facing today. Urgent among children, young adults injury is the greatest."

Professor Rebecca Ivers, Director, Injury Division, The George Institute for Global Health, Australia

Can car seat safety programs reduce road-related injuries among Aboriginal children?

Travelling in a car is a far greater risk for young Aboriginal children than their non-Aboriginal peers. Aboriginal and Torres Strait Islander children under the age of four are four times more likely to die from a road-related injury and twice as likely to suffer a serious road-related injury than other Australian children.

Working with childcare centres in the Sydney region, The George Institute developed the Buckle Up Safely program to improve the safety of children in cars. Since 2014 the program has expanded across NSW to help Aboriginal families.

"We're working closely with Aboriginal communities to employ local staff members who provide car seats at low cost and information about their use," says Dr Lisa Keay, The George Institute, Australia. "We've piloted the project at two locations in Sydney and—thanks largely to grants from NSW Health and Transport for NSW—we are extending this to 12 communities across New South Wales."

"Our expected outcome is that community organisations will have greater capacity to promote safe travel in cars and prevent unnecessary injuries."

The Buckle Up program complements the community-based Driving Change program, which helps young Aboriginal people obtain their driver's licences.

Can a training program reduce crashes involving new motorcycle riders?

How effective motorcycle rider training programs are in reducing crashes is a big focus for governments and motorcycle industry associations. This past year we completed the evaluation VicRide—a half-day, on-road motorcycle coaching program—to see how effective it is in lowering the number of crashes by new riders.

"We've enrolled 2,400 provisional licence riders in Victoria in a randomised, controlled trial as part of a project funded by VicRoads," says Professor Rebecca Ivers, The George Institute, Australia.

There is significant debate about the effectiveness of motorcycle rider training programs. A Cochrane systematic review led by Professor Ivers' team found that it was not clear if training (or what type) reduces the risk of crashes, injuries or offences in motorcyclists, and a best rider training practice could not be recommended. The VicRide trial, once complete, will provide high-quality evidence on the effectiveness of rider training programs.

The George Institute completed the follow-up at the end of 2013 and spent the rest of the financial year linking the participant data to police-reported and self-reported crashes, as well as to their riding offences and licensing records. "We're planning to deliver our main report in January 2015," says Rebecca. *"This will be extremely exciting because it will inform motorcycle safety policy in Victoria, and the rest of the country. The results will also have implications globally."*

THE GAP = MINUS 10 YEARS

Our research: disadvantaged populations

Could a culturally adapted survey help identify depression?

Researchers have conducted several studies linking depression to an increased risk of chronic disease in non-Indigenous populations in Australia. In turn, those with chronic disease have an increased risk of depression. However, no similar research has been done for Aboriginal and Torres Strait Islander people. This is possibly because there isn't a freely available, culturally appropriate tool for identifying depression for Aboriginal and Torres Strait Islander people that has been validated Australia-wide.

In previous work with five Aboriginal language groups of Central Australian Aboriginal men, an existing depression survey, the 9-item patient health questionnaire (PHQ-9), was adapted to make it a culturally appropriate survey for identifying depression.

"We are now looking to determine whether this adapted survey is relevant for Aboriginal and Torres Strait Islander communities Australia-wide," says Associate Professor Maree Hackett, The George Institute, Australia. "Our research team will work with 500 Aboriginal and Torres Strait Islander people who are visiting their general practitioners across Australia to see if the survey correctly identifies people with depression and correctly identifies those without depression."

"If we can show the survey is culturally appropriate and correctly identifies those with and without depression, we'd expect to make it available for use by general practitioners Australia-wide. This would be a major step forward in managing depression in Aboriginal and Torres Strait Islander people."

Input from Aboriginal and Torres Strait Islander people and representative organisations is an important component of the project. For instance, several members of the Steering Committee are Aboriginal and we will be engaging with Aboriginal Community Health Controlled Care in communities across metro and regional locations throughout the research process.

Can changes to China's health services improve treatment for heart disease and mental health?

Chronic diseases, including stroke and heart attack, account for 80% of deaths in China and are also associated with depression and other mental disorders.

To address this health priority, our researchers are investigating whether changes in practices in hospital and by doctors can improve treatment and reduce repeat incidents of acute coronary syndromes (ACS), such as heart attacks and stroke.

The project Clinical Pathway for Acute Coronary Syndromes (CPACS), in its final stages, is identifying ways to ensure ACS patients have access to the care they need when they leave hospital, and that doctors have access to the most up-to-date clinical evidence to help patients manage their heart health and resume their normal lives.

"We are developing clinical pathways for patients hospitalised for acute coronary events so they are at less risk of a repeat event," says Professor Yangfeng Wu, The George Institute, China. "We are working with 75 urban hospitals to help patients get back to good health and next we will be expanding this work to 100 country hospitals."

In a related project, Integrating Depression Care in Acute Coronary Syndromes Patients in Low-Resource Hospitals in China (I-CARE), we are looking at ways to help ACS patients cope with any associated depression or other mental disorders.

"This project has considerable significance for public health in China and developing countries because there are typically few psychologists or psychiatrists available to support people who have both coronary and mental health concerns," says Yangfeng.

On 1 September 2013, the United States National Institute of Mental Health awarded The George Institute, China, a grant to pursue the research, and the pilot study was launched in April 2014.

CPACS has been adopted by the Chinese Ministry of Health as its official project and the Chinese Cardiac Society has used the CPACS results to promote adherence to national guideline recommendations and improve ACS management in hospitals.



"...Our research is important because it has the potential to help so many people in China and around the world, by giving them access to treatment they need and making our healthcare system more efficient..."

Professor Yangfeng Wu, The George Institute for Global Health at Peking University Health Science Center, China

The Ironbark Project: how can falls be prevented in the older Aboriginal community?

Falls are a leading cause of injury-related hospitalisation in older Aboriginal people, resulting in a significant number of deaths each year. Despite this, there has been little research into exactly how and why falls have such a large impact, or whether existing mainstream falls prevention programs are effective in reducing falls in Aboriginal people.

Working in partnership with Aboriginal communities and Aboriginal organisations, the Ironbark Project will explore how an effective and culturally appropriate Aboriginal falls prevention program can be designed and delivered.

"Hospitalisation data shows the economic and social burden of falls in older Aboriginal people is disproportionately high," says Professor Rebecca Ivers, The George Institute, Australia.

"This research will help us understand who is at risk of falls and the types of fall prevention programs that are likely to be most effective for older Aboriginal people," says Rebecca. "Our goal is to end up with a culturally appropriate falls prevention program that can be integrated into existing Aboriginal healthcare services."

"We are pleased to have strong involvement from the Aboriginal community and health services in this project as this is critical to its success," says Rebecca.

Ongoing consultation with Aboriginal Elders, steering committee members, Aboriginal communities through yarning circles and Aboriginal health service providers ensures there is effective community engagement and ownership of the project.

The resulting falls prevention program is scheduled to be piloted and evaluated in three Aboriginal community sites across NSW in 2015.

Can a simple drug minimise the effects of chronic obstructive pulmonary disease in China?

