MONASH University

Department of Epidemiology & Preventive Medicine

ANNUAL REPORT 1998

A partner in the Victorian Consortium for Public Health and the Co-operative Research Centre for Water Quality and Treatment
Contact information

The Department of Epidemiology and Preventive Medicine is part of the Alfred Hospital campus of the Faculty of Medicine of Monash University and has several units situated over three campuses.

The main department and reception is located on the 3rd floor at 553 St Kilda Road, Melbourne 3004, with some staff also on the 4th floor.

The Unit of Nutrition and Preventive Medicine is situated at the Monash Medical Centre, Clayton and the Clinical Trials Centre is situated at the Ashley Ricketson Centre of the Caulfield Hospital.

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Assoc/Prof Flavia Cicutti 9903 0553

Infectious Disease Unit (incorporating CRC for Water Quality and Treatment)
Assoc/Prof Kit airley 9903 0550

Unit of Nutrition & Preventive Medicine
Prof. Karin O'Dea 9594 5510

Unit of Occupational & Environmental Health
Assoc/Prof Malcolm Sim 9903 0582

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Please visit our web site at http://www.med.monash.edu.au/epidemiology/
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Activities of the department

Teaching
Staff of the department teach in all years of the undergraduate medical course and co-ordinate several subjects in the new Bachelor of Biomedical Science degree.

The department also has an active post-graduate education programme which includes:
- Master of Public Health degree
- Graduate Diploma and Master of Occupational & Environmental Health
- Graduate Diploma and Master of Clinical Epidemiology
- Graduate Diploma in International Health
- Graduate Diploma in Health Services Management
- Graduate Diploma in Preventive Medicine
- Short courses
- Doctor of Philosophy (PhD) program

Research
Research covers a range of public health areas including:
- Clinical trials
- Clinical pharmacology
- Cardiovascular disease prevention
- Drinking water quality
- Environmental health
- Indigenous health
- Infectious disease epidemiology
- Occupational epidemiology
- Quality in health care
- Respiratory disease

Consulting
Staff of the department are also active in several professional areas:
- Hospital appointments
- Participation in committees and working parties of professional colleges and associations
- Consultancies for, and advice to, Federal and State Governments
- Grant application reviewing and refereeing of submitted articles to scientific journals, and participation on journal editorial boards.
Research strengths

- Occupational health
- Environmental toxicology
- CRC in water quality
- Applied clinical research
- Clinical epidemiology
- Evidence based medicine
- Respiratory medicine
- Neuro epidemiology
- Quality assurance audit
- Outcomes assessment
- Information technology
- Health promotion
- Preventive medicine
- Health services management
- Clinical trials
- Drug evaluation
- Drug safety monitoring
- Device safety monitoring

Epidemiology and Biostatistics underpin the department’s activities

- Cardiovascular disease
- Cancer prevention
- Infectious disease epidemiology
- Outbreak investigation

These activities are grouped into several units:

- Biostatistics Unit
- Clinical Epidemiology Unit
- Clinical Pharmacology Unit
- Chronic Diseases and Health Services Research Unit
- Infectious Disease Unit
- Unit of Nutrition and Preventive Medicine
- Unit of Occupational and Environmental Health
- Unit of Preventive Medicine
From the Head of Department

Professor John McNeil

1998 was a busy and successful year for the Department. The year was marked by the appointment of several new staff members, some key promotions amongst existing staff, and the commencement of several new and exciting projects. We continued to build links with a large number of outside organizations and were involved in the planning for the new Monash Institute of Public Health and Health Services Research at Monash Medical Centre.

Although the Institute for Public Health and Health Services Research did not officially commence operation until 1999, activity surrounding it was well underway in 1998. We were delighted at the appointment of Professor Chris Silagy as the inaugural Director. Chris is well known to many in this Department and will bring the highest level of expertise in clinical, public health and health services research to the Faculty. Establishment of the Institute is a major step forward for the Public Health Sciences at Monash and we will look forward to working with Chris and his colleagues on many new projects.

