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The George Institute for International Health is committed to reducing the global burden of disease through high-quality research, health policy development and capacity building.

By bridging the gap between researchers, policy makers and practitioners, The George Institute strives to find and implement novel solutions to the growing threats posed by cardiovascular diseases, injuries, and neuropsychiatric conditions.

The George Institute's goals are to develop prevention and treatment programs that are affordable and appropriate not only for higher income countries, but also for lower income countries such as those in the Asia-Pacific region.
The benefits of health care, locally and internationally, are in no small part dependent on the interplay between research, policy and practice. Increasingly, international agencies and regional health authorities recognise the importance of basing health policy and practice on sound evidence from research. The George Institute is at the centre of this nexus, facilitating evidence-based health care reform at home and abroad in the quest for the most effective, affordable and equitable health care.

During 2004, The George Institute expanded its policy development work in collaboration with governments in several countries. Locally, the Australian Health Ministers’ Advisory Council (AHMAC) commissioned The George Institute’s Policy and Practice Division to prepare a report titled, “Improving Indigenous Health: Remote Area Renal Services”. This report defined practical strategies aimed at improving remote Indigenous renal services. In China, The George Institute established a China Advisory Board, comprising key members of the Chinese government and other agencies, such as WHO, to advise on priority health issues in China and ways in which The George Institute’s work can best inform and influence these priorities.

The Institute has also continued to extend its research program. The Institute’s work on cardiovascular diseases and diabetes was recognised by the award of a $8.6 million Program Grant from the National Health and Medical Research Council (NHMRC). In addition, the Institute received a further NHMRC research grant in support of its work on the care of critically ill patients, and a NHMRC Capacity Building Grant focused on developing expertise in injury prevention and trauma care research. In total, Institute researchers were awarded over $3 million dollars in new peer-reviewed grants in 2004. Financially the Institute remains in a strong position, with total revenues of $25.5 million during the 2003/2004 financial year.

The Institute continued to receive core support from several institutions including the University of Sydney and Central Sydney Area Health Service*. A diverse range of organisations support the Institute including the NHMRC, State and Commonwealth Governments of Australia, the National Heart Foundation of Australia, the US National Institutes of Health, the National Roads and Motorists’ Association (NRMA), the Future Forum, the Medical Benefits Fund (MBF), the Byrraju Foundation (India), Servier and Pfizer. These organisations have contributed significantly to the Institute’s success and their support is greatly appreciated.

In 2004, The George Foundation for International Health was established. The George Foundation is an independent charitable foundation with the mission of raising funds for research and development programs in preventive health, health care delivery and health policy development in the Asia-Pacific region. The George Institute looks forward to working closely with The George Foundation.

The achievements of the Institute during the past year would not have been possible without the diligence, dedication and talent of its staff. I would particularly like to acknowledge the contributions of the Division

Peter Burrows, AO
Chairman
Directors and Acting Chief Operations Officer. Furthermore, the unswerving vision and commitment of the Institute’s Principal Directors, Professors Stephen MacMahon and Robyn Norton, with strong support from Emeritus Professor John Chalmers, AC, has once again resulted in the Institute’s success and growth. I would also like to sincerely thank our two principal partners, the University of Sydney and the Central Sydney Area Health Service, for their ongoing support of The George Institute and its vision.

I would like to take this opportunity to pay special thanks to two members of the Board whose terms ended this year. All at the Institute have appreciated the contribution of Professor John Chalmers who played a fundamental role in the establishment of the Institute. His work on the Board has contributed enormously to the growing strength of the Institute. Equally the dedication and enthusiasm of Mr Graham Cowley has been appreciated and his legacy in terms of new members appointed to the Board will ensure an ongoing contribution.

The two new Board members appointed in 2004 were Professor Andrew Coats, Dean of the Faculty of Medicine at the University of Sydney and Mr Peter Church, OAM, co-founder and Managing Director of Asean Focus Group. They bring a wealth of academic and business experience to the Board.

I take pleasure in presenting this Annual Report. On behalf of the Board of Directors, I congratulate The George Institute’s staff and our international collaborators on their many achievements in 2004 and their continued commitment to reducing the global burden of common chronic diseases and injuries.

Peter Burrows, AO
Chairman

Increasingly, international agencies and regional health authorities recognise the importance of basing health policy and practice on sound evidence from research.

* The Central Sydney Area Health Service will amalgamate with South Western Area Health Service in January 2005 to form Sydney South West Area Health Service.
INSTITUTE HIGHLIGHTS

- **Opening of The George Institute office in Beijing** and launch of the China - Australia Partnership for Health in the People's Great Hall

- **Program Grant for cardiovascular research** received from the National Health and Medical Research Council (NHMRC) (AU$8.6 million over five years)

- **The establishment of a Neurological Diseases and Ageing Division**

- **The SAFE Study findings published** in the *New England Journal of Medicine* and recognised as a “landmark” trial in intensive care

- **A Capacity Building Grant in Population Health Research** awarded by the NHMRC (to be conducted collaboratively with the University of New South Wales)

- **Recruitment of over 20,000 young drivers to the DRIVE Study** - one of the world’s largest cohort studies of young drivers

- **Presentation of new findings from the Asia-Pacific Cohort Studies Collaboration (APCSC)** at a collaborators’ meeting in Beijing - the findings received significant media coverage across the Asia-Pacific region

- **The George Foundation for International Health** established with its mission to secure funds for The George Institute’s research, policy and training programs in preventive health, healthcare delivery and health policy development
The past year has seen The George Institute for International Health continue to grow in both size and scope. Operating from larger premises in Sydney and with a new office established in Beijing, China, our initiatives during 2004 reflect and reinforce our commitment to reducing the global burden of non-communicable diseases and injuries.

The George Institute’s achievements in 2004 included a major expansion of its activities in the People’s Republic of China. In April, the China-Australia Partnership for Health, a collaboration between Peking University Health Science Center and The George Institute, was launched in Beijing, in the Great Hall of the People, followed by a two-day scientific symposium. Since then, a number of new collaborative projects have commenced, as outlined elsewhere in the report.

The Institute’s heart and vascular researchers had a highly successful year, with the award of a prestigious Program Grant from Australia’s National Health and Medical Research Council (NHMRC). The team will use the five-year grant to investigate new and emerging causes of heart and vascular disease, and to develop novel applications of established treatments.

In collaboration with colleagues at both the University of New South Wales and the University of Sydney, the Institute also secured a NHMRC Capacity Building Grant in Population Health Research to train graduates in injury prevention and trauma care research. This is the first time that a Capacity Building Grant has been awarded to an injury research team.

A number of studies reached significant milestones during 2004. The findings from the Saline vs Albumin Fluid Evaluation (SAFE) Study, the largest ever study conducted in intensive care, were published in the New England Journal of Medicine. Similarly, key findings from the Asia-Pacific Cohort Studies Collaboration (APCSC) were published in a range of prestigious scientific journals, and received extensive media coverage in China and other countries in the region.

A significant new development during the year was the establishment of the Neurological Diseases and Ageing Division, with the appointment of Professor Craig Anderson as Director. The establishment of this Division will enable the Institute to further develop its research in disorders such as stroke and dementia. Important steps were also made towards the establishment of a Mental Health Division. With the support of the Central Sydney Area Health Service* and the University of Sydney, funding is now available for the appointment of a Professor/Director and other key staff, to commence in 2005/2006.

In closing, we would like to thank all those who contributed to the growth and success of The George Institute in 2004. Our achievements over the past year would not have been possible without the strong commitment of staff, the support of our Board members, especially Peter Burrows and Don Green, and the strategic advice provided by our Research and Development Advisory Committee. With continuing support from all our partners and supporters, 2005 promises to be an equally productive year.

Stephen MacMahon  
Principal Director

Robyn Norton  
Principal Director

* The Central Sydney Area Health Service will amalgamate with South Western Area Health Service in January 2005 to form Sydney South West Area Health Service.
Established in 1999 as an independent charitable organisation, The George Institute for International Health is formally associated with both the University of Sydney and the Central Sydney Area Health Service.

The activities of The George Institute are overseen by a Board of Directors. An independent Research and Development Advisory Committee (RADAC) reviews and provides advice on the Institute’s research, policy and capacity development activities. In 2004, a China Advisory Board was also established, to provide specific advice to the Institute on its research, policy and capacity development activities in China.

The George Institute is headed by two Principal Directors, who are responsible to the Board. An Executive Committee, comprising the Principal Directors, three Division Directors and the Chief Operations Officer oversees the activities of the Institute.
Board of Directors

The George Institute Board of Directors provides governance and ongoing support to the Executive. It advises on the Institute’s strategic directions, investment and expenditure, and executive administration and management.

Research and Development Advisory Committee

A Research and Development Advisory Committee (RADAC) conducts a bi-annual review of the Institute’s research and development activities.

Members of RADAC include international authorities on non-communicable disease 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.

China Advisory Board

The China Advisory Board meets annually and provides advice to the Institute on key health and policy issues in China, to facilitate both the planning of new projects and the implementation of research findings into policy and practice.

Members of the China Advisory Board comprise individuals from the University and government sectors, as well as multilateral organisations.

The University of Sydney

A Memorandum of Understanding (MoU) formally links The George Institute with the University of Sydney. The MoU designates the Institute as a research department of the University with primary associations with the Central Clinical School and the School of Public Health. 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 relocated to the King George V Building within the Royal Prince Alfred Hospital campus.

Established in 1999 as an independent charitable organisation, The George Institute for International Health is formally associated with both the University of Sydney and the Central Sydney Area Health Service.
GLOBAL COLLABORATORS

**Action in Diabetes and Vascular Disease: Preterax and DiaMicon MR Controlled Evaluation (ADVANCE) Collaborators**
University of Melbourne, Australia; University of Auckland, New Zealand; Chinese Academy of Medical Sciences, Beijing, China; Imperial College, London, UK; University of Montreal, Canada; Utrecht University, The Netherlands; and 215 clinical centres in 20 countries worldwide

**Clinical Pathways for Acute Coronary Syndromes in China (CPACS) Collaborators**
The Chinese Cardiology Society, China; Peking University Health Science Center, Beijing, China

**China Salt Substitute Study (CSSS) Collaborators**
Fu Wai Hospital, Beijing, China; Clinical Trials Research Unit (CTRU), Auckland, New Zealand

**Study of Heart and Renal Protection (SHARP) Collaborators**
University of Oxford, UK; Australian and New Zealand Society of Nephrology; Clinical Research Centre, Kuala Lumpur Hospital, Malaysia

**Andhra Pradesh Rural Health Initiative (APRHI) Collaborators**
Byrraju Foundation, Hyderabad, India; CARE Hospital, Hyderabad, India; Centre for Chronic Disease Control, New Delhi, India

**Obesity in Asia Collaboration Collaborators**
International Obesity Task Force, London, UK; University of Utrecht, The Netherlands; Department of Human Nutrition, University of Sydney, Australia

**Saline vs Albumin Fluid Evaluation Study (SAFE) Collaborators**
Australian and New Zealand Intensive Care Society Clinical Trials Group; Australian Red Cross Blood Service; 16 hospitals around Australia and New Zealand

**New Zealand Blood Donors’ Health Study Collaborators**
University of Auckland, New Zealand; University of Otago, Dunedin, New Zealand

**Clinical Pathways for Acute Coronary Syndromes in China (CPACS) Collaborators**
The Chinese Cardiology Society, China; Peking University Health Science Center, Beijing, China

**Andhra Pradesh Rural Health Initiative (APRHI) Collaborators**
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**New Zealand Blood Donors’ Health Study Collaborators**
University of Auckland, New Zealand; University of Otago, Dunedin, New Zealand
The George Institute is acutely aware of the importance of international collaborations in achieving its goal of reducing the global burden of non-communicable disease and injury. It has formed international networks and long-term partnerships with universities, hospitals and research institutes across the globe.

Working in conjunction with its research partners, the Institute draws on a wide range of expertise as it seeks to identify effective and affordable prevention and treatment strategies.

In 2004, The George Institute collaborated with over 300 hospitals or research groups in 30 countries. These projects simultaneously involve dozens of investigators in numerous countries, working on projects with as many as half a million participants.

Other projects rely on the daily contributions of thousands of healthcare workers worldwide.

The Institute has Memoranda of Understanding with the University of Sydney, the Central Sydney Area Health Service and the Brain and Mind Research Institute in Australia, Johns Hopkins University Bloomberg School of Public Health in the United States, and the Ministry of Health of the People’s Republic of China and Peking University Health Science Center in China. The Institute’s office in Beijing, established in 2004, supports a range of cooperative projects bringing together Chinese and Australian policy makers and researchers.

The George Institute also works closely with international agencies including the World Health Organization, the World Bank and the Global Forum for Health Research.
The principal goal of the Heart and Vascular Division is the discovery and implementation of new strategies for the prevention of stroke, heart attack and other major vascular diseases. Stroke and heart attack represent the two leading causes of death worldwide, responsible for more than ten million deaths annually. The burden of ill health caused by these conditions is projected to rise substantially over the next few decades, particularly in developing countries.

New initiatives to discover ways of improving cardiovascular health are a priority for both developed and developing countries. The 2002 World Health Report highlighted the huge potential of more effective treatment and prevention strategies for vascular disease. The leading risk factors for stroke and heart attack are blood pressure, tobacco, cholesterol and obesity and each is among the top ten causes of the total global disease burden. Interventions that seek to reduce population levels of blood pressure and cholesterol by just a few percent, and individualised interventions targeting high-risk patients, have been identified as particularly promising strategies for cost-effective disease prevention.

