



THE GEORGE INSTITUTE
for International Health

Reducing the Global Burden of Disease



Year in Review
2003 Calendar Year



Introduction

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This year alone, non-communicable diseases and injuries will kill about 40 million people and disable many more worldwide. Much of this disease burden is preventable, yet the toll is expected to rise dramatically over the next few years, as the numbers affected by conditions such as heart disease, stroke, injury and depression increase sharply. By 2020, non-communicable diseases and injuries will be entrenched as the world's leading health problems.

No region is likely to be spared. In Australia and other high-income countries, the burden of disease and injury will continue to grow as populations progressively age. However, the biggest increases will be suffered by low and middle-income countries, where already fragile health systems are ill-equipped to deal with these rapidly expanding epidemics. The social and economic consequences of these changes will be profound, and are likely to adversely affect development in many parts of the world. For most low and middle-income countries, there is only a small window of opportunity in which to act to avert the serious consequences of these global changes in disease patterns.

Through high-quality research, evidence-based policy development and a range of capacity-development programs, The George Institute for International Health is working to develop solutions to the growing problems of heart and vascular disease, injury, mental illness, and neurological diseases. With its global partners, multidisciplinary faculty and worldwide programs, the Institute is uniquely placed to deliver results in a diverse range of economic, ethnic and cultural situations.

*The George Institute for International Health was formerly known as **The Institute for International Health**. It was established in 1999 with the support of the University of Sydney Faculty of Medicine, in response to the growing worldwide burden of non-communicable diseases and injuries, particularly in the Asia-Pacific region.*

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“I would also like to take this opportunity to thank our two principal partners, the University of Sydney and the Central Sydney Area Health Service, for their continued support of the Institute”

Message from the Chairman

It is with great pleasure that I present our fourth annual report. This is an opportunity to reflect on not only the accomplishments of the 2003 calendar year, but also the remarkable growth that the Institute has achieved in such a short period of time since its inception.

Established in 1999 with just four staff, the Institute has expanded rapidly over this five-year period. By the end of 2003, we had more than 70 staff working on projects in almost 30 countries with the collaboration of more than 300 hospitals and universities worldwide. This year witnessed the establishment and development of many new projects, the launch of significant new global partnerships, and preparations for a name change to The George Institute for International Health to coincide with the Institute's planned relocation to larger premises at the King George V Hospital within the Royal Prince Alfred Hospital campus.

Financially, the Institute remains in a strong position, with total revenues of

about \$29 million in 2003, representing a 46% increase in turnover from the previous year. Further increases are expected in 2004 as new projects begin. Institute staff were once again successful in attracting support from peer-reviewed agencies including the National Health and Medical Research Council (NHMRC), with total awards in excess of \$2 million.

The Institute has received core support from several institutions including the University of Sydney and NSW Health. In addition, the Institute's projects have been supported by a diverse range of organisations including the NHMRC, state and commonwealth governments of Australia, the National Heart Foundation of Australia, the US National Institutes of Health, the Motor Accidents Authority (MAA), the Future Forum, Servier and Pfizer.

The significant achievements of the past year would not have been possible without the hard work, talent, and dedication of the Institute's staff. In this respect, special thanks are due to the

division directors and general manager. Furthermore, the unwavering vision and commitment of the Institute's principal directors, Professors Stephen MacMahon and Robyn Norton, with strong support from Professor John Chalmers, AC, has ensured the continued growth and success of the Institute. I would also like to take this opportunity to thank our two principal partners, the University of Sydney and the Central Sydney Area Health Service, for their continued support of the Institute.

On behalf of the Board of Directors, I congratulate all Institute staff and collaborators worldwide on another successful year and a further important contribution to global health care.

A handwritten signature in black ink that reads "Peter Burrows".

Peter Burrows, AO
Chairman
Board of Directors



Institute Highlights

- > **Second meeting of the Institute's Research and Development Advisory Committee (RADAC)** to review and advise on research and development priorities and strategies
- > **Appointment of a Director of the Injury Prevention and Trauma Care Division**, Professor Mark Stevenson, signaling our continued commitment to this vital area
- > **Launch of The China–Australia Partnership for Health** to facilitate a range of collaborative projects between the Institute and the Peking University Health Science Center
- > **Appointment of a Capacity Development Coordinator** to expand and integrate the Institute's teaching and training activities in Australia and abroad
- > **Commencement of the Study of Heart and Renal Protection (SHARP)**, a global project investigating the effects of cholesterol lowering in people with chronic kidney disease, involving more than 60 centres in Australia, New Zealand, Malaysia and Thailand
- > **Grants received from NHMRC and other peer-review agencies** totalling more than \$2 million in support of research on the prevention of cardiovascular disease and the treatment of critically ill patients
- > **More than 7,000 patients recruited to the world's largest clinical trial in intensive care** — the SAFE (Saline versus albumin fluid evaluation) study, conducted in collaboration with the Australian and New Zealand Intensive Care Society's Clinical Trials Group and the Australian Red Cross Blood Service
- > **Memorandum of understanding signed with the Department of International Cooperation of the Ministry of Health of the People's Republic of China**, to enable collaboration on a series of round table discussions concerning priority health issues for the healthcare system in China



Message from the Principal Directors

As the Institute begins its sixth year of operations, both the breadth and volume of our work continues to grow. Numerous new initiatives reflect and strengthen our commitment to reducing the burden of non-communicable diseases and injuries through policy relevant health research, the promotion of evidence-based health policy, and essential capacity-development in Australia and in low and middle-income countries in Asia.

During 2003, the Institute reached several important milestones. In October, our Research and Development Advisory Committee reviewed the past two years' progress, together with our plans for the future. The committee commended our achievements and strongly endorsed our development plans. They also provided a series of constructive recommendations that formed the basis of a strategic planning exercise involving all members of the Institute's board and senior staff. The resulting three-year strategic plan has been adopted by the board and will guide the development of operational plans for the Institute's activities in the coming year.

Other significant achievements included major progress in the development of our Mental Health Division, with the guidance of leading mental health authorities from

Australia and abroad. There were also important developments in the Institute's program in the People's Republic of China, including the signing of a memorandum of understanding with The Ministry of Health and the launch of The China–Australia Partnership for Health with the Peking University Health Science Center. Several major new projects were launched, and one of the Institute's largest clinical trials (the SAFE study) completed patient recruitment ahead of time.

Planned activities in 2004 include the opening of an Institute office in China, in collaboration with Peking University. A new Director will be appointed to establish a Division of Neurological Diseases and Ageing, building on the Institute's existing activities in stroke, dementia and head injury. The recently appointed Capacity Development Coordinator will expand activities and coordinate all of the Institute's teaching and training activities. These new developments coincide with a change in identity for the Institute, which has been renamed The George Institute for International Health. This name signifies the relocation of the Institute and its staff to the King George V Hospital within the Royal Prince Alfred Hospital campus in Camperdown, Sydney.

A dedicated staff, insightful advisory committee and energetic board have ensured the Institute's continued success over the past year. Each Institute staff member has made an important contribution, and this has been facilitated in no small part by the guidance, motivation and support provided by the Institute's division directors and general manager. The strategic advice provided by the Institute's Board of Directors and its Research and Development Advisory Committee has been invaluable, and we would like to especially acknowledge the advice and support of Mr Peter Burrows, AO, Professor John Chalmers, AC, and Professor Judith Whitworth, AC. Finally, we would also like to thank the Vice-Chancellor of the University of Sydney, Professor Gavin Brown, and the Chief Executive Officer of the Central Sydney Area Health Service, Dr Diana Horvath, AO, for their continued commitment to the Institute and its mission.

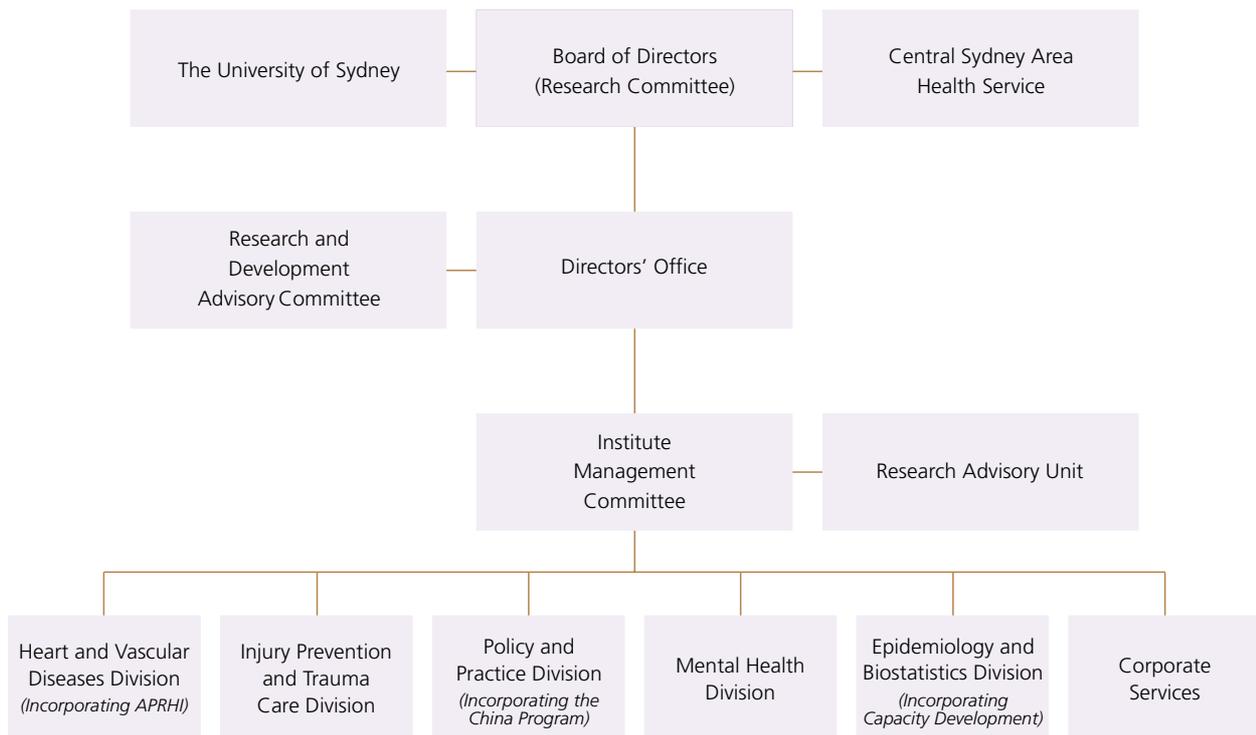


Stephen MacMahon
Principal Director
Professor of Cardiovascular Medicine and
Epidemiology, University of Sydney



Robyn Norton
Principal Director
Professor of Public Health, University of Sydney

Institute Structure



Board of Directors

The activities of The George Institute are overseen by a board of directors. This group oversees fundraising, investment and expenditure, and advises on administration and management. Membership of the board includes representatives of The George Institute as well as external advisors. A full listing of members is provided on page 52.

Research and Development Advisory Committee

The George Institute has a Research and Development Advisory Committee (RADAC) to review and advise on its activities. Members of RADAC include international authorities on non-communicable diseases and injuries, authorities on health research and

development in low and middle-income countries, representatives of international health and development agencies, and representatives of the Australasian and Asia-Pacific research community. See page 7 for an update on RADAC's 2003 meeting, and page 54 for a full listing of members.



“RADAC endorsed the value of the Institute’s research and development activities including its major observational studies and its intervention trials.”

The University of Sydney

The George Institute is formally associated with the University of Sydney through a memorandum of understanding that designates the Institute as a research department of the University. The Institute is primarily associated with the Central Clinical School and has a close relationship with the School of Public Health. Many staff of the Institute have full or conjoint academic appointments at the University of Sydney, and all applications for support from peer-reviewed agencies and foundations are submitted through the University of Sydney.

Central Sydney Area Health Service

The George Institute is formally associated with the Central Sydney Area Health Service through a memorandum of understanding. Senior academic staff of the Institute hold Honorary Consultant appointments at the Royal Prince Alfred Hospital in several clinical divisions. In May 2004, the Institute will relocate to the King George V building within the Royal Prince Alfred Hospital campus.