The other significant event in our calendar was the planning retreat held at Booth Lodge near Kallista in late November. Fifteen of our senior staff met over two days in a productive series of workshops expertly coordinated by Dr Norman Swan. Several guests including Dr William Hart, Professor Leon Piterman and Dr Michael Walsh joined us for part of the time and made very valuable contributions.

The retreat identified four key themes as our priorities over the next three to five years. These are security and growth, developments in education, improved organisational structure, and research success. A detailed document was produced listing specific goals within each of these theme areas and the actions required to bring them to fruition. The retreat was the third in a series of such events held over the last few years and each has contributed substantially to our development.

Planning exercises such as this have become a more significant part of our work as University departments develop more of the characteristics of a small business. Increasingly we are facing a competitive marketplace for all of our activities, particularly in the postgraduate area where competition between tertiary institutions is rife and fees are low by international standards. Contract research is increasingly seen as one of the few avenues available to supplement our university funding and to enable us to provide the highest quality in our educational offerings.

On the educational front, 1998 saw preparation for two exciting new initiatives scheduled to commence in 1999. The first of these is the Postgraduate Diploma in Clinical Health Management developed under the guidance of Dr Jenny Majoor. This is a joint project between this Faculty and the Faculties of Business and Economics and Law and is designed to train individuals with management responsibility in hospitals and government. Following a very successful first intake, negotiations have taken place with the aim of providing the course to participants from Indonesia and Malaysia.

Our second major educational development has been in the new Bachelor of Biomedical Sciences degree where the Department has played a major role in establishing the first year unit entitled 'Medical Sciences and Society'. This new degree has attracted students from a very high band of TAT scores and is likely to represent a major growth area for the faculty. Prior to its introduction, traditional science courses at Monash focused very largely on the basic sciences and provided little in the way of a broad health education for undergraduates. We are looking forward to an increased involvement in this course and are grateful for the enormous contribution from Flavia Cicuttini and Andrew Forbes in developing our contribution to it.

On the research front, the major development was the transfer from Deakin University of Professor Kerin O’Dea who was also appointed to the Chair of Nutrition and Preventive Medicine at Monash. Kerin has brought to Monash outstanding expertise in a variety of areas including public health, nutrition and indigenous health. Although at the beginning of 1999 her group transferred to the new Institute, we look forward to maintaining the close teaching and research links that developed during her time in the Department.
Other research news included the commencement of several new NHMRC funded projects including the ASFAST study which is being conducted jointly with Assoc. Professor Barry McGrath's Vascular Medicine Unit at Monash Medical Centre and Renal units at MMC, the Royal Melbourne Hospital and the Austin and Repatriation Hospital. We also commenced new projects involving 'out-of-hospital' cardiac arrest (in conjunction with the Metropolitan Ambulance Service and the Metropolitan Fire Brigade) and an Australian Kidney Foundation National Survey of Renal Diseases in conjunction with Professor Robert Atkins. News from existing projects included the refunding by NHMRC for an additional two years of VECAT and the successful completion of the massive CRC for Water Quality and Treatment "Water Filter" Trial.

1996 also saw a substantial increase in our international links. Collaborative links have developed with several major international units in Canada and the US. Early in the year we had two visitors from Montreal, Canada; Nancy Mayo from McGill University and Mark Goldberg from the University of Quebec, who both worked in the Department for two weeks. Nancy ran a successful short course on "Measuring health outcomes on an individual, group and population level" and Mark ran an equally successful course entitled "Modern methods of data analysis for the health researcher".

A strong interaction has also been developed with Professor Steve Hrudey from the Department of Public Health Sciences at the University of Alberta, Canada. A joint project on development of a Drinking Water Quality Management has been established through the secondment of Ms Samantha Rizik from Steve's Department. Sam has added a very valuable new skill in risk management to the Department and has been a very valued colleague.