During 2004, the Heart and Vascular Division initiated a number of new projects in low and middle-income countries of the Asia-Pacific region. There have been several important successes in this regard, culminating in the establishment of major new projects in China and India. Further expansion of the Division’s activities in the region is anticipated over the coming year. A specific priority is the commencement of primary health care projects in India designed and implemented according to World Health Organization (WHO) recommendations.

In addition to the initiation of new projects, the Division has continued to make excellent progress with established studies. In particular, the Action in Diabetes and Vascular Disease: Preterax and Diamicron MR Controlled Evaluation (ADVANCE) Study is now well into the follow-up phase for its 11,140 participants. The Study of Heart and Renal Protection (SHARP) is currently recruiting participants in more than 50 centres in Australia, New Zealand, Malaysia and Thailand. The mortality surveillance component of the Andhra Pradesh Rural Health Initiative (APRHI) has documented more than 1,300 deaths in...
rural India, providing the first evidence about the causes of death in rural Andhra Pradesh. In addition, the Dietary Intervention in e-shopping Trial (DIeT) has completed follow-up of the 500 participants who took part in a randomised trial studying the effectiveness of the Internet for delivering messages about healthy eating habits to Australian consumers.

The outlook for the Heart and Vascular Division over the next few years remains extremely positive. The Division has consolidated its success in securing major grants from the National Health and Medical Research Council (NHMRC) with the award of a prestigious Program Grant that will provide AU$8.6 million dollars of core funding support over the next five years. With this support, the Division plans to develop a new program of work investigating the potential of fixed dose combinations (‘polypills’) for the prevention of vascular disease in a range of clinical and geographic settings. The success and growth of the Division has been greatly facilitated by the dedication of all members of the team, and will be further enhanced by the recent appointment of new research fellows and program administration staff.

HIGHLIGHTS

- Completed recruitment to the China Salt Substitute Study (CSSS), setting the stage for the discovery of a new way of managing blood pressure for hundreds of millions of Chinese
- Secured a five-year NHMRC Program Grant worth AU$8.6 million which will underpin the development of new work on the use of fixed dose combinations (‘polypills’) for the prevention of vascular disease
- Secured funding for and established new glucose control initiatives as part of the Action in Diabetes and Vascular Disease: Preterax and Diamicron MR Controlled Evaluation (ADVANCE) Study, significantly boosting progress towards the study’s goals. Also completed baseline evaluations of the ADEPT (heart function) and ADREM (eye disease) substudies of ADVANCE, making these among the largest ever investigations of heart and eye complications in diabetes
- Proved the feasibility of providing dietary advice to large numbers of consumers, at low cost and in real time through the Dietary Intervention in e-shopping Trial (DIeT)
- Trained 75 primary health care workers participating in the Andhra Pradesh Rural Health Initiative (APRHI) in the conduct of verbal autopsies, uncovering the huge burden of cardiovascular disease in their communities
- Conducted a major new analysis from the Blood Pressure Lowering Treatment Trialists’ Collaboration (BPLTTC) which provided fundamental new information for guidelines directing the use of blood pressure lowering agents among patients with diabetes

Studies in the Division:

- Action in Diabetes and Vascular Disease: Preterax and Diamicron MR Controlled Evaluation (ADVANCE)
- Andhra Pradesh Rural Health Initiative (APRHI)
- 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)
- Heart Disease in Indians Study (HINDI)
- Internet-based Cholesterol Assessment Trial (I-CAT)
- Perindopril Protection against Recurrent Stroke Study (PROGRESS)
- Study of Heart and Renal Protection (SHARP)
ACTION IN DIABETES AND VASCULAR DISEASE: PRETERAX AND DIAMICRON MR CONTROLLED EVALUATION (ADVANCE)

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

Project Managers
Helen Monaghan, Samantha Flynn

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

Funding Agencies
Servier Laboratories; NHMRC

Aim
To determine the effects of routine blood pressure lowering and 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 matching placebo and to either an intensive modified-release gliclazide-based glucose lowering regimen (target HbA1c ≤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 is now in the follow-up phase. Final results are expected to be available in early-2007.

ANDHRA PRADESH RURAL HEALTH INITIATIVE (APRHI)

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

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

Funding Agencies
The George Foundation for International Health; Byrraju Foundation; Australian Government Department of Education, Science and Technology; University of Sydney; National Heart Foundation of Australia; NHMRC; Initiative for Cardiovascular Health Research in Developing Countries (IC Health)

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

Methods
This project comprises three main components:
1. a mortality surveillance system to establish the main causes of death
2. a disease and risk factor survey to establish the main non-fatal illnesses and their principal causes
3. trials of primary health care interventions designed to address the identified causes of disease.

Status/Results
A strong collaboration has been established between the partners. The mortality surveillance system has been incorporated into the existing primary health system and all deaths in 45 of the participating villages have been recorded over the last 12 months. Streamlining and expansion of the system to further
villages is currently ongoing. A pilot survey for the disease and risk factor survey has also been completed with the main survey of 4,000 individuals anticipated to commence in early 2005. The first intervention project addressing cardiovascular disease will start soon afterwards.

**BLOOD PRESSURE Lowering Treatment Trialists’ Collaboration (BPLTTC)**

**Institute Investigators**
Fiona Turnbull, Bruce Neal, Charles Algert, Stephen MacMahon, Mark Woodward, John Chalmers, Hisatomi Arima, Vlado Perkovic

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

**Funding Agencies**
Analyses funding: NHMRC; National Heart Foundation of Australia
Sponsors of collaborator meetings:
AstraZeneca; Bayer; Boehringer-Ingelheim; Merck; Pfizer; Servier; Solvay

**Aim**
To provide reliable evidence about the effects of different classes of blood pressure lowering drugs on cardiovascular mortality and morbidity in at risk patients.

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**New evidence about the main causes of death in rural India**

Since mid-2003, the Andhra Pradesh Rural Health Initiative (APRHI) has collected detailed information about more than 1,300 deaths that have occurred in 45 villages participating in APRHI. These data show that rural India is now suffering major new problems from chronic conditions, particularly cardiovascular disease and injury.

The mortality surveillance system used for APRHI is based on the verbal autopsy tool. This system is well established and uses an interview with friends and relatives of the deceased person to collect key pieces of information that then allow specialist reviewers to assign a cause of death. A unique aspect of APRHI is the incorporation of data collection using the verbal autopsy tool into the routine work of local primary healthcare workers. This has proved very successful, with high-quality data being collected for over 90% of all deaths. In addition, data collection is achieved at low cost because the work is done by health workers who perform verbal autopsies in the field as part of their usual role.

The low cost of the system means that it is sustainable and it should be possible to monitor the causes of death in these villages over a prolonged period. With plans to semi-automate the cause of death assignment process using computerised systems, it is hoped that the mortality surveillance system will provide continuous data about the changing patterns of death in these populations for many years to come. The system may provide a model for cause of death recording in other parts of India and in other low-income settings.
Prospective-designed overviews (meta-analyses) of major blood pressure lowering trials.

The collaboration has reported results for the first of its pre-specified subgroup analyses treatment effects by diabetes status. These results showed that the short-to-medium term effects of the major classes of blood pressure lowering drugs on major cardiovascular events were broadly comparable for patients with and without diabetes. Work is continuing on the other subgroup analyses which will define the effects of different types of treatments by age groups, sex and blood pressure levels. The results of these analyses are expected to be available in 2005.

**CHINA SALT SUBSTITUTE STUDY (CSSS)**

**Institute Investigators**
Nicole Li, Bruce Neal, Rachel Huxley

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

**Funding Agencies**
National Heart Foundation of Australia; University of Sydney; Foundation for High Blood Pressure Research; China Capital Medical Science Development Fund

**Aim**
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 have been recruited. These individuals will be followed up for a 12-month period.

**Status/Results**
Participant recruitment was completed in September 2004. Follow-up is now under way and expected to be completed by August 2005. Preliminary results should be available by October 2005.

**CLINICAL PATHWAYS FOR ACUTE CORONARY SYNDROMES IN CHINA (CPACS)**

**Institute Investigators**
Anushka Patel, Fiona Turnbull, Lucy Chen

**Project Manager**
Dorothy Han

**Collaboration**
The Chinese Cardiology Society, Beijing, China; Peking University Health Science Center, Beijing, China

**Funding Agencies**
Sanofi-Aventis; Guidant Corporation

**Aim**
To develop, implement and evaluate clinical pathways for the management of acute coronary syndromes (ACS) in tertiary and non-tertiary centres in China.

**Methods**
Phase 1 - A prospective survey of the management of patients presenting with an ACS in about 40 hospitals in urban centres in China. The survey will include follow-up of 3,000 individuals for up to 12 months.

Phase 2 - Development, implementation and evaluation (using a cluster randomised trial design) of clinical pathways for ACS management. The pathways will be developed on the basis of data collected in Phase 1.

**Status/Results**
The inaugural CPACS Investigators’ Meeting was held in Beijing in October 2004, with over 70 delegates attending. Data collection for Phase 1 commenced in November 2004.
DIETARY INTERVENTION IN E-SHOPPING TRIAL (DiET)

Institute Investigators
HUANG Ling-ya, Bruce Neal, Federica Barzi, Rachel Huxley

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

Funding Agencies
Future Forum; National Heart Foundation of Australia

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

Methods
DiET is a randomised, double-blind, controlled trial in which 500 participants were enrolled and followed over a three-month period.

Status/Results
The study was completed in July 2004. Preliminary analyses suggest that the study intervention was highly successful in reducing the amount of saturated fat purchased by consumers. Further investigations of the data are ongoing with final reports anticipated for the first half of 2005.

HEART DISEASE IN INDIANS STUDY (HINDI STUDY)

Institute Investigators
Clara Chow, Bruce Neal

Collaboration
Department of Cardiology, Royal Prince Alfred Hospital, Sydney, Australia; Byrraju Foundation, Hyderabad, India; CARE Hospital, Hyderabad, India

Funding Agencies
Byrraju Foundation; NHMRC; Initiative for Cardiovascular Health Research in Developing Countries (IC Health); The George Foundation for International Health

Aim
To ascertain why South Asian Indians living in Australia have such disproportionately high levels of cardiovascular disease when compared with their counterparts living in rural India.

Methods
This study will comprise surveys of two South Asian Indian populations, the first from Andhra Pradesh, India, and the second, a migrant South Indian population from Sydney, Australia. The study will involve 600 people, 300 from each location. Cardiovascular risk factors and measures of atherosclerosis will be recorded in both and comparisons will be made between the two populations.

Status/Results
The Andhra Pradesh component of the study is well under way, with health assessment questionnaires and physical measurements already completed for 300 people. The Australian component of the study has commenced and will continue throughout 2005.

INTERNET-BASED CHOLESTEROL ASSESSMENT TRIAL (I-CAT)

Institute Investigators
Stephen Li, Bruce Neal, Nicola Lewis, Kathy Jayne

Collaboration
School of Public Health, University of Sydney, Australia; Lipid and Cardiovascular Risk Assessment Clinic, Westmead Hospital, Sydney, Australia; Lipid Clinic, Royal Prince Alfred Hospital, Sydney, Australia
Funding Agencies
Medical Benefits Fund (MBF); National Heart Foundation of Australia; Pfizer

Aim
To discover whether advice about cholesterol provided via the Internet can improve peoples’ cholesterol management.

Methods
I-CAT is a large-scale randomised controlled trial that is planned to include 3,500 participants. The primary outcome will be the number of participants that commence or increase their use of cholesterol-lowering medication following use of the study website. Participants will be recruited through media relations and advertising at hospitals, doctors’ surgeries, pharmacies, newsletters and through email networks.

Status/Results
Recruitment started in September 2004 and after one month there were 500 participants involved in the trial. Recruitment is expected to be completed by September 2005 and follow-up by the end of the year.

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, Beijing, China; National Cardiovascular Centre, Osaka, Japan; University of Glasgow, UK; Lariboisiere Hospital, Paris, France; Universita degli Studi di Milano,

Using the Internet to prevent coronary heart disease
Coronary heart disease (CHD) is the greatest single cause of death among Australians, accounting for about 30,000 deaths each year. The lifetime risk of suffering a CHD event is one in three for a 40 year old Australian woman and one in two for a 40 year old Australian man.

Dietary fat consumption is a leading cause of CHD and novel ways of improving the diets of Australians are urgently required. The Dietary Intervention in e-shopping Trial (DleT) defined an innovative approach to this problem. The trial, conducted in collaboration with a commercial Internet grocery shopping provider, tested whether it was possible to provide online advice during the shopping process that consumers could use to help them make healthier choices when grocery shopping.

DleT is a key study in several regards. First, it provides definitive evidence about a new way of modifying the behaviours of consumers. While the public health importance of factors such as food purchasing habits are widely recognised, clear evidence about how to modify such aspects of human behaviour is limited. Second, DleT is one of the largest ever randomised trials to formally evaluate the effectiveness of the Internet at delivering health messages. The Internet is widely cited as a source of health information but there is remarkably little high-quality data about how effective the Internet is in changing people’s behaviour.
Italy; Uppsala University, Sweden; and 172 other hospital and university centres worldwide

**Funding Agencies**
Health Research Council of New Zealand (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 was 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 exploratory analyses addressing a range of questions in the field of neurology are ongoing. The Epidemiology and Biostatistics Division is undertaking two further analyses using PROGRESS data: the first aims to establish the relationship between a number of novel risk factors and the risk of secondary cardiovascular disease amongst patients who survived a stroke or transient ischaemic attack; the second is a cost-benefit analysis of PROGRESS using UK cost data.