Management and Divisions

The George Institute is headed by Principal Directors, Professor Stephen MacMahon and Professor Robyn Norton, who are responsible to the Board for activities of the Institute. The George Institute’s Management Committee, consisting of the Principal Directors, the Division Directors and the Institute’s General Manager, has responsibility for the day-to-day management of the Institute. Associate Professor Bruce Neal is Director of the Heart and Vascular Division; Professor Mark Stevenson is Director of the Injury Prevention and Trauma Care Division; Professor Mark Woodward is Director of the Epidemiology and Biostatistics Division; Professor John Chalmers is Director of the Research Advisory Unit; and Mr Graham Lawrence is the General Manager and head of Corporate Services.

2003 RADAC MEETING HELD

The George Institute is advised by the Research and Development Advisory Committee (RADAC) comprised of international authorities on non-communicable diseases and injuries, international health research experts and practitioners, and representatives from global health and development agencies. The Committee reviews the Institute’s work on a biennial basis.

October 2003 saw the second RADAC meeting being held at the University of Sydney. Members were unanimous in their recognition of the value and quality of the Institute’s programs and were impressed by its growing reputation and achievements. The importance of the Institute’s many partnerships and collaborations was also recognised.

RADAC endorsed the value of the Institute’s research and development activities including its major observational studies and its intervention trials. It advocated a focus on core strengths and recommended closer integration and alignment between the Institute’s Divisions.

Global Collaborators



“Global partnerships with institutions, organisations and individuals sharing our vision allow us to extend our reach in rich and poor countries alike.”

National and international collaboration is integral to The George Institute's work. Global partnerships with institutions, organisations and individuals sharing the Institute's vision allow this work to extend into rich and poor countries alike. Through these partnerships, the Institute draws upon a wide range of expertise to develop and implement activities to address global and regional health issues.

In 2003, The George Institute's activities spanned 300 collaborating universities, hospitals and institutions in over 30 countries, making its

research program one of the world's largest and most diverse. While some studies may involve 80 investigators, 10 countries and more than half a million participants, others involve daily work with thousands of patients and hundreds of healthcare workers worldwide.

The Institute achieves its goals with the assistance of formal partnerships, and has memoranda of understanding with the University of Sydney, Central Sydney Area Health Service, Johns Hopkins University Bloomberg School of Public Health, the Chinese Ministry of Health and

Peking University Health Science Center. The establishment of an Institute office in Beijing will support a range of cooperative projects bringing together Chinese and Australian policy makers and researchers.

The Institute also works closely with major international agencies including the World Health Organization, the World Bank and the Global Forum for Health Research.



“Stroke and heart attack
are responsible for more than
10 million deaths a year”

Heart and Vascular Division

In 2000, stroke and heart attack represented the two leading causes of death worldwide, responsible for more than 10 million deaths annually. The burden of ill health caused by vascular diseases will rise sharply in the next few decades, particularly in developing countries.

By 2020, the toll in lower-income countries will outweigh that in higher-income countries by a factor of four. The requirement for major new initiatives addressing cardiovascular health in developing countries has been clearly identified as a global health priority.

The 2002 World Health Report emphasises the potential benefits of more effective vascular disease prevention strategies.

The leading risk factors for stroke and heart attack are blood pressure, tobacco, cholesterol and being overweight. Each of these factors is among the top ten causes of the global disease burden and, collectively, these risk factors account for more than half the entire disease burden in developing countries.

The principal goal of The George Institute's Heart and Vascular Division is the discovery and implementation of new strategies for the prevention of stroke, heart attack and other major vascular diseases. The selection of this area for research reflects the global importance of vascular diseases as causes of premature death and disability.

While there have been significant advancements in cardiovascular disease treatment and prevention over the past few years, there remains great potential for new intervention strategies to bring about even greater benefits.

In the past year, the Heart and Vascular Division has significantly advanced a number of initiatives and studies (see page 11 for Highlights). The outlook for the Division over the next few years remains very positive. The Division has continued its success in securing new grants and is developing a series of exciting new projects with local and overseas collaborators.

> **Bruce Neal is Director of the Heart and Vascular Division** at The George Institute, Associate Professor in the Faculty of Medicine at the University of Sydney and Honorary Consultant Epidemiologist at the Royal Prince Alfred Hospital. He holds a five-year career development award from the National Heart Foundation of Australia. Bruce completed his medical training at Bristol University in the UK in 1990 and spent four years in clinical posts during which he gained membership of the UK Royal College of Physicians. Prior to taking up his current post in 1999, he worked as an epidemiologist at the Clinical Trials Research Unit in Auckland, New Zealand, where he completed a PhD in Medicine.



Tackling the world's biggest killer

HIGHLIGHTS

- > Initial recruitment to the Study of Heart and Renal Protection (SHARP), a new trial that will define the effect of lowering cholesterol in patients with chronic kidney disease. The division is coordinating recruitment of approximately 2,500 patients from Australia, New Zealand, Malaysia and Thailand, contributing to a global target of 9,000 for SHARP.
- > Publication, in the *The Lancet*, of the second cycle of results from the Blood Pressure Lowering Treatment Trialists' Collaboration. These new data provide the most comprehensive evidence to date about the effects of each of the main classes of blood pressure lowering drugs on stroke, heart attack and heart failure. The results, which emphasised the importance of optimal blood pressure control, have direct clinical implications for hundreds of millions of individuals.
- > Commencement of work on the Andhra Pradesh Rural Health Initiative, a new project addressing the health needs of villagers living in Andhra Pradesh, India. This project has a particular focus on cardiovascular disease, a major health problem in developing countries.
- > Design of new consumer-directed strategies for improving cardiovascular health using the Internet — a novel approach designed to complement traditional doctor-oriented methods of treatment and prevention.

Studies in the Division

- > Action in Diabetes and Vascular Disease: Preterax and Diamicon MR Controlled Evaluation (ADVANCE)
- > Blood Pressure Lowering Treatment Trialists' Collaboration (BPLTTC)
- > China Salt Substitute Study (CSSS)
- > Clinical Pathways for Acute Coronary Syndromes in China (CPACS)
- > Dietary Intervention in e-shopping Trial (DieT)
- > Fetal-Origins Overviews
- > IMPAKT (Improving Indigenous Patient Access to Kidney Transplantation)
- > Obesity in Asia
- > Perindopril Protection Against Recurrent Stroke Study (PROGRESS)
- > Rural Primary Health Care Initiative in Andhra Pradesh
- > Study of Heart and Renal Protection (SHARP)



Heart and Vascular Division

ACTION IN DIABETES AND VASCULAR DISEASE: PRETERAX AND DIAMICRON MR CONTROLLED EVALUATION (ADVANCE)

Institute Investigators

Stephen MacMahon, John Chalmers, Bruce Neal, Anushka Patel

Project Managers

Helen Monaghan, Samantha Flynn

Collaboration

University of Melbourne, Australia; University of Auckland, New Zealand; Chinese Academy of Medical Sciences, China; Imperial College, UK; University of Montreal, Canada; Utrecht University, The Netherlands; and 215 clinical centres in 20 countries worldwide

Funding Agencies

Servier Laboratories; NHMRC

Aims

To determine the effects of routine blood pressure lowering and more intensive glucose control on the risks of major cardiovascular events in high-risk patients with type 2 diabetes.

Methods

The study is a factorial, multicentre, randomised controlled trial. 11,140 participants have been recruited and randomised to either a fixed low-dose perindopril-indapamide combination or a matching placebo, and to either an intensive modified-release gliclazide-based glucose lowering regimen (target HbA1c $\leq 6.5\%$) or standard guidelines-based glucose lowering therapy.

Follow-up is planned for an average of four and a half years. The primary outcomes will be major macrovascular complications (stroke and heart attack) and major microvascular complications (eye and renal disease).

Status/Results

The trial has completed recruitment on schedule and has now entered the follow-up phase. Final results are expected to be available in 2006.

BLOOD PRESSURE LOWERING TREATMENT TRIALISTS' COLLABORATION (BPLTTC)

Institute Investigators

Bruce Neal, Fiona Turnbull, Charles Algert, Stephen MacMahon, Mark Woodward, John Chalmers

Collaboration

Principal investigators from large-scale trials worldwide, including studies conducted in Australasia, Asia, North America and Europe

Funding Agencies

Analyses: NHMRC; National Heart Foundation of Australia. Sponsors of collaborator meetings include Bayer; Boehringer-Ingelheim; Merck; Pfizer; Servier; Solvay

Aims

To provide reliable evidence about the effects of different classes of blood pressure lowering drugs on cardiovascular mortality and morbidity in a variety of patient groups.

Methods

A series of prospective overviews (meta-analyses).



Tackling the world's biggest killer

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Status/Results

The second round of analysis was performed in 2003 and included data from 29 trials and more than 160,000 patients. The results showed that treatment with any commonly used blood pressure lowering regimen reduces the risk of total major cardiovascular disease, and that larger reductions in blood pressure produce larger reductions in risk.

Following the presentation of results at several international meetings during 2003 including the American Society of Hypertension, the European Society of Hypertension and the American Heart Association, the main report was published in *The Lancet*.

With sufficient data now available, the collaboration is turning its attention to subgroup analyses to determine the effects of treatment in important patient subgroups. These include patients with diabetes and those with different baseline blood pressures.

CHINA SALT SUBSTITUTE STUDY (CSSS)

Institute Investigators

Bruce Neal, Rachel Huxley

Collaboration

Fu Wai Medical Hospital, Beijing, China; Clinical Trials Research Unit (CTRU), Auckland, New Zealand

Funding Agencies

Australian Council for High Blood Pressure Research, University of Sydney

Aims

To determine the effects of a low-sodium, high-potassium salt substitute

on blood pressure in individuals at high risk of cardiovascular disease living in northern China.

Methods

CSSS is a randomised, double-blind, controlled trial in which 600 participants will be recruited and followed up for a 12-month period.

Status/Results

Protocol has been written, ethics approval received, and funding obtained. Recruitment is expected to commence in May 2004.

STUDY RESULTS CHANGE CLINICAL PRACTICE

Hundreds of millions of people worldwide have blood pressure levels above the optimum and many are prescribed blood pressure lowering medication. The work of the **Blood Pressure Lowering Treatment Trialists' Collaboration** has provided uniquely reliable information to guide doctors in their choices of drug treatment for patients. The publication, in *The Lancet*, of the second cycle of overview results has generated significant international interest in the Collaboration's work.

The latest analyses clearly show that all of the major classes of blood pressure lowering drugs are effective and that there is little difference between them in terms of their benefit. The analyses also highlighted the importance of optimal blood pressure control. As with the study's first results (reported in 2000), it is anticipated that these findings will be a cornerstone for future national and international guidelines for the use of blood pressure lowering drugs.



Heart and Vascular Division

CLINICAL PATHWAYS FOR ACUTE CORONARY SYNDROMES IN CHINA (CPACS)

Institute Investigators

Anushka Patel, Fiona Turnbull, Lucy Chen

Collaboration

The Chinese Society of Cardiology; Peking University Health Science Center

Funding Agencies

Guidant Corporation; Sanofi-Synthelabo; Novartis

Aims

The overall objective of this project is to develop, implement and evaluate clinical pathways for the management of acute coronary syndromes (ACS) in tertiary and non-tertiary centres in China. The objective of Phase 1 is to reliably document management practices relating to ACS in China.

Methods

Phase 1 – A prospective survey of the management of at least 3000 consecutive patients presenting with an ACS in 40 tertiary and non-tertiary facilities in urban China. The survey will include follow-up of individuals for up to 12 months following discharge from hospital.

Phase 2 – Development, implementation and evaluation (using a cluster randomised trial design) of clinical pathways for ACS management using data collected in Phase 1.

Status/Results

A study protocol has been submitted to the University of Sydney Ethics Committee, and Phase 1 will commence in May 2004.

DIETARY INTERVENTION IN E-SHOPPING TRIAL (DieT)

Institute Investigators

Bruce Neal, Rachel Huxley, Amy Huang

Collaboration

Department of Human Nutrition, University of Sydney, Australia; Shopfast, Australia; British Heart Foundation, UK

Funding Agencies

Future Forum; National Heart Foundation of Australia

Aims

To determine the effects of highly tailored dietary advice on the amount of fat purchased by consumers using a commercial Internet-shopping service.