Chronic obstructive pulmonary disease (COPD) is the fourth most common cause of death worldwide mostly due to cigarette smoking and exposure to biomass fuels such as coal and wood. If current trends continue, COPD is likely to become one of the top three common causes of death by 2020.

Existing treatments use the same bronchodilators and anti-inflammatory agents involved in controlling asthma and are not nearly as effective in managing COPD. Making the problem worse—particularly in the developing world—is the fact the newer generations of these treatments are too expensive for low-income earners.

The George Institute is conducting research looking at the effect of treatments called theophylline and steroids in COPD in China (the TASCs study). If the study concludes that combining low doses of very inexpensive theophylline and corticosteroids—or theophylline alone—limits exacerbation and improves quality of life, a treatment could cost as little as \$15 per year compared to over \$1,000 for standard treatment.

"We plan to study 2,400 patients across 44 centres in China until 2016," says Professor Norbert Berend, The George Institute, Australia. "China is an important part of the world in which to conduct this research as 65% of men in the country smoke cigarettes and while only 4% of women do as well, this may increase in future."

"Also, compared to men, almost half as many women in China have COPD, due primarily to a village lifestyle that exposes them to biomass fuels in cooking."

700,000 CHINESE PEOPLE DIE OF ACUTE CORONARY EVENTS EACH YEAR
THE PREDICTED INCREASE OF ACS IN CHINA OVER THE NEXT DECADE **69%**

IN INDIA 25% SUFFER MENTAL ISSUES: DEPRESSION, ANXIETY AND EMOTIONAL DISORDERS

Could mobile technology fill in the gaps of an overstretched healthcare system?

Billions of low-income people worldwide do not have access to essential treatment, and healthcare systems around the globe are at breaking point. SMARThealth (Systematic Medical Appraisal, Referral and Treatment) applies new technologies and innovative practices to help make healthcare widely available at a low cost.

Initiatives include developing electronic decision support tools for tablets and smartphones to assist healthcare workers in low- to middle-income countries—or those who help disadvantaged populations in developed countries.

"SMARThealth uses technology as a catalyst to strengthen healthcare systems," says Dr Fred Hersch, The George Institute, United Kingdom. "In some less well-off countries there is only one doctor for every 30,000 people, so we need to find new ways of making health information and services available to these communities.

"However, SMARThealth is not just applicable to less well-off countries," Fred adds. "The program can also be applied to wealthier countries where current healthcare models are reaching breaking point due to surging demand from ageing populations."

The George Institute is working with the World Health Organization, the International Telecommunication Union and private partners on the Be He@lthy Be Mobile initiative. This multi-sectoral program aims to build evidence to support launching large-scale mobile health interventions to help limit the cost and prevalence of non-communicable chronic diseases such as heart disease and stroke.

SMART Mental Health program is the latest iteration of the SMARThealth program. The global burden of mental disorders and treatment gap is large, especially in countries like India, due to poor awareness about mental health and few available trained mental health professionals to provide care. As a result, only a small percentage of those suffering from mental disorders actually receive any mental healthcare.

"We are developing a decision support tool that non-physician community health workers and primary care doctors can use to screen and treat people for common mental disorders," says Dr Pallab Maulik, Deputy Director, The George Institute, India. "An anti-stigma intervention will also be evaluated."

"If we can show that system works well, we can provide tools and guidance to the government about what can be done for basic mental healthcare in a rural setting," says Pallab.

The study began in early 2014, involving over 50,000 participants in over 40 villages including a set of villages in designated Scheduled Tribal areas in the Indian state of Andhra Pradesh.



*"...SMARThealth is
The program can also
healthcare*

*not just applicable to less well-off countries.
be applied to wealthier countries where current
models are reaching breaking point..."*

Dr Fred Hersch, Research Fellow, The George Institute for Global Health, United Kingdom

Q&A: Director, Global Development, John McCaffrey

Philanthropy plays an important role in medical and health research, often providing crucial seed funding for research projects, sometimes even prior to government funding. In December 2013, John McCaffrey was appointed Director of Global Development at The George. As former Executive Director of the UK Labour Party Fundraising, John brings more than 20 years' international experience in sponsorship and fundraising, and hundreds of millions of dollars raised. John has joined the Institute to diversify and increase its funding base.

What difference can donors make by supporting the Institute?

The world needs new ways of delivering healthcare—otherwise, by 2023, more than 100 million people aged 60 or under will be killed or disabled by avoidable conditions. The bulk of this burden is falling on developing countries, and on disadvantaged populations in high-income nations.

We recognise that all donors have different areas of interest. At The George Institute, we can match donors to individual projects and provide access to leading clinical researchers in several fields. In addition, we can take you to parts of the developing world where you can see how our work helps treat chronic diseases such as diabetes, mental illness, and heart and kidney ailments on the ground.

Because of our global presence and local partnerships and collaborations, we are equipped to react quickly to research opportunities. We are also innovating at every stage of our projects—from methodology to outcomes—making us a very exciting organisation to invest in.

What type of research donors can support?

Technology and innovation are a big focus for us, which in a health context can lead to real world and immediate results, such as tablet PC devices for use in the remotest villages which ease the strain on overburdened public health systems. If we can enable a health worker in a village in India to use a tablet as a diagnostic tool, we can negate the need for people to travel potentially hundreds of kilometres to have diagnostic blood tests. As healthcare costs rise worldwide, these types of projects are going to be increasingly attractive to governments.

As Director of Global Development, what is your focus?

The George Institute has been extremely successful in obtaining peer-reviewed funding through bodies such as

the Australian Government's National Health and Medical Research Council (NHMRC). But government funding is becoming increasingly competitive and more and more scarce as the cost of healthcare becomes unsustainable. The focus of my role is on expanding our funding base and to continue building a community of individuals and organisations who know our researchers and who are as committed as we are to investing in global health.

We're also in the middle of establishing an international Foundation Council to drive our fundraising activities. We're currently identifying young, energetic Council members, and we hope to have the first meeting of this group in early 2015.

Another priority for us is identifying the areas in which we're strongest, establish interdisciplinary groups across The George Institute in each and create strong cases for funding support. These areas are Indigenous health, using technology to deliver healthcare programs, women's health, adolescent health, and seniors' health. These easily recognisable stories are critical because fundraising relies on good storytelling.



Thank you...

Equity Trustees - the
J.O & J.R Wicking Trust

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Bupa and Bupa Health
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Therapy Association



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and Ageing



Centre for Road Safety,
Transport NSW



HCF Health and
Medical Research
Foundation



NSW Health



NRMA Motoring and
Services



Oxford Martin School



50% THE PERCENTAGE OF THOSE WITH CVD IN DEVELOPED COUNTRIES WHO DON'T RECEIVE RECOMMENDED MEDICINES

IN DEVELOPING COUNTRIES THE PERCENTAGE FOR THE SAME MEDICINES IS ABOVE **80%**



Our enterprises

Striving to make healthcare more accessible and affordable to those in most need, George Health Enterprises works in tandem with The George Institute to change the way healthcare is delivered through innovations in medicines, medical information technology and clinical research management.