**STUDY OF HEART AND RENAL PROTECTION (SHARP)**

**Institute Investigators**
Bruce Neal, Alan Cass

**Project Manager**
Rochelle Currie

**Collaboration**
University of Oxford, UK; Australian and New Zealand Society of Nephrology; Clinical Research Centre, Kuala Lumpur Hospital, Malaysia

**Funding Agencies**
NHMRC; University of Oxford

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

**Methods**
SHARP is a randomised placebo-controlled trial that will recruit 9,000 individuals from about 200 centres worldwide. The George Institute is coordinating and overseeing recruitment and follow-up of about one-quarter of the study participants from 65 centres in Australia, New Zealand, Malaysia and Thailand. Mean follow-up for participants will be four and a half years.

**Status/Results**
Recruitment of patients commenced in Australia and Malaysia in October 2003, in New Zealand in February 2004 and in Thailand in August 2004. Recruitment will continue until mid-2005 with patient follow-up planned to continue through until 2007. The study results are expected to be available in 2008.
The Australian government endorsed injury prevention and control as a national health priority almost two decades ago, and it remains a leading cause of death and disability, not only in Australia, but also globally. Injuries impact on the lives of almost 25% of the world’s population.

The George Institute’s Injury Prevention and Trauma Care Division has developed a comprehensive research and training program focusing on four areas of significant priority: road traffic injuries; trauma management (including critical care management); musculoskeletal conditions; and injury to Indigenous Australians.

The Injury Prevention and Trauma Care Division’s leading road traffic injury study, DRIVE, is one of the world’s largest cohort studies, investigating risk factors for motor vehicle-related crashes and injuries among drivers aged 17 to 24 years. It reached a milestone in December 2004 by achieving its recruitment target of 20,000 young drivers. A world first study, investigating the relationship between mobile phone use and car crash resulting in injury, also completed recruitment at the end of 2004 and the results will be released in 2005.

Findings from the Saline vs Albumin Fluid Evaluation (SAFE) Study, a randomised trial involving the Australian and New Zealand Intensive Care Society’s Clinical Trials Group (ANZICS CTG), were published in the prestigious *New England Journal of Medicine*. The accompanying editorial described the study (the world’s largest trial conducted in intensive care) as a ‘landmark trial’.

During 2004, the Division began recruiting patients for another ANZICS CTG collaborative trial, the Normoglycaemia in Intensive Care Evaluation (NICE) Study, as well as for a large cohort study on mild traumatic brain injury.

Research in the musculoskeletal area continued through the Division’s Prevention of Ectopic Bone-related Pain and Disability after Elective Hip Replacement Surgery (HIPAID) Study. Over 900 individuals undergoing hip replacement surgery were recruited to the study and findings will be reported in 2005.

The Division focused for the first time on an area in which limited research has been undertaken, namely injuries incurred in New England.
by indigenous Australians. During the year, Stage one of an Injury Prevention and Safety Promotion for Urban Aboriginal Children and Youth in South Western Sydney project was completed.

Internationally, the Division has research initiatives in China, India and Vietnam. In China, a large observational study focusing on Motorcycle Helmet Use and Risk Factors for Helmet Non-use among Motorcyclists reached completion, while a new project focusing on seatbelt use was initiated. The China Seatbelt Intervention project is focused on increasing seatbelt restraint use in Guangzhou province. Working with the Ministry of Health and the Ministry of Public Security of the People’s Republic of China, as well as industry partners, this study will provide China with an opportunity to implement world best practice in road safety.

In collaboration with the University of New South Wales, The George Institute obtained a National Health and Medical Research Council (NHMRC) Capacity Building Grant in Population Health Research for injury prevention and trauma care research. The grant, worth AU$2.35 million over five years, is the first grant of its kind awarded to an injury prevention and trauma care research team.

In collaboration with the University of Sydney, the Division developed and implemented a nationally accredited one-semester web-based course. The online Injury Epidemiology, Prevention and Control Unit was offered as part of a Masters program through the University of Sydney, in collaboration with the University of Queensland and the University of Western Australia.

### HIGHLIGHTS

- The DRIVE Study one of the world’s largest cohort studies of young drivers - recruits 20,000 study participants
- Awarded a NHMRC Capacity Building Grant in Population Health Research (AU$2.35 million over five years) for injury prevention and trauma care research in collaboration with the University of New South Wales
- BP China funds China Seatbelt Intervention project
- Publication of findings from the world’s largest intensive care trial, Saline vs Albumin Fluid Evaluation Study (SAFE), in the *New England Journal of Medicine*
- Dr Rebecca Ivers and Professor Mark Stevenson join the editorial boards for the *Cochrane Injuries Group* and the international journal *Traffic Injury Prevention*, respectively
- Recruitment commences for the Normoglycaemia in Intensive Care Evaluation (NICE) Study, a large intensive care trial undertaken in hospitals throughout Australia and New Zealand
- Completed data collection for the Mobile Phone Use and Road Crashes Study
- Division staff receive a certificate of excellence from the University of Sydney’s Institute for Teaching and Learning for their online Injury Epidemiology, Prevention and Control Unit

### Studies in the Division:

- Auckland Car Crash Injury Studies (ACCIS)
- China Seatbelt Intervention
- Developing Return-to-Play Guidelines Following Mild Traumatic Brain Injury
- DRIVE: Young Driver Cohort Study
- Improving Vision to Prevent Falls: A Randomised Trial
- Mobile Phone Use and Road Crashes
- Injury Prevention and Safety Promotion for Urban Aboriginal Children and Youth in South Western Sydney
- Motorcycle Helmet Use and Risk Factors for Helmet Non-use among Motorcyclists in China
- Normoglycaemia in Intensive Care Evaluation (NICE)
- Prevention of Ectopic Bone-related Pain and Disability after Elective Hip Replacement Surgery (HIPAID)
- Saline vs Albumin Fluid Evaluation Study (SAFE)
- Surge Capacity of Patients in Emergencies (SCOPE) Study
- Systematic Reviews of Interventions in Motorcycle Safety
AUCKLAND CAR CRASH INJURY STUDIES
(ACCIS)

Institute Investigators
Robyn Norton, Stephanie Blows, Rebecca Ivers, Mark Woodward

Collaboration
School of Population Health, University of Auckland, New Zealand

Funding Agencies
Health Research Council of New Zealand (HRC); Transit New Zealand

Aim
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 randomly selected drivers, 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 study show that a range of factors are associated with increased risk 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
- drinking alcohol before driving
- reporting suicidal ideation (having thoughts of suicide or of taking action to end one’s life)
- carrying two or more passengers, if a young driver.

Papers on the role of unlicensed driving, seatbelt use, and marijuana use in car crash injury, and findings related to the cohort component of the study have been submitted for publication.

CHINA SEATBELT INTERVENTION

Institute Investigators
Mark Stevenson, ZHANG Junhua, Rebecca Ivers, Robyn Norton, Sing Kai Lo

Collaboration
Ministry of Health and Ministry of Public Security of the People’s Republic of China; Guangzhou Municipal Bureau of Public Security, China

Funding Agencies
BP China

Aim
To determine whether the implementation of a comprehensive intervention over 12 months, will lead to an increase in seatbelt restraint use in Guangzhou.

Methods
The evaluation of the intervention will be undertaken by adopting a controlled pre-test/post-test design. Prior to the implementation of the intervention, extensive baseline (pre-test) measures of the key outcomes will be undertaken in the intervention city (Guangzhou) and the control city (yet to be selected). These measures will be repeated at 12 months post-intervention. At six months post-intervention follow-up will be carried out to assess the sustainability of the intervention and an economic evaluation conducted to determine its cost-effectiveness.

Status/Results
Focus groups have been undertaken among professional drivers and traffic
police officers to investigate barriers to seatbelt use and enforcement. Observational surveys will be conducted in early 2005 to estimate the prevalence of seatbelt use, with a social marketing campaign targeted for implementation in mid-2005.

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

Institute Investigators
Mark Stevenson, Julie French

Collaboration
Injury Risk Management Research Centre and School of Safety Science, University of New South Wales, Sydney, Australia; 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

Aim
To determine the incidence and risk factors for 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 recruit 3,500 rugby union players, aged 16 to 35 years, over three years and follow them through one or more football seasons. Demographic information and recent past history of head injury, information on potential risk factors and results of a baseline neuropsychological test will be collected. Outcomes of interest will be the incidence of mTBI (as defined by the American Congress of Rehabilitation Medicine), the measure of time until intact cognitive functioning is achieved, and the time to return-to-play. Based on the findings from the study, national and international guidelines and policies will be developed for returning players to the game following mTBI.

Status/Results
A pilot study was completed in 2004 to test the data collection tools and study logistics. The main study will commence in the 2005 football season and run for a period of three years.

DRIVE: YOUNG DRIVER COHORT 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, University of New South Wales, Sydney, Australia; Roads and Traffic Authority of New South Wales (RTA), Australia

Funding Agencies
NHMRC; National Roads and Motorists’ Association (NRMA) Motoring and Services; Motor Accidents Authority of New South Wales (MAA)

Aim
To investigate the importance of potential determinants of motor vehicle-related crashes and injuries among young drivers aged 17 to 24 years, 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 provisional drivers in New South Wales aged 17 to 24 years. Baseline information from participants will be linked prospectively to information about motor vehicle infringements and crash and injury involvement that is routinely collected and stored in databases maintained by the RTA, New South Wales Health and the New South Wales Coroner.
INJURY PREVENTION AND TRAUMA CARE DIVISION

Status/Results
The DRIVE Study was launched by the New South Wales Minister for Roads, in February 2003. Recruitment for the baseline phase is now complete, with over 20,000 young drivers recruited. Baseline findings will be published in 2005. The resurvey phase of the study has now commenced, with participants being invited to complete a second survey one year after joining the study. The first outcome data linkage will occur in 2005.

Aims
Falls and visual impairment are common problems among older Australians: of people aged 75 years or older, 40% fall at least once a year and 20% of people in this age bracket have visual acuity worse than 20/40. Visual impairment is an important risk factor for 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 life; vision-related activities of daily life; 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

Improving Vision to Prevent Falls: A Randomised Trial
Institute Investigators
Rebecca Ivers
Collaboration
Centre for Education and Research on Ageing, Concord Hospital, Sydney, Australia; Centre for Vision Research, Westmead Hospital, Sydney, Australia
Funding Agencies
NHMRC

Improving access to education and training
During the second semester of 2004, The George Institute, through the University of Sydney, implemented a web-based (online) course in injury epidemiology, prevention and control. The one-semester course was developed with funding from the Australian Government Department of Health and Ageing and involved contributors from around Australia and overseas. While housed at the University of Sydney, the course was offered by the three consortium members: the University of Sydney, the University of Queensland and the University of Western Australia. Fourteen students completed the course, which included lively weekly discussions moderated by experts in the field. The students evaluated the course favourably and the course coordinator, Dr Suzanne McEvoy from the Injury Prevention and Trauma Care Division, received a certificate of excellence from the University of Sydney’s Institute for Teaching and Learning. Many Institute staff were involved in developing the course, preparing the website, contributing to the course content, moderating the online discussions and providing administrative support. The course will be offered again in second semester of 2005.
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 home modifications and aids). Falls during follow-up are ascertained with a falls calendar system.

**Status/Results**
Recruitment commenced in August 2002 and was completed in July 2004. A total of 617 participants were recruited. Follow-up will continue until June 2005.

**INJURY PREVENTION AND SAFETY PROMOTION FOR URBAN ABORIGINAL CHILDREN AND YOUTH**

**Institute Investigators**
Kathleen Clapham, Mark Stevenson

**Collaboration**
Yooroang Garang, School of Indigenous Health Studies, University of Sydney, Australia

**Funding Agencies**
Funding pending

**Aims**
This study investigates the impact of injury on Aboriginal children and youth in South Western Sydney. The study aims to:

- document the extent of injury in this population group
- increase understanding of suitable injury prevention strategies for this population
- propose community-based, collaborative local interventions, which will reduce injury among urban Aboriginal children and youth, and promote their safety and resilience.

**Methods**
The study employs quantitative and qualitative methodologies.

**Stage 1** is a descriptive epidemiological study, which documents the magnitude of the Aboriginal injury problem in the study setting by gathering routinely collected hospital data on all injury-related causes of death, hospital admission and hospital outpatient treatment.

**Stage 2** involves qualitative field research using an ethnographic approach. Data are collected from a diverse range of sources in order to build up an extensive description of injury and its impact, the contexts in which it occurs and contributing factors and safety issues.

**Stage 3** uses a community participatory approach to the design of an intervention. The findings and analysis from Stages 1 and 2 are fed back to the project reference group and community participants and inform the identification of partners and areas for intervention.

**Status/Results**
Ethical approval has been obtained and a local project reference group with a majority of Aboriginal participants formed. **Stage 1** has been completed. Known limitations on New South Wales Aboriginal health data and limited access to treatment lead to under-reporting of Aboriginal injury. A paper based on Stage 1 is currently being prepared. **Stage 2** is under way with face-to-face qualitative interviews being conducted with key informants from a wide range of government and non-government agencies, and community organisations. **Stage 3** has also commenced, with key stakeholders in an Aboriginal child safety partnership in South Western Sydney currently being identified.
MOBILE PHONE USE AND ROAD CRASHES

Institute Investigators
Mark Stevenson, Suzanne McEvoy

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

Funding Agencies
Insurance Institute for Highway Safety, USA; Motor Accidents Authority of New South Wales (MAA)

Aim
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. Data collection for the case-crossover study commenced in May 2002 and was completed in July 2004. Participants were drivers who were injured in a road crash and presented to one of three adult teaching hospitals in metropolitan Perth. Recruitment for the case-control study commenced in June 2003 and concluded in January 2004. Cases were injured drivers and controls where 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 analysis and report writing is under way. Results are expected to be available by mid-2005.

