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I am very pleased to present the second annual report of the Institute for International Health. The 2000/2001 financial year has been an extraordinarily productive period for the Institute with many new initiatives launched and substantial progress made by all programs. The output from the Institute has been remarkable and has included:

- Numerous major publications in leading medical journals such as *The Lancet* and *New England Journal of Medicine*;
- Contributions to several major global initiatives focused on the control of chronic diseases and injuries in lower income countries;
- Media coverage of Institute’s PROGRESS study around the world (including all major television networks in both Australia and the USA).

In addition, the Institute has made major advances establishing the infrastructure required to support programs of the size envisaged. This has included the appointment of a Director of Finance and Administration to oversee the development of state-of-the-art systems for financial management and human resources management at the Institute.

The Institute has continued to improve its financial position, with a total turnover of over $13 M in the 2000/2001 financial year and with positive projections for income and expenditure for the next three years. Institute staff were, once again, very successful in attracting support from the National Health and Medical Research Council (NHMRC) with awards in excess of $1.4 M in the 2000 round. A particular highlight has been success of the Injury Prevention and Trauma Care Program (in association with the Australia and New Zealand Intensive Care Society) in raising $2.7 M for the SAFE study, a major nationwide initiative concerned with the care of critically ill patients.

The Institute’s work has been supported by several institutions, which have provided infrastructure funding including The Medical Foundation of the University of Sydney, Ramsay...
Health Care, the NHMRC and NSW Health. In addition, the Institute’s projects have been supported by a vast array of sponsors, including the NHMRC, State and Commonwealth Governments of Australia, the National Heart Foundation, Servier, MBF, and many others. We are sincerely grateful to all these sponsors for their important contribution to the work of the Institute. I would also like to take this opportunity to thank the University of Sydney and the Central Sydney Area Health Service, the two principal partners of the Institute, for the support they have provided over the past year.

The continued growth and success of the Institute reflects the contributions of many players, but without doubt it is the staff of the Institute and their commitment to its objectives that have been most important. The Institute Directors, Professors Robyn Norton and Stephen MacMahon, with strong support from Professor John Chalmers, have continued to work tirelessly in pursuit of their plans for the Institute. The Program Directors, Dr Bruce Neal, Professor Mark Woodward and Ms Gillian Dowell, have also contributed substantially to the expansion of the Institute programs, projects and systems.

On behalf of the Board of Directors, I congratulate all the Institute staff and their collaborators worldwide on the success of their programs in the past year and the important contributions they have made to health care development worldwide.

Peter Burrows
Chairman,
Board of Directors
The Institute for International Health was established two years ago with the support of the University of Sydney Faculty of Medicine. Its purpose is to conduct an international program of research and development concerned with the control of common chronic diseases and injuries. During the 2000/2001 financial year, the Institute has continued to make rapid progress in the establishment of this program. The Institute's ongoing work now includes projects in more than 20 countries worldwide. The Institute employs fifty staff at its offices in Sydney, from which it coordinates the activities of more than 200 others employed on Institute projects around the world. In December 2000, the Institute moved its offices from the Royal North Shore Hospital campus to the Newtown campus of the University of Sydney and established affiliations with the Central Sydney Area Health Service and the Royal Prince Alfred Hospital. The Institute will move to the King George V building of the Royal Prince Alfred complex in 2003, once refurbishment of the building is completed.

Some highlights of the Institute's activities during the past financial year include:

- Completion of the seven-year PROGRESS study on the effects of blood pressure lowering on the risks of stroke, heart attack and other serious outcomes among 6,105 patients with cerebrovascular disease from Asia, Australasia and Europe (Heart and Vascular Disease Program). The study demonstrated a very worthwhile reduction in risks – a result that is likely to have important implications for the care of many millions of high-risk patients worldwide.
- The award of major grants from the National Health and Medical Research Council (NHMRC), the Health Research Council of New Zealand, CSL Ltd and State, Territory and Commonwealth Governments of Australia for the SAFE study – a large-scale multicentre study of fluid resuscitation for critically ill patients (Injury Prevention and Trauma Care Program). This study is a joint initiative of the Institute and the Australia and New Zealand Intensive Care Society.
- Completion of the first round of analyses in the Asia Pacific Cohort Studies Collaboration, a project investigating the causes of heart disease and stroke among half a million individuals from Asia and Australasia (Epidemiology and Biostatistics Program). The results of this project provide important new evidence about the effects of diabetes, high blood pressure, high blood lipids, smoking and obesity on the risks of cardiovascular disease among people from South East and Eastern Asia.

The Institute has also made substantial progress with the development of several new projects including:

- The launch of a pilot study for the China Car Crash Injury study: an investigation of the causes of car crash injury in Shenyang, China.
- The recruitment of collaborating centres from Asia, Australasia, North America and Europe for the ADVANCE study of the prevention of vascular complications of diabetes.
- The recruitment of collaborating centres for the NHMRC- and MBF-funded HIPAID study of the prevention of orthopaedic complications of hip replacement.
• Completion of data collection in the InterAsia study of cardiovascular disease risk factors in representative population samples from Thailand and China.
• Initiation of the design phase of a program concerned with the prevention of stroke, heart attack and heart failure among high risk groups in India.

In the past year, the Institute has also initiated a regular International Health Seminar Series, established a Research and Development Advisory Committee, launched a new website (www.iih.org), developed new internal systems for financial management and human resources management, taught a variety of health and medical courses (including a biostatistics course in Hanoi, Vietnam), and contributed to a number of major global initiatives concerned with the control of injury and cardiovascular diseases in lower income countries.

Over the next few years, the Institute will be working towards the establishment of two new programs and will increase its fundraising activities in support of planned and existing programs. Additionally, the Institute will continue to work towards the establishment of a broader range of projects in lower income countries, including new activities focussed on building capacity in health care program development. An important new development will be the execution of a memorandum of understanding between the Institute, the University of Sydney and the Johns Hopkins University Bloomberg School of Public Health concerning the development of collaborative initiatives in international health. The Johns Hopkins University Bloomberg School of Public Health is home to one of the largest and most respected international health faculties in the world.

The achievements of the Institute in the past year reflect in large part the extraordinary efforts made by the Institute’s staff, together with the support and direction provided by the Institute’s Board of Directors. Once again, we wish to offer special thanks to Professor John Chalmers and Mr Peter Burrows whose advice has been critical in ensuring the continued development of the Institute over the past year. We would also like to express our appreciation to the Vice Chancellor of the University of Sydney, Professor Gavin Brown, and the Chief Executive Officer of the Central Sydney Area Health Service, Dr Diana Horvath, for their support of the Institute and its continued evolution.

Stephen MacMahon
Director & Medical Foundation Professor of Cardiovascular Medicine and Epidemiology

Robyn Norton
Director & Ramsay Health Care Professor of Injury Prevention
The Changing Global Burden of Disease and Injury

The establishment of the Institute was stimulated by the large and growing global and regional burden conferred by non-communicable diseases and injury. Worldwide in 1990, non-communicable diseases and injury accounted for about 33 million of the 50 million deaths that occurred that year and about 55% of the years of healthy life lost due to death or disability. Between 1990 and 2020, deaths from non-communicable diseases and injury are expected to rise from 33 million to about 58 million, and there will be similar proportional increases in years of healthy life lost. Three of the major contributors to this growing disease burden are cardiovascular disease, injury, and neuropsychiatric conditions. Collectively in 1990, these accounted for about 40% of all deaths and 35% of all years of healthy life lost worldwide. By 2020, the same three causes are expected to account for about half of all deaths and a similar proportion of years of healthy life lost.