Methods

DieT is a randomised, double-blind, controlled trial in which at least 500 participants will be enrolled and followed over a three-month period.

Status/Results

The study design is complete and the software prepared for implementation. Recruitment will commence February 2004 with results expected later in the year.

FETAL-ORIGINS OVERVIEWS

Institute Investigators

Rachel Huxley, Alan Cass, Bruce Neal

Collaboration

Clinical Trials Service Unit, University of Oxford, UK; University of Bristol, UK; St Mary's Hospital, UK

Funding Agencies

None

Aims

To investigate the strength of evidence for the fetal-origins hypothesis of adult disease that proposes that impaired fetal and neonatal growth is associated with increased risk of morbidity and mortality in adult life.



Photo courtesy National Heart Foundation of Australia

Tackling the world's biggest killer

Methods

Meta-analyses of all studies that have reported on the associations between size at birth with subsequent cholesterol, diabetes, renal disease and coronary heart disease.

Results/Status

New analyses of the associations of birth weight with cholesterol will be released shortly. Data collection for the analyses relating to renal disease, diabetes and coronary heart disease is ongoing.

IMPAKT (IMPROVING INDIGENOUS PATIENT ACCESS TO KIDNEY TRANSPLANTATION)

Institute Investigators

Alan Cass

Collaboration

Menzies School of Health Research, Darwin; Cooperative Research Centre for Aboriginal Health, Darwin; specialist renal units in Darwin, Alice Springs, Townsville, Cairns, Brisbane, Sydney, Adelaide and Perth

Funding Agencies

NHMRC

Aims

To identify Indigenous Australians' barriers to accessing renal

transplantation and to propose strategies to reduce disparities in Indigenous Australians' access to renal transplantation.

Methods

The research program includes: a multi-centre cohort study of patients commencing dialysis at eight renal units in urban, rural and remote areas; a survey of Australian nephrologists' attitudes and practices; an in-depth qualitative study of Indigenous and non-Indigenous end-stage renal disease (ESRD) patients' knowledge and attitudes concerning transplantation; and a modelling study of alternate cadaveric allocation algorithms.

Results/Status

A national cohort study, of all patients who commenced ESRD treatment in Australia, 1993-1998, has been completed and accepted for publication. Indigenous patients had a transplant rate approximately one-third of non-Indigenous patients, and faced barriers to acceptance onto a waiting list, and to moving from a waiting list to receive a transplant.

A consultation process is in progress with local on-site nephrologists, nursing staff, educators and community groups. Broad consultation and commitment to the research program will be fundamental for translation of research findings into

improved service delivery. This consultation will inform the development of protocols for submission to ethics committees at multiple sites across Australia and is a critical component of the research program. Protocols will be submitted in 2004, with cohort studies expected to commence later in the year.

OBESITY IN ASIA

Institute Investigators

Rachel Huxley, Bruce Neal

Collaboration

International Obesity TaskForce; University of Utrecht, The Netherlands.

Funding Agencies

None

Aims

Firstly, to use nationally representative, cross-sectional data from Asian countries so as to provide reliable estimates of the prevalence of obesity in Asia. Secondly, to establish the strength of the association between different measures of adiposity and heart disease risk factors. These data will be used to assist in the development of obesity management guidelines specific to the Asia-Pacific Region.



Heart and Vascular Division

Methods

Statistical analysis of cross-sectional data to determine prevalence of obesity, and the strength of associations between measures of adiposity and risk factors.

Results/Status

A complete database of all contributing studies is expected by early 2004. Completion of initial analyses is planned for the end of the year.

PERINDOPRIL PROTECTION AGAINST RECURRENT STROKE STUDY (PROGRESS)

Institute Investigators

John Chalmers, Stephen MacMahon, Bruce Neal, Mark Woodward, Anushka Patel

Collaboration

University of Auckland, New Zealand; University of Melbourne, Australia; Chinese Academy of Medical Sciences, China; National Cardiovascular Centre, Japan; University of Glasgow, UK; Lariboisiere Hospital, France; Università degli Studi di Milano, Italy; Uppsala University, Sweden; 172 other hospital and university centres worldwide

Funding Agencies

HRC; NHMRC; US National Institutes of Health; Australian Health Management

Group; Pfizer Cardiovascular Lipid Grants; Servier

Aims

To determine the effects of an angiotensin-converting enzyme (ACE) inhibitor-based blood pressure lowering regimen on the risk of stroke among patients with a history of cerebrovascular disease. Secondary aims include investigation of the effects of treatment on other major outcomes, and investigation of the determinants of stroke.

Methods

PROGRESS is a randomised, double-blind, placebo-controlled trial in which 6,105 participants with stroke or transient ischaemic attack (TIA) were randomised to perindopril-based

treatment or matching placebos.

Follow-up continued for an average of four years.

Status/Results

The study was completed in 2001 and the main results showed that study treatment reduced the risk of stroke by a quarter. Subsidiary reports published in the last year have greatly broadened the clinical application of the findings. We are now working on a series of new analyses investigating the role of novel risk factors (biochemical, haematological and genetic) in the causation of stroke and the effectiveness of treatment. An economic cost-benefit analysis of PROGRESS will be completed in 2004 using UK cost data.

CHOLESTEROL LOWERING FOR PEOPLE WITH KIDNEY DISEASE

Patient recruitment commenced during 2003 for a new global, randomised controlled trial of cholesterol lowering in 9,000 people with chronic kidney disease – **SHARP**. The George Institute's Heart and Vascular Division is coordinating the trial in more than 60 centres in Australia, New Zealand, Malaysia and Thailand.

People with chronic kidney problems have very high risks of cardiovascular disease; however, while cholesterol lowering is a very well established treatment for other high-risk groups, those with kidney disease have generally been excluded from past studies. The lack of evidence about the effects of cholesterol lowering, and the high likelihood that these patients will benefit, make them a particularly worthwhile group for study. Follow-up of patients is scheduled to continue until 2007, and results will be reported in 2008.



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RURAL PRIMARY HEALTH CARE INITIATIVE IN ANDHRA PRADESH

Institute Investigators

Bruce Neal, Stephen MacMahon, Rohina Joshi, Magnolia Cardona, Clara Chow

Collaboration

Byrraju Foundation, Hyderabad, India; CARE Foundation, Hyderabad, India; Centre for Chronic Disease Control, New Delhi

Funding Agencies

Byrraju Foundation; International Development Fund, University of Sydney; Australian Department of Education, Science and Training; National Heart Foundation; NHMRC; the Initiative for Cardiovascular Health Research in Developing Countries

Aims

As part of a broader rural development initiative in India, this study aims to formulate, implement and evaluate simple low-cost intervention programs for the prevention of injury and non-communicable conditions such as cardiovascular disease and mental illness.

Methods

The study is being conducted in 135 villages in rural Andhra Pradesh. The project comprises a number of

components. In the first stage, a mortality surveillance system has been established. This will be followed by surveys to establish disease and risk factor prevalence and patterns of health services use. Based on the findings of these assessments, intervention projects will be implemented to address leading causes of death and disability. Wherever possible the interventions will be tested using cluster randomised trial methodologies and implemented with a view to their being embedded in the existing primary health care infrastructure. The program will incorporate various capacity development initiatives and evaluation of cost-effectiveness.

Status/Results

A strong collaboration has been established.

Multi-skilled health workers from 45 villages have been trained in the mortality surveillance methods and data collection is ongoing. A comprehensive report on the structure, organisation and financing of the Indian and Andhra Pradesh health care systems, both formal and informal, has also been prepared. The surveys are scheduled to commence in the next few months, the first interventions to start soon afterwards.

STUDY OF HEART AND RENAL PROTECTION (SHARP)

Institute Investigators

Bruce Neal, Alan Cass

Project Manager

Rochelle Currie

Collaboration

University of Oxford, UK

Funding Agencies

NHMRC; University of Oxford; Merck Sharpe and Dohme

Aims

To determine the effects of lowering cholesterol, using a combination of simvastatin and ezetimibe, on the risk of major vascular complications in patients with chronic kidney diseases.

Methods

A randomised placebo-controlled trial to be conducted among 9,000 individuals recruited from about 200 centres worldwide. The George Institute will coordinate and oversee the recruitment of about one-quarter of the study participants from an estimated 60 centres in Australia, New Zealand, Malaysia and Thailand. Mean follow-up is four and a half years.

Status/Results

Recruitment of patients commenced in Australia and Malaysia in October 2003. The study results will not be available until 2008.



“Injury is one of the world’s leading causes of death and disability, accounting for 11% of global mortality and 13% of all disability adjusted life years.”

Injury Prevention and Trauma Care Division

Injury is one of the world’s leading causes of death and disability, accounting for 11% of global mortality and 13% of all disability adjusted life years. Injury was identified as a National (Australian) Health Priority almost 20 years ago, and remains a priority today due to evidence of the profound impact injuries have on society. The George Institute’s Injury Prevention and Trauma Care Division has developed a comprehensive research and training program focusing on three areas of significant priority — road traffic injuries, musculoskeletal conditions and trauma management.

The Injury Prevention and Trauma Care Division’s leading road traffic injury study — and one of the world’s largest cohort studies of young drivers — DRIVE continued through 2003 and reached a milestone in December by recruiting 12,000 young drivers. Research in the musculoskeletal area has continued through the Division’s highly successful HIPAID study, while research on trauma management focused on the SAFE study the world’s largest clinical trial in intensive care units.

The Division’s comprehensive strategy for the next three years includes the continued recruitment of leading scientists, making teaching and training programs accessible to students throughout Australia and the Asia–Pacific region, and continuing a leading role in advocacy and policy development, both nationally and internationally. These strategies, combined with planned research initiatives in China, India and Thailand, will ensure that The George Institute continues to respond to the growing burden of injury as a major world health issue.

> **Mark Stevenson is Director of the Injury Prevention and Trauma Care Division** at The George Institute and a Professor in the School of Public Health at the University of Sydney. Prior to these appointments, he was an Associate Professor in the School of Population Health and foundation Director of the Injury Research Centre in the Faculty of Medicine and Dentistry at the University of Western Australia. Mark has also worked as an Associate Professor in the Department of Epidemiology & Biostatistics at Curtin University, Perth, Australia; as an epidemiologist at the Centers for Disease Control and Prevention in Atlanta, USA; and has spent time at the Harvard University School of Public Health. A strong advocate for road and child injury prevention, Mark has worked on numerous national and international projects related to these areas. He is also a member of the Australasian Trauma Society, on the editorial boards of international journals, and Chair of the Sydney Chapter of the Australasian College of Road Safety.



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HIGHLIGHTS

- > Recruitment of Professor Mark Stevenson as Director, Injury Prevention and Trauma Care Division
- > Recruitment completed for the largest intensive care trial, SAFE; findings to be released early 2004, making a significant contribution to knowledge on treating seriously ill patients
- > Completion of research on barriers to motorcycle helmet use among 5,000 motorcyclists in China
- > 12,000 drivers recruited for DRIVE and on target to recruit 20,000 drivers by mid 2004
- > Funding secured for one of the largest cohort studies of mild traumatic brain injury in non-competitive sport
- > Funding obtained to conduct systematic reviews on interventions in motorcycle safety, with an emphasis on developing intervention studies in China

Studies in the Division

- > Auckland Car Crash Injury Studies (ACCIS)
- > Barriers to Helmet Use Among Motorcyclists in China
- > DRIVE Study
- > Prevention of Ectopic Bone-Related Pain and Disability after Elective Hip Replacement Surgery (HIPAID)
- > Saline vs Albumin Fluid Evaluation Study (SAFE)
- > Systematic reviews of interventions in motorcycle safety
- > Developing Return-to-Play Guidelines following Mild Traumatic Brain Injury
- > Mobile phone use and road crashes
- > Improving vision to prevent falls: a randomised trial



Injury Prevention and Trauma Care Division

AUCKLAND CAR CRASH INJURY STUDIES (ACCIS)

Institute Investigators

Robyn Norton, Stephanie Blows, Rebecca Ivers, Mark Woodward

Collaboration

School of Population Health, The University of Auckland

Funding Agencies

Health Research Council of New Zealand; Transit New Zealand

Aims

To determine the contribution of potentially modifiable risk factors for motor vehicle-related injuries and to quantify the longer-term burden of disability attributable to car crashes. Factors predictive of poor long-term outcomes have also been investigated.