The George Institute's three commercial entities—George Clinical, George Medicines and George Technologies—sit under the banner of George Health Enterprises—providing a unique combination of commercial expertise, strategic direction and policy advice for projects that help finance the work of The George Institute. In doing so, they shape the future of healthcare delivery across the world.

All profits are returned to The George Institute, providing us with essential support as we continue our mission of supplying innovative and scalable solutions for the treatment of chronic disease and injury.

"...In our fight against widespread chronic disease, The George Institute relies upon innovation, initiative enterprises, making

widespread chronic disease, The George Institute relies and, of course, income, all of which are provided by the them an essential part of our ongoing activities..."

Professor Stephen MacMahon, Principal Director, The George Institute for Global Health

George Medicines

George Medicines is dedicated to overcoming major health challenges through the provision of medicines that are safe, effective and commercially viable. To have lasting impact on chronic diseases, it's imperative that affordable medications become widely available.

Inexpensive and effective treatments for cardiovascular disease

In high-income countries, about half of all people with cardiovascular disease do not receive recommended medicines long-term. In low- and middle-income countries, 80–90% or more do not receive these medicines, making this a global health priority, and 80% of cardiovascular disease now occurs in developing countries where treatment is less accessible and affordable.

George Medicines has developed a pair of novel polypills to treat cardiovascular disease that combine four generic drugs in one easily administered tablet. Red Heart Pill One (RHP1) and

Red Heart Pill Two (RHP2) have the potential to halve the risk of death from cardiovascular disease.

The UMPIRE study, a landmark trial involving 2,000 patients in Europe and India, showed that these products increased the likelihood that patients would take their medication, and improved blood pressure and cholesterol control. Similar studies in Australia and New Zealand, in which half the participants were Indigenous, reinforced these findings. Overall, a combined analysis showed that taking a polypill leads to a 43% increase in patient adherence to medication.

RHP1 and RHP2 are scheduled for submission to a regulatory approval authority in early 2015. Their approval will equip The George Institute with resources to develop newer products, and even more importantly, by being introduced into practice, they will mark an important step in our mission to make medical care convenient, affordable, and accessible for all people, wherever they are in the world.

George Technologies

George Technologies aims to reshape the healthcare system by introducing digital solutions to support a new model of primary care, such as its flagship program SMARThealth (Systematic Medical Appraisal, Referral and Treatment).

A SMART solution for primary care

SMARThealth is a digital decision support tool that helps medical practitioners assess a person's cardiovascular health. It also enables them to delegate routine aspects of patient care to qualified community health workers. This task-shifting reduces overwork of doctors, and ensures that more people have access to the care necessary to prevent and reduce their risk of cardiovascular disease, especially in disadvantaged populations.

A two-year randomised trial of SMARThealth in over 5,000 Australian patients saw a significant increase in rates of best practice care for those previously receiving inadequate treatment for cardiovascular disease. Appropriate use of aspirin, for example, was achieved among 38% of patients whose doctors used SMARThealth, and only 12% of those who didn't.

The SMARThealth program is relevant for all healthcare contexts given the burden of chronic diseases in high- as well as low- and middle-income countries, and is being tested for other disease groups such as mental health (see page 18). A new version of SMARThealth is scheduled to be tested in China and Iran in early 2015.

GEORGE CLINICAL
PROFITS CONTRIBUTE **39%**
OF THE GEORGE INSTITUTE'S RESEARCH FUNDING

George Clinical

From inception, The George Institute has been conducting commercial clinical trials. In 2005, The Institute centralised this work, which soon evolved into George Clinical (2008), a contract research organisation that has been at the forefront of developing new drugs and treatments, managing clinical trials for The George Institute and commercial customers around the world. With George Clinical's continued growth throughout the 2013–14 financial year and a broadening base of commercial customers, it is a critical source of funding for both the Institute's research program and its global network.

Our expertise

George Clinical leverages The George Institute's internationally recognised scientific expertise and outstanding track record in trial delivery in the Asia-Pacific region to deliver excellence in clinical trials. Focusing primarily on the Asia-Pacific region, and its increasing rates of non-communicable and chronic diseases, George Clinical has developed a reputation for delivering large outcomes-focused trials that demonstrate the effectiveness of innovative treatments for both clinical practice and patients.

"George Clinical not only provides the Institute with essential monetary support," explains its Managing Director, Dr Marisa Petersen, "but also expedites the process whereby the results of its investigations can be translated into real-world solutions, based on robust evidence and designed to improve healthcare delivery in developing and developed countries alike."

Our model

George Clinical brings together The George Institute's international network of medical specialists with its own experts in a range of operational services including project management, site management, data management, endpoints and safety management, regulatory advice and process optimisation. It draws on extensive experience conducting trials in compliance with various and often complex ethical and regulatory guidelines applicable in different parts of the world.

Our model matches an internationally recognised scientific and medical expert with every step of its clinical trial operations, offering tremendous benefits especially in identifying ideal sites for trials, and in-patient recruitment and retention.

"With teams located in ten different countries in the Asia-Pacific region alone, we have access to a broad and reputable network of investigators, and to large and diverse patient populations," says Marisa. "This makes it possible to deliver immediate results of relevance to the target markets of our customers."

Leading by example

George Clinical has already set an important precedent by demonstrating the benefits of an integrated and collaborative approach to clinical trials instead of the traditional hierarchical research model. It has also developed and uses methodologies that decrease the cost of clinical development while ensuring trials still operate to the highest standards, meeting regulatory requirements and stringent standards of research design.

As a result, George Clinical is able to work closely with its partners in the therapeutic development industry to generate results quickly. "Many of the diseases we research are widespread and life-threatening," explains Marisa, "so our customers can't afford to waste any time in the development of novel treatments."



"...George Clinical not only provides the Institute with essential monetary support, but also translates research results into robust evidence-based real-world solutions, designed to improve healthcare delivery around the world..."

Dr Marisa Petersen, Managing Director, George Clinical

A growing global network

George Clinical continues to evolve from a regional organisation into a global company with new research hubs in the UK and Taiwan, and business development operations in the US.

The enterprise has also developed its presence in Asia with a new partnership established this past year in Japan to complement George Clinical activities in India, China, Australia and East Asia, and granting it access to major new pharmaceutical markets.

"This is a time of incredible growth opportunities," says Marisa. "George Clinical is committed to establishing itself in new countries in order to ensure that we can offer both regional and global services to an increasing range of international clients."

Our growing team of world leading experts has also contributed to this expansion, such as Professor Henry Krum, former President of the Asian Pacific

Society of Heart Failure, who was appointed as the organisation's Consultant Senior Director of Cardiovascular Trials. He joined George Clinical's Scientific Director, Professor Bruce Neal, in representing George Clinical at the 2014 Annual Scientific Congress of the American College of Cardiology.

Recent collaborations spearheaded by The George Institute, in Europe and South America, are also adding to George Clinical's international network.

Delivering results

George Clinical, through its collaboration with The George Institute, is concentrating on four of the most common non-communicable disease groups in low- and middle-income countries: diabetes, heart disease, stroke and prevalent respiratory conditions.