These major changes in the global burden of disease and injury reflect, in part, a continuing shift in the distribution of non-communicable diseases and injury from developed countries to developing or newly industrialised countries, primarily as a consequence of the changing demographic patterns in the latter. So, whereas in 1990, about a third of all deaths from non-communicable disease and injury occurred in developed countries, by 2020 the proportion is likely to be reduced to a fifth. Thus, about 80% of all deaths from non-communicable causes worldwide will occur in developing or newly industrialised countries, and more than half of these deaths will occur in the populations of Asia and the Pacific. These deaths from non-communicable causes will occur at substantially younger ages in developing or newly industrialised countries than in developed countries.

Changing Patterns of Death Worldwide

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<th>Chronic Diseases and Injury</th>
<th>Infectious, Maternal, Perinatal and Nutritional Conditions</th>
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<tr>
<td>33</td>
<td>17</td>
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<tr>
<td>2020</td>
<td>10</td>
</tr>
<tr>
<td>1990</td>
<td>58</td>
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Global Burden of Disease Project, 1996

Strategies for Health Research and Development

This rapidly changing distribution of the global burden of non-communicable diseases and injury requires major investment in health research and development in those countries likely to be most adversely affected by the changes. If the predicted epidemics are to be minimised in scale and managed appropriately, then there is a pressing need for research on modifiable determinants of risk in these populations and for the development of practical, affordable research-based strategies for preventive and therapeutic intervention. This will not be easily
achieved by the efforts of health research and development experts located within developing and newly industrialised countries alone, since they are relatively few, poorly resourced, and often inexperienced in non-communicable diseases and injury (since the main focus of research and development in many developing countries has been – appropriately – communicable, maternal, perinatal and nutritional disorders). In contrast, experts in these fields from developed countries are numerous, comparatively well resourced, and more experienced in non-communicable diseases and injury. Thus, there is a strong rationale for encouraging health research and development experts from these countries to turn their attention, at least in part, to the escalating problems faced by developing and newly industrialised countries, and to work with their counterparts in these regions in an effort to minimise and manage the epidemics. This is an important priority for global health resource allocation, and a major aspect of the rationale for the programs of the Institute for International Health.

**Objectives of the Institute Programs**

The primary aim of the Institute is to conduct an international program of health research and development, the objectives of which are to facilitate the prevention of premature death, serious ill health and disability from common causes of non-communicable diseases and injury. The program is oriented to health issues of global significance, with an emphasis on the health problems of the Asia Pacific region, particularly those of economically developing and newly industrialised countries, as well as those of Australia. In particular, the program is focussed on three major health problems: heart and vascular diseases, injury and mental illness.

For each of the health problems targeted, the research component of the program comprises preventive, epidemiological and clinical studies. The main aims of these studies are the discovery of modifiable causes of diseases and injury, and the identification of effective, practicable strategies for their prevention and treatment. The research program is being conducted both in developed countries, including those of Australasia, North America and Europe, and in developing and newly industrialised countries, including those in the broader Asia and Pacific region. In association with the research activities, various complementary development initiatives have been initiated. These initiatives are concerned with the formulation and implementation of affordable, research-based health care policy and practice in an effort to reduce the burden of non-communicable disease and injury.

To facilitate the research and development program of the Institute, a communications strategy is being implemented. The objective is to ensure the widespread dissemination of results from the research and development program and to generate discussion on important development issues. The strategy involves web-based communications, publications in both the peer-reviewed literature and the general press, and direct communications with policymakers worldwide.

In addition to its commitment to the establishment of a research and development program, the Institute contributes to teaching programs at the graduate and post-graduate
level, in medicine and health sciences at the University of Sydney. In collaboration with the Department of Public Health and Community Medicine and the clinical departments of the University of Sydney, the Institute offers academic programs for advanced training in epidemiology, biostatistics and clinical research for post-graduate research fellows from Australia and overseas.

**Regional and International Collaboration**

The research and development programs conducted by the Institute require extensive regional and international collaboration. In 2000/2001 the Institute’s research program was conducted in collaboration with more than 200 universities and hospitals in over 12 countries worldwide. Major collaborative relationships have been established in Asia, North America and Europe with research centres with interests in heart and vascular diseases, injury prevention and trauma care, as well as those with general interests in health care in developing and newly industrialised countries. During the coming year (2001/2002) the Institute will formalise its relationship with the Department of International Health at the Johns Hopkins University Bloomberg School of Public Health, Baltimore, USA. The Institute is also involved in collaborative initiatives with the World Health Organization and the Global Forum for Health Research, particularly in relation to its activities in heart and vascular diseases and in injury prevention and trauma care.

Within Australasia, major collaborative relationships have been established with the University of Melbourne, the University of Western Australia, the University of Auckland, and the Australia and New Zealand Intensive Care Society. Within Sydney, the Institute has major collaborations with several centres including the NHMRC Clinical Trials Centre (University of Sydney) and the Injury Risk Management Research Centre (University of New South Wales).
The Institute has been established as an independent charitable institution, the activities of which are overseen by a Board of Directors. During the period covered by this report, the Board also constituted the Research Committee of the Institute (as required by the Australian Tax Office). The Board oversees fundraising, investment and expenditure, and advises on administration and management. Membership of the Board includes representatives of the Institute and University, representatives of major sponsors (including The Medical Foundation of the University of Sydney) and a representative of the Central Sydney Area Health Service (from October 2000). A full listing of Board members is provided from page 41.

The University of Sydney

The Institute is formally associated with The University of Sydney, through a Memorandum of Understanding that designates the Institute as a Research Department of the University of Sydney. During 2000, the Institute was primarily associated with the Northern Clinical School of the Faculty of Medicine. From 2001, its primary association moved to the Central Clinical School. The Institute also has a close relationship with the School of Population Health and Health Services Research. Many staff of the Institute have full or conjoint academic appointments at the University of Sydney and all applications for support from peer-reviewed agencies and foundations such as the National Health and Medical Research Council, the National Heart Foundation and the Wellcome Trust are submitted through the University of Sydney.
Central Sydney Area Health Service

The 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 2003 the Institute will relocate to the King George V Hospital within the Royal Prince Alfred campus.

Research and Development Advisory Committee

In 2001, the Research and Development Advisory Committee was established to review and advise on the research and development programs of the Institute. Members of the Committee include international authorities on non-communicable diseases and injury, 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 Asian Pacific research community. A full listing of members is provided on page 47.

Programs

The work of the Institute is organised within several programs: the Heart and Vascular Diseases Program, the Injury Prevention and Trauma Care Program, the Mental Health Program (to be established in 2002), the Epidemiology and Biostatistics Program and the Finance and Administration Program.

Management

The Institute is headed by two Principal Directors (Professor Stephen MacMahon and Professor Robyn Norton) who are responsible to the Board of Directors for the activities of the Institute. Dr Bruce Neal is Director of the Heart and Vascular Diseases Program, Professor Robyn Norton is Acting Director of the Injury Prevention and Trauma Care Program, Professor Mark Woodward is Director of the Epidemiology and Biostatistics Program and Ms Gillian Dowell is Director of the Finance and Administration Program. It is anticipated that a Director of the Mental Health Program will be appointed during 2002. Collectively, the Principal Directors and Program Directors form the Institute Management Committee, which is chaired by one of the two Principal Directors.
Core Institute Support

Initial core support for the Institute provided by The Medical Foundation of the University of Sydney and Ramsay Health Care enabled the Institute to establish two Chairs in the Faculty of Medicine at the University of Sydney: The Medical Foundation Chair of Cardiovascular Medicine and Epidemiology and the Ramsay Health Care Chair of Injury Prevention. The Commonwealth Department of Health and Aged Care also contributed funds, which assisted with the development of the Injury Prevention and Trauma Care Program, and the National Health and Medical Research Council contributed funds for the development of the Heart and Vascular Diseases Program through an Eccles Award to Professor Stephen MacMahon.