Methods

These studies, designed and conducted in collaboration with colleagues at the University of Auckland, involve both a case-control study and a cohort study. The case-control study uses data collected from 571 drivers involved in injury-related car crashes and 588 drivers randomly driving on the roads in the Auckland region of New Zealand. The prospective cohort study incorporates follow-up of 292 of the cases and 368 of the controls at five and 18 months after the initial interview.

Status/Results

Published analyses from the case-control show that a range of factors are associated with increased risks of car crash injury, including acute sleepiness; driving an uninsured vehicle; failing to perform periodic vehicle inspections; driving a car that is more than 15 years old; and, for young drivers, carrying two or more passengers. Additional analyses currently under way include the role of alcohol consumption and risk-taking behaviour in determining the risks of injury. Findings related to the cohort component of the study have been submitted for publication.

BARRIERS TO HELMET USE AMONG MOTORCYCLISTS IN CHINA

Institute Investigators

Junhua Zhang, Robyn Norton, Sing Kai Lo

Collaboration

Australian Centre for Health Promotion, the University of Sydney, Australia; Ministry of Health and Ministry of Public Security, China

Funding Agencies

International Postgraduate Research Scholarship (IPRS); Australian Department of Education, Science and Training (DEST); International

Postgraduate Award (IPA); University of Sydney

Aims

To describe the prevalence of motorcycle helmet use in China and identify barriers to helmet use.

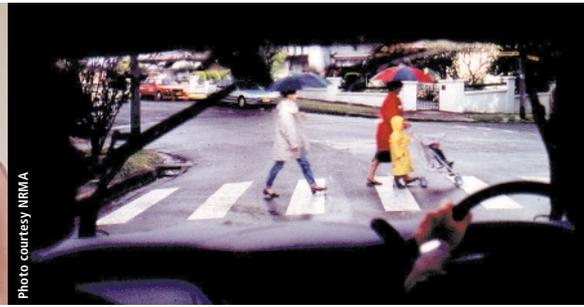
Methods

Data from existing national and provincial databases have been gathered to investigate the burden of motorcycle injuries and deaths in China. Roadside observations and interviews with 4,768 randomly selected motorcyclists in Guangxi province have been used to assess the prevalence of motorcycle helmet use by motorcyclists and to identify barriers to helmet use.

Results

Data collection and analysis were completed during 2003. The analyses suggest that more than 40% of motorcyclists do not wear helmets and, of those wearing helmets, about 70% are wearing helmets that do not meet national helmet quality standards. Further, around 30% of those wearing helmets are wearing them improperly.

Risk factors of improper helmet use were also identified (including not wearing a helmet, substandard helmet use and standard helmet use but with helmet improperly secured). It was found that motorcyclists travelling on rural primary roads were likely to wear their helmets improperly, as was the



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case for those who are peasants, blue-collar workers, unlicensed, or lower-income earners. Other risk factors included lack of knowledge of proper helmet use and incorrect beliefs about — or negative attitudes towards — helmet use, legislation and enforcement.

DRIVE STUDY

Institute Investigators

Robyn Norton, Mark Stevenson, Rebecca Ivers, Stephanie Blows, Sing Kai Lo

Collaboration

Injury Risk Management Research Centre and Centre for Multicultural Health, the University of New South Wales, Australia; Roads and Traffic Authority of NSW (RTA), Australia; Injury Research Centre, the University of Western Australia

Funding Agencies

NHMRC; Motor Accidents Authority of NSW (MAA)

Aims

To investigate the importance of potential determinants of motor vehicle-related crashes and injuries among young drivers aged 17–24 including road risk perceptions, risky driving behaviours, pre-licensing driving

experience, training and education, mental health and sleep habits.

Methods

DRIVE is a web-based cohort study of 20,000 young NSW drivers. All provisional drivers holding NSW red 'P1' plates aged 17–24 are eligible to join the study. Baseline information from participants will be linked prospectively to information about motor vehicle crash and injury involvement, to be routinely collected and stored in databases maintained by the RTA, NSW Health and the NSW Coroner.

Status/Results

The main phase of DRIVE was launched by the then NSW Minister for Roads and Transport, The Hon. Carl Scully, in February 2003, following completion of a pilot study in November 2002. Recruitment for this main phase is currently underway, with more than 12,000 participants successfully recruited by December 2003. The target of 20,000 young drivers should be reached by mid-2004. Baseline findings will be published in late 2004.

THOUSANDS OF YOUNG DRIVERS RECRUITED FOR STUDY

Young people account for almost 30% of car crash injuries and fatalities, yet comprise only 13% of the total population in NSW. The **DRIVE study** aims to investigate ways to reduce this burden, assessing risky driving behaviours, risk perceptions, and the impact of driver experience, training and education.

More than 12,000 young drivers across NSW have been recruited so far to participate in DRIVE — one of the world's largest studies of young drivers — with 20,000 to be recruited by mid-2004.

The Roads and Traffic Authority of NSW wrote to eligible drivers on the Institute's behalf to give them information about the study and encourage them to participate. The media has also played a significant positive role in recruitment into the study.

The media reported news of the study throughout 2003, starting with prime-time news coverage of the launch in February 2003 by then NSW Minister for Roads and Transport, The Hon. Carl Scully. Regional media have been particularly enthusiastic about the study, with broad coverage greatly assisting recruitment in regions with extensive reports on DRIVE.



Injury Prevention and Trauma Care Division

PREVENTION OF ECTOPIC BONE-RELATED PAIN AND DISABILITY AFTER ELECTIVE HIP REPLACEMENT SURGERY (HIPAID)

Institute Investigators

Marlene Fransen, Robyn Norton, Bruce Neal, Stephen MacMahon, Mark Woodward

Project Manager

Jan Douglas

Collaboration

University of Auckland, New Zealand; Royal Prince Alfred Hospital, Australia; Royal North Shore Hospital, Australia; Rehabilitation Studies Unit, Australia; CONROD, Australia; Prince Charles Hospital, Australia; Middlemore Hospital, New Zealand; and 17 other hospitals in Australia and New Zealand

Funding Agencies

NHMRC; MBF

Aim

To determine the effects of a short, post-operative course of a non-steroidal, anti-inflammatory drug (ibuprofen) on ectopic bone-related pain and disability, 6 to 12 months after elective hip replacement surgery.

Methods

Randomised placebo-controlled trial involving 900 patients recruited from orthopaedic centres in Australia and New Zealand. Patient sample will be randomised within 24 hours after surgery to receive either ibuprofen (1200mg daily) or matching placebo, in three divided doses for 14 days.

Status/Results

Piloting of the study procedures commenced in the latter half of 2001, with recruitment to the main study commencing early in 2002. The Data

Safety and Monitoring Committee met in April 2003 to review safety and outcome data on the first 494 randomised patients; the committee found no evidence to recommend any changes to the trial at that time. A total of 26 hospitals throughout Australia and New Zealand have recruited patients into the HIPAID study, with recruitment closing early November 2003 after 903 patients were randomised. Data lock is planned for 30 June 2004 and the main results will be ready for presentation in September 2004.

INJURY WORKFORCE DEVELOPMENT

In response to a growing need for injury workforce development in Australia and South East Asia, the Injury Prevention and Trauma Care Division is developing a range of teaching and training initiatives. For the past three years, the division has run a two-credit point elective subject, 'Injury Prevention', as part of the University of Sydney's Master of Public Health program. This popular two-day intensive workshop is taught by staff of the Division using innovative methods such as small-group debates. The course provides an introduction to the principles of injury prevention, and is attended by both Masters students and individuals currently working in the field.

Throughout 2003 the division also headed a collaboration of leading Australian universities and injury experts to develop a web-based course in injury epidemiology, prevention, and control. This Commonwealth Government-funded project focuses on flexible delivery and distance learning to improve access for students in rural and remote Australia and, in the future, in South East Asia. Students will work through online presentations with live audio, and interact with lecturers via web platforms and email. The first of its kind in Australasia, this course will be offered in 2004, marking the start of an exciting new phase of teaching in the Division.



Photos courtesy NHRWA

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SALINE VS ALBUMIN FLUID EVALUATION STUDY (SAFE)

Institute Investigators

Robyn Norton, Stephen MacMahon, Bruce Neal, Sing Kai Lo

Project Manager

Julie French

Collaboration

Australian and New Zealand Intensive Care Society Clinical Trials Group; Australian Red Cross Blood Service; 16 hospitals around Australia and New Zealand

Funding Agencies

NHMRC; HRC; Commonwealth Department of Health and Ageing; Australian state and territory governments; Auckland Hospital; Middlemore Hospital; Royal Hobart Hospital; CSL

Aims

To determine the effects of fluid resuscitation, with 4% human albumin solution or normal saline, on all cause mortality in critically ill patients in intensive care settings.

Methods

Randomised, controlled double-blind trial of saline versus albumin fluid in 7,000 patients recruited from intensive care units in Australia and New Zealand.

Status/Results

A pilot study was completed at the end of 2001 and the main study commenced in March 2002. By the end of May 2003, the target of 7,000 patients had been recruited. A paper describing the study rationale and protocol, and an accompanying editorial, were published in the *British Medical Journal* in early 2003. A paper describing the main findings has been accepted for publication in the *New England Journal of Medicine*.

SYSTEMATIC REVIEWS OF INTERVENTIONS IN MOTORCYCLE SAFETY

Institute Investigators

Rebecca Ivers, Mark Stevenson, Stephanie Blows, Robyn Norton, Junhua Zhang, Bette Liu

Funding Agencies

University of Sydney Sesqui Research and Development Grants; Cochrane Health Promotion Field

Aims

The aim of this study is to review and synthesise evidence for interventions designed to reduce motorcycle injury, and to summarise the estimated reductions in risk of death and injury achieved by these interventions.

Findings will be used as a basis for dialogue with researchers in China in order to develop a protocol for a series of intervention studies aiming to examine methods of reducing injury amongst motorcycle riders in China.

Methods

Four Cochrane Collaboration-style systematic reviews will be completed: helmets for preventing injuries in motorcyclists; the effectiveness of interventions to increase motorcycle and rider conspicuity in reducing motorcycle crash fatalities and injuries amongst motorcyclists; the effectiveness of motorcycle-rider training and education in reducing motorcycle crash fatalities and injuries in motorcyclists; and the effectiveness of helmet use legislation in reducing motorcycle crash fatalities and injuries in motorcyclists.

Status/Results

Review One was accepted for publication by the Cochrane Collaboration in December 2003, as was the protocol for Review Two. Protocols for Reviews Three and Four will be submitted for peer review by April 2004.

Injury Prevention and Trauma Care Division



DEVELOPING RETURN-TO-PLAY GUIDELINES FOLLOWING MILD TRAUMATIC BRAIN INJURY

Institute Investigators

Mark Stevenson

Collaboration

NSW Injury Risk Management Research Centre, University of New South Wales; Center for Injury Research and Control, University of Pittsburgh, USA; University of Pittsburgh Sports Medicine Centre, USA

Funding Agencies

US Centers for Disease Control and Prevention, through the University of Pittsburgh

Aims

To estimate the incidence of sport-related mild traumatic brain injury (mTBI) in non-elite rugby union players and to develop guidelines for managing return-to-play decisions following mTBI.

Methods

A cohort study will be undertaken and will recruit 2,245 rugby union players aged 16–35 over three years and follow them through one football season. Demographic information and recent past history of head injury, information on potential risk factors and a baseline neuropsychological test

will be collected. Outcomes of interest will be mTBI (as described by the American Congress of Rehabilitation Medicine), time until intact cognitive functioning is achieved, and time until return-to-play. Based on the findings from the study, national and international guidelines and policies for returning players to the game following mTBI will be developed.

Status/Results

A pilot study is planned for the 2004 rugby season to test the data collection tools and study logistics. The main study will commence in the 2005 season and run over a period of three years.

MOBILE PHONE USE AND ROAD CRASHES

Institute Investigators

Mark Stevenson

Collaboration

Injury Research Centre, School of Population Health, the University of Western Australia

Funding Agencies

Insurance Institute for Highway Safety, USA; Motor Accidents Authority of NSW (MAA)

Aims

To investigate the role of driver distractions, in particular mobile phone use, in road crashes.