Together we have conducted several large-scale studies designed to improve understanding of the illnesses and pave the way for new treatments. For example, TASCs will focus on the effectiveness of theophylline and steroids in the treatment of chronic pulmonary obstructive disease, which is becoming

increasingly prevalent in Asia. TASCs will involve 2,400 subjects and has the potential to revolutionise the treatment of COPD in Asia and beyond (see page 17).

Looking to the future

George Clinical aims to continue to expand its operations outside the Asia-Pacific region, with a particular focus on strengthening its operations in North America and Europe. It also intends to broaden the range of its target non-communicable diseases to include additional respiratory ailments and cancer.

"We see huge opportunities for growth in a variety of exciting directions," says Marisa. "Given the resources available to us, I'm confident that George Clinical has a very bright future indeed."

Our people

Our team of researchers and professionals are among the world's best, bringing together a diverse range of skill sets and backgrounds, and a genuine passion for improving the health of people around the world. Our researchers range from clinicians such as cardiologists and nephrologists, to other allied health professionals such as physiotherapists, from senior academics to fledgling PhD students who are aspiring to be the next generation of leaders in medical and health research.

We pride ourselves on this culture of diversity, strong gender representation across our team, a consultative strategic planning process and using a collaborative approach to problem solving. This coupled with our team's dedication and high standard of expertise is what makes it possible for the Institute to deliver world-class, high-impact healthcare research.

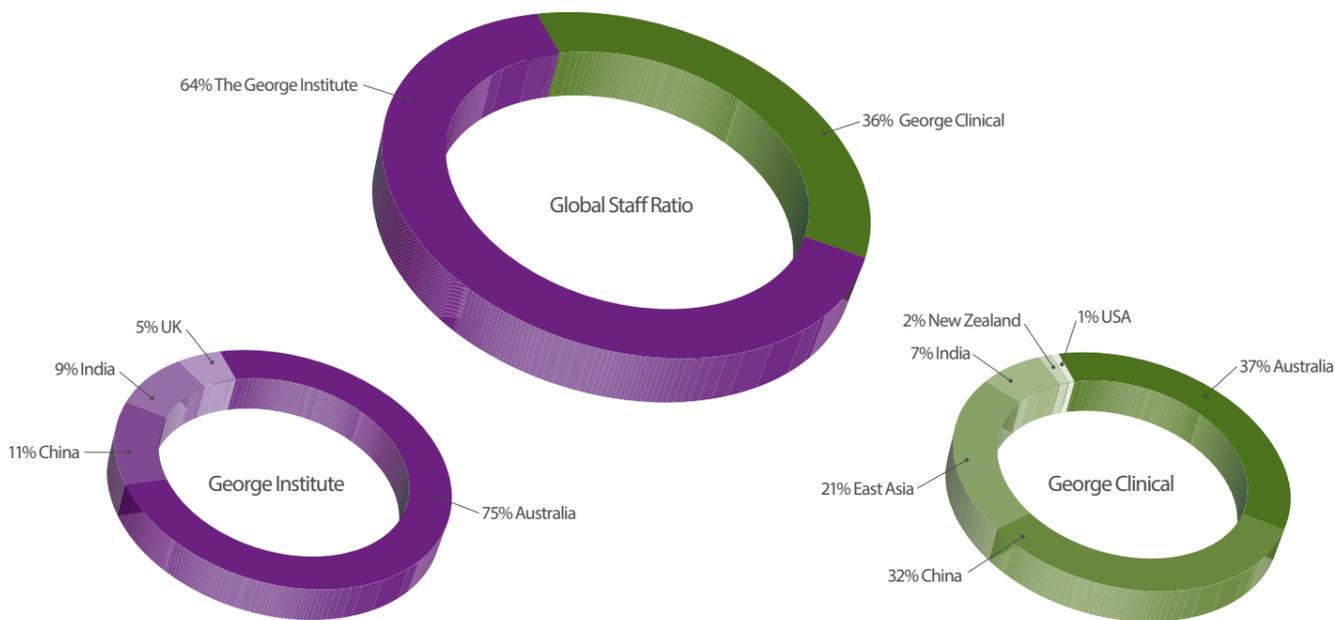
A global presence

Starting with a team of five in 1999 in Sydney, Australia, today The George Institute has over 450 staff across the globe, with centres in Australia, China, India and the United Kingdom, and a global network of collaborators and partners. This global presence makes it possible for us to work with many different communities on local health priorities, tailor research projects to address these, pool resources, and forge ahead in reducing the burden of chronic and injury especially where the need is greatest.

To support this trajectory of global growth, this past year the Institute bolstered its Board membership and senior management team with professionals with strong corporate, government and global management experience: Russell Aboud and Paul McClintock AO were appointed to the Board of Directors; Sarah Hazell was appointed as Director, Global Human Resources; John McCaffrey as Director, Global Development; and Richard Mills was appointed Director, Global Communications (see page 30).

"From a human resources perspective, we are focused on building a robust and consistent global management infrastructure while ensuring we maintain local flexibility," says Sarah Hazell, Director, Global Human Resources.

"This means prioritising best practice for example in career development, systems and efficiencies, recruitment strategies and success planning so we can continue to attract and retain world-leading talent."



Top 10 strengths

An engaged and dedicated team

In March 2014, we conducted a staff survey, *Your Say*, to see how we are doing and what we can do better. With an outstanding response rate from staff, the results not only showed that we have improved since the last survey in 2009, but that we have outperformed benchmark organisations such as universities and pharmaceutical companies. According to the results, our employees say the Institute's top ten strengths are: research support and quality, talent, organisational values, mission and objectives, flexibility, teamwork, leadership, organisational direction, change and innovation, and motivation and initiative.

"Overall, the survey results were very strong with The George Institute staff being much more satisfied with the survey practices than they were in 2009. The Institute is significantly outperforming the benchmarking industries, with staff being much more satisfied than staff within universities and pharmaceutical/biomedical organisations. It's very rare for us to see such a high response rate for an organisation of this size." Frank Basile, Senior Consultant, Voice Project (for our *Your Say* staff survey).



Our Board



"...From modest beginnings we have become the ways in which healthcare is delivered a global organisation, producing research findings that are changing worldwide and improving the lives of millions of people..."

Michael Hawker AM, Chair of the Board of Directors, The George Institute for Global Health

Michael Hawker AM (1)

Chair
Michael is a Non-Executive Director of Aviva Plc Group (UK), the Macquarie Group and Washington H. Soul Pattinson. His former executive roles include CEO and Managing Director of Insurance Australia Group, Group Executive of Business and Consumer Banking at Westpac, Executive Director of Citibank International in Europe, and Deputy Managing Director of Citibank in Australia. He has been Chair of the Insurance Council of Australia and the Australian Financial Markets Association, a Board Member of The Geneva Association and a Member of the Financial Sector Advisory Council. He is a Senior Fellow of the Financial Services Institute of Australia and a Fellow of the Australian Institute of Company Directors. Michael joined the Board in February 2011.