In 1999, the Institute’s computer network and analysis facilities were established with a large equipment grant from the University of Sydney. In 2000, the Institute was awarded a three-year grant from the NSW Department of Health for infrastructural support. In the same year, the Institute received a donation from Servier Laboratories towards the cost of new office accommodation in the King George V Hospital for the Institute’s Heart and Vascular Diseases Program.

Project Support

Institute research projects are supported by a variety of agencies, foundations and sponsors including the National Health and Medical Research Council of Australia, the National Heart Foundation of Australia, the Health Research Council of New Zealand, the British Heart Foundation, the NSW Department of Health, MBF, the Commonwealth, State and Territory Governments of Australia, the Northern Sydney Area Health Service, the Institut de Recherches Internationales Servier, Bristol-Myers Squibb, Pfizer, AstraZeneca, CSL and several other pharmaceutical companies.

Institute Funding
Overview

This research program is focussed, in large part, on coronary heart disease and cerebrovascular disease. The choice of these diseases reflects their global importance as causes of premature death and disability. In 1990, these diseases represented the two leading causes of death worldwide, responsible for about 10.6 million deaths annually. This ranking is predicted to remain unchanged for some time. Moreover, throughout the next two decades, these two diseases are expected to remain among the top five causes of loss of healthy life due to death or disability.

While the burden of ill health caused by coronary heart disease and cerebrovascular disease will continue to be substantial in both higher- and lower-income regions, the toll in lower-income countries will outweigh that in higher-income countries by a factor of four.

Blood pressure is a disease precursor that is a particular focus of the research program. This reflects its importance as a determinant of the total burden of cardiovascular disease, particularly in the populations of Eastern Asia.
In some Eastern populations, the contribution of blood pressure to cardiovascular disease may be much greater than that in the West, due principally to the greater incidence of diseases that are particularly strongly associated with blood pressure in these countries. In particular, blood pressure appears to be the major determinant of death and disability due to cerebrovascular disease, which is the leading cause of death and loss of healthy years of life in China and several other Asian populations. Other risk factors of established importance as causes of cardiovascular disease in Western populations, such as smoking, high cholesterol and diabetes are now emerging as important risk factors in Eastern populations, and these are also the subjects of ongoing Institute research projects.

The Heart and Vascular Diseases Program has made substantial advances on a number of projects during the last 12 months of operation. The PROGRESS trial was completed and its results were reported at major scientific meetings in Europe and in the general press, worldwide. The results represent a major breakthrough in stroke prevention, with implications for tens of millions of individuals worldwide. Also completed was the first cycle of analyses from the Blood Pressure Lowering Treatment Trialists’ Collaboration: results were reported at a major scientific meeting in the US and in the general press, worldwide. The findings of this project have widespread implications for the management of individuals receiving blood pressure lowering drugs. The results of both the PROGRESS study and the Trialists’ Collaboration were subsequently published in The Lancet. A number of other projects have also advanced substantially over the last year. The sodium bread study (NaBS) and the InterASIA study have both been completed and manuscripts are in preparation for publication. Major steps have also been taken in planning for the Cardiovascular Health Initiative in India, with the appointment of a dedicated full time research fellow in Sydney.

The other principal area of activity has involved the ADVANCE study, which has now entered its recruitment phase. After much work, five regional collaborating centres have been established (Beijing, London, Melbourne, Montreal and Utrecht) and 216 clinical centres in 20 countries have indicated that they will participate. Recruitment is in the early stages, but it is anticipated that most centres will be recruiting early in 2002.

The outlook for the Heart and Vascular Diseases Program over the next few years remains very positive, with secured long-term support for major projects. Plans for new research into the management of acute stroke, and interventions to modify the nutritional determinants of cardiovascular disease are well advanced. The success and growth of the program has been greatly facilitated by the hard work of the current team, and will continue apace with the recent appointment of new research fellows and program administration staff.
Action in Diabetes and Vascular Disease: Preterax and Diamicron MR Controlled Evaluation (ADVANCE)

**Institute Investigators**
Stephen MacMahon, John Chalmers, Bruce Neal, Anushka Patel.

**Collaboration**
University of Melbourne, Australia; University of Auckland, New Zealand; Chinese Academy of Medical Sciences, China; Imperial College, UK; University of Montreal, Canada; Utrecht University, The Netherlands.

**Funding Agency**
Institut de Recherches Internationales Servier.

**Aims**
To determine the effects of more intensive blood pressure lowering and 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. 10,000 participants will be recruited from centres in Asia, Australasia, Europe and North America. Participants will be 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 or standard guidelines-based glucose lowering therapy. Follow-up will be for an average of 4.5 years. The primary outcomes will be major macrovascular complications (stroke and heart attack) and major microvascular complications (eye and renal disease).

**Status/Results**
A regional coordinating centre has been established in each of the five collaborating regions and 216 clinical centres in 20 countries have signalled their intent to collaborate. Recruitment started in June 2001. Ten centres are already active with the majority of the remainder anticipated to commence recruitment later in 2001. Final results from the study are expected to be available in 2006.

The Blood Pressure Lowering Treatment Trialists’ Collaboration

**Institute Investigators**

**Collaboration**
Principal investigators from large-scale trials worldwide, including studies conducted in Australasia, Asia, North America and Europe.
Funding Agencies
The National Health and Medical Research Council of Australia, the National Heart Foundation of Australia, the Health Research Council of New Zealand, the British Heart Foundation, the International Society of Hypertension, AstraZeneca, Aventis, Bayer, Bristol Myers-Squibb, GlaxoWellcome, Hoechst, Merck, Pfizer, Searle and Servier.

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

Methods
A series of prospective overviews (meta-analyses).

Status/Results
The first round of analyses was performed in 2000 and included data from 15 completed trials and about 75,000 patients. The results demonstrated that ACE inhibitors and calcium antagonists both reduce cardiovascular morbidity and mortality, that more intensive blood pressure lowering conferred greater benefits and that there are some differences between the effects of different drug classes on cause-specific cardiovascular outcomes. The results were presented at the International Society of Hypertension meeting in Chicago in August 2000 and were published in The Lancet in December 2000. A second round of data collection and analyses that will be based on up to 300,000 patients is ongoing.

Cardiovascular Health Initiative in India
Institute Investigators
Bruce Neal, Stephen MacMahon, Anushka Patel, Vivek Chaturvedi.

Collaboration
All India Institute of Medical Sciences, India; Global Forum for Health Research, Switzerland; World Health Organization, Switzerland.

Funding Agency
Institute for International Health.

Aims
The main objective of this project is to formulate, implement and evaluate simple low-cost intervention programs for the prevention of cardiovascular diseases in middle- and low-income populations in India.
Methods
This is a cluster-randomised trial that will be conducted in about 30 discrete populations in India. A cardiovascular disease prevention program directed at both the health care professionals and the community will be developed and implemented in 15 of the communities, selected at random. Surveys of the knowledge, attitudes and practices of the health care providers and the population, conducted before and after implementation of the program, will be used to determine the effects of the program.

Status/Results
A strong collaboration has been established with researchers in India, and the Institute for International Health has provided 12 months’ support to enable an Indian research fellow to further develop the project in Sydney. An application for project funding has been made to the Wellcome Trust with a view to initiating the project in 2002.

China Salt Substitute Study (CSSS)
Institute Investigators
Bruce Neal, Stephen MacMahon.

Collaboration
University of Auckland, New Zealand; University of Western Australia, Australia; Chinese Academy of Medical Sciences, China.

Funding Agencies
The study remains unfunded but a full application is being submitted to the Wellcome Trust.

Aims
The primary aim of this study is to determine the long-term effects of a low-sodium, high-potassium salt-substitute on blood pressure among individuals in Northern China with a history of cerebrovascular disease.

Methods
The study is a double-blind randomised trial. There will be 600 participants with a history of cerebrovascular disease recruited and followed up for 12 months through an established network of hospital-based clinics in Northern China.