Methods

This project comprises two studies: a case-crossover study and a case-control study. The case-crossover study is being undertaken over a 24-month period; data collection commenced in May 2002. Participants are drivers who are injured in a road crash and present to one of three adult teaching hospitals in metropolitan Perth.

Recruitment for the case-control study commenced in June 2003. Cases are injured drivers and controls are drivers recruited from the service station closest to the crash site — at the same time of day and day of the week as the crash — to simulate similar road and driving conditions.

Status/Results

Data collection for the case-crossover study will continue until mid-2004. Case recruitment for the case-control study will be completed in January 2004 and analysis is under way.



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IMPROVING VISION TO PREVENT FALLS: A RANDOMISED TRIAL

Institute Investigators

Rebecca Ivers

Collaboration

Centre for Education and Research on Ageing, Concord Hospital; Centre for Vision Research, Westmead Hospital

Funding Agencies

NHMRC

Aims

Falls and visual impairment are both common problems among older Australians: of people aged 75 years or older, 40% fall at least once a year and 20% have visual acuity worse than 20/40. Visual impairment is an important risk factor in cases of falls and fractures. The primary objective of this

study is to assess the effect of identifying and treating visual impairment on the risk of falls. The secondary objective is to assess the effect of identifying and treating visual impairment on: activities of daily living; vision-related activities of daily living; health and vision-related quality of life; fear of falling; fractures; and admission to aged care institutions.

Methods

This study is a randomised trial with subjects randomised to one of two groups: a control group and a group having tests of visual function and eye examination. In the latter, tests are followed (where necessary) by appropriate interventions to improve vision and reduce disability caused by impaired vision. (Interventions may include new spectacles, cataract

surgery or other appropriate eye treatment such as laser therapy, and vision-related aids and home-modifications.) Falls during follow-up are ascertained with a falls calendar system.

Status/results

Recruitment commenced in late-August 2002, with 480 subjects recruited by the end of 2003. Subjects have been recruited from Concord, Royal Prince Alfred, Balmain and Canterbury hospitals and from clients referred to community aged care services in Central Sydney. Some participants have been recruited from community groups. Recruitment will continue until June 2004, by which time a sample size of about 800 will have been achieved.

NEW STUDY TO REDUCE MILD TRAUMATIC BRAIN INJURY IN SPORT

Contact sports, such as the football codes, carry a high risk of head injury. The incidence of mild traumatic brain injury (mTBI) accounts for the vast majority of sport-related head injuries with the potential for serious adverse outcomes.

Sporting bodies are recommended to adopt return-to-play guidelines when players sustain mTBI; however, current guidelines are inadequate and conflicting. Consequently, current practices are, at best, ad-hoc and not yet standardised across sporting bodies.

Professor Mark Stevenson from The George Institute, with investigators at the University of New South Wales and the University of Pittsburgh, have secured funds to undertake a cohort study in Sydney on this issue. The incidence of mTBI in non-elite rugby union players will be determined, and guidelines for managing return-to-play decisions will be developed. The study will recruit 2,245 players over three years from 2005. Baseline data collection will include a neuropsychological test with primary outcomes being: measures of mTBI incidence; time to achieve baseline neuropsychological results; and time to return-to-play. The study findings will be used to develop guidelines for returning players to the game following mTBI.



“Epidemiology and biostatistics are central to most aspects of The George Institute’s research and development activities.”

Epidemiology and Biostatistics Division

Epidemiology and biostatistics are central to most aspects of The George Institute’s research and development activities. Staff in this Division contribute to study design and undertake data analysis for each of the Institute’s programs. In addition, the Division has its own research and development projects and is actively involved in teaching and training.

The research projects conducted by the Epidemiology and Biostatistics Division include the Asia Pacific Cohort Studies Collaboration, for which the Institute acts as joint

coordinating centre with the Clinical Trials Research Unit at the University of Auckland, New Zealand; the Fletcher Challenge Heart and Health Study; and the New Zealand Blood Donors’ Health Study. Both the latter studies are conducted in collaboration with colleagues at the University of Auckland. In addition, the Epidemiology and Biostatistics Division is involved in collaborative projects with various other institutions including: the Sydney Dental Hospital (dental health and cardiovascular risk factors); the University of Dundee, Scotland (the

Scottish Heart Health Study); the University of Glasgow, Scotland (WHO MONICA Project, the GLAMIS case-control study of myocardial infarction, Glasgow Heartscan Study and the CADET trial of the effects of clopidogrel and aspirin on thrombotic risk factors).

The George Institute’s training activities in quantitative research methods are a primary responsibility of the Epidemiology and Biostatistics Division. In the last few years, workshops have been conducted in Beijing (China), Hanoi (Vietnam), Hong Kong (China), Taiwan and

> **Mark Woodward is Director of the Epidemiology and Biostatistics Division** at The George Institute, Professor of Biostatistics at the University of Sydney and Honorary Consultant Epidemiologist at Royal Prince Alfred Hospital. He has a PhD from the Department of Applied Statistics at the University of Reading, UK, where he subsequently worked for several years, most recently as Senior Lecturer in Statistical Epidemiology. Mark holds an Honorary Senior Research Fellowship at the Cardiovascular Epidemiology Unit of the University of Dundee, Scotland, and has previously been the Director of the Institute of Statisticians’ Training and Development Centre in the UK.

Mark has extensive experience working in developing countries, including more than two years as Training Adviser to the Central Statistics Office in Zimbabwe. He has also worked for several aid agencies, including the Asian Development Bank, the World Health Organization and the UK Department for International Development. He is the author of two textbooks on medical statistics, one of which will have its second edition published in 2004.



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Thailand. In the next year we expect the continued development of an Internet-based course in quantitative methods for health care researchers.

The Division also provides consultant statistical and methodological advice to various research groups in Sydney — much of this through the Research Design and Analysis Clinic, run by the Division at the Royal Prince Alfred Hospital with the support of the Central Sydney Area Health Service.

HIGHLIGHTS

- > New funding secured for the Asia Pacific Cohort Studies Collaboration and five papers published
- > E-lecturer recruited to begin work on partially web-based learning modules in biostatistics and epidemiology
- > US funding secured to conduct innovative research into factors associated with antioxidant stress, a potential cause of heart disease

Studies in the Division

- > Asia Pacific Cohort Studies Collaboration (APCSC)
- > Fletcher Challenge Heart and Health Study
- > New Zealand Blood Donors' Health Study

Epidemiology and Biostatistics Division



ASIA PACIFIC COHORT STUDIES COLLABORATION (APCSC)

Institute Investigators

Mark Woodward, Stephen MacMahon, Federica Barzi, Alireza Moghaddam, Anushka Patel

Collaboration

University of Auckland, New Zealand; Academia Sinica, Taiwan; Chinese Academy of Medical Sciences, China; Sugiyama Jogakuen University, Japan; Shiga University, Japan; Yonsei University, South Korea, and more than eighty investigators representing 44 cohorts from 10 countries

Funding Agencies

NHMRC; Pfizer

Aims

APCSC was initiated to provide direct, reliable evidence about determinants of stroke, coronary heart disease and other common causes of death in Asia-Pacific populations.

Methods

The APCSC is a collaborative overview of individual participant data from cohort studies in the Asia-Pacific region. Investigators from all major cohort studies with information on blood pressure and causes of death have been invited to participate. Where

available, repeat measurements of blood pressure and other cardiovascular risk factors are used to correct associations for regression dilution. Analyses are developed in conjunction with colleagues at the Clinical Trials Research Unit in Auckland.

Status/Results

Several presentations of APCSC data have been made in Australia, Asia and the USA, with the first five APCSC results papers published in 2003. Further publications are in progress and more public presentations of results at scientific meetings are planned. Links are also being developed with the Diverse Populations Collaboration in the USA.

FLETCHER CHALLENGE HEART AND HEALTH STUDY

Institute Investigators

Stephen MacMahon, Robyn Norton, Mark Woodward, Sam Colman

Collaboration

University of Auckland, New Zealand

Funding Agencies

Fletcher Challenge; HRC; US National Institutes of Health

Aims

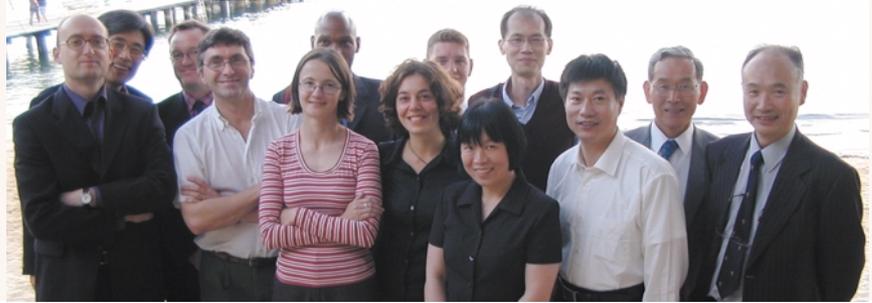
The primary aim of this study is to identify risk and protective factors for a range of chronic disease and injury outcomes.

Methods

Baseline information has been obtained from over 10,000 individuals, 8,000 of whom were employees of a nationwide multi-industry corporation in New Zealand (Fletcher Challenge) and 2,500 of whom were selected from the electoral roll of the greater Auckland region. Information collected from study participants has been linked prospectively to information routinely collected by the New Zealand Health Information Service on all deaths and hospitalisations.

Status/Results

The initial cohort analyses, involving 10 years of follow-up outcome data, have been completed, focusing on the relationships between body mass index, socio-economic status, marital status and the risks of driver injury. These analyses, published in 2003, show evidence of a U-shaped relationship between body mass index and risk of driver injury and also suggest that both low occupational status and low educational level are important determinants of driver injury



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risk. As a result of recent funding from the US National Institutes of Health, analyses of stored blood samples will soon commence to examine novel cardiovascular biomarkers using a nested case-control study design.

NEW ZEALAND BLOOD DONORS' HEALTH STUDY

Institute Investigators

Robyn Norton, Stephen MacMahon, Sing Kai Lo, Marlene Fransen, Mark Woodward

Collaboration

University of Auckland, New Zealand;
University of Otago, New Zealand

Funding Agency

HRC

Aims

The primary aim of this study is to identify risk and protective factors for a range of injury outcomes, including motor vehicle-related injuries. However, the study should also provide information about risk and protective factors for a range of chronic disease outcomes.

Methods

Baseline information has been obtained from over 22,000 individuals aged 16–60 at the time they provided a voluntary blood sample at one of several static or mobile New Zealand Blood Service sites situated in the northern half of the North Island of New Zealand. Information collected from study participants will be linked prospectively to information routinely collected by the New Zealand Health Information Service on all deaths and hospitalisations.

Status/Results

Recruitment and baseline data collection were completed in the latter half of 1999. A paper describing the study methods and the characteristics of the participants was published in early 2002. The initial analyses have demonstrated substantial heterogeneity of risk factors within the study population, suggesting that the study has the potential to provide important new information once outcome data become available. Further analyses of the cross-sectional data are currently being planned.

CARDIOVASCULAR DISEASE (CVD) RISK FACTORS THE FOCUS OF APCSC

After several years recruiting studies, devising analytical methods and agreeing on a study protocol, the Asia Pacific Cohort Studies Collaboration (APCSC) finally hit the headlines in 2003. With five publications during the year, the largest ever collaboration in the region looked at three of the major risk factors for CVD: blood pressure, cholesterol and diabetes.

Using data from several thousand people, mainly from representative national samples, precise relationships between the risk factors and CVD were quantified. Amongst many important findings, a continuous log linear relationship between systolic blood pressure (found to be the strongest blood pressure variable for prediction) and both coronary heart disease and stroke was demonstrated, implying that even those with moderate blood pressure, who are otherwise at high risk, might benefit from blood pressure lowering treatment. For all three risk factors, Asians had at least as great an excess risk as Caucasians for unfavourable values — a finding with crucial consequences for the many Asian countries going through a transition to Western lifestyles: young, often very large, populations can expect a huge burden of CVD unless action is soon taken to reduce risk.



“The George Institute is guided by the principle that a strong evidence base should underpin the development of health policy.”