On a more personal note, we were very pleased during the year by the promotion of Flavia Cicuttini and Malcolm Slim to Associate Professors within the Department. Both Malcolm and Flavia are fundamental to so many of our activities and their new appointment was a pleasing recognition of their enormous talent and contribution to our activities. We were also delighted by the appointment of Jenny Major and Joe Ibrahim to Senior Lectureships following the completion of their Doctorates. They have also developed roles of fundamental importance to our activities.

A distressing occasion during the year was the death of our valued colleague, Dr Noni Holmes. Noni had completed her PhD in the Department in 1996. Noni was a great friend and colleague who was popular and highly respected throughout the Department. Her passing after a relatively brief illness brought shock and sadness.

We were also saddened to learn of the death in England of the previous head of the Department, Professor Louis Opit. Louis was an outspoken and sometimes controversial figure during his time at Monash and was responsible for the establishment of the MPH degree upon which so much of the Department's growth has depended. He was recalled with great fondness by many of his former colleagues and students.

As in previous years the Annual Report provides an opportunity to record our appreciation of those staff who have moved on to new positions outside DEPM. They include, Mandy Thrift, Andrea Hinwood, Sue Ziolkowski and Trina Vincent. All have made a major contribution to our activities and we wish them well in their future careers.

The report also provides an opportunity to thank our wonderful administrative, research and technical staff who work tirelessly despite understaffing and various other forms of stress, to keep the Department on an even keel. Their contribution to our activities cannot be over-estimated.
Professor & Head of Department
Head of Unit, Preventive Medicine
John McNeil, MBBS, MSc, PhD, FRACP, FAFFPM

Academic Staff
Abramson, Michael MBBS(Hons), BMedSc, PhD, FRACP, FAFFPM, Associate Professor,
Deputy Head of Department, Head - Unit of Clinical Epidemiology
Buchbinder, Rachelle MBBS(Hons), MSc, FRACP (part-time)
Brigantti, Esther MBBS, GDipClinEpi, FRACP
Cicullini, Fiavia MSc, DHTM, MBBS(Hons), PhD, FRACP, FAFFPM, Associate Professor,
Head - Unit of Clinical Effectiveness
Davis, Susan MBBS, PhD, FRACP
Demos, Lisa BPharm, GDip HospPharm, PhD (on secondment from Alfred Hospital)
Elder, David MBChB, DGM, MRCPG, Grad Dip Occ Health, MPH, FAFFPM
Fairley, Christopher MBBS, PhD, FRACP, FAFFPM, Associate Professor,
Head - Unit of Infectious Diseases
Fritsch, Lin MBBS, PhD, FAFFPM
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Forbes, Andrew BSc(Hons), MSc, PhD, Head - Unit of Biostatistics
Goddard, David BMedSc, MBBS, DOH, FAOM, MFOM
Hocking, Bruce MBBS, FRACP, FAOM (part-time)
Krum, Henry MBBS, PhD, FRACP, Associate Professor, Head - Unit of Clinical Pharmacology
Mylavanam, Arul MSc, C.Stat(UK), Grad.IS(UK), PhD
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Head - Unit of Occupational & Environmental Health
Sinclair, Martha BSc(Hons), PhD

Post-doctoral Research Fellows
Daniel, Mark BSc, MSc, PhD
Rowley, Kevin BAppSc, GDipEpi & Biostats, PhD
Thrift, Mandy BSc(Hons), PhD
Woods, Rosalie BSc, GDip Dietetics, MPH, PhD