MOTORCYCLE HELMET USE AND RISK FACTORS FOR HELMET NON-USE AMONG MOTORCYCLISTS IN CHINA

Institute Investigators
ZHANG Junhua, Robyn Norton, Sing Kai Lo

Collaboration
Department of Noncommunicable Disease Prevention and Health Promotion, World Health Organization (WHO), Geneva, Switzerland; Ministry of Health and Ministry of Public Security of the People’s Republic of China

Funding Agencies
International Postgraduate Research Scholarship (IPRS); the Australian Government Department of Education, Science and Training (DEST); International Postgraduate Award (IPA); University of Sydney

Aim
To describe the trends in motorcycle use and injuries in China, to determine the prevalence of motorcycle helmet use and risk factors for helmet non-use among motorcyclists in China.

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

Status/Results
Nationally, motorcycles accounted for 23.4% of all registered motor vehicles in 1987, increasing to 63.2% in 2001. Motorcyclist fatalities and injuries increased 5.5-fold and 9.3-fold, respectively, between 1987 and 2001. Motorcycles constituted between 76% and 79% of total motor vehicles at a county level, with motorcyclist fatalities, as a proportion of all road traffic fatalities,
increasing from 22.9% in 1997 to 37.5% in 2001. Findings relating to the observational study are currently being prepared for publication and wider dissemination.

NORMOGLYCAEMIA IN INTENSIVE CARE EVALUATION (NICE)

Institute Investigators
Robyn Norton, Stephen MacMahon, Suzanne McEvoy, Mark Stevenson, Sing Kai Lo

Project Manager
Leonie Crampton

Collaboration
Australian and New Zealand Intensive Care Society Clinical Trials Group; 23 hospitals around Australia and New Zealand; 16 hospitals from Canada will join the study in 2005

Funding Agencies
NHMRC

Aim
Hyperglycaemia is a common finding in patients who are critically ill in the intensive care unit (ICU), whether or not the patient has a history of diabetes mellitus. The presence of hyperglycaemia in critically ill patients has the potential to cause adverse effects that may ultimately lead to multiple organ failure and death, and could prolong the course of ventilation and hence the length of stay in intensive care. The primary aim of the NICE study is to compare the effects of two blood glucose targets on all-cause mortality in Intensive Care patients who are predicted on admission to the ICU to stay in the ICU for at least one full calendar day.

Methods
In this study, 4000 patients will be recruited from 23 ICUs throughout Australia and New Zealand over a two year period. The treatment groups will be assigned to receive an insulin sliding scale regimen from one of two groups: either the lower range group of 4.5-6.0 mmol/L, or the higher range group of 8.0-10.0 mmol/L.

Status/Results
A pilot study to determine inclusion criteria for the protocol was finalised in June 2004, with data analysis completed in July. The NICE study commenced recruitment in December 2004.

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 and Royal North Shore Hospital, Sydney, Australia; Prince Charles Hospital, Brisbane, Australia; Rehabilitation Studies Unit, Sydney, Australia; Middlemore Hospital, Auckland, New Zealand; and 17 other hospitals in Australia and New Zealand

Funding Agencies
NHMRC; Medical Benefits Fund (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 six to 12 months after elective hip replacement surgery.

Methods
This is a randomised placebo-controlled trial involving 900 patients recruited from orthopaedic centres in Australia and New Zealand. The patient sample will be randomised within 24 hours after surgery to receive either ibuprofen (1200mg daily) or a matching placebo in three divided doses for 14 days.
INJURY PREVENTION AND TRAUMA CARE DIVISION

Status/Results
Piloting of the study procedures commenced in the latter half of 2001, while recruitment to the main study commenced in early-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 recruited patients into the HIPAID Study, with recruitment closing in November 2003 after a sample of 903 patients was randomised. Data lock took place in July 2004. The main results have been analysed and a paper has been submitted for publication in a peer-reviewed journal.

Aim
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 was published in the New England Journal of Medicine in May 2004. The study concluded there is no discernable difference in the death rate in intensive care patients resuscitated using either of two commonly used fluids, human albumin or saline. Further papers are in preparation.

SALINE VS ALBUMIN FLUID EVALUATION STUDY (SAFE)

Institute Investigators
Robyn Norton, Stephen MacMahon, Bruce Neal, Sing Kai Lo, Suzanne McEvoy

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; Australian Government Department of Health and Ageing; Australian State and Territory governments; Auckland Hospital; Middlemore Hospital; Royal Hobart Hospital; CSL

SURGE CAPACITY OF PATIENTS IN EMERGENCIES STUDY (SCOPE)

Institute Investigators
Matthias Traub, Suzanne McEvoy, Mark Stevenson, Robyn Norton

Collaboration
Australasian Trauma Society’s Trauma Research Group

Funding Agencies
None

Aim
To assess current disaster clinical preparedness in Australasian metropolitan hospitals.
Methods
The SCOPE study is a cross-sectional survey of all hospitals that are accredited by the Australasian College for Emergency Medicine. The survey will quantify hospital surge capacity and create suitable benchmarks in hospital disaster clinical preparedness.

Status/Results
Data collection was completed at the end of 2004 and results are expected to be available in 2005.

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<th>SYSTEMATIC REVIEWS OF INTERVENTIONS IN MOTORCYCLE SAFETY</th>
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Aim
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 are currently being used to inform development of 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 in 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
The first review on helmets for preventing injury in motorcycle riders was published in the Cochrane Database of Systematic Reviews in February 2004. Protocols for the remaining reviews have also been published on the Cochrane Library. All reviews will be completed by July 2005.

Partnering for change - The China Seatbelt Intervention
In China, injuries are the leading cause of death for those aged one to 44 years, accounting for around 750,000 deaths and 3.5 million hospital stays each year. Much of the injury-related hospital death and serious injury is due to road traffic injury. This is not surprising given motor vehicle production in China has tripled since the early 1990s.

Through a two-year intervention, researchers propose to increase the use of seatbelts from approximately 15% to approximately 40% in the Guangzhou province. Working with the Ministry of Health and Ministry of Public Security of the People’s Republic of China as well as industry partners, the China Seatbelt Intervention will provide China with an opportunity to implement world best-practice in road safety, and to build capacity in the area.
The Epidemiology and Biostatistics Division contributes to study design and undertakes data analysis for each of the Institute’s projects. It also manages its own research and development activities and collaborates with researchers outside the Institute on other projects. Division staff are also involved in a range of teaching and training activities.

One of the Division’s most significant research projects is the Asia-Pacific Cohort Studies Collaboration (APCSC). The Institute is a joint coordinating centre working with the Clinical Trials Research Unit at the University of Auckland, New Zealand. This project involves more than 650,000 participants and 44 studies in ten countries. It investigates associations between blood pressure, obesity, cholesterol, diabetes, and smoking. In 2004, important new findings from the study were presented at a collaborators’ meeting in Beijing. The meeting and the study findings received extensive media coverage across the Asia-Pacific region.

During 2004, the Division established The Obesity in Asia Collaboration in partnership with Utrecht University and the University of Sydney. Funded by the International Obesity Taskforce, the aim of this initiative is to provide evidence regarding the relationships between anthropometric markers of adiposity and cardiovascular risk factors within populations of the Asia-Pacific region. Researchers from 12 countries in the region have contributed datasets to the Collaboration, including information on different measures of adiposity and cardiovascular disease risk factors for nearly 300,000 individuals.

In addition to its own research projects, the Division is involved in collaborative projects based at other institutions including the University of Dundee, UK (the Scottish Heart Health Study and WHO MONICA Project), and the University of Glasgow, UK (the GLAMIS case-control study of myocardial infarction, Glasgow Heartscan Study and the CADET trial of the effects of clopidogrel and aspirin on thrombogenic risk factors).

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, World Health Organization (WHO) and the UK Department for International Development. In 2004, he assisted the United Nations to develop a training course for users and producers of the indicators for the Millennium Development Goals. He also completed the second edition of his textbook, “Epidemiology: Study Design and Data Analysis”, which was published in December 2004.
A key role of the Division is training medical researchers in quantitative research methods.

In 2004, members of Mahidol University attended two workshops in Bangkok, Thailand conducted by the Division. These workshops built on initial training seminars held in 2003. They concentrated on data analysis and writing papers for submission to international journals.

In conjunction with the Australasian Cochrane Collaboration, the Division held workshops for Australian researchers on meta-analysis and Bayesian approaches to meta-analysis. A series of training workshops on the statistical software package, STATA were conducted, as were a series of biostatistics update sessions to train researchers in data analysis techniques commonly used in medical and health research.

In addition to short courses and workshops, the Division also provided consultant statistical and methodological advice to various research groups in Sydney, much of this through the Biostatistical Research Clinic conducted by the Division at The George Institute and Concord Hospital in Sydney.

Studies in the Division:
- Asia-Pacific Cohort Studies Collaboration (APCSC)
- Fetal-Origins Overviews
- Fletcher Challenge Blood Samples Study
- New Zealand Blood Donors’ Health Study
- Obesity in Asia Collaboration
- PROGRESS Blood Samples Study
- PROGRESS Economic Analysis

HIGHLIGHTS

- Presented important new findings from the Asia-Pacific Cohort Studies Collaboration (APCSC) at a collaborators’ meeting in Beijing. The meeting, and the findings presented, received extensive media coverage across Australia and the Asia-Pacific region
- Established the Obesity in Asia Collaboration, wrote the protocol and secured initial funding for the study
- Published the first paper from the nested case-control study from PROGRESS, showing that B-type natriuretic peptide and C-reactive protein are independent risk factors for congestive heart failure (CHF)
- Published findings from the Fetal-Origins Overviews study in the *Journal of the American Medical Association*, showing an association between birthweight and subsequent blood cholesterol levels
- Conducted two workshops on analysis of local research data at the Faculty of Medicine, Ramathibodi Hospital, Mahidol University in Bangkok.
- Provided statistical and computing advice to 45 medical researchers (many of whom visited more than once) at The George Institute’s Biostatistical Research Clinic
ASIA PACIFIC COHORT STUDIES COLLABORATION (APCSC)

Institute Investigators
Mark Woodward, Rachel Huxley, Stephen MacMahon, Federica Barzi, Anushka Patel, Alireza Moghaddam

Collaboration
University of Auckland, New Zealand; Academia Sinica, Taipei, Taiwan; Chinese Academy of Medical Sciences, Beijing, China; Sugiyama Jogakuen University, Nagoya, Japan; Shiga University, Hikone, Japan; Yonsei University, Seoul, South Korea; and more than 80 investigators representing 44 cohorts from ten countries

Funding Agencies
NHMRC; Pfizer

Aim
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 meta-analysis of individual participant data from cohort studies in the Asia-Pacific region, including the largest known medical database in the region, and one of the largest ever in the world. 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, UK and the USA, and papers have now been published or accepted for publication. Several more papers are in preparation. Links are also being developed with the Diverse Populations Collaboration in the USA, and an application for funding to pool the two meta-data sets has been made. Analyses of cancer outcomes in APCSC began in 2004.

Obesity in Asia Collaboration

The prevalence of overweight and obesity has been rapidly increasing in countries of the Asia-Pacific region, with adverse consequences for health. Previously, most of the research examining the association between adiposity and cardiovascular disease (CVD) risk factors, has been conducted in Caucasians, but there is a growing body of evidence to suggest that the associations vary substantially across ethnic groups. To date, there has been insufficient evidence to reliably examine this issue. The Obesity in Asia Collaboration was initiated to provide reliable evidence concerning the relationships between anthropometrical markers of adiposity with CVD risk factors within, and across, ethnic groups. To date, researchers from 12 countries in the region have contributed datasets to this Collaboration, with information on different measures of adiposity and CVD risk factors on nearly 300,000 individuals. In addition, these data will be combined with data from the Asia-Pacific Cohort Studies Collaboration (APCSC), an individual participant meta-analysis of 44 studies within the region, to provide the most reliable evidence concerning the association of adiposity with CVD risk factors across ethnic groups. A further aim of the Collaboration is to facilitate the development of ethnically appropriate Body Mass Index (BMI) cut-points and aid in the development of intervention strategies for obesity related disorders.
FETAL-ORIGINS OVERVIEWS

Institute Investigators
Rachel Huxley, Alan Cass, Sarah White, Sam Colman, Federica Barzi, Mark Woodward

Collaboration
Clinical Trial Service Unit, University of Oxford, UK; University of Bristol, UK; St George’s Hospital, London, UK

Funding Agencies
None

Aim
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.

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

Status/Results
New analyses of the associations of birth weight with cholesterol have been accepted for publication in the Journal of the American Medical Association. Data collection for the analyses of the association between birth weight and coronary heart disease has been completed and preliminary analyses have begun, with publication of results expected in 2005. Data collection for the renal and diabetes reviews is currently ongoing.

FLETCHER CHALLENGE BLOOD SAMPLES STUDY

Institute Investigators
Mark Woodward, Sam Colman, Stephen MacMahon, Robyn Norton

Collaboration
Centre for Thrombosis and Vascular Research, University of New South Wales, Sydney, Australia; Department of Medicine, University of Glasgow, UK; University of Cambridge, UK; University of Western Australia, Perth, Australia

Funding Agencies
US National Institutes of Health; Emerging Risk Factors Collaboration, University of Cambridge

Aim
To identify novel risk factors for myocardial infarction (MI).