Policy and Practice Division

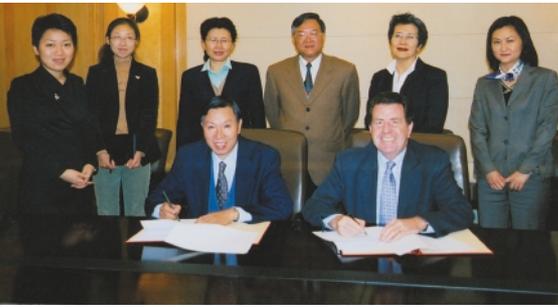
The Policy and Practice Division was established in July 2002 to develop the Institute’s capacity in health policy and practice to complement its existing capacity in health research. The aim of the Division is twofold: to strengthen the links between research and policy, and to expand The George Institute’s involvement in health policy review and development.

The Division is bringing a policy perspective to research in several ways by:

- > providing advice on the orientation of research at the design stage to reflect policy concerns
- > working with researchers to distil the policy and practice implications of their research and reflecting these in publications and presentations
- > collaborating with the College of Health Sciences at the University of Sydney on course and curriculum development, teaching and postgraduate supervision in health policy
- > advising researchers on the processes of government and of international development, and helping them to form links with relevant areas of government
- > leading debate on issues of research policy
- > undertaking research on policy-related questions

> **Michael Reid is Director of the Policy and Practice Division** at The George Institute. He brings with him rich experience in health sector development and management, having recently spent five years as Director-General of NSW Health, the largest public sector organisation in Australia. Prior to this Michael was Managing Director of a health consulting company which undertook numerous consultancies in Australia, for governments in Asia and the Pacific and with UN organisations.

Michael holds Adjunct Professorships in the Faculty of Medicine at the University of Sydney and the Faculty of Public Administration at the University of Western Sydney. He is a sought after speaker and facilitator and works extensively on aspects of health systems reform and health financing both within Australia and internationally, with particular focus on the Asian region.



Putting research into practice

The Division has continued to build its activities in health policy development, both through consulting work and through self-initiated sponsored projects. While most of the Division's consultancy work has a domestic focus, its international portfolio is increasing and its sponsored activities all have an international character. An important element of the Division's international work is health governance and institutional capacity building. Over the course of 2003, the Division has sought to further relationships with the World Bank, the Asian Development Bank, WHO and AusAID as a potential service-provider and collaborator.

HIGHLIGHTS

- > Hosted seven seminars, open to the interested public, as part of the Institute's International Health Evening Seminar Series
- > Facilitated national and state-level consultations for the Commonwealth Government Department of Health and Ageing, providing input for a National Strategic Framework for Aboriginal and Torres Strait Islander Mental Health and Social and Emotional Wellbeing
- > Co-hosted a Roundtable on Global Health Research, resulting in the development of a detailed program of action to increase Australian involvement in health research in resource-poor countries
- > Signed a memorandum of understanding with the Ministry of Health of the People's Republic of China to develop high level round table discussions on major health sector reform and management themes
- > Co-hosted the Symposium on Global Health and Foreign Policy, the proceedings of which will feature in the 16 February 2004 edition of *The Medical Journal of Australia*



Policy and Practice Division

BRIDGING RESEARCH AND PRACTICE

The George Institute's policy team work with the Institute's researchers to identify and integrate policy and practice considerations into the design, conduct and reporting of the Institute's global research. Through close collaboration with policy makers, The George Institute is actively promoting the translation of research findings into practice.

In 2003, the Division was key in developing a submission seeking funding under the NHMRC Health Services Research Program for a research project. The project aims to develop and test innovative approaches

to improving the uptake of research findings into health services decision making. A collaboration has also been fostered with the New South Wales Institute for Health Research (IHR), which brings together the research community and government to address the interface between research and policy.

The IMPAKT study aims to identify Indigenous Australians' barriers to accessing renal transplantation and to propose strategies to reduce disparities in their access to renal transplantation. IMPAKT is an example of a study that seeks to directly affect health service delivery (see page 15 for further details).

PROMOTING DEBATE ON GLOBAL HEALTH ISSUES

By stimulating debate on serious world health issues, The George Institute is working to raise awareness of international health concerns.

The Institute hosted seven seminars in 2003 as part of its International Health Evening Seminar Series exploring major issues in international health, with a focus on Australia's contribution to health care in low and middle-income countries. The series attracted a high calibre of national and international speakers from a broad range of development and research organisations including AusAID, the World Bank and Johns Hopkins

GLOBAL HEALTH AND FOREIGN POLICY SYMPOSIUM

Participants at the September 2003 symposium *Global Health and Foreign Policy: Scope for Australian Engagement* proposed a number of practical steps to better link health and foreign policy. These focused on mechanisms to broaden the public policy agenda, to engage civil society more closely in the policy debate and to improve public understanding of global health issues.

There was overwhelming support from symposium participants for the creation of an Australian Coalition for Global Health. In order to forward this outcome, it was agreed, during the symposium, that a small coordination group should be formed which would comprise participants from NGOs, academia and the private sector and interested individuals. The coordination group will meet in 2004, with a potential launching of the Coalition by mid-2004.

The Medical Journal of Australia acknowledged the importance of the symposium by agreeing to devote its February edition in 2004 to covering the issues and outcomes of the symposium.



Putting research into practice

University. A sample of this work includes:

- > hosting a round table discussion on Global Health Research to explore mechanisms for strengthening Australian involvement in the health research effort in low and middle-income countries. The round table was held on 22 July, in conjunction with the Australian International Health Institute from the University of Melbourne. Professor John Frank, the Scientific Director of the Institute of Population and Public Health, Canadian Institutes of Health Research, was the keynote speaker, and AusAID and NHMRC provided financial assistance for the round table discussion and contributed to the panel discussion that formed part of the program
- > co-hosting a two-day Symposium on Global Health and Foreign Policy, with Nuffield Trust of the United Kingdom and the School of Public Health and Community Medicine at the University of New South Wales, to examine the nexus between global health and foreign policy and its implications for public policy in Australia

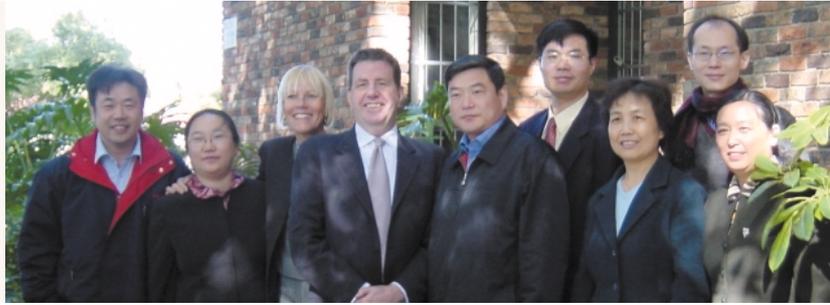
- > Professor Michael Reid facilitating a number of policy forums and presenting papers at several national and international conferences including a keynote presentation on “The public-private interface for health insurance in the Asia region” at the International Health Summit

DOMESTIC POLICY CONSULTANCIES

The Policy and Practice Division has undertaken a number of significant consultancies in the area of health systems development and health management during the course of the year. These include:

- > The appointment of Professor Michael Reid to Chair the Western Australian Health Review Committee established by the Minister of Health and the State Treasurer. The review report provides the framework for health system reform to ensure that effective, quality health care is provided in a sustainable and equitable manner over the next five to ten years

- > The facilitation of national and state-level consultations for the Commonwealth Department of Health and Ageing as an essential input to the development of a National Strategic Framework for Aboriginal and Torres Strait Islander Mental Health and Social and Emotional Wellbeing. This framework, prepared by the Division, will direct the national provision of mental health services to Aboriginal and Torres Strait Islander peoples over the next five years, including the allocation of appropriate resources to support service development and reform
- > advice to the Board of the Neuroscience Institute of Schizophrenia and Allied Disorders (NISAD) on governance and management models for the organisation and the strategies, processes and practices for achieving the preferred model



Policy and Practice Division

INTERNATIONAL POLICY CONSULTANCIES

Following its consultancy project for the World Health Organization's Center for Health and Development in Kobe in 2002, the Center has invited The George Institute to undertake a further project to develop a range of indicators for health and welfare systems throughout the world.

The George Institute has joined with four other prominent organisations working on health and development in a consultancy to AusAID to develop a conceptual framework aiding the development of a new health strategy for Australia's overseas aid program.

BUILDING POLICY CAPACITY

In 2003, the Institute's Policy and Practice Division entered into an exciting program with the Chinese Ministry of Health to lead high-level round table discussions on major issues relating to health sector reform and management. The first round table discussion was held in Dalian in March 2003 for senior officials from national and provincial governments on public-private partnerships in health care delivery.

The Institute partnered with WHO on a second round table discussion on rural health finance, held in September, for which a major paper was prepared and

translated. The relationship between The George Institute and the Ministry of Health of the People's Republic of China was cemented in a memorandum of understanding, signed in October, to support an ongoing program of round table discussions for the next three years (see page 37 for further details). The next round table discussion, on the topic of urban health reform, is planned for Beijing in 2004.

ROUNDTABLE ON GLOBAL HEALTH RESEARCH

Seventy leading researchers and practitioners came together in July for the Roundtable on Global Health Research, hosted by The George Institute in conjunction with the Australian International Health Institute from the University of Melbourne. The aim was to identify mechanisms for strengthening Australian involvement in the health research effort in low and middle-income countries. Keynote speaker, Professor John Frank, described a groundbreaking initiative in Canada. Four government agencies with an interest in health, research and development were brought together to cooperate on global health research, while joining the research community in a forum to develop ideas and policy advice to government.

Participants at the round table discussion developed a detailed program of action to increase Australian involvement in health research in the developing world. Next steps agreed at the meeting included:

- > strengthening networks between researchers and institutions in the region to build research skills
- > collaborating with government on policy and funding mechanisms to support research as a global public good
- > exploring avenues for increased funding from overseas sources forming a coalition on global health research to carry the agenda forward.



Capacity Development

Spanning formal, large-group teaching, individual training and public seminars, the transfer of knowledge and skills forms a vital part of The George Institute's work both internationally and in Australia.

Many Institute staff hold academic appointments in the Faculty of Medicine at the University of Sydney, and contribute to teaching in public health and medicine as well as supervising postgraduate Masters and Doctoral research students.

The Institute also facilitates regular visits from international scholars, for varying periods of time, both from Asia and further afield. During the year, colleagues from Johns Hopkins University contributed to seminars in biostatistics and epidemiology, attended by individuals from throughout Australia and New Zealand.

A Capacity Development Coordinator was appointed in November 2003 to facilitate the Institute's teaching and training activities and ensure quality assurance across all these activities.

Teaching and training activities that were a particular focus during 2003 included:

- > the development of a web-based training unit in epidemiology and biostatistics

- > the development of a national web-based masters level course in injury prevention and control to complement the current face-to-face unit
- > the development of a short course in clinical research methods to be delivered in Beijing in association with the Peking University Health Science Center

- > the International Health Seminar Series for local health academics, managers and practitioners in Sydney (see below for further details).

Sharing our knowledge

2003 INTERNATIONAL HEALTH EVENING SEMINAR SERIES

- > Tuesday 25 February: International mental health
- > Thursday 3 April: International approaches to health services research and its funding
- > Tuesday 13 May: Politics of foreign aid
- > Thursday 12 June: Measuring quality - improving health system performance using indicators
- > Wednesday 2 July: Indigenous health: moving from rhetoric to reality
- > Thursday 12 August: Ethical, cultural and logistic considerations in undertaking community trials in resource-poor environments
- > Thursday 11 September: Sex in the Pacific
- > Thursday 14 October: Where to with WHO?

“We expect the specific scientist-to-scientist collaborations will help inter-disciplinary research, improve the quality of our research and education, and contribute to the health of mankind.”

*Professor Ke Yang
Peking University Health Science Center*



China Program

Through a range of research, policy and training activities developed in consultation with other Divisions, The George Institute's China program aims to promote the adoption of evidence-based approaches to improve clinical and health outcomes in China. This includes supporting the development of health policy in China to ensure that health research is effectively translated into practice.

All Divisions of The George Institute have major activities in China. Many Chinese universities and hospitals participate in the Institute's studies, and good working relationships have been forged with national bodies such as the Ministry of Health, the Chinese Center for Disease Control and Prevention (CCDC) and the State Development and Planning Commission.