Don Green (Not pictured)

Deputy Chair
Don is a Fellow Chartered Accountant, a Fellow CPA, a Fellow of the Taxation Institute of Australia and Special Counsel at Ernst & Young Australia. He is currently Chair of Rose Property Group and Chair of Infrastructure Partnerships Australia Taxation Taskforce. He has been a Director or Committee Chair of the Friends of the Mater Foundation for the Mater Misericordiae Hospital, the Australian Council for Infrastructure Development, and the Institute of Chartered Accountants in Australia. For many years, Don was a visiting Fellow

at the Centre for Money, Banking and Finance, Macquarie University, where he lectured in the Master of Applied Finance program. Don joined the Board in May 2003 and retired in August 2014.

Russell Aboud (2)

Non-Executive Director
Russell has worked in the global investment industry both domestically and internationally for over 28 years, the majority of time as a Managing Director in Sydney and London for UBS. Currently, Russell is the Executive Chairman and a founding partner of Manikay Partners, a New York-based multi-strategy global investment firm. Former appointments include Non-Executive Director of the Australian Securities Exchange, Chairman of Ord Minnett and Senior Advisor to JP Morgan Australia. Russell joined the Board in August 2013.

Yasmin Allen (3)

Non-Executive Director
Yasmin is a Non-Executive Director of Insurance Australia Group Limited (IAG), where she is Chair of IAG's Nomination and Remuneration Committee and a Member of its Audit and Risk Committees. She is a Non-Executive Director of Cochlear Limited, and Chair of its Audit Committee. Yasmin is also a Director of Santos Limited and a National Director of the Australian Institute of Company Directors. Prior to her directorships, Yasmin had an extensive career in investment banking, including as Vice-President of Deutsche Bank, Director of ANZ Investment Bank in Sydney, and Associate Director with HSBC in

London. Yasmin's previous directorships include Export Finance and Insurance Corporation (EFIC), Film Australia Limited and Chair of Macquarie Global Infrastructure Funds. Yasmin joined the Board in August 2014.

Gina Anderson (4)

Non-Executive Director
Gina brings 12 years of experience as a Director serving in both Non-Executive and Executive Director capacities. She is currently Non-Executive Director of GDI Property Group, an Advisory Board Member of the Australian Charities and Not-for-profits Commission (ACNC), Chair of Women's Community Shelters Limited, a Philanthropy Fellow at the Centre for Social Impact at the University of New South Wales and a Member of the City of Sydney Appeals Committee of the Salvation Army. Gina was Executive Director and CEO of Philanthropy Australia from 2005 to 2010. Her previous roles at St Hilliers and Westpac included senior general management, corporate affairs, human resources and executive responsibilities. Gina joined the Board in February 2012.

Elsa Atkin AM (5)

Non-Executive Director
Elsa's experience in the not-for-profit sector, change management, advocacy, and media and corporate relations areas was gained through her previous roles as Executive Director of the National Trust of Australia (NSW), Deputy Director of the Evatt Foundation and a senior executive at the Australian Broadcasting Corporation (ABC). She has served on a variety of

government and non-government boards and committees, including University of Western Sydney (Nepean Campus), the Heritage Council of NSW, the NSW Library Council, and the Immigration Review Panel. Elsa joined the Board in July 2007.

Joanna Capon OAM (6)

Non-Executive Director
Joanna is a Board Member of the Sydney Children's Hospital Network (Randwick and Westmead) and a Member of the Health Care Quality Committee of the Sydney Children's Hospital Network. She is also Chair of Operation Art and Member of the Editorial Advisory Board of Art and Australia. She is a former Board Member of Museums and Galleries NSW and the Australia-China Council. Joanna joined the Board in March 2007.

Jason Yat-sen Li (9)

Non-Executive Director
Jason is a founding partner and the CEO of Yatsen Associates—a corporate advisory and investment firm based in Beijing and member of the Global Agenda Council for China of the World Economic Forum, and is a Governing Member of the Smith Family. He was Head of China Strategy and Head of Sustainability for Insurance Australia Group and Vice-Chair of the Australia-China Chamber of Commerce (in Beijing). He was a Director of the Sydney Institute, the National Centre for Volunteering, and the NSW Government's Sydney Metropolitan Strategy Group. Jason joined the Board in June 2007.

Catherine Livingstone AO (7)

Non-Executive Director
Catherine spent 20 years working in the field of implantable medical devices, including six years as CEO and Managing Director of Cochlear Limited. She is Chair of Telstra Corporation Limited, and a Non-Executive Director of Worley Parsons Limited and Saluda Medical Pty Ltd. She is President of the Business Council of Australia, a member of the Prime Minister's Science Council and the Prime Minister's Business Advisory Council. Catherine's former roles include Chair of the Commonwealth Scientific and Industrial Research Organisation (CSIRO), President of Chief Executive Women, Chair of The Australian Business Foundation, Non-Executive Director of the Macquarie Group, and a Member of the New South Wales Innovation and Productivity Council. Catherine joined the Board in August 2012.

Paul McClintock AO (8)

Non-Executive Director
Paul is Chairman of Myer Holdings Limited, NSW Ports and I-MED Network, Committee for Economic Development of Australia, and a Director of St Vincent's Health Australia Limited. Paul has served as the Secretary to Cabinet and Head of the Cabinet Policy Unit reporting directly to the Prime Minister as Chairman of Cabinet, supervising Cabinet processes and acting as the Prime Minister's most senior personal policy adviser. Former positions include Chairman of Medibank Private Limited, Thales Australia, the COAG Reform Council, Intoll Management Limited, Symbion Health,

Affinity Health, Ashton Mining, Plutonic Resources and the Woolcock Institute of Medical Research. Paul graduated in Arts and Law from the University of Sydney and is an Honorary Fellow of the Faculty of Medicine. Paul joined the Board in October 2013.

David Armstrong (Not pictured)

Non-Executive Director
David joined the Board in October 2014.

Professor Stephen MacMahon (10)

Principal Director
Please see bio on page 30.

Professor Robyn Norton (11)

Principal Director
Please see bio on page 30.

Carolyne Rodger (Not pictured)

Company Secretary & Legal Counsel (General Counsel since November 2014)
Carolyne Rodger was appointed Company Secretary on 22 February 2013. She is also Company Secretary of George Clinical Pty Ltd and The George Foundation for Global Health. Carolyne is admitted as a lawyer with the Supreme Court of NSW and is a member of the Law Society of NSW. She holds a Bachelor of Business, a Bachelor of Laws, and Graduate Diplomas in Applied Finance, Investment and Legal Practice. Prior to joining The George Institute, Carolyne held senior roles in corporate governance, risk management, legal and compliance with Platinum Asset Management and Perpetual Investments, and was Company Secretary for the Charter Hall Group. She has over 20 years of practical corporate governance experience.

Senior Management Committee

Professor Stephen MacMahon

Principal Director

Co-founder of The George Institute for Global Health. Professor of Medicine and James Martin Professorial Fellow, University of Oxford. Professor of Cardiovascular Medicine & Epidemiology, the University of Sydney. Honorary Professor, Peking University Health Science Center. Honorary Consultant, Royal Prince Alfred Hospital (Sydney). Chairman, George Clinical Pty Ltd.