Methods
The Fletcher Challenge Study recruited 10,500 participants in the early 1990s, 8,000 of whom were employees of a nationwide multi-industry corporation in New Zealand (Fletcher Challenge), and 2,000 of whom were randomly sampled from the electoral role of the greater Auckland region. Subjects completed a questionnaire, were involved in several medical tests and gave blood samples, which were stored at sub-zero temperatures. Some time later, around 20% of participants were recalled for repeat surveying.

In 2003/04, members of the cohort who had suffered an MI since the study began were identified through linkage with routine medical records of hospitalisation and death. These MI cases were matched (by age, sex and whether or not they were Fletcher Challenge employees) to twice the number of controls (those with no MI) in a nested case-control study. Blood samples from these subjects were identified and shipped to laboratories for analysis of novel putative risk factors for MI.

The hypotheses to be addressed are whether novel markers of oxidative stress and inflammation are independently associated with MI. Markers to be included in the analyses are expected to include F2-isoprostanes, 3-chloro-tyrosine, modified apo-AI and AII, C-reactive protein, CD40L, IL-18, MMP-9 and Lp(a).

Status/Results
Cases and controls have been identified and blood samples transported to...
Analyses have been completed for F2-isoprostanes, modified apo-AI and All and Lp(a). Agreement has been reached to publish results for Lp(a) jointly with the British Regional Heart Study.

**NEW ZEALAND BLOOD DONORS’ HEALTH STUDY**

**Institute Investigators**
Robyn Norton, Stephen MacMahon, Stephanie Blows, Marlene Fransen, Rebecca Ivers, Sing Kai Lo, Mark Woodward

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

**Funding Agency**
Health Research Council of New Zealand (HRC)

**Aim**
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 to 60 years 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. Analyses of the relationships between sleep disorders, work related injuries, risk taking behaviours and motor vehicle injuries were conducted in 2004. The findings are being prepared for publication. Further analyses of the cross-sectional data are planned.

**OBESITY IN ASIA COLLABORATION**

**Institute Investigators**
Rachel Huxley, Mark Woodward, Federica Barzi

**Collaboration**
International Obesity Task Force, London, UK; University of Utrecht, The Netherlands; Department of Human Nutrition, University of Sydney, Australia

**Funding Agencies**
International Obesity Task Force; Department of Human Nutrition, University of Sydney

**Aim**
The overall aim of this study is to provide reliable evidence regarding the relationships between anthropometric markers of adiposity and cardiovascular risk factors within populations of the Asia-Pacific Region. More specifically, the aims of this study are to:

1. Determine which measure of adiposity (BMI, waist circumference, waist-hip ratio) exhibits the strongest correlation with fasting plasma glucose and blood pressure. Further, to examine any heterogeneity in the strength of these associations between each study population to determine whether regional and/or ethnic differences exist.

2. Estimate the relative risks for the association between measures of adiposity with diabetes and hypertension and to
examine whether there is regional and/or ethnic heterogeneity in the associations.

**Methods**

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

**Status/Results**

Data from 12 contributing studies, with information on approximately 300,000 people, has been obtained and additional data is currently being sought. A study protocol has been submitted for publication. Initial analyses are expected to be completed by early-2005.

**PROGRESS BLOOD SAMPLES STUDY**

**Institute Investigators**

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

**Collaboration**

University of Melbourne, Australia; University of Glasgow, UK

**Funding Agency**

US National Institutes of Health; Australian Health Management Group; Pfizer

**Aim**

To establish the relationship between a number of novel risk factors and the risk of secondary cardiovascular disease amongst patients who survived a stroke or transient ischaemic attack.

**Methods**

At the onset of the PROGRESS Study, blood samples were taken from patients and frozen for future use. Several years later, these samples were thawed and laboratory tests carried out to ascertain levels of blood-based cardiovascular risk factors, including lipids, inflammatory and coagulation variables. Using a nested case-control methodology, analyses will associate levels of these risk factors with secondary stroke, myocardial infarction and chronic heart failure during the duration of PROGRESS.

**Status/Results**

The initial range of laboratory assays was completed in 2004. Statistical methods for the analyses were developed simultaneously. Four papers were subsequently drafted, all of which were submitted for publication in late-2004. One of these papers has already been accepted for publication. Funding will be sought for further assays.

**PROGRESS ECONOMIC ANALYSIS**

**Institute Investigators**

Mark Woodward, Sam Colman

**Collaboration**

University of St Andrews, UK

**Funding Agency**

Servier, UK

**Aim**

To undertake a cost-benefit analysis of the PROGRESS Study. Specifically, the study aims to evaluate the economic benefits of the blood pressure-lowering treatment used in the PROGRESS Study compared to the costs of alternative types of treatment in the UK.

**Methods**

A Markov transition model will be used to forecast movements between health states after a stroke, with and without the PROGRESS Study treatment. These health states include levels of disability whilst free-living, during hospitalisation and at death. Costs will be attached to each state using recent UK health service data.

**Status/Results**

The Markov model has been developed and initial results obtained. These will be subjected to sensitivity analyses and the results written up for publication during 2005.
NEUROLOGICAL DISEASES AND AGEING DIVISION

The George Institute established the Neurological Diseases and Ageing Division in 2004 to focus on healthy ageing. Its research themes are the neurological diseases and related disorders that predominantly affect older people, in particular stroke, dementia, depression, and frailty.

While the majority of older people live active and fulfilling lives, ageing is associated with declines in functional capacity and a greater risk of chronic disease, disability and susceptibility to illness. The progressive ageing of the world’s populations has resulted in rapid increases in all age-related diseases, particularly non-communicable diseases and injury. Of this disease burden, those conditions affecting the brain, namely stroke, dementia and depression, are major causes of premature death, disability and reduced quality of life. The social and economic costs of these diseases are also on the rise, with mounting pressure on healthcare systems and caregivers worldwide.

Enormous opportunities have arisen for the promotion of healthy ageing as the mechanisms and factors underlying disease and disability are better understood. Advances in epidemiological and clinical research, together with a greater knowledge of what underlies brain injury, degeneration and repair, provide the tools for reducing the burden of neurological diseases and promotion of healthy life expectancy.

During 2004, The George Institute’s newest division was part of the successful NHMRC program grant for cardiovascular research, which included studies to develop new treatments for acute stroke. The Division will use this funding to lead an international randomised trial of Intensive Blood Pressure Reduction in the Acute Cerebral Haemorrhage Trial (INTERACT).

Craig Anderson is Director of the Neurological Diseases and Ageing Division at The George Institute and is Professor of Stroke Medicine and Clinical Neuroscience in the Faculty of Medicine at the University of Sydney and the Department of Neurosciences of Royal Prince Alfred Hospital. Craig holds specialist qualifications in clinical neurology and geriatrics, and a PhD in medicine and epidemiology from the University of Western Australia. From 1997 to 2003, he was Professor of Gerontology and Co-Director of the Clinical Trials Research Unit at the University of Auckland. He is a member of several specialist societies, is an Editor for the Cochrane Stroke Group, and is currently President of the Stroke Society of Australasia. He has published widely on the clinical and epidemiological aspects of stroke, cardiovascular disease and aged care, and is on the Steering Committee for several large-scale research projects including the Ongoing Telmisartan Alone and in Combination with Ramipril Global Endpoint Trial (ONTARGET) global trials programme in cardiovascular prevention involving over 30,000 patients in 40 countries.
Intracerebral haemorrhage is the most serious form of stroke. It affects between two to three million people worldwide, over one million of these in China. INTERACT will determine if early intensive therapy to lower blood pressure can reduce death and disability from intracerebral haemorrhage. In 2004, the Division formed collaborations with investigators in China and the United States, including representatives of the National Institute of Neurological Diseases and Stroke at the National Institutes of Health. As a result, a pilot study is scheduled to commence in mid-2005.

The Division has also been working with the New South Wales Greater Metropolitan Clinical Taskforce’s Stroke Unit network, to plan new research, training and education activities. The aim of this work is to bridge the gap between research evidence and clinical practice for people affected by stroke and their family.

The Division’s other projects include a series of international studies of risk factors for stroke, and clinical trials to determine management strategies for vascular depression and dementia.

**HIGHLIGHTS**

- Commenced start-up activities for the Intensive Blood Pressure Reduction in Acute Cerebral Haemorrhage Trial (INTERACT) pilot phase in 400 patients recruited from 50 clinical centres in Australia, New Zealand, China and the United States. INTERACT will determine if a policy of routine intensive blood pressure control in patients with acute intracerebral haemorrhage will reduce death and dependency in this most serious form of acute stroke
- Conducted research training for the Greater Metropolitan Clinical Taskforce Stroke Unit network in New South Wales, Australia, to plan new research, training and education activities to improve the evidence/practice gap in stroke care
- Appointed Dr Ken Butcher as Senior Research Fellow in Stroke Medicine, commencing in 2005. Ken is a specialist neurologist with a PhD in neuroscience and considerable expertise in acute stroke therapy and sophisticated brain imaging technology
- Conducted strategic planning sessions with the Brain and Mind Research Institute (BMRI) for epidemiological studies and clinical trials to assess new strategies for the prevention and management of depressive illness in the setting of stroke and cardiovascular disease
MENTAL HEALTH DIVISION

Mental illnesses are common to all countries and cause immense suffering. They can affect a person’s inherent ability to think, feel, and communicate. Mental illness can erode the capacity of a person to function in the workplace or in the broader community. People with these disorders are often subjected to social isolation, poor quality of life and increased mortality.

It is projected mental health disorders will increase their share of the total global burden disease from 10.5% in 1990 to 15% by 2020. Almost half a billion people worldwide have a mental or behavioural illness.

Most middle and low-income countries devote less than 1% of their health expenditure to mental health. Consequently mental health policies, legislation, community care facilities, and treatments for people with mental illness are not given the priority they deserve.

The aim of the Mental Health Division is to engage in research, policy development and training that will lead to the prevention and control of mental disorders. The Division is also focused on the delivery of mental healthcare that is affordable, equitable, and culturally appropriate.

In 2004, Professor Helen Herrman and Doctor Vikram Patel continued their secondments with the Institute, providing valuable strategic advice on the establishment of the Institute’s mental health program. With input from a range of mental health experts, a strategic plan for the Division has been developed, identifying priority activities, strategies for implementing and monitoring the program of work and funding opportunities. Both Helen Herrman and Vikram Patel have been made Honorary Professorial Fellows of the Institute and continue to guide the development of the Division.

ACTIVITIES

In May, in partnership with key collaborators in Australia, the Institute held a mental health planning workshop. The objective of the workshop was to generate specific proposals relating to research and training, including identification of the scope of the projects, potential collaborators in Australia and the region, and strategies for funding applications.

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 Melbourne. In 2001/02, 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.

Vikram Patel is a Reader in the London School of Hygiene and Tropical Medicine and also holds honorary academic appointments with the Institute of Psychiatry, London, UK; University of Melbourne, Australia; and the Sri Chitra Tirunal Institute for Medical Sciences and Technology, Kerala, India. Vikram 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 non-government organisations.
The proposed research program that emerged from this workshop builds on the Institute’s expertise in conducting clinical trials and focuses on the synergies with other Institute divisions, including the Heart and Vascular Division and the Injury Prevention and Trauma Care Division. Themes to be explored over the coming year include:

**Mental health and cardiovascular disease**

Working with the Heart and Vascular and Neurological Diseases and Ageing Divisions, there is potential to develop projects at the interface of mental health and cardiovascular health (e.g. depression and dementia associated with cardiovascular disease). The Division is investigating opportunities for integrating mental health into the design of new studies and analysing mental health components of Institute data sets.

**Adolescent mental health**

The Injury Prevention and Trauma Care Division is involved in several studies that will provide useful data sets for mental health analysis. The Division’s DRIVE Study includes the investigation of psychological predictors of injury in young drivers.

**Mental health in China**

Building on the Institute’s China Program, the Mental Health division has commenced planning for a number of systematic reviews and mental health studies in China. Negotiations for collaborative research projects with The Institute of Mental Health at Peking University are under way.

**Mental health in India**

The Andhra Pradesh Rural Health Initiative has conducted a pilot survey to establish the prevalence of three chronic conditions in rural India - cardiovascular disease, injury and mental illness. The Division has conducted a preliminary analysis of the mental health component of this pilot study and is consolidating plans for further mental health research in India.

**Policy development**

The Division aims to incorporate policy and practice change objectives into all new research projects. In consultation with the Institute’s policy and practice experts, the mental health program will continue to explore a range of policy development and mental health promotion issues over the coming years.

**Training**

Formal and informal training, postgraduate student supervision and capacity building activities are proposed as part of the program. The Division aims to develop training programs in collaboration with Australian and international partners who have already developed and implemented similar training schemes.

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**International survey on depression**

As part of the Memorandum of Understanding signed with the BMRI in 2004, The George Institute is in the process of developing the online component of the Social and Economic Burden of Depression (SEBoD) international survey on knowledge of, and attitudes towards, depression and its treatments among people living in the Asia-Pacific region. The study will also evaluate the extent to which demographic factors and/or personal experiences are associated with knowledge and attitudes. The survey will be conducted in several countries in the region, including Australia, and will be available in seven languages.

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**HIGHLIGHTS**

- Held a Mental Health Planning Workshop in May 2004, attended by a diverse range of mental health experts from the Asia-Pacific region. This workshop identified potential research projects and training activities for the Division. The workshop contributed to the development of a strategic plan for the Division

- Signed a Memorandum of Understanding with the Brain and Mind Research Institute (BMRI) in May 2004 with the aim of facilitating research, policy development and training in population-based mental health in Australia and the Asia-Pacific region

- Secured funding for a Professor/Director of population-based mental health, a senior research fellow and a personal assistant, through the generous support of the University of Sydney and the Central Sydney Area Health Service, with anticipated appointment of a Chair in 2005
The George Institute is home to a unique division. The Policy and Practice Division was established to bridge the gap between research and both clinical and public health policy and practice. This Division supports one of the Institute’s key principles that evidence-based research should underpin all health policy and practice.