Status/Results
Funding is currently being sought.

International Collaborative Study of Cardiovascular Disease in Asia (InterAsia)
Institute Investigators
Sayan Cheepudomwit, Bruce Neal, Stephen MacMahon.

Collaboration
The Faculty of Medicine, Mahidol University, Thailand; the National Health Foundation, Thailand; Tulane University, USA.

Funding Agency
Pfizer Inc.

Aims
To estimate the prevalence of cardiovascular diseases (such as coronary heart disease and stroke) and the levels of cardiovascular risk factors (such as high blood pressure, high cholesterol, cigarette smoking, diabetes and obesity) in Thailand.
Methods
A cross-sectional survey of a representative national sample of 5,000 adults from Thailand has been conducted. Data about cardiovascular diseases and risk factors were collected by a questionnaire, physical examination and a blood test.

Status/Results
Fieldwork, data collection and the main analyses are now complete. The principal findings from the study are currently being prepared for presentation and publication.

Sodium in Bread Study (NaBS)
Institute investigators
Bruce Neal, Seham Girgis.
Collaboration
University of Otago, New Zealand; Department of Nutrition, Royal North Shore Hospital, Australia.

Funding Agencies
The Northern Sydney Area Health Service; George Weston Foods provided the bread for the study.

Aims
To determine whether it is possible to make a one-quarter reduction in the salt content of bread without adversely affecting palatability.

Methods
110 participants were randomly assigned to either six consecutive weeks of bread with 100% usual sodium content or six weeks of bread in which the sodium content was reduced from 100% usual to 75% usual over the follow-up period. Participants’ ability to detect a difference in the bread and perceptions of taste, flavour and acceptability were recorded each week.

Status/Results
The study is now complete. Participants were not able to detect the week-to-week reductions in sodium content of the bread making this a possible new means of achieving meaningful reductions in dietary sodium intake. The findings were presented at a meeting of the Public Health Association of Australia and a paper has been submitted for publication.

Perindopril Protection Against Recurrent Stroke Study (PROGRESS)
Institute Investigators
John Chalmers, Stephen MacMahon, Bruce Neal, Mark Woodward.
Heart and Vascular Diseases

Perindopril Protection Against Recurrent Stroke Study (PROGRESS)

Number of participants suffering a stroke during four years of follow-up

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<th>Active Treatment (n=3,051)</th>
<th>Placebo (n=3,054)</th>
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<tbody>
<tr>
<td>Fatal or disabling stroke</td>
<td>123 (4%)</td>
<td>420 (14%)</td>
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<tr>
<td></td>
<td>307 (10%)</td>
<td>181 (6%)</td>
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Methods

PROGRESS is a randomised, double-blind, placebo-controlled trial in which 6,105 participants with stroke or TIA were randomised to perindopril-based treatment or matching placebo. Follow-up continued for an average of four years.

Results

The study is now complete and the results showed that study treatment reduced the risk of stroke by one quarter. Among those who received combination therapy with two drugs, one death or major nonfatal event was prevented among every 11 patients treated for five years. The findings have important implications for the care of as many as 50 million individuals worldwide. Results were released in June 2001 at meetings of the European Society of Hypertension and the World Congress of Neurology.

Other Research Activities of the Heart and Vascular Diseases Program

Staff of the Heart and Vascular Diseases Program have also been involved in the conduct of the Fletcher Challenge Heart and Health study in New Zealand and the New Zealand Blood Donors’ Health study. They have also contributed to data analysis and preparation of reports from the Electricity Generating Authority of Thailand study and a study of the determinants of diabetes in a cohort of Japanese insurance company employees.

Collaboration

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

Funding Agencies

The Health Research Council of New Zealand, the National Health and Medical Research Council of Australia and Institut de Recherches Internationales 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 cardiovascular events, dementia and disability.
Overview

This research program is focussed on motor vehicle-related injuries, musculoskeletal conditions and trauma management. The choice of the first two areas primarily reflects their current and projected importance as global and regional causes of death and disability. By 2020, motor vehicle-related injuries are expected to become the sixth leading cause of death and the third leading cause of years of healthy life lost due to death or disability, worldwide. About 90% of the burden of death and disability will occur in the developing and newly industrialised regions of the world, including those of the Asia and Pacific regions. Musculoskeletal conditions, including fall-related injuries, are already important global causes of disability, with falls being the 14th leading cause of death and disability worldwide. By 2020, osteoarthritis is projected to become the seventh leading cause of death and disability in the developed world, with the incidence rising in developing countries, consistent with changing demographic patterns. The decision to focus on trauma management reflects the paucity of research in this area and the need to identify and implement effective evidence-based trauma care to facilitate reductions in the burden of death and disability from injuries.

The Injury Prevention and Trauma Care (IPTC) Program has made significant advances in its activities within the last 12 months. Funding was secured for two large-scale randomised controlled trials and work on the development of these trials is ongoing. Specifically the NHMRC and MBF (a major Australian health insurer) have provided funds to support the conduct of HIPAID – a randomised controlled trial to examine the effects of a non-steroidal anti-inflammatory drug on ectopic bone formation, pain and disability following hip replacement surgery in 1,000 individuals. Additionally, in collaboration with the Australia and New Zealand Intensive Care Society Clinical Trials Group and the Australian Red Cross Blood Service, funds were secured from the NHMRC, the NZ Health Research Council, CSL Ltd, the Commonwealth Government and most State and Territory governments, for the conduct of SAFE – a trial involving intensive care units in Australia and New Zealand, that aims to examine the efficacy and safety of saline versus albumin for fluid resuscitation in 7,000 critically ill patients. During the year, the Institute provided funds to support the conduct of a pilot study for a case-control study investigating the causes of motor vehicle-related injuries in China. The results of the pilot study, conducted in collaboration with colleagues from Peking Union and Shenyang Medical Colleges in China, suggest that the conduct of such a study is feasible and, as a consequence, funding proposals for a study involving 1,000 cases and 1,000 controls are being developed. During the year, proposals have also been prepared for studies examining barriers to motorcycle helmet use in China and the organisation of pre-hospital care services in both rural and urban areas in China. The outcome of a funding proposal for a cohort study aimed at identifying risk factors for driver injuries among 20,000 young people in Australia should be known by the end of 2001.

In addition to the Program’s focus on securing new research funds and implementing new studies, staff of the IPTC program have had a very active year in terms of publishing and presenting
the results of recently completed studies, including the Auckland Car Crash Injury studies and the Auckland Hip Fracture studies. Program staff have also contributed to a number of teaching and training activities over the past year, including preparations for the development of a new Injury Prevention Elective for the University’s Masters of Public Health program. Additionally, staff have continued to support the work of the Global Forum for Health Research’s Road Traffic Initiative in Developing Countries and have played an integral role in supporting the development of a WHO five-year strategic plan for the prevention of road traffic injuries worldwide.

During the coming year, a priority for the Program will be the recruitment of a fulltime Program Director and the further development of collaborative activities with colleagues in the Asia Pacific region. The former should consolidate the development of a growing and enthusiastic IPTC team, who have contributed enormously to the success of the Program over the past year.

**Auckland Car Crash Injury Studies (ACCIS)**

**Institute Investigators**
Robyn Norton, Lawrence Lam, Mark Woodward.

**Collaborators**
Department of Community Health, University of Auckland, New Zealand.

**Funding Agencies**
Health Research Council of New Zealand; Transit New Zealand.

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

**Methods**
These studies involve the conduct of both a case-control study and a cohort study. The case-control study involves data collected from over 500 drivers involved in injury-related car crashes and over 500 drivers randomly driving on the roads in the Auckland region of New Zealand. The prospective cohort study involves follow-up of the cases and controls at four and 18 months following the initial interview.