Professor Robyn Norton

Principal Director

Co-founder of The George Institute for Global Health. Professor of Global Health and James Martin Professorial Fellow, University of Oxford. Professor of Public Health, the University of Sydney. Honorary Professor, Peking University Health Science Center. Honorary Consultant Epidemiologist, Royal Prince Alfred Hospital (Sydney). Chair Emeritus, Road Traffic Injuries Research Network. Member of the National Health and Medical Research Council (NHMRC) Health Care Committee, Australia.

Tim Regan

Chief Operating Office
Chief Financial Officer

Acting Executive Director, The George Institute, China, since January 2014

President of the Financial Executives Institute in Australia. Non-Executive Director of Thomas & Coffey. Bachelor of Economics, the University of Sydney. Fellow of the Institute of Chartered Accountants and Australian Property Institute. Prior experience includes former COO of Mirvac Group, CEO of TJS Services, Commercial Manager for Sydney Organising Committee for the Olympic Games and Senior Manager at PricewaterhouseCoopers.

Professor Anushka Patel

Chief Scientist

Professor of Medicine, the University of Sydney. Cardiologist, Royal Prince Alfred Hospital (Sydney). Medical training obtained from the University of Queensland. Postgraduate research degrees from Harvard University and the University of Sydney.

Mark Botros

Director, Global Information & Technology, from September 2013 to July 2014

24 years' experience in information technology, information services, and business management. Prior experience includes Chief Information Officer for Healthcare Australia.

Peter Dolnik

Director, Research Services

12 years' experience in research strategy and research management in senior roles, including at the University of New South Wales, and as lecturer in philosophy, logic and ethics at UNSW and the University of Western Sydney.

Professor Terry Dwyer AO

Executive Director, The George Institute, United Kingdom, since July 2014

Professor of Epidemiology and James Martin Professorial Fellow, University of Oxford. Chair of International Child Cardiovascular Cohort Consortium. Lead of the International Childhood Cancer Cohort Consortium. Member of the UK Biobank Scientific Advisory Board.

Sarah Hazell

Director, Global Human Resources, since July 2013

Over 20 years' experience in global, strategic human resources with employee engagement, talent management and succession planning her areas of strength. Previous experience includes time with Baxter Healthcare Inc, ResMed Ltd and the Australian Diabetes Council.

Professor Vivekanand Jha

Executive Director, The George Institute, India

Professor of Nephrology and James Martin Professorial Fellow, University of Oxford. Secretary of the Indian Society of Nephrology. Councillor from Asia in the International Society of Nephrology and the Transplantation Society. Deputy Editor of the *Indian Journal of Nephrology*. Subject Editor of *Nephrology* (the official journal of the Asian Pacific Society of Nephrology). Associate Editor of the *American Journal of Kidney Diseases*.

John McCaffrey

Director of Global Development, since November 2013

Over 20 years in sponsorship and fundraising. Prior experience includes as Executive Director for fundraising for the Labour Party in Britain and raising money for the arts, University of Cambridge, HRH The Prince of Wales' Charities Council and the Vatican Museums.

E. Richard Mills

Director, Global Communications, since November 2013

Prior experience includes as Director of Corporate Communications at The World Bank and as spokesman in the United States government, from Congress and the Executive Office of the President to the State Department.

Professor Vlado Perkovic

Executive Director, The George Institute, Australia
Executive Director, George Clinical, until October 2014

Professor of Medicine, the University of Sydney. Staff Specialist in Nephrology at the Royal North Shore Hospital (Sydney). Member of the NHMRC Academy. Chair of the Scientific Committee of the Australasian Kidney Trials Network. Fellow of the Royal Australasian College of Physicians and of the American Society of Nephrology.

Dr Marisa Petersen

Executive Director, George Clinical
Managing Director, until October 2014

PhD in Clinical Pharmacology and Pharmacokinetics. Member of the Pharmaceutical Industry Council R&D Taskforce. 25 years in clinical research in Asia-Pacific. Prior experience includes as Vice President Asia-Pacific for Omnicare Clinical Research.

Carolyn Rodger

Company Secretary & Legal Counsel
General Counsel, since November 2014

Professor Yangfeng Wu

Executive Director, The George Institute, China, until December 2013

Executive Associate Director of the Peking University Clinical Research Institute. Professor of Epidemiology, Department of Epidemiology and Biostatistics at Peking University School of Public Health. Founding Executive Director of The George Institute, China.

Q&A: Senior Director, Professor John Chalmers AC

Professor John Chalmers is Senior Director of the Professorial Unit at The George Institute and Emeritus Professor of Medicine, the University of Sydney. He facilitated the initial establishment of the Institute in his role as Chairman of Research at the Royal North Shore Hospital and Subdean for Research within the Faculty of Medicine at the University of Sydney. Aside from being a part of the Institute's senior management team for the past 15 years, a major clinical trial researcher and a world expert in research on hypertension and cardiovascular disease, Professor Chalmers dedicates his time to mentoring early career researchers aspiring to make a difference through the field of medicine and health research.

What are the origins of The George Institute?

The Institute was founded by Professor Stephen MacMahon, a renowned investigator on cardiovascular diseases, and Professor Robyn Norton, an international authority on injury, both based in New Zealand before starting the Institute. Seeing the need for research that can have big impact, in a short period of time, to address the growing burden of chronic disease and injury, they developed a charter for what was then called the Institute for International Health. With new professorial appointments at the University of Sydney, and with endorsement from Royal North Shore Hospital and the Faculty of Medicine at the University of Sydney, the Institute opened on the 1st of January, 1999. In 2004, we became The George Institute for International Health after moving into the King George V Building at Royal Prince Alfred Hospital in Sydney.

What makes the Institute different?

Since its inception, what has distinguished the Institute from many other research institutions is its focus on research that can alter clinical practice and health services on a population scale, in as short a time as possible compared for example to lab research that can take many years to yield breakthroughs. Our researchers would not stop at publishing their research in eminent journals, but would seek to translate the results into changes to healthcare, health systems and government policies.

What do you see as the Institute's key achievements?

The list of research highlights is too long to sum up here. Instead, I would say our greatest achievement is to have achieved so much in such a short time. Ranked among the top ten of research institutes in the world for impact is no small feat for such a young organisation. This to me is testament to the wisdom and relevance of the vision articulated in the original Institute charter written by Robyn and Stephen, more than 15 years ago.

What inspires and drives your research?