Internally, the Division advises researchers on how best to integrate policy and practice considerations into their research. It facilitates the dissemination and implementation of research findings, through the identification and targeting of relevant information to key stakeholders, whether they be the general community, politicians, governments, health care providers or consumer groups.

An equally important part of the Division’s work is in leading the debate on international health issues. The Division works with numerous international collaborators, including the Ministry of Health of the People’s Republic of China and has also taken a lead role in facilitating the establishment of an Australian forum to advocate for the importance of global health research in Australia, the proposed Australian Coalition for Global Health Research.

To stimulate discussion on health care policy and practice the Division hosts regular seminars, symposia and conferences focused on major international health priorities. The George Institute’s International Health Evening Seminar Series features prominent speakers presenting different perspectives on a variety of health topics. Issues addressed during 2004 included: the implications for the health system of the United States/Australia Free Trade Agreement; the epidemic of cardiovascular diseases in low and middle-income countries; and the building of healthcare partnerships with China.

The Policy and Practice Division also undertakes its own policy-related research including a major NHMRC-funded study, Improving Access to Kidney Transplants (IMPAKT). The team is currently developing a research program with indigenous and non-indigenous collaborators throughout Australia, New Zealand and Canada, to address disparities in chronic diseases among indigenous populations.

The Policy and Practice Division is also committed to building capacity in policy research and practice. In partnership with the Australian Health Policy Institute and...
Commenced planning for the second Health Policy Round Table with the Ministry of Health of the People’s Republic of China, to be held in Beijing in April 2005.

Consulted to the Australian Health Ministers’ Advisory Committee on the development of strategies to improve Indigenous Australians’ access to health care services in remote areas.

Hosted six seminars in the International Health Evening Seminar Series.

Produced a policy statement, “Inequity and Health: A Call to Action”, on behalf of the Health and Equity Taskforce of the Royal Australasian College of Physicians.

Appointed a senior health economist, Dr Stephen Jan, who will commence work with The George Institute in 2005.

The George Institute, at the University of Sydney’s School of Public Health, it developed components of the new Graduate Certificate in Health Policy at the University of Sydney, scheduled to commence in 2006. Supervision of postgraduate students undertaking policy-relevant research is another priority for the Division and currently two full-time PhD students are based within the Division.

BRIDGING RESEARCH AND PRACTICE

The George Institute aims to undertake policy-relevant research. The Institute’s research in Indigenous communities is designed to influence the development of policy for the prevention and management of chronic diseases and injuries. The Institute’s road safety research investigating the determinants of motor vehicle-related crashes and injuries among young drivers has already stimulated debate in New South Wales about graduated drivers’ licences and restrictions for provisionally licensed drivers. Two research projects conducted by the Institute in China are designed to influence health policy and practices related to increasing the use of seatbelts and increasing motorcyclists’ use of helmets.

Through its Heart and Vascular Division, the Institute aims to establish research evidence for clinical interventions and for changes to systems of healthcare delivery. These aims are evident in the Andhra Pradesh Rural Health Initiative in India, which is working to improve health status through sustainable interventions incorporated into the existing primary health care infrastructure.

In the past year, the Policy and Practice Division strengthened its links with the Institute for Health Research (IHR), an organisation that brings together the research community and the New South Wales Government to address the interface between research and policy. In 2004, the Australian Health Ministers’ Advisory Council (AHMAC) commissioned the Policy and Practice Division to prepare a report, “Improving Indigenous Health: Remote Area Renal Services”. The Division completed the preliminary phase of this report in December 2004. The aim of this phase was to define practical strategic directions to improve remote Indigenous renal services, through...
In 2003, The George Institute, in conjunction with the Australian International Health Institute from the University of Melbourne, hosted a round table meeting on Global Health Research. The meeting brought together leading researchers and practitioners with the aim of increasing Australian involvement in health research in the developing world. During 2004, The George Institute has supported the establishment of a planning group which is working towards the formation of an Australian Coalition for Global Health Research. A meeting was held in October 2004 with the Chief Executive Officer of the NHMRC to discuss these initiatives and an ongoing program has been developed which should culminate in a second round table meeting on Global Health Research in late-2005. The planning group hope to officially launch the Coalition at this meeting.

**International Policy Initiatives**

In accordance with the Memorandum of Understanding with the Department of International Cooperation of the Ministry of Health of the People’s Republic of China, signed in 2003, a series of round table meetings focusing on priority health issues for China’s healthcare system has been established. The round table meetings provide a forum for senior Chinese health officials to discuss high-priority areas of urban health system reform in collaboration with key international experts and partners. The major topics of discussion include urban hospital reform, pharmaceutical regulation, urban health financing and system development to meet the needs of an ageing population. These topics are reviewed annually to ensure high priority health issues are incorporated into round table discussions. Planning is under way for the second round table meeting to be held in April 2005 in Beijing. The topic of discussion will be health care safety in China. The round table will coincide with a meeting of the China Advisory Board. The Round Table Series Reference Group provides guidance on the content of the round tables. Members of the Reference Group include representatives from the:

- Chinese Medical Association
- New South Wales Ministry for Science and Medical Research
- China Academy of Health Policy, Peking University
- Australian Government Department of Health and Ageing
- Health Systems Development and Financing, World Health Organization
- UK Department for International Development Health Systems Resource Centre
- The George Institute for International Health

Another international policy initiative has been the development of a framework for increasing the capacity of mental health services in East Timor, focusing on improving the capacity of the Ministry of Health to deliver its mental health program.

During 2004, The George Institute has supported the establishment of a planning group which is working towards the formation of an Australian Coalition for Global Health Research.
for Global Health Research. This coalition aims to increase Australian involvement in health research in the developing world.

**Building Policy Capacity**
An important area of focus for the Policy and Practice Division is building the capacity for policy development and for translating research findings into practice. The Division does this through the development and delivery of training programs and the mentoring of researchers, investigators and postgraduate students. In 2004, the Division contributed to teaching in the Master of Public Health and International Master of Public Health courses and supervised honours, masters and doctoral theses.

**IMPROVING ACCESS TO KIDNEY TRANSPLANTS (IMPAKT)**

**Institute Investigators**
Alan Cass, Cilla Preece, Kate Anderson

**Collaboration**
Menzies School of Health Research, Darwin, Australia; Cooperative Research Centre for Aboriginal Health, Darwin; specialist renal units, satellite dialysis units and Aboriginal Medical Services in Sydney, Dubbo, Brewarrina, Darwin, Alice Springs, Brisbane, Cairns, Townsville, Mount Isa, Alice Springs, Port Augusta, Perth, Kalgoorlie and Broome

**Funding Agencies**
NHMRC

**Aims**
To identify the barriers to Indigenous Australians receiving kidney transplants and to propose strategies to reduce these disparities.

**Methods**
The research program includes the following five component studies:
1. a survey of Australian nephrologists' attitudes and practices
2. an in-depth qualitative study of Indigenous and non-Indigenous end-stage kidney disease (ESKD) patients' knowledge, attitudes, and decision-making concerning transplantation
3. a multi-centre cohort study of patients commencing dialysis at eight renal units in urban, rural and remote areas
4. a review of the transplant 'work-up' requirements
5. a modelling study of alternative systems for allocating deceased donor kidneys

**Results/Status**
The survey of Australian nephrologists' attitudes and practices relating to transplantation has been undertaken (Component 1); data analysis is currently under way.

Protocols for the in-depth qualitative study (Component 2) have been approved by all relevant Indigenous and non-Indigenous ethics committees across Australia. Introductory site visits have been made to participating renal units, as well as to local Indigenous groups. In-depth interviewing will commence in January 2005.

An expert panel of kidney specialists from around Australia met in July 2004. They formulated a set of criteria for determining the appropriateness of kidney transplantation for individual patients. These criteria will be used in the cohort study (Component 3) during 2005, allowing analysis of the degree to which disparities in rates of transplantation can be attributed to differences in patients' clinical characteristics.
All Divisions of The George Institute have research, policy, or capacity building activities in China. The China Program supports the Divisions to conduct their activities in cooperation with Chinese researchers and policy makers.

Partnerships have been forged with national bodies including the Ministry of Health of the People’s Republic of China, the Chinese Center for Disease Control and Prevention (CCDC) and the State Development and Planning Commission, as well as a number of Chinese universities and hospitals.

In 2004, The George Institute officially opened an office in Beijing in collaboration with Peking University Health Science Center. The opening coincided with the launch of the China-Australia Partnership for Health at the Great Hall of the People. The George Institute’s office is based at the Peking University Health Science Center campus and coordinates the activities of the Institute’s China Program and the China-Australia Partnership for Health. Currently four staff members are based in the China office.

The George Institute established a China Advisory Board in 2004 to oversee the development of its China Program. The Board includes representatives from Peking University Health Science Center (PUHSC), the Ministry of Health of the People’s Republic of China, the World Health Organization and National People’s Congress of the People’s Republic of China. The Board has a number of roles including:

- reviewing and advising the Institute on appropriate directions for its China Program
- assessing current and proposed initiatives in relation to health priorities and public health issues in China
- providing guidance on the implementation of clinical research findings into clinical practice
- facilitating the adoption of public health research findings by the government sector and professional bodies

Lucy Chen is Director of The George Institute’s China Program and Director of the China-Australia Partnership for Health. She is a technical advisor for China health issues for the Australian Government and governments of a number of other OECD countries. She is also a consultant to the World Health Organization.

Prior to her appointment at The George Institute, Lucy held management positions in health service development and planning, health program management, health policy formulation, and health service evaluation in the Australian Government health sector. Her particular areas of interest include health system architecture and translating research results into health policy and clinical practice.
The China-Australia Partnership for Health

The primary mechanism for developing the China Program is through the China-Australia Partnership for Health. The China-Australia Partnership for Health brings together The George Institute, the University of Sydney and PUHSC in a broad range of collaborative activities and research projects aimed at addressing current and emerging health issues in China.

In conjunction with PUHSC, the Institute established a Partnership Committee that has ultimate responsibility for the effective management of all activities undertaken by the China-Australia Partnership for Health. The Committee oversees the development and implementation of an operational plan for the Partnership. The Committee also initiates major joint projects between PUHSC and The George Institute, advises on capacity-building and research project opportunities, is developing a fundraising strategy, and ensures all joint projects are effectively managed. The Committee includes representatives from PUHSC, the University of Sydney and The George Institute.

Scientific Symposia

One of the first initiatives of the China-Australia Partnership for Health was a series of collaborative symposia and workshops, which were attended by senior hospital clinicians from the six hospitals affiliated with PUHSC. The symposia and workshops showcased research initiatives being conducted by PUHSC and The George Institute. They also provided an opportunity for discussion about possible new collaborative research and capacity-building initiatives in areas including heart and vascular disease, renal disease, diabetes, musculoskeletal disorders, mental health, ageing and health policy and practice. There are a number of project proposals in development as a result of the symposia and one already in pilot phase.

HIGHLIGHTS

- Launched the China-Australia Partnership for Health in Beijing
- Established The George Institute’s Beijing office, based at Peking University Health Science Center (PUHSC)
- Scientific symposia, jointly hosted with PUHSC and held in Beijing for senior hospital clinicians from the six hospitals affiliated with PUHSC. The aim of the symposia was to identify future collaborative research and capacity-building activities
- Established a co-tutelle arrangement that will see a number of Chinese doctoral scholars visit the Institute to undertake ongoing research, leading to qualifications from both Peking University and the University of Sydney.
Research Activities

Health priorities in China vary. The economic development and political imperatives of a region influence the health care policies and practices of that area.

The following Institute studies and trials are conducted in China:

Asia-Pacific Cohort Studies Collaboration (APCSC):

The APCSC is a collaborative overview of participant data from cohort studies in the Asia-Pacific region. The study aims to provide direct, reliable evidence about determinants of stroke, coronary heart disease and other common causes of death in Asia-Pacific populations. The project has data on over 650,000 participants from 44 separate cohort studies in mainland China, Hong Kong, Taiwan, Japan, South Korea, Singapore, Thailand, New Zealand and Australia.

China Salt Substitute Study (CSSS)

This project 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. The study has successfully recruited and randomised study participants and has been progressing since September 2004. A second collaborator’s meeting is scheduled for early 2005.

Musculoskeletal Disability amongst Older People in China, CCPACH Cohort, Shanghai

The prevalence of disability throughout China from the two most common musculoskeletal disorders in older people, osteoarthritis (OA) and osteoporotic fractures, is largely unknown. Evidence from other populations demonstrate that about 10% of men and 18% of women aged 60 years and over will report chronic knee or hip pain and disability. It is hypothesized that in China, limited access to highly beneficial joint replacement surgery for people with severe disease is likely to increase the societal burden attributable to OA within a community.

20,000 participants aged 50 and over in Shanghai will be recruited to the study.

Clinical Pathways for Acute Coronary Syndromes in China (CPACS)

The Clinical Pathways for Acute Coronary Syndromes in China (CPACS) is a two-phase research program aimed at developing, implementing and evaluating clinical pathways for the management of acute coronary syndromes. The study is managed by the Partnership at Peking University, Beijing. The first Investigators’ Meeting took place in Beijing in October 2004, with over 70 delegates attending. Data collection commenced in November 2004 and it is anticipated that Phase 1 will be completed within 6-8 months.
China Seatbelt Intervention

The aim of this intervention program is to reduce road fatalities by increasing seatbelt use from 15% to 40% in the Guangzhou province. Focus groups have been undertaken among professional drivers and traffic police officers to investigate barriers to seatbelt use and enforcement. Observational surveys will be conducted in early-2005 to estimate the prevalence of seatbelt use, with a social marketing campaign targeted for implementation in mid-2005.