HIGHLIGHTS

- > Launch of The China–Australia Partnership for Health in Sydney and the signing of a memorandum of understanding (MOU) with Peking University Health Science Center
- > Memorandum of understanding signed with the Department of International Cooperation of the Ministry of Health of the People's Republic of China, to develop a series of round table discussions on topics such as rural health financing and urban health systems
- > The first round table meeting held (as a result of the above MOU)

THE CHINA–AUSTRALIA PARTNERSHIP FOR HEALTH

The primary mechanism for developing the China program is through The China–Australia Partnership for Health which was launched in October 2003. A new initiative between The George Institute and Peking University Health Science Center, the partnership links Peking University and the University of Sydney in a broad range of collaborative activities and research projects to address the major health

problems facing China in the coming decades.

The partnership also aims to strengthen capacity in clinical and population-based health research and the development of health policy and clinical guidelines, focusing on chronic disease control and injury prevention.

Activities

The George Institute's research activities in 2003 included a number of studies and trials in China:



Working together for a healthier future

- > China Salt Substitute Study (CSSS) — Heart and Vascular Division
- > Clinical Pathways for Acute Coronary Syndromes in China (CPACS) — Heart and Vascular Division
- > Action in Diabetes and Vascular Disease: Preterax and Diamicron MR Controlled Evaluation (ADVANCE) — Heart and Vascular Division

- > Asia Pacific Cohort Studies Collaboration (APCSC) — Epidemiology and Biostatistics Division
- > Barriers to Helmet Use Among Motorcyclists in China — Injury Prevention and Trauma Care Division

In addition, visiting scholars working with The George Institute on research related to China during 2003 included:

- > Yang Li, Professor in Epidemiology, Deputy Dean of the School of Public Health, Guangxi Medical University, China

- > Junhua Zhang, PhD student

In association with the Policy and Practice Division, The George Institute has initiated a variety of policy-related activities in China, including the China Health Reform Round Table Series.

MEMORANDUM OF UNDERSTANDING WITH THE CHINESE MINISTRY OF HEALTH

On 23 October 2003, the Institute for International Health (now The George Institute for International Health) and the Department of International Cooperation of the Ministry of Health of the People's Republic of China signed a memorandum of understanding (MOU) governing collaboration between the two organisations on the delivery of a series of round table discussions addressing priority health issues for the Chinese healthcare system.

The aim of the round table discussion series is to promote the development of sound structures of health governance, to be better able to meet the needs of the Chinese population, by building organisational capacity and responsiveness for senior managers of the Ministry of Health and related Ministries.

The MOU specifies that the participation at these round table discussions, planned to be held twice a year for the next three years, will be at the level of Vice Minister and Director-General from health and related Ministries, from both central and regional governments in China.

“An estimated 450 million people worldwide suffer from a mental or behavioural illness — 200 million in Asia alone.”



Mental Health Division

An estimated 450 million people worldwide suffer from a mental or behavioural illness — 200 million in Asia alone. Currently, mental illnesses make up five of the 10 leading causes of disability in Asia, and the Global Burden of Disease study predicts that by 2020 depression will be the leading cause of disability in Asia.

Even though mental disorders are widely recognised as a major contributor to the burden of ill health in Australia and many low and middle-income countries, opportunities for the development

and implementation of effective strategies for the promotion of mental health have been under-utilised in all countries of the Asia-Pacific region, irrespective of the level of country resources. These gaps are most apparent in poorer countries of the region where there may be only one qualified mental health professional for half a million people.

Recognising that mental health is an integral part of health and is intimately connected with physical health and behaviour, The George Institute's Mental Health Division

aims to establish a research, policy development and training program focused on the promotion of mental health and the prevention and treatment of mental disorders in Australia and the Asia-Pacific region. Mental health programs and expertise can improve the effectiveness and quality of general health care, especially in chronic and traumatic conditions, and in areas where satisfaction with health care is in decline.

The George Institute's newest division will achieve its goals by working in close collaboration with

- > **Professor Helen Herrman** is Professor of Psychiatry and Professor of Public Health at the University of Melbourne, and Director of Psychiatry at St Vincent's Mental Health Service in Melbourne, Australia. From 2001 to 2002, Helen was acting regional adviser in mental health for the World Health Organization's Western Pacific Region. Among other positions, she is Chair of the World Psychiatric Association's Section on Public Policy and Psychiatry.
- > **Dr Vikram Patel** is a Senior Lecturer in the London School of Hygiene and Tropical Medicine and also holds honorary academic appointments with the Institute of Psychiatry, London; University of Melbourne, Australia; and the Sri Chitra Tirunal Institute for Medical Sciences & Technology, Kerala. He has been based in Goa, India, since 1996 where he has been involved in building community based institutions to provide mental health services, strengthening research capacity, and conducting relevant mental health research in partnership with Goan NGOs.



Australian and international research teams addressing mental public health issues. A strategic plan is currently being developed to provide a framework covering the mission of the division; priority activities; strategies for implementing and monitoring the program of work; and funding opportunities. It is anticipated that the final plan will be presented to The George Institute's Board by June 2004.

HIGHLIGHTS

- > Secondment of Professor Helen Herrman, University of Melbourne, and Dr Vikram Patel, London School of Hygiene & Tropical Medicine to develop a strategic plan for The George Institute's Mental Health Division
- > Participation in the Global Forum for Health Research Special Session on Mental Health, organised by the World Health Organization, with the aim of bringing together selected interested parties to discuss plans for promoting mental health research

RESEARCH

A key feature of research in this Division will involve building on The George Institute's expertise in conducting clinical trials, and exploring the synergies with other Institute studies in heart and vascular disease (e.g. depression and dementia associated with cardiovascular disease) and injury prevention and trauma care (e.g. psychological predictors and sequelae of injury, substance abuse, suicide prevention, head trauma).

POLICY

In consultation with The George Institute's policy and practice experts, the mental health program will explore a range of policy development and mental health promotion issues over the coming years. Some of the key themes include: working with other sectors in the interest of mental health; incentives to make markets work for mental health; indicators of mental health; and macroeconomics of mental health.

TRAINING

Formal and informal training and capacity-building activities are proposed as part of the Institute's mental health activities. This will include the development of specialist training in population-based mental health in the form of short courses and study units in degree programs for public health, health policy and epidemiology.



“The George Institute’s research, policy and training activities are supported by Corporate Services.”

Corporate Services

The George Institute’s research, policy and training activities are supported by Corporate Services, who provide the infrastructure and quality assurance required for the achievement of the Institute’s strategic goals.

The responsibilities of Corporate Services include finance and administration, human resources, communications and marketing, and information technology (including information technology support, data programming and data

management). Corporate Services are also responsible for building and facilities management and have overseen negotiations with both the University of Sydney and the Central Sydney Area Health Service in relation to the Institute’s accommodation needs. From May 2004, the Institute will be relocated from temporary accommodation at two university sites to new premises in the King George V Hospital within the Royal Prince Alfred Hospital campus.

FINANCE AND ADMINISTRATION

The Finance and Administration team has grown over the past year in order to provide support to all areas of The George Institute. Financial reporting, with detailed analysis and commentary, has been developed for all divisions and projects, and includes non-financial Key Performance Indicators. Budgets are developed in line with the strategic direction of the Institute and monthly results are reported against approved budgets. Administrative procedures have been strengthened and implemented to support the efficient operation of the Institute.

- > **Graham Lawrence** is General Manager and Company Secretary of The George Institute. He is a graduate of the University of Technology, Sydney, with a Bachelors degree in Business, and is a Certified Practising Accountant. He has held various accounting positions in large commercial organisations, including IBM, News Limited and Foxtel, as well as management roles within the private health sector. Graham joined the Institute in March 2002, bringing with him many years of commercial experience that has included the successful application of commercial principles to the operation of not-for-profit entities.



HUMAN RESOURCES

The George Institute has continued to expand its staff, with a further 40% increase in the last year and further increases expected over the next two years. Human Resources (HR) has expanded its resource base to service the increasing demand and is further streamlining processes to ease the administrative burden created by such significant growth. This has allowed the HR team to focus on more critical strategic and operational issues moving forward, including strategies to recruit and retain the best staff, and to align performance management and remuneration structure with the organisation's overall goals.

COMMUNICATIONS AND MARKETING

A strategic analysis of the Institute's marketing needs was conducted in the first half of the year, the most important outcome being the decision to rename and re-brand the organisation. The analysis also resulted in the appointment of a Public Affairs Manager who will assist the Institute in communicating its mission and values to the wider community. Media attention for The George Institute's

HIGHLIGHTS

- > Implementation of a financial, contract and service management system to provide the Institute's clinical trials and other research projects with accurate and detailed reporting
- > Development of a strategy to recruit and retain the best staff at the Institute
- > Market review and re-branding of the Institute under its new identity as The George Institute for International Health
- > Employment of a Public Affairs Manager to further develop and implement the Institute's communications strategies

work in Australia and overseas continues to be positive and extensive, and Institute staff members are increasingly sought for comment by the media as international experts.

INFORMATION TECHNOLOGY

The focus of the Information Technology (IT) team in the past year has been to increase the quality, stability, functionality and reliability of

the Institute's systems. This involved the upgrading of most key systems and the introduction of a Service Desk, ensuring a fast and accountable level of service important to all Institute programs and projects. Further developments and improvements continue to be made to the electronic data capture systems, increasing the Institute's ability to efficiently implement new studies and projects globally, and allowing the pursuit of its strategic and research goals.

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Federica Barzi

A comparison of lipids and lipid ratios as predictors of coronary death in the Asia Pacific region. 5th International Congress on Coronary Artery Disease. Florence, Italy, October 2003.

Stephanie Blows

Injury workforce development in Australia, New Zealand, and South East Asia. Research and Development Advisory Committee (RADAC) Symposium. Sydney, Australia, October 2003.

Lifesavers and revenue raisers: the influence of the media on public perceptions of speed cameras. Road Safety Research, Education, and Policing Conference. Sydney, Australia, September 2003.

Marijuana use and the risk of car crash injury. Road Safety Research, Education, and Policing Conference. Sydney, Australia, September 2003.

Marijuana use and the risk of car crash injury. Australasian Epidemiological Association Annual Scientific Meeting. Perth, Australia, September 2003.

Vehicle age and the risk of car crash injury. 1st Asia-Pacific Injury Prevention Conference. Perth, Australia, March 2003.

Magnolia Cardona

Andhra Pradesh Rural Health Initiative. Research Presentation Day, School of Public Health, The University of Sydney. Sydney, Australia, November 2003.

Alan Cass

Why do governments intervene in health? Royal Australasian College of Physicians Conference on the Ethics and Philosophy of Health Financing. Melbourne, Australia, November 2003.

Chronic kidney disease and vascular health in Indigenous Australians. 3rd Annual Baker Heart Research Institute and Institute for International Health Symposium. Sydney, Australia, October 2003.

Prevention and treatment of chronic kidney disease in indigenous peoples. Research and Development Advisory Committee (RADAC) Symposium. Sydney, Australia, October 2003.

John Chalmers

New strategies for hypertension control: more evidence for low-dose combination therapy. 20th National Congress of Italian Hypertension Society — Joint Symposium. Rome, Italy, October 2003.

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The ADVANCE Morbidity – Mortality Study in Diabetes: current status and baseline data. 20th National Congress of Italian Hypertension Society — Joint Symposium. Rome, Italy, October 2003.

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Rochelle Currie

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Marlene Fransen

Meta-analysis of exercise for OA knee: differential effect of one-to-one treatments, exercise classes and home programs. Osteoarthritis Research Society International. Berlin, Germany, October 2003.

Exercise and osteoarthritis. Annual Scientific Meeting, Australian Rheumatology Association. Sydney, Australia, May 2003.

Rachel Huxley

Does size at birth materially influence the levels of CHD risk factors in adult life? Controversial issues in SGA children. Rapallo, Italy, October 2003.

Maternal nutrition and its impact on the health of adult offspring. Australasian Epidemiological Association Annual Scientific Meeting. Perth, Australia, September 2003.