**Status/Results**
Initial analyses from the case-control study have focused on the role of driver sleepiness/fatigue in determining the risk of driver injury: these analyses show that acute driver sleepiness, but not chronic sleepiness, is associated with a significant increase in the risk of motor car occupant injury. Additional analyses will focus on the role of passengers and other in-car distractions in determining the risks of injury. Data collection for the cohort study was completed in early 2001 and analyses are now underway.
Auckland Hip Fracture Studies (AHFS)

Institute Investigators
Robyn Norton, Marlene Fransen, Rebecca Ivers, Mark Woodward.

Collaboration
University of Auckland, New Zealand; University of Otago, New Zealand; Middlemore Hospital, New Zealand; ESR, New Zealand.

Funding Agency
Health Research Council of New Zealand.

Aims
To determine risk factors for hip fracture among older people and, after two years, to identify adverse outcomes attributable to the hip fracture.

Methods
The Auckland Hip Fracture studies involved the conduct of a case-control study (n=910 cases and 911 controls) and a prospective cohort study, in which all cases and controls were recontacted at two years.

Status/Results
Further analyses of these datasets have focussed on the role of physical activity in the incidence of hip fracture among older people, and the increased risks of death and institutionalisation in individuals who sustain hip fractures. The study confirms earlier research on the protective effects of physical activity for older people across all ages, but suggests that among frail older people living in institutions in whom physical activity is minimal, the protective effects may be overshadowed by the increased exposure to falling associated with physical activity. Analyses of the follow-up data suggest that the long-term adverse effects of hip fracture may be substantially greater for men compared with women.

Barriers to Helmet Use Among Motorcyclists in China

Institute Investigators
Junhua Zhang, Robyn Norton.

Collaboration
Australian Centre for Health Promotion, University of Sydney, Australia; Department of Health and the Department of Public Security, Guangxi, China.

Funding Agencies
Dr Zhang is the recipient of an International Postgraduate Research Scholarship (IPRS) from the Department of Education, Training and Youth Affairs (DETYA) and an International Postgraduate Award (IPA) from the University of Sydney.

Aims
To identify evidence-based intervention strategies likely to increase compliance with helmet use laws among motorcyclists in China.

Methods
Data from existing national and provincial databases will be used to describe the burden of motorcycle injuries and deaths in China. The prevalence of motorcycle helmet use by motorcyclists will be assessed by roadside observations in selected regions of China. Factors associated with motorcycle helmet use will be identified using case-control research methodologies. Intervention strategies that are likely to increase helmet use by motorcyclists will be proposed, based on the findings of this research.

Status/Results
The study protocol is currently being finalised. Data collection is expected to begin in late 2001.
China Car Crash Injury Study

Institute Investigators
Ting-Rui Guan, Robyn Norton, Mark Woodward.

Collaboration
Peking Union Medical College, China; Shenyang Medical College, China.

Funding Agency
The Institute for International Health.

Aims
The aim of the main study is to investigate the causes of car crash occupant injuries in Shenyang, China. The aim of the pilot study has been to assess the feasibility of the procedures for case and control recruitment and to assess the acceptability of the study instruments.

Methods
A population-based case-control study is planned involving the recruitment of 1,000 drivers involved in car crashes in which at least one of the occupants is hospitalised or killed and a random sample of 1,000 drivers recruited from roadside surveys in Shenyang.

Status/Results
The pilot study, conducted in May 2001, showed that the conduct of a case-control study of car crash injury in China is feasible. Response rates of over 80% were obtained for cases and over 95% for controls. The study instruments and procedures proved to be acceptable and comprehensible for both case and control drivers. A proposal based on the experience gained in the pilot study, is currently being prepared for submission to funding bodies.

Prevention of Ectopic Bone-Related Pain and Disability after Elective Hip Replacement Surgery (HIPAID)

Institute Investigators
Marlene Fransen, Robyn Norton, Bruce Neal, Stephen MacMahon.

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

Funding Agencies
National Health and Medical Research Council of Australia; Medical Benefits Fund, Australia.

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 twelve months after elective hip replacement surgery.
Methods
Randomised placebo-controlled trial involving 1,000 patients recruited from approximately 20 orthopaedic centres in Australia and New Zealand. Patients will be randomised, within 24 hours after surgery, to receive either ibuprofen (1200 mg daily) or matching placebo in three divided doses for 14 days.

Status/Results
The inaugural HIPAID Management Committee meeting was held in April 2001 in Adelaide. To date, 16 centres in Australia and New Zealand have been recruited. Piloting of the study procedures will commence in the latter half of 2001, with recruitment to the main study commencing soon after.

Saline vs Albumin Fluid Evaluation Study (SAFE)

Institute Investigators
Robyn Norton, Stephen MacMahon, Bruce Neal.

Collaboration
Australia and New Zealand Intensive Care Society Clinical Trials Group and the Australian Red Cross Blood Service.

Funding Agencies
The National Health and Medical Research Council of Australia; the Health Research Council of New Zealand; Australian Commonwealth, State and Territory governments; CSL Limited.
Injury Prevention and Trauma Care

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

Methods
Randomised controlled trial of saline versus albumin fluid in 7000 patients recruited from intensive care units in Australia and New Zealand.

Status/Results
Preparations for the conduct of the pilot study in five Australian centres are ongoing and it is anticipated that the pilot study will commence in the latter half of 2001. Recruitment of the remaining participating centres in Australia and New Zealand is nearing completion.

Translation of Research Into Practice (TRIP) – a new approach to the dissemination of information about falls prevention

Institute Investigators
Aleksandra Natora, Robyn Norton.

Collaborators
Department of Public Health and Community Medicine, University of Sydney, Australia; Rehabilitation Studies Unit, University of Sydney, Australia.

Funding Agency
Commonwealth Department of Health and Aged Care (CDHAC), Australia.

Aim
To determine whether small group interactive sessions, involving both practitioners and researchers, have the potential to be an effective means of transferring information between researchers and practitioners and, as a consequence, whether this method will enhance implementation of falls and falls-related injury evidence into practice.

Methods
Interactive sessions were conducted with practitioners in five falls and falls-related program practice fields – geriatricians, health promotion officers, in-hospital nursing staff, nursing home staff, and allied health workers. All sessions were facilitated, followed a standard format, and were audio-taped for later transcription and qualitative analysis.

Status/Results
The study was completed in December 2000, resulting in the submission of a report to the CDHAC. Participants reported engaging in a wide range of falls prevention activities that were generally consistent with known research evidence. However, the activities differed across the different practitioner groups, as did the sources of knowledge regarding best practice. The benefits of the interactive sessions to information transfer were not perceived by participants to surpass those of traditional didactic methods, although such sessions could prove useful if incorporated into larger conferences or meetings.
**Young Drivers’ Cohort Study**

**Institute Investigators**
Robyn Norton, Lawrence Lam, Mark Woodward, Rebecca Ivers.

**Collaboration**
Injury Research Centre, University of Western Australia; Injury Risk Management Research Centre and School of Medical Education, University of New South Wales, Australia; Roads and Traffic Authority of NSW, Australia.

**Funding Agency**
Funding is currently being sought from the NHMRC.

**Aims**
To assess the importance of several factors (including road risk perceptions, risky driving behaviours, pre-licensing driver experience and training/education factors) as determinants of motor vehicle-related crashes and injuries among young people aged 17-29 years.

**Methods**
A prospective cohort study of 20,000 young people, recruited at the time they receive their provisional driver’s licence from a NSW Roads and Traffic Authority (RTA) licensing centre is planned. Baseline information from participants will be linked prospectively to information about motor vehicle crash and injury involvement collected and routinely stored in databases maintained by the RTA and the NSW Coroner’s Office.