Motorcycle Helmet Use and Risk Factors for Helmet Non-use among Motorcyclists in China

The aim of this study is to describe the trends in motorcycle use and motorcycle injuries in China. It will determine the prevalence of motorcycle helmet use and risk factors for helmet non-use among motorcyclists in Guangxi province.

Data from existing national and provincial databases have been collected. Roadside observations and interviews were conducted with 4,768 randomly selected motorcyclists in Guangxi province to assess the prevalence of motorcycle helmet use by motorcyclists and to identify barriers to helmet use.

Findings relating to the observational study have been prepared for publication.

Fellows and Visiting Scholars

Collaboration between Peking University and the Institute is being fostered through a co-tutelle arrangement. Under this initiative, a number of Chinese doctoral scholars will visit the Institute to undertake ongoing research, leading to qualifications from both Peking University and the University of Sydney.

Several other Fellows and Visiting Scholars from China also worked with the Institute in 2004 on collaborative research projects. They include:

- Dr HU Yonghua, Dean, School of Public Health, Peking University
- TAO Man, World Health Organization Fellow
- Dr ZHANG Junhua, PhD graduate, now working in the Beijing office as a Senior Research Fellow

The Launch of the China-Australia Partnership for Health in Beijing

The Beijing launch of the China-Australia Partnership for Health was held in the Great Hall of the People in April 2004. The launch was attended by leaders in the Chinese National People’s Congress, the Ministry of Health of the People’s Republic of China, the National Development and Reform Commission and the State Food and Drug Administration. Representatives from the World Health Organization, the Australian Embassy in Beijing, and the corporate and academic sectors in China also attended, as well as leading clinicians, executives from Peking University, the Vice-Chancellor of the University of Sydney and senior staff from The George Institute. The launch received extensive media coverage in China and Australia.
One of the three strategies that The George Institute employs to address its mission is a process known as capacity development. Capacity development aims to build both individual and institutional expertise to address the growing burden of non-communicable disease and injury.

The George Institute’s capacity development initiatives are integrated throughout its activities and are conducted both locally and internationally.

Locally, the Institute contributes to degree programs being offered through the University of Sydney, and in particular, staff support masters, doctoral and post-doctoral level students, who work on a range of Institute research projects to fulfil their training needs. The Institute also provides a weekly program of seminars open to all staff and interested others and offers occasional courses in research methods, in response to demand.

To improve accessibility to training, the Institute has embraced online learning. In 2004, The George Institute, in conjunction with the University of Sydney, collaborated with the University of Queensland and the University of Western Australia to design and develop a national injury epidemiology, prevention and control course. The course is available as a unit of study in the Masters of Public Health program at the University of Sydney. Many Institute staff were involved in the development and implementation of the course. Other online learning courses to which the Institute is contributing, include a falls prevention unit and a unit for the Professional Masters of Medicine program at the University of Sydney.

Internationally, the Institute’s main capacity development focus has been working with our Chinese partners to build research capacity in China. Scientific symposia and workshops, held in Beijing in April, brought together Chinese and Institute researchers with similar research interests. Outcomes included several new collaborative research projects, including the collaboration between The George Institute and the Arthritis Centre at the First People’s Hospital in Beijing.

A co-tutelle arrangement has also been established between Peking University and The University of Sydney. Under this initiative, a number of Chinese doctoral scholars will visit the Institute to undertake ongoing research, leading to qualifications from both universities. The co-tutelle arrangement is allowing Dr Ren Minghui, Deputy Director-General of the Department of International Cooperation at the Ministry of Health of the People’s Republic of China to undertake a research doctoral qualification conducting research in China and Australia.

The Andhra Pradesh Rural Health Initiative in India is another international capacity-building activity undertaken by the Institute. A number of programs have been conducted to develop the skills of local health workers to carry out mortality surveillance and to implement affordable and sustainable interventions aimed at preventing and managing non-communicable diseases. Similarly, as part of an International Development Fund Strategic Grant from the University of Sydney, the Institute also hosted two visiting scholars from India. The visits from Dr Koteswara Raju, Coordinator of the Social Work Department at DNR College Association, Bhimavaram, Andhra Pradesh, and Dr Rajesh Kumar from the Postgraduate Institute of Medical Education and Technology, Chandigarh helped build the relationships associated with the Andhra Pradesh Rural Health Initiative.
Operations comprise the Information Technology (including information technology support, data programming and data management), Finance and Administration, and Human Resources units. Together they provide the frontline support that enables the Institute to achieve its goals.

Building and facilities management is also a core responsibility of the Operations team. In 2004, Operations ensured the smooth transition of The George Institute to new premises in the King George V Building within the Royal Prince Alfred Hospital campus. It also worked closely with the China Program to formulate comprehensive financial and operational procedures for The George Institute’s new office in Beijing.

**Information Technology**

The Information Technology (IT) team ensures the quality and reliability of The George Institute’s IT systems. The average uptime of the Institute’s public web servers is 98.35%. During 2004, the IT team consolidated a new help desk structure to provide timely and customer-focused IT support. The team began implementing standard operating procedures and completed core documentation for programming. This will provide the foundations for building research study websites. The team also developed and implemented a study management console (SMC), a centralised tool for the improved management of the Institute’s studies. The Institute’s data management and programming teams expanded and are supporting five new web-based research studies with increased efficiencies and technological advancements.

**Finance and Administration**

The Finance team focuses on the financial and operational aspects of the projects undertaken by the Institute. The team provides detailed budgeting and monthly financial reporting for each project, program and division together with relevant reporting of key performance indicators. In 2004, the Finance team streamlined the reporting process to enable more timely distribution of essential financial information. The Finance team also undertook budgeting and half-year forecasts to ensure that the financial performance and strategic directions of the Institute were closely aligned.

**Human Resources**

The Human Resources (HR) team further evolved in 2004 to support The George Institute’s continued rapid expansion. This included the implementation of a new payroll and HR system to improve administrative and reporting efficiencies. As part of the Institute’s strategy to recruit and retain the best staff, the HR team conducted an organisation-wide culture survey. Additionally, the HR team continued to provide systematic reports on performance measures, such as staff turnover, which demonstrate the health of the organisation. The HR team’s commitment to best practice policies and procedures was demonstrated by the implementation of a revised remuneration framework aligned to strategic performance measures.
THE GEORGE FOUNDATION FOR INTERNATIONAL HEALTH

Officially established in 2004 The George Foundation’s mission is to secure funds for The George Institute’s research programs in preventive health, healthcare delivery and health policy development.

The George Foundation seeks partners and donors to join it in supporting high-value, high-impact and high-quality health projects in low and middle-income countries in the Asia-Pacific region. In 2005, the Foundation will appoint an Executive Director to assist it in its fundraising activities.

The Foundation is a separately incorporated company, limited by guarantee, in the state of New South Wales. A Board of Directors oversees its activities. The first meeting of the Board was held in August 2004. The Board appointed an Executive Committee (John Chalmers, Michael Courtnall and Peter Church) which meets more frequently.

Initial Activities

The George Institute has committed $1.5 million over the three-year period 2004-2007 to launch the Foundation’s activities.

The Foundation board agreed to commit $250,000 towards the Andhra Pradesh Rural Health Initiative. This initiative involves 140 villages in five districts of rural Andhra Pradesh. Here activities include the development of a mortality surveillance system, a survey of disease prevalence, and measures to enhance capacity building.

The Foundation also contributed $100,000 towards a Health Policy round table meeting to be held in Beijing, in April 2005. This conference will provide a forum for senior Chinese health officials to discuss high priority areas of urban health system reform in collaboration with key international experts and partners including representatives of The George Institute.

A breakfast meeting hosted by BlueScope Steel was held in Shanghai, in November 2004. John Chalmers and Michael Courtnall represented the Foundation at the meeting, which was also attended by the Australian Consul General and the Australian Trade Commissioner in Shanghai. Representatives of Australian companies in China including the ANZ Bank, Allen Arthur Robinson, BlueScope Steel and Qantas were also present. The Foundation canvassed the advice and support of these enterprises for furthering its activities in the region.

During 2005-6 the Foundation plans to follow up opportunities in China and to explore new initiatives in India, Vietnam and Thailand.

Board Members:

- John Chalmers, AC
- Peter Burrows, AO
- Peter Church, OAM
- Michael Courtnall
- Stephen MacMahon
- Robyn Norton
Mr Peter Burrows, AO

A stockbroker with Bell Potter Securities, Peter Burrows is a Director of Stocks Convertible Trust plc, and is former Chairman of Ferragamo Australia Ltd, Garratts Limited and Rabbit Photo Holdings Ltd. He is also a former Director of a number of public companies including ASX (Sydney) Ltd. His charitable activities have included his roles as President of The Medical Foundation of the University of Sydney, Chair of the Power Foundation for Art and Visual Culture, chair of the Royal Botanic Gardens Foundation, Honorary Treasurer of the Royal Alexandra Hospital for Children and Governor of the Australian Archaeological Institute of Athens. He served on the Senate of the University of Sydney, chairing its Finance, Audit, Investment and Remuneration committees and is an Honorary Fellow of that University.

Emeritus Professor John Chalmers, AC

Emeritus Professor of Medicine at the University of Sydney, John Chalmers is Senior Director of The George Institute for International Health and Honorary Consultant Physician at the Royal Prince Alfred Hospital. He chairs the National Heart, Stroke and Vascular Health Strategies Group for the Australian government.

Previously John has served as Professor of Medicine and Dean at the Flinders Medical Centre in Adelaide, and as Chairman of Research Development for the Faculty of Medicine at the University of Sydney. He has also chaired the National Health and Medical Research Council (NHMRC) and has been President of the Royal Australasian College of Physicians and of the International Society of Hypertension.

John resigned from the Institute Board in June 2004 to become Chairman of the newly formed fundraising arm of the Institute, The George Foundation for International Health.

Mr Peter Church, OAM

Co-founder and Managing Director of the Asean Focus Group, Peter Church is an international lawyer and corporate adviser. His involvement in business relations between Australia and the South East Asian region spans more than 35 years. He has authored and edited several books focused on business in Asia.

He has a number of other Asia-related business roles including Special Counsel to Blake Dawson Waldron, Chairman of Thai law firm Bangkok International Associates Limited and is also a non-executive director of ‘Australia Centre’ businesses (principally English language schools in Chiang Mai, Thailand and in Medan, Indonesia). He is also a member of the Advisory Board of angelz.com, an Asia-wide networking organization based in Singapore, and Indonesia’s Aksara Foundation, a charitable organisation that promotes dialogue on important social, economic and political issues.

He is a former member of the Australian Federal Government’s Trade Policy Advisory Council and APEC Committee and a former President of the Australia Indonesia Business Council and Australia ASEAN Business Council.

BOARD OF DIRECTORS

Peter Burrows

John Chalmers

Peter Church
Professor Andrew Coats

Professor Andrew Coats is Dean of the Faculty of Medicine, the University of Sydney. He has had a distinguished international career in clinical cardiology, with a particular focus on the treatment of chronic heart failure.

He took undergraduate studies in medicine at Oxford and Cambridge Universities before completing his general medical and cardiological training in Melbourne. He returned to Oxford to conduct research in his key areas of interest - hypertension, heart failure and cardiovascular physiology.

For more than a decade Andrew worked at the National Heart and Lung Institute, Imperial College School of Medicine, London, overseeing the Department of Clinical Cardiology - Heart Function where he was the first Viscount Royston Professor of Clinical Cardiology.

He was Associate Medical Director in charge of research and development for the combined Royal Brompton and Harefield NHS (National Health Fund) Trust, London. From 1996 to 2000, he was director of Cardiology, before returning to Australia to his current position at the University of Sydney.

He has served in various roles on steering committees of major international cardiovascular trials. In 2003, he was appointed Chair of the NSW Ministerial Council on Medical & Health Research and Chair of the Australian Health Information Council.

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 the 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.

Graham resigned from the Board in June 2004.

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 establishment of the Friends of the Mater Foundation for the Mater Misericordiae Hospital and is a member of the Foundation’s Investment Advisory Committee. He is a Director of the Australian Council for Infrastructure Development and has participated on professional committees of the Institute of Chartered Accounts 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 and Honorary Consultant Epidemiologist at the Royal Prince Alfred Hospital. He holds Honorary Professorships at the Peking University Health Science Center and the University of Auckland Faculty of Medicine and Health Sciences.

Stephen is Chairman of the Partnership Council of the Initiative for Cardiovascular Health Research in Developing Countries (IC Health), a development of the Geneva-based Global Forum for Health Research and the World Health Organization. He is also a member of the Board of Governors of the Heart Research Institute in Sydney and a member of the Council of the International Society of Hypertension.

Professor Robyn Norton

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 an Honorary Professorship at the Peking University Health Science Center, China.