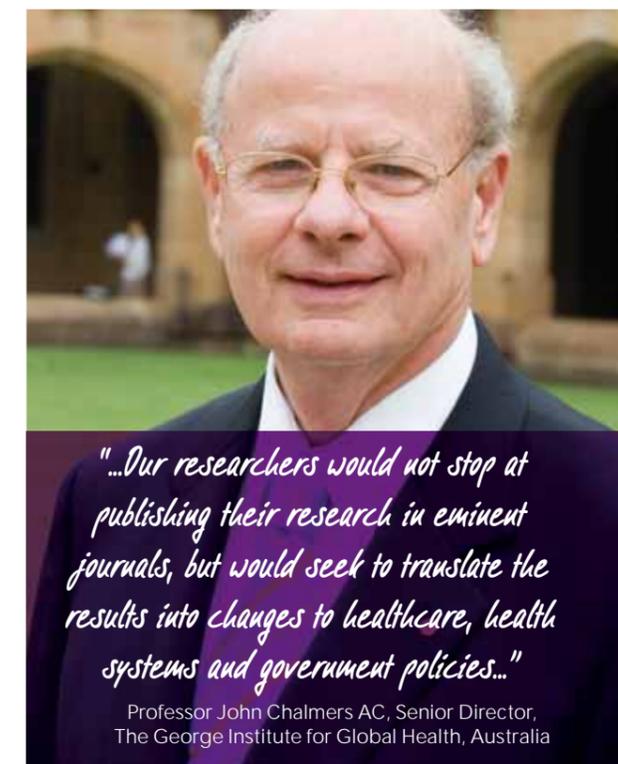
Seeking to reduce the growing burden of stroke and heart disease, and also of renal disease, especially in people with diabetes—through novel and more effective treatment of the major risk factors for these, such as high blood pressure, high cholesterol and poor glucose control; and through wider public health measures, such as improving nutrition to address obesity and excessive intake of dietary salt.

What do you see as the biggest challenge facing researchers today?

Firstly, finding novel ways to address old problems—as many of the old challenges are still at the heart of the issues facing us, and secondly, finding better ways to translate our successful research findings into improved outcomes across the population, through better patient care, improved health services and more enlightened health policies.

What words of advice would you have wanted to receive when you started your medical and research career?

Work hard, keep thinking, find inspiring people to guide and supervise you and always look for great people with whom to collaborate—as that is often the key to opening the next chapter. I have been fortunate to have great mentors over many years.



Our financials

Modest net surplus

By obtaining grant funding, winning commercial contracts and controlling costs, The George Institute recorded a small net surplus in 2013–14 from its activities spread across Australia, China, India, South East Asia and the UK.

At the end of 2013–14, The George Institute had \$14.7 million of cash and \$14.4 million of trade and other receivables. The Institute's investment portfolio rose to finish the year valued at \$8.2 million. Deferred income—representing funding received for projects in advance—increased to \$23.2 million. Overall retained earnings increased by \$0.5 million to \$10.3 million, placing the Institute in a financially sound position.

Peer-reviewed funding

The Institute continued to secure highly competitive and sought after peer-reviewed grants in Australia and other countries, such as the UK and the USA.

Government funding

Australian governments—at federal, state and territory level—contributed funds to research projects. The Federal and NSW State Government also contributed funding for infrastructure support.

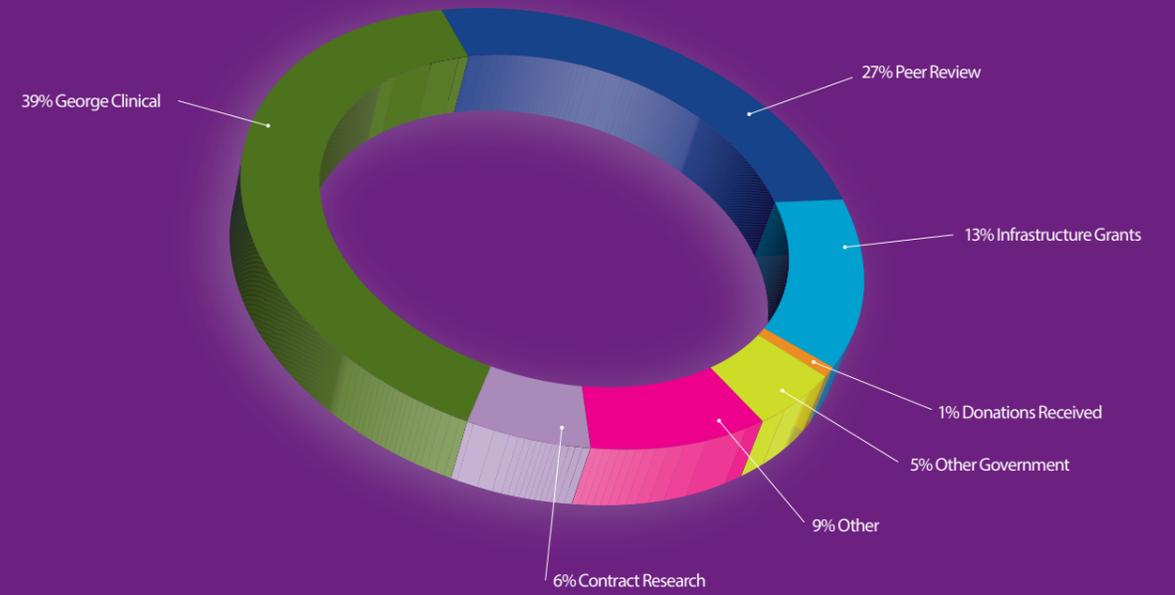
Clinical research

In 2013–14, George Clinical continued to generate funds by managing commercial trials for global pharmaceutical companies. This innovative funding approach provides ongoing support for The George Institute's research activities globally.

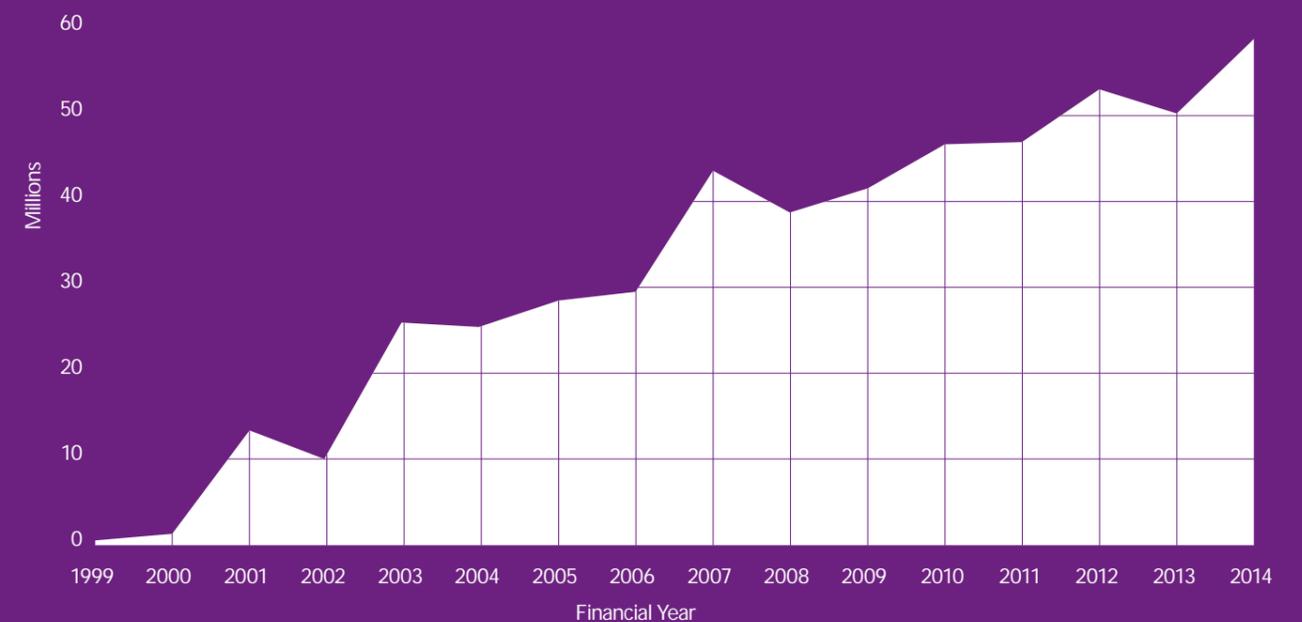
Donations and sponsorships

Donations and sponsorships are an important source of funding for The George Institute. In 2013–14, we received donations from a valuable number of supporters. In March 2014, The George Institute stepped up its fundraising activities by appointing a new Director of Global Development.