**Status/Results**
The outcome of the funding application for the main phase of the study should be known in late 2001.

**Other Activities of the Injury Prevention and Trauma Care Program**
The Institute for International Health is one of the partner organisations involved in the Global Forum for Health Research’s Road Traffic Initiative in Developing Countries, which aims to identify potential resources and support for research focussed on the problem of motor vehicle-related injuries in developing countries. The 2nd Road Traffic Initiative meeting was held in Geneva in April 2001. During the year, staff within the Program also contributed to a WHO meeting to develop a 5-year Strategy for Road Traffic Injury Prevention. Additionally, Injury Prevention and Trauma Care Program staff continue their involvement in the conduct of the New Zealand Blood Donors’ Health study and the Fletcher Challenge Heart and Health study (outlined on pages 27 and 28).
Epidemiology and Biostatistics

Overview

Epidemiology and biostatistics are central to all aspects of the Institute’s research and development program. A strong Epidemiology and Biostatistics Program is therefore a major strategic objective of the Institute. Staff employed in this Program contribute to study design and undertake data analysis for all the Institute programs. They also provide data management facilities and computer software and hardware support. In addition, the Program has its own research and development projects and is actively involved in teaching and training.

Computing services at the Institute have evolved rapidly over the past few years from a basic structure to a very comprehensive network of PCs and servers. Data security and emergency retrieval systems have been established and both external and internal websites created. The data management capabilities of the Institute have been extended to offer a generic data capture, quality assurance, data storage and retrieval service. A unique feature of the service being pioneered by the Institute is an on-line internet data entry facility. These new data management services are being developed initially for the ADVANCE and SAFE studies, both of which began data collection in 2001.

The research component of the Epidemiology and Biostatistics Program comprises the Asia Pacific Cohort Studies Collaboration, for which the Institute acts as joint coordinating centre with the Clinical Trials Research Unit at the University of Auckland, New Zealand, the Fletcher Challenge Heart and Health study and the New Zealand Blood Donors’ Health study. Both the latter studies are conducted in collaboration with colleagues in the Department of Community Health at the University of Auckland. In addition to research work instigated by staff within the Institute, the Epidemiology and Biostatistics Program is involved in collaborative projects with various other institutions including: the Royal North Shore Hospital in Sydney (dental health and cardiovascular risk factors and the Australasian Traumatic Brain Injury study); the University of Dundee, Scotland (the Scottish Heart Health study and international CALIBRE trial of drug treatment as adjuncts to defibrillation in ventricular fibrillation); the University of Glasgow, Scotland (WHO MONICA Project, the GLAMIS case-control study of myocardial infarction, Glasgow Heartscan study and the CADET trial of the effects of clopidogrel and aspirin on thrombogenic risk factors); and the Mario Negri Institute, Italy (analysis of dietary data from the GISSI-Prevenzione study).

The Institute’s training in developing countries is a primary responsibility of the Epidemiology and Biostatistics Program. Workshops have been conducted in Hanoi, Vietnam (Advanced Statistical Methods in Epidemiology) and another is planned for Beijing, China (Analysis of Large-Scale Clinical Trials). Additionally, Program staff teach the 12-week “Multiple Regression and Statistical Computing” course for the Masters of Public Health at the University of Sydney and currently support two PhD students.

The Program also provides consultant statistical advice to various research groups in Sydney on an ad-hoc basis. From November 2001, this will be formalised, in part, through the establishment of a Research Design and Analysis Clinic, to be run at the Royal Prince Alfred Hospital in Sydney, on behalf of the Central Sydney Health Authority.

Future plans for the Program include a further concentration of efforts to establish teaching and research collaboration in developing countries.
Asia Pacific Cohort Studies Collaboration (APCSC)

Institute Investigators
Mark Woodward, Xin-Hua Zhang, Federica Barzi, Stephen MacMahon.

Collaboration
University of Auckland New Zealand; Academia Sinica, Taiwan; Chinese Academy of Medical Sciences, China; Sugiyama Jogakuen University, Japan; Shiga University, Japan; Yonsei University, South Korea and 81 investigators representing 58 cohorts from nine countries/regions.

Funding Agencies
The project is partly funded by the National Health and Medical Research Council of Australia. A satellite symposium in Osaka was supported by an educational grant from Pfizer Inc.

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

Methods
The APCSC is a collaborative overview of individual participant data from cohort studies in the Asia-Pacific region. Investigators from all major cohort studies with information on blood pressure and causes of death have been invited to participate. Where available, repeat measurements of blood pressure and other cardiovascular risk factors are used to correct associations for regression dilution. Analysis strategies are developed in conjunction with colleagues at the Clinical Trials Research Unit in Auckland.

Status/Results
In May 2001, in conjunction with the 5th International Conference of Preventive Cardiology in Osaka (Japan), a satellite symposium on APCSC results was held, together with the third meeting of study collaborators. Presentations were made at the conference on results for diabetes, smoking and lipids, as well as on methodological aspects of the analysis of APCSC. Further analyses are underway, several papers are being prepared for publication, and other presentations of the findings are planned.

Fletcher Challenge Heart and Health Study

Institute Investigators
Stephen MacMahon, Robyn Norton, Mark Woodward.

Collaboration
University of Auckland, New Zealand.

Funding Agency
Fletcher Challenge Ltd, Health Research Council of New Zealand.
**Aims**
The primary aim of this study is to identify risk and protective factors for a range of chronic disease and injury outcomes.

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

**Status/Results**
Initial cohort analyses – involving 10 years of follow-up outcome data – have been completed, focussing on the relationships between BMI, SES, marital status and the risks of driver injury. The results of these analyses are currently being prepared for publication.

**New Zealand Blood Donors’ Health Study (NZBDHS)**

**Institute Investigators**
Robyn Norton, Stephen MacMahon, Mark Woodward.

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

**Funding Agency**
Health Research Council of New Zealand.

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

**Methods**
Baseline information has been obtained from over 22,000 individuals aged 16–60 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 will be 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.
An estimated 400 million individuals worldwide suffer from mental or neurological disorders or from psychosocial problems related to alcohol or drug abuse. These disorders constitute five of the ten leading causes of disability worldwide and, through their effects on suicide, in particular, these disorders are also an important cause of premature death. In the next 20 years, major depression is predicted to rise to become the second leading cause of disability worldwide, after coronary heart disease. The burden of ill health caused by these conditions appears to be greater in the developing and newly industrialised world, in which they are now believed to be the leading cause of loss of healthy life years. However, there remains a pressing need for more surveillance programs in such countries in an effort to better quantify this burden.

Effective interventions exist for the treatment of many mental disorders, but there are unanswered questions about how best to deliver such care and how best to assure adherence. These questions are similarly relevant in higher and lower income countries. The formulation, implementation and evaluation of low-cost preventive and therapeutic interventions for common mental disorders, such as depression, is a particular priority for lower income countries. So too, is the training of staff skilled in mental health epidemiology and mental health services program development.

These will be among the objectives of the Institute’s Mental Health Program, which will be established during 2002. A major focus of current efforts is to raise funds for the appointment of a Program Director and associated support staff.
The Finance and Administration Program is responsible for the financial and administrative activities of the Institute. This includes management of budgets, contracts, assets and human resources; financial and management accounting; investment and risk management and financial systems development.

Over the past year, the Program has been working to develop an integrated accounting and management reporting system to facilitate the management of budgets, contracts and assets. A key feature of this system upgrade will be a state-of-the-art reporting structure which will enable the Institute to satisfy the increasingly complex demands for reporting at all levels and in all currencies including management, sponsorship and governmental reporting. The system utilises electronic delivery of reports as well as having the capability to embrace the various forms of e-commerce as they become available. It will add value to the work of the Institute, supporting its future development through the provision of timely and accurate information, while ensuring that the Institute’s financial strategy can continue to sustain its academic development. All Institute financial data will be processed on the new system from October 2001.