Research Fellows/Officers
Alfred, Geoffrey BBus
Bailey, Michael BSc(Hons) MSc(Statistics)
Benke, Geza BSc MAppSc GDipQuanMeth, FAICH
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Glass, Deborah BA(Hons), CertEd, MSc
Ikin, Jill BA(Psych) Grad Dip Hlth
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Muir, Jane BSc, Grad Dip Dietetics, PhD
Peeterson, Anna BSc(Hons), PhD
Piers, Sunil MBBS, MD, PhD
Robman, Luba MD PhD
Walker, Karen BSc(Hons), MND, PhD
Watson, Max BAppSc, M Rural Sc, PhD, Grad Dip Epi

Computer Systems Officers
Fee, Colin
Software Resources Officer
Doherty, Natalie, Bach of Computing (InfoSyst)
### Research Assistants

<table>
<thead>
<tr>
<th>Name</th>
<th>Qualification</th>
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<tbody>
<tr>
<td>Butler, Kate</td>
<td>B.HlthSc (Nursing)</td>
</tr>
<tr>
<td>Cameron, Melissa</td>
<td>BSc(Hons), GDipSportsSc</td>
</tr>
<tr>
<td>Chapman, Janine</td>
<td>BSc, MHN</td>
</tr>
<tr>
<td>Hankin, Judy</td>
<td>BA(Psych)RN</td>
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<tr>
<td>Kaimkamis, Mary</td>
<td>BSc, MHN</td>
</tr>
<tr>
<td>Karshimkus, Connie</td>
<td>AsocDipApplSci</td>
</tr>
<tr>
<td>“Lightbody, Pam”</td>
<td>BSc</td>
</tr>
<tr>
<td>Mal, Trudy</td>
<td>BAppSc</td>
</tr>
<tr>
<td>“Ristevski, Sonya”</td>
<td>BSc(Hons)</td>
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<tr>
<td>Simmons, Geoff</td>
<td>BSc(Hons)</td>
</tr>
<tr>
<td>Shiel, Louise</td>
<td>BSc GradDipAppSci DlpEd</td>
</tr>
<tr>
<td>Skiba, Marina</td>
<td>BEd</td>
</tr>
<tr>
<td>Smith, Karen</td>
<td>BSc(Hons), GradDipEpi&amp;Biostat</td>
</tr>
<tr>
<td>Stoney, Rachel</td>
<td>BSc(Hons) MHN</td>
</tr>
<tr>
<td>Tikeiffi, Gabriella</td>
<td>BSc</td>
</tr>
<tr>
<td>Tsamidis, Alex</td>
<td>BSc(Hons)</td>
</tr>
<tr>
<td>Wharton, Catherine</td>
<td>BAppSc HlthPromotion</td>
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<tr>
<td>Yeow, Elaine</td>
<td>BSc, MHN</td>
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### Research Nurses

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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Ferguson, Joanne</td>
<td>RN, DipEd</td>
</tr>
<tr>
<td>Gibson, Kimberley</td>
<td>BA, RN</td>
</tr>
<tr>
<td>Guise, Isabel</td>
<td>RN</td>
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<tr>
<td>Harris, Linton</td>
<td>RN, DipAppSci(Nursing)</td>
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<tr>
<td>Natoli, Lisa</td>
<td>RN, DipAppSci(Nursing)</td>
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<tr>
<td>Richardson, Fiona</td>
<td>RN, DipAppSci(Nursing), G DipHlthPromEd</td>
</tr>
<tr>
<td>Savio, Fiona</td>
<td>BNSG, MHlthSc</td>
</tr>
<tr>
<td>See, Jody Anne</td>
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</tr>
<tr>
<td>Snaddon, Judy</td>
<td>BA, SRN, SRM</td>
</tr>
<tr>
<td>Vincent, Trina</td>
<td>RN</td>
</tr>
<tr>
<td>Willis, Jessika</td>
<td>BSc, G DipHumServRes, RPN</td>
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<tr>
<td>Zbikowski, Sue</td>
<td>RN, G DipDrugEvalPharmSc</td>
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### Technical Assistants

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<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Barrie, Lorien</td>
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<tr>
<td>Elliot, John</td>
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<td>Wilke, John</td>
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### BMEdSci & Honours Students