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Sue Ingram

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Rebecca Ivers

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Rohina Joshi

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Sing Kai Lo

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Live alone with your partner or have children before 55: Results from the Australian Unity Wellbeing Index. 3rd Annual Conference of the Australian Psychological Society. Melbourne, Australia, November 2003.

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Stephen MacMahon

Blood Pressure Lowering Treatment Trialists' Collaboration: second cycle of overviews. Global chapter meeting of the Vascular Biology Working Group. Orlando, USA, November 2003.

Blood Pressure Lowering Treatment Trialists' Collaboration: second cycle of overviews. Hypertension and CME Symposium. Orlando, USA, October 2003.

Results of the second cycle of the Blood Pressure Lowering Treatment Trialists' Collaboration. NHLBI-NIH Workshop. Bethesda, USA, October 2003.

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Bruce Neal

Are all blood pressure lowering drugs equal: evidence from meta-analysis of all randomised trials. Second Chinese Cardiac Study (CCS-2). Qingdao, China, November 2003.

Publications and Presentations

CONFERENCE PRESENTATIONS (CONT'D)

Large scale treatment trials in cardiovascular disease, II Heart & Vascular Diseases, III Rural Health Initiative in Andhra Pradesh. Research and Development Advisory Committee (RADAC) Symposium. Sydney, Australia, October 2003.

Rethinking blood pressure lowering. 3rd Annual Baker Heart Research Institute and Institute for International Health Symposium. Sydney, Australia, October 2003.

BP lowering — is it that simple? Stroke Society of NSW. Sydney, Australia, September 2003.

ALLHAT & ANBP2: where does the evidence now lie? 1) Panel discussion 2) Presentation. Symposium on hypertension and related diseases. Sydney, Australia, September 2003.

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ALLHAT & ANBP2: two major and important trials on anti-hypertensive therapy. NSW Cardiovascular Club. Sydney, Australia, March 2003.

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Significance of the final expected outcomes. HIPAID Nurse Collaborators meeting. Sydney, Australia, February 2003.

Turning science into clinical practice. Mayo Clinic — Thai Heart Cardiovascular Conference, in conjunction with the 35th Annual Scientific Meeting of the Heart Association of Thailand under the Royal Patronage. Pattaya, Thailand, February 2003.

Robyn Norton

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Anushka Patel

Risk factors for stroke in the Asia Pacific region. Research and Development Advisory Committee (RADAC) Symposium. Sydney, Australia, October 2003.

Implications of rising incidence of diabetes in the Asia Pacific region. Concord Hospital Physicians' Workshop. Sydney, Australia, August 2003.

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Progress in reducing vascular disease in high-risk patients. Seminar for Advanced Trainees in Medicine. Sydney, Australia, June 2003.

Progress in reducing vascular disease in high-risk patients. Seminar for Advance Trainees in Medicine. Melbourne, Australia, June 2003.

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Vlado Perkovic

SHARP study planning meeting and Arterial Stiffness substudy. American Society of Nephrology. New York, USA, November 2003.

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InterAsia: prevalence of renal impairment in Thailand. Research and Development Advisory Committee (RADAC) Symposium. Sydney, Australia, October 2003.

Mick Reid

State of play of private involvement in health systems in the Asia and Pacific region. Innovation: Public & Private Sector Case Studies for High Performance Health Insurance and Health Care Providers. 8th Annual Summit on leadership in public-private partnerships for health. Miami, USA, December 2003.

Australian Health Care Agreements. Epinet Seminar Series. Westmead Hospital. Sydney, Australia, November 2003.

How do we reform health financing in Australia and New Zealand? Research and values to policy and practice. 3rd Health Services and Policy Research Conference, Royal Australasian College of Physicians Conference on the Ethics and Philosophy of Health Financing. Melbourne, Australia, November 2003.

Therapeutic goods administration. Clinical Trials Workshop. Sydney & Melbourne, Australia, November 2003.

Impact of the private sector on health and welfare systems. 3rd Global Symposium on Health and Welfare Development in the 21st Century. Kobe, Japan, October 2003.

Scope for Australian engagement. Global Health and Foreign Policy Symposium. Sydney, Australia, September 2003.

International and national aspects of resource allocation in healthcare. Would a change in distribution of Federal funds delivered to private and public systems improve healthcare? 43rd Annual Princess Alexandra Hospital Week. Brisbane, Australia, September 2003.

Australian Healthcare Agreements. Current policy and future directions. Royal Australian College of Medical Administrators. Sydney, Australia, August 2003.

Indigenous health: moving from rhetoric to reality. A 10 year plan for improving Aboriginal and Torres Strait Islander health. Sydney, Australia, July 2003.

Impact of the private sector on health and welfare systems. Health Reform Seminar Series. Dalian, China, March 2003.

Anne-Marie Richens

A randomised trial of the effects of an additional communication strategy on recruitment into a large-scale clinical trial. Australasian Epidemiological Association Annual Scientific Meeting. Perth, Australia, September 2003.

Mark Stevenson

The need for evidence based practice in the 21st Century. 20th Australasian Podiatry Conference. Perth, Australia, January 2003.

Cell phones and car crashes: what's the risk? Center for Injury Research and Control, the University of Pittsburgh, USA, November, 2003.

Ronald Stolk

The prevalence and management of diabetes mellitus in Thai adults. The International Collaborative Study of Cardiovascular Disease in Asia (InterASIA). International Diabetes Epidemiology Group-European Diabetes Epidemiology Group (IDEG-EDEG). Tours, France, August 2003.

Fiona Turnbull

Blood Pressure Trialists' Collaboration – Overviews 2003. Research and Development Advisory Committee (RADAC) Symposium. Sydney, Australia, October 2003.

Blood Pressure Trialists' Collaboration – Overviews of randomised trials of blood pressure lowering agents. Australasian Epidemiological Association Annual Scientific Meeting. Perth, Australia, September 2003.

Mark Woodward

Homocysteine and cardiovascular disease. Lipitor Specialist Meeting. Gold Coast, Australia, July 2003.

New risk factors for CHD. Lipitor Specialist Meeting. Gold Coast, Australia, July 2003.

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What can we learn from the epidemiology of stroke in Pacific Rim countries? 2nd Asia Pacific Scientific Forum, American Heart Association. Honolulu, USA, June 2003.

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The PROGRESS Study: contribution to evidence-based medicine. The Asia Pacific Cohort Studies Collaboration. Cardiovascular Epidemiology Meeting, Heart Association of Thailand. Bangkok, Thailand, January 2003.

The effects of diabetes mellitus on the risks of major cardiovascular diseases and death in the Asia-Pacific region. 5th Cardiovascular Medley, Bangkok Heart Association. Samui, Thailand, January 2003.

Junhua Zhang

Road traffic injury and its prevention in China. 1st Asia Pacific Injury Prevention Conference. Perth, Australia, March 2003.



Board of Directors

Mr Peter Burrows, AO

Peter Burrows is Chairman of China Region Investments Limited and is a Director of the Stocks Convertible Trust plc. He is currently the President of the Medical Foundation of the University of Sydney and the President of the University's Power Institute Foundation for Art & Visual Culture. Other charitable activities include his role as the Governor of the Australian Archaeological Institute at Athens, Chairman of the Royal Botanic Gardens Foundation and a Member of the Investment Advisory Committee at the Australian National University.

Previously Peter has been Honorary Treasurer of The Royal Alexandria Hospital for Children, Chairman of the New Children's Hospital Appeal and Director of the Northern Clinical School Appeal, Royal North Shore Hospital. Peter has sat on boards of such listed companies as Garratts Ltd, The Australian Stock Exchange, FTR Holdings Ltd and Winepros Ltd.

Professor John Chalmers, AC

John Chalmers is Emeritus Professor of Medicine at the University of Sydney and Head of the Research Advisory Unit within The George Institute for International Health.

He is currently Chairman of the National Heart, Stroke and Vascular Health Strategies Group for the Commonwealth Government of Australia. He is also a member of the Executive Committee of the American Society for Hypertension and an ex-officio member of the executive council for the International Society for Hypertension.

Until mid-2002, John was Chairman of Research Development for the Faculty of Medicine at the University of Sydney. He was also previously Chairman of the National Health and Medical Research Council of Australia and President of the Royal Australasian College of Physicians.

Mr Graham Cowley

Graham Cowley is Founder and Principal of Cowley Hearne Lawyers.

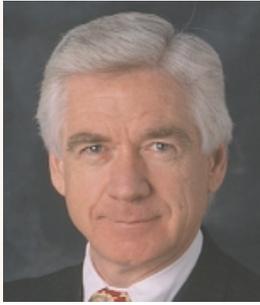
In 1993, Graham initiated Cowley Hearne's membership of Meritas, the world's largest group of independent commercial law firms, of which he was, until recently, a Vice-Chair. He is a member of the International Bar Association and the American Chamber of Commerce and was formerly Chairman of the NSW Small Business Development Council. His notable achievements include being Founder of the Australian Law Marketing Association and the North Sydney Business Forum.

He is currently Chair of the Board of the Epilepsy Association and a member of the Kokoda Track Foundation.

Mr Don Green

Don Green is a Fellow Chartered Accountant, a Fellow CPA and is a Senior Partner in Ernst & Young Australia. He is a Visiting Fellow at the Centre for Studies in Money, Banking and Finance at Macquarie University.

Don played a key role in the formal establishment of the Friends of the Mater Foundation for the Mater



Misericordiae Hospital and is a member of the Foundation's Investment Advisory Committee. Until recently Don was a Director of the Australian Council for Infrastructure Development and has participated on professional committees of the Institute of Chartered Accountants over a number of years.

Professor Stephen MacMahon

Stephen MacMahon is a Principal Director of The George Institute for International Health.

He is also Professor of Cardiovascular Medicine and Epidemiology at the University of Sydney, Honorary Consultant Epidemiologist at the Royal Prince Alfred Hospital and Clinical Professor of Medicine at the University of Auckland.

Stephen is Chair of the Partnership Council of the Initiative for Cardiovascular Health Research in Developing Countries (IC Health) – a development of the Global Forum for Health Research and the World Health Organization. He is also Chair of the Research Committee of the World Heart Federation and a member of the Council of the International Society of Hypertension.

Professor Robyn Norton

Professor Robyn Norton is a Principal Director of The George Institute for International Health.

She is also Professor of Public Health in the School of Public Health at the University of Sydney and Honorary Consultant Epidemiologist at the Royal Prince Alfred Hospital. Robyn holds Honorary Professorships at Shenyang Medical College, China and the University of Auckland, New Zealand.

Robyn is Chair of the Road Traffic Injuries Research Network of the Global Forum for Health Research, Chair of the Research Committee of the Australasian Trauma Society, and a member of the board of the International Society for Child and Adolescent Injury Prevention.

Dr Paul Torzillo, AM

Paul Torzillo is a Senior Respiratory Physician and Intensive Care Physician at the Royal Prince Alfred Hospital in Sydney and is the Clinical Director for Respiratory and Critical Care Services at the Central Sydney Area Health Service. Paul is also a Clinical Associate Physician in the Department of Medicine at the University of Sydney and has had an active role in teaching.

With a long-term interest in Aboriginal Health, Paul has worked for Nganampa Health Council in the north-west corner of South Australia since 1984. He is currently the Medical Director of that organisation, and acts as a consultant to both the Commonwealth and Northern Territory governments in the area of Aboriginal health.

Paul has also worked with the WHO Division of Child and Adolescent Health.

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Staff Individual Awards

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2003 Medical Journal of Australia/Wyeth Award for best research published in the Medical Journal of Australia

John Chalmers

Honorary Life Member, Turkish Society of Hypertension

Centenary Medal for Service to Australian Society and Science in Medical Research, Department of Prime Minister and Cabinet

Rachel Huxley

John Chalmers Post-Doctoral Award, The George Institute for International Health

SESQUI Post-Doctoral Award, University of Sydney

Post-Doctoral Award, Australian Foundation for High Blood Pressure

Rohina Joshi

International Post Graduate Award (IPA), University of Sydney

International Postgraduate Research Scholarship (IPRS), Department of Education Science and Technology, Government of Australia

Bruce Neal

Nancy Ross Partridge Research Award for "Public Health & CVD: Nutritional Studies, Clinical Trials and CVD Initiatives in the Developing World", National Heart Foundation of Australia

Staff of the Institute

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