Human resource management has been implemented by the Program to facilitate day-to-day people management as well as deliver significant benefits over the longer-term. The recently introduced performance management, remuneration and workplace safety initiatives align Institute objectives with staff capability. Human resource management will be made simpler through the implementation of the MYstaff Human Resource Information System (HRIS) to be launched in 2001. MYstaff reduces the need for manual processing of HR reporting, leave applications and fortnightly payroll and provides a central point for employee data. The system works in conjunction with the new employees intranet. Through the intranet, staff can access policy and procedure information, have frequently asked questions answered and download relevant forms and documents as required. This further reduces the cost of HR administration by providing a portal of general information.

An investment strategy has been developed by the Program to assist in building a strong foundation for the Institute. This will help to ensure the Institute’s financial stability in future years, as well as enabling the Institute to directly support projects in developing countries.
Teaching and Training

Teaching and training is an important aspect of the Institute’s activities. It involves postgraduate supervision and academic teaching at the University of Sydney, the conduct of international short courses in epidemiology and biostatistics and a visiting academic program. In addition, the Institute hosts seminars on both international health and research methodology and conducts joint seminars with the NHMRC Clinical Trials Centre and the Department of Public Health and Community Medicine at the University of Sydney. During 2000/2001, Institute staff contributed to graduate level teaching in the University of Sydney’s Medical Program as well as the Masters of Public Health (MPH), the Masters of International Public Health (MIPH) and the Masters of Medicine in Clinical Epidemiology (MMed Clin Epi) programs. In 2001, the Institute’s major contribution to these courses was teaching of the core biostatistics modules, and the development of a two-day intensive Elective in Injury Prevention. Postgraduate students of biostatistics, epidemiology and clinical research are encouraged to seek supervision by senior staff of the Institute and in 2001 seven postgraduate students, enrolled at the Universities of Sydney and Auckland, were supervised by Institute staff.

Short courses in biostatistics, epidemiology and clinical research were offered in Vietnam in 2000 and are planned for China during 2001. The proposal to develop a formal collaboration between the Institute for International Health and the Johns Hopkins University Bloomberg School of Public Health should facilitate the development of new international teaching initiatives.

The Institute initiated a visiting research fellows programs during 2000/2001, hosting a number of research fellows and professors for periods of up to 12 months. It is anticipated that this program will not only facilitate and enhance relationships with collaborating centres and organisations, but will enhance the growth and development of Institute staff.

A number of seminar series have been hosted by the Institute over the past year, with a view to enhancing existing collaborative partnerships, strengthening the knowledge base of researchers and practitioners and forging new associations and partnerships for the future conduct of the Institute’s programs and projects. The International Health Seminar Series, in particular, has provided a forum for discussion of major issues in international health, with a focus on Australia’s contribution to health care in lower income countries. Speakers from key aid and research organisations worldwide, including AusAID, the World Bank and Johns Hopkins University, have contributed to the series.
A comprehensive communications strategy is a key feature of the objectives of the Institute. The aim is to ensure effective outcomes for both research and development at the Institute and considerable progress has been undertaken in this area in the last year. This has involved the re-development of the Institute website, publication of relevant literature in peer-reviewed journals and publications of suitable collaborating organisations, widespread publicity of the Institute’s research in both international and Australian media and establishing internal communications and the Institute’s intranet.

The aim of re-developing the Institute’s website was to attract a much wider audience than it had previously maintained and to become a gateway to several large international research projects. This was achieved by adding new features to enhance the content, improving the visual design for greater flexibility and usability, and developing the technical aspects of the site including features such as a search engine and quick find. The re-development initially saw a 200% increase in unique visitors and has continued to maintain a high level of access.

The Institute’s work has received widespread publicity both in Australia and overseas. This has included publication of the Institute’s research findings in the most prestigious medical journals including *The Lancet* and the *New England Journal of Medicine* and Institute staff being invited to give lectures at major conferences in North America, Europe and Asia.

Reports about the Institute’s work have been presented on all major television networks in Australia and North America, on CNN International and BBC World, on regional television and radio stations worldwide, and in major newspapers globally including the *Washington Post*, *USA Today*, the *Observer*, the *Daily Telegraph*, the *Sydney Morning Herald* and the *Age*. Articles about the work of the Institute have featured in publications of the University of Sydney and the Royal Prince Alfred Hospital.
Staff Publications and Presentations
Staff Publications

Peer Reviewed Journals


Books/Book Chapters


Conference Presentations

John Chalmers


Blood pressure & stroke prevention. 18th Annual Scientific Meeting of International Society of Hypertension. Chicago, USA, August 2000.

Guidelines are of considerable value in the management of hypertension. 18th Annual Scientific Meeting of International Society of Hypertension. Chicago, USA, August 2000.

Hypertension and stroke prevention. 18th Annual Scientific Meeting of International Society of Hypertension. Chicago, USA, August 2000.


Neil Chapman

Overviews of the latest trials using newer antihypertensive drugs. Danish Hypertension Society. Copenhagen, Denmark, April 2001.
Marlene Fransen
Excess mortality or institutionalisation following hip fracture: men are at greater risk than women. Australasian Epidemiological Association Annual Scientific Meeting. Canberra, Australia, November 2000.


Ting-Rui Guan

Rebecca Ivers


Stephen MacMahon


Bruce Neal

Robyn Norton


Aleskandra Natora


Bruce Neal


Staff Presentations

Best practice in falls prevention. Northern Sydney Falls Health Improvement Steering Committee Meeting. Sydney, Australia, August 2000.
Mark Woodward
Pooling results from individual data – possible approaches to analysis. Satellite meeting on the Asia Pacific Cohort Studies Collaboration. 5th International Conference on Preventive Cardiology. Osaka, Japan, May 2001.
Smoking and fatal coronary heart disease in Asian and Western populations. 5th International Conference on Preventive Cardiology. Osaka, Japan, May 2001.
Statistical methods used to analyse the data. Satellite meeting on the Asia Pacific Cohort Studies Collaboration. 5th International Conference on Preventive Cardiology. Osaka, Japan, May 2001.
Fibrinogen and stroke in the Scottish Heart Health Study. 4th World Stroke Congress. Melbourne, Australia, November 2000.
Xin-Hua Zhang
Organizing the collaborative overview. Satellite meeting on the Asia Pacific Cohort Studies Collaboration. 5th International Conference on Preventive Cardiology. Osaka, Japan, May 2001.
Conference Proceedings/Technical Reports/Other Publications

Meetings Convened


Meetings Convened


Staff Individual Awards

Marlene Fransen
NHMRC Postdoctoral Public Health (Australia) Fellowship.

Stephen MacMahon
FAHA, American Heart Association.

Robyn Norton
Honorary Professor, Shenyang Medical College, China.