Funding sources for 2013–14



Historical revenue - 15 years



"...It's very exciting to be part of a 15-year success story that is pioneering global healthcare solutions for the 21st century..."

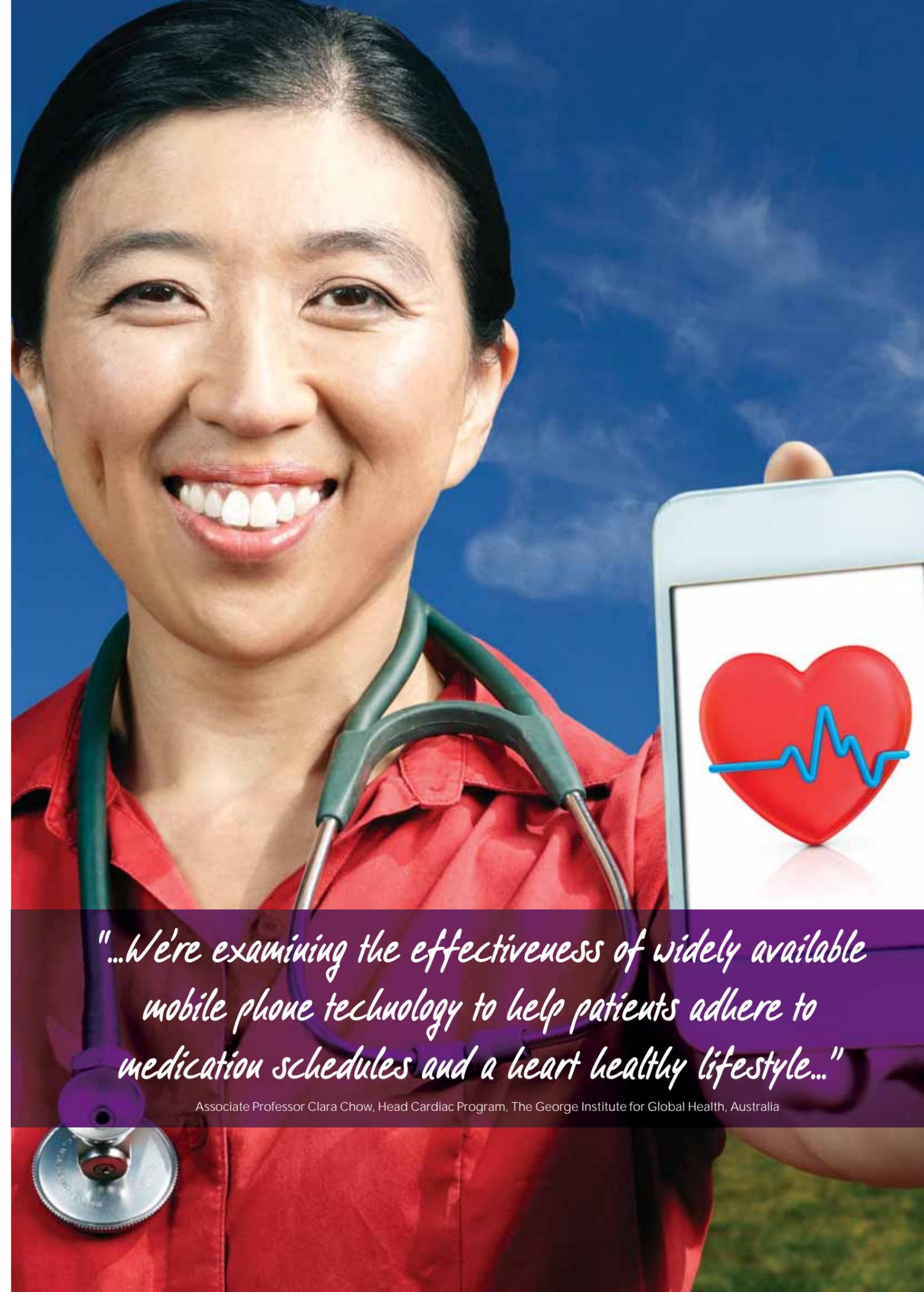
Tim Regan, Chief Financial Officer, Chief Operational Officer, The George Institute for Global Health

Statement of profit & loss for year ended 30 june 2014

Consolidated	2014 \$	2013 \$
Income		
Operating revenue	57,204,483	48,380,991
Other income	1,657,877	1,992,510
Total income	58,862,360	50,373,501
Expenses		
Employee expenses	31,341,039	27,186,012
Study contract fees	10,265,297	6,316,013
Rent & administration expenses	4,104,188	3,868,337
Consultants & sub-contractor fees	3,455,924	3,910,149
Travel & accommodation expenses	2,351,630	2,237,406
Other expenses	7,120,768	5,262,931
Income tax	206,689	-
Total expenses	58,845,535	48,780,848
Net surplus	16,825	1,592,653

Statement of financial position as at 30 june 2014

Consolidated	2014 \$	2013 \$
Current assets		
Cash & cash equivalents	14,704,240	12,368,584
Trade receivables & other assets	14,355,711	14,314,849
Total current assets	29,059,951	26,683,433
Non-current assets		
Investments	8,243,877	7,117,975
Plant & equipment	1,773,619	1,889,601
Intangible assets	717,640	-
Total non-current assets	10,735,136	9,007,576
Total assets	39,795,087	35,691,009
Current liabilities		
Deferred income	23,209,701	18,633,446
Trade & other payables	2,865,311	3,375,693
Provisions	2,825,294	3,328,065
Total current liabilities	28,900,306	25,337,204
Non-current liabilities		
Provisions	634,141	607,214
Total non-current liabilities	634,141	607,214
Total liabilities	29,534,447	25,944,418
Net assets	10,260,640	9,746,591



"...We're examining the effectiveness of widely available mobile phone technology to help patients adhere to medication schedules and a heart healthy lifestyle..."

Associate Professor Clara Chow, Head Cardiac Program, The George Institute for Global Health, Australia

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15 years of big change!

- From 5 to 450 staff globally
- Over 5,200 publications
- Projects in over 50 countries
- Centres in Australia, China, India and the United Kingdom and offices across Asia-Pacific
- Partnerships with over a 1,000 universities, hospitals, medical centres and organisations
- Raised over \$500 million for health and medical research
- Ranked among the top 10 research institutions in the world for scientific impact, 2011, 2012, 2013 & 2014
- Research that is changing policy and practice
- Unique funding model assisted by our commercial enterprises
- Research spanning the chronic disease and injury landscape