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

Associate Professor Paul Torzillo, AM

Paul Torzillo is Senior Respiratory Physician and Intensive Care Physician at the Royal Prince Alfred Hospital in Sydney and Clinical Director for Respiratory and Critical Care Services in Central Sydney Area Health Service. He is also a Clinical Associate Physician in the Department of Medicine at the University of Sydney and played 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 this 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 World Health Organization Division of Child and Adolescent Health.
## SUMMARY

### FINANCIAL REPORT

### REVENUE

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<th>Description</th>
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<tr>
<td>Peer Reviewed Grants:</td>
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<td>NHMRC</td>
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<td>Other Australian Agencies</td>
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<td>US National Institutes of Health</td>
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<td><strong>Total Peer Reviewed Grants</strong></td>
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<td>Other Grants:</td>
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<td>Others</td>
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<td><strong>Total Other Grants</strong></td>
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<td>All Sources</td>
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<td>Other Sources</td>
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<td><strong>Total Other Income</strong></td>
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### EXPENDITURE

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<td>Projects</td>
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<td><strong>Total Expenditure</strong></td>
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### NET SURPLUS

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<tbody>
<tr>
<td><strong>Net Surplus</strong></td>
<td><strong>1,982,704</strong></td>
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</tbody>
</table>
RESEARCH AND DEVELOPMENT ADVISORY COMMITTEE (RADAC)

Professor Judith Whitworth, AC  
(Chair), Director, John Curtin School of Medical Research, Australian National University, Canberra

Professor Bruce Armstrong, AM  
Head, School of Public Health, University of Sydney

Professor Robert Black  
Chairman, Department of International Health, Johns Hopkins University, Baltimore

Professor Andrew Coats  
Dean, Faculty of Medicine, University of Sydney

Professor Adele Green  
Deputy Director, Queensland Institute for Medical Research, Brisbane

Professor Adnan Hyder  
Assistant Professor & Leon Robertson Chair, Bloomberg School of Public Health, Johns Hopkins University, Baltimore

Professor KE Yang  
Executive Vice-President, Peking University Health Science Center, Beijing

Professor Stephen Leeder, AO  
Director, Australian Health Policy Institute, Sydney

Professor Terry Nolan  
Head, School of Population Health, University of Melbourne

Professor Srinath Reddy  
Head, Cardiology, All India Institute of Medical Sciences, New Delhi

Professor Andrew Wilson  
Head, Division of Health Systems Policy and Practice, School of Population Health, University of Queensland, Brisbane

Dr Derek Yach  
Professor of Global Public Health, Yale School of Public Health, Connecticut

EX-OFFICIO:

Professor John Chalmers, AC  
Senior Director, The George Institute for International Health, Sydney

Professor Stephen MacMahon  
Co-Principal Director, The George Institute for International Health, Sydney

Professor Robyn Norton  
Co-Principal Director, The George Institute for International Health, Sydney

CHINA ADVISORY BOARD

Professor HAN Qide (Chair)  
Vice-Chairman of Standing Committee, China National People's Congress

Dr Henk Bekedam (Observer)  
WHO China

Professor KE Yang  
Executive Vice-President, Peking University Health Science Center

Dr KONG Lingzhi  
Director, Non-Communicable Diseases, China Ministry of Health

Dr QI Xiaqiu  
Director General, Department of Disease Control, China Ministry of Health

Dr REN Minghui  
Deputy Director General, Department of International Corporation, China Ministry

Dr WU Fan  
Director, Chronic Disease and Injury, China Center for Disease Control

Dr ZHANG Zongjiu  
Director, Health Care Service (Injury), China Ministry of Health
PEER-REVIEWED JOURNALS


PUBLICATIONS AND PRESENTATIONS


**CONFERENCE PRESENTATIONS**

**Craig Anderson**

**Federica Barzi**

A comparison of lipids and lipid ratios as predictors of coronary death: evidence from 70,301 subjects in the Asia Pacific region. Presentation for the Asia Pacific Cohort Studies Collaboration. 5th International Congress of Coronary Heart Disease: From Prevention to Intervention. Florence, Italy, October 2004.


**Magnolia Cardona**


**Alan Cass**


**John Chalmers**


Preterax ADVANCE sub studies and study progress during the last year. 14th Scientific Meeting of the European Society of Hypertension: Preterax Coordinators’ Meeting. Paris, France, June 2004.


**Clara Chow**


**Kathleen Clapham**


**Rochelle Currie**


SHARP - Study of Heart and Renal Protection. (Chair), Australia/New Zealand Investigators & Nurses Meeting. Melbourne, Australia, August 2004.

SHARP - Study of Heart and Renal Protection. (Chair), Malaysia/Thailand Investigators & Nurses Meeting. Kuala Lumpur, Malaysia, July 2004.

**Rachel Huxley**

Rebecca Ivers


Injury prevention and trauma care research. NSW Trauma Research Day. NSW Institute of Trauma and Injury Management (ITIM). Sydney, Australia, August 2004.


The DRIVE study. School of Public Health and Centre for Culture and Health Seminar Series, University of New South Wales. Sydney, Australia, April 2004.

Rohina Joshi


Sing Kai Lo

Stephen MacMahon
Cardiovascular disease: a neglected yet avoidable threat to development and the alleviation of poverty. Global forum for health research: helping correct the 10/90 gap. Mexico City, Mexico, November 2004.


VALUE in the context of other recent trials of blood pressure lowering. Special symposium on the VALUE study and the new implications on hypertension treatment. Hong Kong, September 2004.


Suzanne McEvoy
Research activities in injury prevention and trauma care at The George Institute. Trauma Research Seminar. NSW Institute of Trauma and Injury Management (ITIM). Sydney, Australia, August 2004.

Bruce Neal
What have we learned from major clinical trials? Pfizer Cardiovascular Symposium. Brisbane, Australia, October 2004.


How low or is it the way we go? Neuro Event. Melbourne, Australia, July 2004.

Is it just how low, or is it the way we go? My perspective. Prevent & Protect Vascular Event. Sanofi-Synthelabo. Sydney, Australia, April 2004.


Robyn Norton


Anushka Patel


Siva Sivarajasingam

Mark Stevenson


Matthias Traub

Where to from here? Trauma Research Seminar. NSW Institute of Trauma and Injury Management (ITIM). Sydney, Australia, August 2004.

Fiona Turnbull


Mark Woodward


Is smoking as important a risk factor for coronary heart disease in Asia as it is in primarily Caucasian populations? American College of Cardiology Scientific Sessions 2004. New Orleans, USA, March 2004.


ZHANG Junhua
CONFERENCE PROCEEDINGS/TECHNICAL REPORTS/OTHER PUBLICATIONS


STAFF AWARDS

Federica Barzi
John Chalmers Doctoral Award, The George Institute for International Health.

Stephanie Blows
John Chalmers Doctoral Award, The George Institute for International Health.

Alan Cass
Don and Lorraine Jacquot Research Establishment Award, Royal Australasian College of Physicians.

Sing Kai Lo
Adjunct Professor, Shanghai University of Traditional Chinese Medicine.

Professor John Chalmers and Professor Fiona Stanley at 2004 John Chalmers Oration in Adelaide.

John Chalmers Award.

Suzanne McEvoy - Award from Institute of Teaching and Learning for the online Injury Epidemiology, Prevention and Control Unit.
STAFF OF THE INSTITUTE

DIRECTORS’ OFFICE
Stephen MacMahon - Principal Director, Professor of Cardiovascular Medicine and Epidemiology, University of Sydney
Robyn Norton - Principal Director, Professor of Public Health, University of Sydney
John Chalmers - Senior Director, Emeritus Professor of Medicine, University of Sydney
Graham Lawrence - Director, Commercial Development
Christine Bent - Personal Assistant to Professor Chalmers
Tara Doris - Executive Assistant to Professor MacMahon
Jodie Lewin - Public Affairs Officer
Kristina McDaid - Executive Assistant to Professor Norton
Kylie Monro - Associate Director (Strategic Development)
Beverley Mullane - Graphic Designer
Mary O’Brien - Librarian
John Patava - Business Development Manager (until Sept ’04)
Sue White - Public Affairs Manager

HEART AND VASCULAR DIVISION
Bruce Neal - Director, Associate Professor of Medicine, University of Sydney
Anushka Patel - Deputy Director
Charles Algert - Research Fellow
Magnolia Cardona - Senior Epidemiologist and Program Manager
Clara Chow - Research Scholar
Rochelle Currie - Senior Project Manager
Samantha Flynn - Senior Project Manager
Jane Goddard - Project Manager
HAN Dorothy - Senior Project Manager (Beijing Office)
Lyndal Hones - Project Manager
HUANG Ling-ya (Amy) - Research Scholar
Rohina Joshi - Research Scholar
Nicola Lewis - Project Manager
Nicole Li - Research Fellow
Stephen Li - Research Scholar
Mamta Merai - Research Assistant
Helen Merianos - Personal Assistant to Associate Professor Neal
Helen Monaghan - Senior Project Manager
Alana Morrison - Administration Assistant

INJURY PREVENTION AND TRAUMA CARE
Mark Stevenson - Director, Professor of Injury Prevention, University of Sydney
Yousif Al-Hosani - Research Scholar
Stephanie Blows - Research Scholar
Tracey Bruce - Research Assistant
Kathleen Clapham - Senior Research Fellow
Leonie Crampton - Senior Project Manager
Hung Dang Viet - Research Scholar
Cheri Donaldson - Personal Assistant to Professor Stevenson
Jan Douglas - Senior Project Manager
Marlene Fransen - Senior Research Fellow, Senior Lecturer, University of Sydney
Julie French - Research Fellow
Rebecca Ivers - Senior Research Fellow
Katina Kardamis - Research Assistant
Viraji Kumarasinghe - Project Manager
Bette Liu - Research Scholar (until March ’04)
Suzanne McEvoy - Senior Research Fellow
Matthias Traub - Trauma Fellow
ZHANG Junhua - Senior Research Fellow (Beijing Office)

EPIDEMIOLOGY AND BIOSTATISTICS
Mark Woodward - Director, Professor of Biostatistics, University of Sydney
Evangelie Barton - Personal Assistant to Professor Woodward
Federica Barzi - Senior Research Fellow
Sam Colman - Biostatistician
Rachel Huxley - Senior Research Fellow, Senior Lecturer, University of Sydney
Sing Kai Lo - Senior Biostatistician, Associate Professor, University of Sydney
Ali reza Moghaddam - Research Scholar
Siva Sivarajasingam - Senior Statistician (until Sep ’04)
NEUROLOGICAL DISEASES AND AGEING
Craig Anderson - Director
Professor of Stroke Medicine and Clinical Neuroscience, University of Sydney
Sarah Homewood - Personal Assistant to Professor Anderson

MENTAL HEALTH
Helen Herrman - Honorary Professorial Fellow
Vikram Patel - Honorary Professorial Fellow

POLICY AND PRACTICE
Alan Cass - Director,
Senior Lecturer, University of Sydney
Michael Reid - Director (until Feb ’04),
Adjunct Professor, University of Sydney
Sue Ingram - Deputy Director (until Nov ’04)
Terrie Agnew - Research and Executive Assistant to Professor Reid (until June ’04)
Kate Anderson - Research Assistant
Maureen Bolawaqatabu - Executive and Research Assistant (until Dec ’04)
Suzanne Pope - Teaching and Training Coordinator (until August ’04)
Cilia Preece - Research Officer
Sarah White - Research Scholar
(Policy & Practice and Epidemiology & Biostatistics)

CAPACITY DEVELOPMENT
Margaret Tayar - Capacity Development Coordinator

CHINA PROGRAM
Lucy Chen - Director
LIU Lili - Senior Operations Manager (Beijing Office)
Suzanne Brownhill - China Program Coordinator

OPERATIONS
Romy Baker - Chief Operations Officer
Karen Hayward - Personal Assistant to Ms Baker and Mr Lawrence

FINANCE AND ADMINISTRATION
Kerrith Sowden - Finance and Administration Manager (Acting Chief Operations Officer until Dec ’04)
Ana Carreras - Receptionist
Claire Courter - Kitchen Attendant
Juanita Datu - Accountant
Joshua Fathers - Management Accountant (Acting Finance Manager until Dec ’04)
James Scott - Accountant
Anastasia Stathakis - Receptionist

HUMAN RESOURCES
Karen Sellar - Human Resources Manager
Kristy Eagleton - Human Resources Administrator

IT, DATA MANAGEMENT AND PROGRAMMING
James Turnbull - Chief Technical Officer (until July ’04)
Pradeep Baisani - Database Administrator/Developer
Kathy Jayne - Data Management Coordinator
Sameer Pandey - Software Development Manager
Gillian Ryder - Service Delivery Coordinator
Manuela Schmidt - Clinical Data Manager
Balamurali Vijayan - Database Administrator/Developer
George Vukas - Systems and Network Administrator

VISITING SCHOLARS
Wichai Aekplakorn - Visiting Scholar, Heart and Vascular
Hisatomi Arima - Visiting Scholar, Heart and Vascular
Micky Collins - Visiting Professorial Fellow, Injury Prevention and Trauma Care
Nicola Cooper - Visiting Scholar, Epidemiology and Biostatistics
Samath Dharmaratne - Visiting Scholar, Injury Prevention and Trauma Care
Julian Higgins - Visiting Scholar, Epidemiology and Biostatistics

HONORARY SCHOLARS
Tony Adams - Senior Fellow, Policy and Practice
Robert Bernstein - Senior Fellow, Policy and Practice
Samath Dharmaratne - Senior Fellow, Injury Prevention and Trauma Care
Simon Finfer - Professorial Fellow, Injury Prevention and Trauma Care
David Kelaher - Senior Fellow, Policy and Practice
Stephen Leeder - Professorial Fellow, Policy and Practice
John Myburgh - Professorial Fellow, Injury Prevention and Trauma Care
Helga Newby - Senior Fellow, Policy and Practice
James Pearse - Senior Fellow, Policy and Practice
Elizabeth Reid - Senior Fellow, Policy and Practice
Anthony Rodgers - Professorial Fellow, Heart and Vascular
Robert Timmons - Senior Fellow, Policy and Practice