Takayoshi Ohkubo
Japan Heart Foundation Overseas Research Fellowship.
Appendix
Mr Peter Burrows (Chairman)

Peter Burrows, First Vice President of Merrill Lynch Private (Australia) Pty Limited brings to the Board a depth of financial experience. He is a graduate of the University of Sydney with a Bachelor of Economics degree and is an Associate of the Securities Institute of Australia. Beginning his career in 1970, Peter worked in London at Cazenove and Co, stockbrokers, successfully completing his membership examinations for the Stock Exchange, London. Returning to Sydney in 1972, Peter joined Ernest L. Davis and Co, Stockbrokers and in 1978 became a member of the Sydney Stock Exchange and a partner. From 1984-86 Peter was Managing Director of Macquarie Davis Limited and then founded Burrows Limited. In 1986 and 1987 he was awarded ‘Stockbroker of the Year’. From 1988 to 1992 he was a director of the Australian Stock Exchange (Sydney) and took on his present role in 1997. Throughout his career Peter has spent a great deal of time on charitable and voluntary activities including currently being President of The Medical Research Foundation of the University of Sydney, Governor of the Museum of Sydney and member of the Advisory Board, Centre for Health Economics Research and Evaluation, University of Sydney. He is Chairman of Encompass Bioinformatics Limited. In the past, Peter has been Chairman of the New Children’s Hospital Appeal and Director of the Northern Clinical School Appeal, Royal North Shore Hospital. He has sat on the boards of such listed companies and organisations as Garratt’s Limited (Chairman), ASC Limited, Rabbit Photo Holdings Limited, Mosaix Technologies Limited and Australian Opportunities Investment Trust.
Professor John Chalmers, AC FAA FRACP

John Chalmers is Professor of Medicine and Chairman of Research Development in the Faculty of Medicine at the University of Sydney. Professor Chalmers was previously Foundation Professor of Medicine and a key figure in the establishment of the Flinders Medical Centre as a major academic centre in Adelaide. His research has been in the field of hypertension and has ranged from basic science to clinical studies and large scale clinical trials. Over the past 20 years, he has been Chairman or President of many bodies including the National Health and Medical Research Council, the Royal Australian College of Physicians, the Australian Society for Medical Research, the International Society of Hypertension, the Scientific Advisory Board of the World Heart Federation, and the WHO Expert Committee on Hypertension. He has served on many government bodies, including the Australian Health Minister’s Advisory Council, the Australian National Council on AIDS, the Australian Drug Evaluation Committee and the Pharmaceutical Benefits Advisory Committee. In 2000, John was appointed as Professorial Fellow in the Institute for International Health.

Mr Graham Cowley, LL B

Graham Cowley is Founder and Chairman of Cowley Hearne Lawyers. In 1993, Graham initiated Cowley Hearne’s membership of Commercial Law Affiliates, the world’s largest group of independent commercial law firms, in which he holds the position of President’s Counsellor (Vice President). He is a member of the International Bar Association and the American Chamber of Commerce and was formerly Chairman of the NSW Small Business Development Council. His notable achievements include being Founder of the Australian Law Marketing Association and the North Sydney Business Forum. Graham is also currently involved in various charitable organisations, including the Board of the Epilepsy Association of NSW. Graham joined the Institute Board in July 2000.
Mr Pat Grier

Pat Grier is Managing Director of Ramsay Health Care. Pat started his career in Australia as a Marketing Manager for Reckitt and Colman a pharmaceutical company, and later became the General Manager of a large international cosmetics company – Revlon. He moved into the private health care industry ten years ago and joined HCA as a Hospital Executive bringing with him experience in marketing and general management. Having worked as a Chief Executive Officer at one of HCA's largest hospitals, he moved to Ramsay Health Care in 1988, initially as Marketing and Development Manager and subsequently becoming Chief Operating Officer. During his time as Operations Manager, Ramsay Health Care was restructured and the organisation grew by over 300%. In 1995 he became Managing Director. In 1997, in preparation for continued growth, Ramsay Health Care was successfully floated on the Australian Stock Exchange. Having been a Marketing Manager and a General Manager in the cutthroat world of the retail industry, he has brought to the health care sector a wealth of experience in consumer marketing, general management and strategic thinking.

Dr Diana Horvath, AO

Diana Horvath is the Chief Executive Officer of the Central Sydney Area Health Service. Diana is a graduate of the University of Sydney with a Bachelors degree in Medicine and a Masters degree in Health Planning. She is a Fellow of the Royal Australasian College of Medical Administrators, the Australian Faculty of Public Health of the Royal Australasian College of Physicians and the Australian College of Health Service Executives. Diana has been awarded the Sax Medal by the Australian Hospital Association, the highest honour periodically awarded by the AHA for innovation in health care management and research, and the Arthur Anderson/Dr Ed Crosby International Award for managerial innovation. Her previous appointments include Chairman of the National Health and Medical Research Council, Commissioner for the Health Insurance Commission, Member of the Australian Health Ministers’ Advisory Council and President of the Australian Hospital Association, among many others. Diana is also currently a Board Member of the Centenary Institute for Cancer Medicine and Cell Biology, the Institute of Respiratory Medicine, and the ANZAC Health and Medical Research Institute. Diana joined the Institute Board in October 2000.
Professor Stephen MacMahon

Stephen MacMahon is a Principal Director of the Institute for International Health. He holds the Medical Foundation Chair of Cardiovascular Medicine and Epidemiology at the University of Sydney and is Honorary Professor of Medicine at the University of Auckland. Stephen is also an Honorary Consultant Epidemiologist at the Royal Prince Alfred Hospital. He was previously Director of the Clinical Trials Research Unit and Associate Professor of Medicine and Clinical Pharmacology at the University of Auckland. He is a graduate of the faculties of medicine at the University of Sydney and the University of New South Wales and a Fellow of the American College of Cardiology. He received postgraduate training in cardiovascular disease epidemiology at the National Heart, Lung and Blood Institute in the United States and at the University of Oxford. He has been the recipient of many scholarships and fellowships; in 1999 he was the recipient of the Eccles Award from the National Health and Medical Research Council of Australia for his work on the causes, prevention and treatment of cardiovascular diseases.

Professor Robyn Norton

Robyn Norton is a Principal Director of the Institute for International Health and Ramsay Health Care Professor of Injury Prevention in the Department of Public Health and Community Medicine at the University of Sydney. She is also an Honorary Consultant Epidemiologist at the Royal Prince Alfred Hospital and holds Honorary Professorships at Shenyang Medical College in northern China and the University of Auckland, New Zealand. Robyn was previously the foundation Director of the Injury Prevention Research Centre at the University of Auckland. She is a graduate of the University of Sydney and undertook postgraduate training in epidemiology at the National Institute of Alcohol Abuse and Alcoholism in the United States and the Royal Free Hospital in London. She is currently Chair of the NSW (Sydney) Chapter of the Australian College of Road Safety and Chair of the Research Committee of the Australasian Trauma Society.
Program Directors

Ms Gillian Dowell
Gillian Dowell is the Finance and Administration Program Director and Company Secretary. She is a graduate of the University of Sydney with a Bachelors degree in Economics majoring in accounting, economics and commercial Law and is also a Certified Practising Accountant. She is currently completing the Chartered Company Secretarial diploma with Chartered Secretaries Australia. Gillian previously held the position of Financial Controller with an American multinational corporation. Gillian joined the Institute in October 2000, bringing and applying commercial experience to the establishment of the Finance and Administration Program.

Dr Bruce Neal
Bruce Neal is Director of the Heart and Vascular Diseases Program at the Institute for International Health, a senior lecturer in the Department of Medicine at the University of Sydney and an Honorary Consultant Epidemiologist at the Royal Prince Alfred Hospital. He completed his medical training at Bristol University in the UK in 1990 and spent four years in clinical posts during which time he gained membership of the UK Royal College of Physicians. Prior to taking up his current post in 1999, he spent four years working as an epidemiologist at the Clinical Trials Research Unit in Auckland, New Zealand, where he completed his PhD. Bruce currently conducts an international program of clinical and epidemiological research concerned with the causes, prevention and treatment of heart and vascular diseases. The program constitutes large-scale randomised trials, cohort studies and overview projects.
Professor Mark Woodward

Mark Woodward is Director of the Epidemiology and Biostatistics Program, Professor of Biostatistics at the University of Sydney and Honorary Consultant Epidemiologist at the Royal Prince Alfred Hospital. He has a PhD from the Department of Applied Statistics at the University of Reading, England, where he subsequently worked for several years, most recently as Senior Lecturer in Statistical Epidemiology. He 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 the Asian Development Bank, the World Health Organization and the UK Department for International Development.
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Shannah Baichoo · Accountant (until April 2001)
Andrew Church · Finance Officer
Karen Sellar · HR Coordinator
Emma Thomson · Finance and Personnel Officer (until December 2000)