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Ashley Opat</td>
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<tr>
<td>Michael Gingold</td>
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### Administrative Staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Department</th>
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</thead>
<tbody>
<tr>
<td>Anderiesz, Natalie</td>
<td>Admin Officer, Finance &amp; Resources</td>
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<tr>
<td>Apostolou, Ellie</td>
<td>Recept/Secretary</td>
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<tr>
<td>Barrie, Carolyn</td>
<td>Admin Officer, Unit of Occ &amp; Env Health</td>
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<tr>
<td>Blalch, Rhonda</td>
<td>BEd, Administrative Officer</td>
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<tr>
<td>Cherry, Sandra</td>
<td>Admin Secretary/PA (HOD)</td>
</tr>
<tr>
<td>Cope, Jenny</td>
<td>BA, Admin Assistant</td>
</tr>
<tr>
<td>Cowie, Marilyn</td>
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</tr>
<tr>
<td>McKeown, Sonya</td>
<td>BA(Hons) Resources Manager</td>
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<tr>
<td>Patchett, Annette</td>
<td>Office Assistant</td>
</tr>
<tr>
<td>Parnial, Marian</td>
<td>BA(Hons), Admin Assistant</td>
</tr>
<tr>
<td>Ryan, Anna</td>
<td>BA, Admin Secretary, Ashley Rick etson Centre</td>
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<tr>
<td>Skinner, Michelle</td>
<td>Aboriginal Health Worker (WA)</td>
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<tr>
<td>Skinner, Karen</td>
<td>Aboriginal Health Worker (WA)</td>
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<td>Thomson, Lynda</td>
<td>BA, GDipMarArc, Admin Officer Postgraduate teaching</td>
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<tr>
<td>Toporlanis, Phyllis</td>
<td>Admin Secretary</td>
</tr>
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</table>

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<table>
<thead>
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<th>Name</th>
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</thead>
<tbody>
<tr>
<td>Branley, Pauline</td>
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<td>Göricane, Glenys</td>
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<td>Green, Sally</td>
<td>BAppSc, G Dip(ManipPhysio)</td>
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<td>Hellard, Margaret</td>
<td>MBBS FRACP</td>
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<tr>
<td>Hinwood, Andrea</td>
<td>BSc MAppSc</td>
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<tr>
<td>Ibrahim, Joe</td>
<td>MBBS, FRACP, MHA</td>
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<tr>
<td>Islopoulos, Catherine</td>
<td>BSc(Hons), G DipDiet, MPH</td>
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<tr>
<td>Kazda, Hana</td>
<td>BSc(Hons)</td>
</tr>
<tr>
<td>Kwok, Anthony</td>
<td>G DipPhysio, G DipHlthAdmin, MHA</td>
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<tr>
<td>Lin, Stephen</td>
<td>BSc(Hons)</td>
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<tr>
<td>Loft, Bebe</td>
<td>MA(Lond), BA, LLB</td>
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<tr>
<td>Lu, Zhong Xian</td>
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<tr>
<td>Majcor, Jenny</td>
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<tr>
<td>Martin, Paul</td>
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<td>Meakim, Jean</td>
<td>BSc(Hons), MAppSc</td>
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<td>Meyer, Alastair</td>
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<tr>
<td>Nelson, Mark</td>
<td>MBBS, G DipFamMed, MFamMed</td>
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<tr>
<td>Padlifhona, Alex</td>
<td>MBBS, FRACP</td>
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<tr>
<td>Pelizzer, Ann-Marie</td>
<td>MBBS, FRACP</td>
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<tr>
<td>Robertson, Brent</td>
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<tr>
<td>Stephenson, Hugo</td>
<td>BSc, MBBS</td>
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<tr>
<td>Stuart, Rhonda</td>
<td>MBBS FRACP</td>
</tr>
<tr>
<td>Su Qing</td>
<td>BChem, MAppSc</td>
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Research nurses, Fiona Savio, Isabel Guise and Kimberley Gibson
The activities of the Biostatistics Unit involve:

- the provision of statistical collaboration on departmental research projects
- teaching at undergraduate and postgraduate levels
- independent research
- overseeing data collection and management practices in the department
- statistical support for departmental PhD and Master of Public Health projects
- provision of statistical consulting to hospitals and university departments and external clients

Head of Unit
Dr Andrew Forbes

Unit staff
Michael Bailey
Arul Mylvaganam

The vast majority of departmental research projects require significant input from the Biostatistics Unit. Members of the Unit hold coinvestigator and/or associate investigator status on a number of research projects within and external to the department, and also provide regular advice on many statistical issues within other research projects. Further details of research projects and associated publications are listed elsewhere in this report.

The teaching activities of the unit in 1998 consisted of lectures and tutorials within and external to the department. Undergraduate medical student teaching consisted of a series of problem-based tutorials in first year, and assistance with tutorials in the second and fourth year of the medical program. Postgraduate teaching included biostatistics and computing subjects for the Master of Public Health and the Graduate Diplomas in Clinical Epidemiology and Occupational and Environmental Health. Other activities included a series of statistics lectures for researchers at the Alfred Hospital and education sessions for the Royal Australasian College of Physicians.
The focus of research in chronic diseases has been the development of magnetic resonance imaging (MRI) as a sensitive, reproducible method to measure joint cartilage non-invasively in healthy and diseased states. This novel outcome measure is currently being used in clinical studies to identify determinants of cartilage volume in normal subjects, to examine the rate of cartilage loss over time in healthy and diseased states, and in an intervention study of antioxidants in osteoarthritis.

The importance of arthritis as a major contributor to disability in the aged population was examined in a recently completed community based study of independently-living elderly people. Risk factors for accidents were identified and the role of aids aimed at reversing disability was examined in a randomized controlled trial.

In the area of health services research, we have a program directed at examining quality in healthcare. The Acute Health Indicators Project is currently underway. This project was commissioned by the Department of Health and Human Services (Victoria) in October 1996. The Project team consists of the Australian Council on Healthcare Standards-Care Evaluation Program and the Department of Epidemiology and Preventive Medicine. The project brief is to identify a concise set of indicators of clinical care which would be suitable for implementation and monitoring at the state level. It is intended that the indicators will reflect on the quality of care within public acute hospitals and be useful determinants of hospital performance. The final report for the Acute Health Indicator Project is due in June 1999.

Although computers are now widely used in hospitals for the collection of administrative data and test results, they have made little impact on clinical practice. Numerous studies have demonstrated that the implementation of clinical decision support tools provide improved medical outcomes, yet little work has been done in developing intelligent medical algorithms. We are currently examining a computer based algorithm in the decision support for management of stroke and other medical conditions.

The impact of human rights on health outcome is of increasing interest both nationally and internationally. The relationship between health status and the observance of human rights in remote aboriginal communities in the context of sexual health is currently underway. In particular the question being addressed is how much evidence is required before government is obliged to act to avert a disaster, possibly of genocidal proportions. The feasibility of developing quantitative methods for measuring human rights is being examined.

The chronic diseases and health services research unit is actively involved in course development and teaching in 2nd and 4th as well as contributing to 3rd and 6th year medical student teaching. New postgraduate teaching initiatives include the Graduate Certificate in Pharmacoeconomics and the Graduate Diploma in Health Management being delivered by distance mode.
Clinical Epidemiology Unit

Much of the Department's research falls within the scope of Clinical Epidemiology. For example, the randomised clinical trials of Vitamin E currently underway at Caulfield offer the prospect of preventing vascular disease and cataracts. Collaborative links with the Alfred Hospital include the Department of Respiratory Medicine, Clinical Pharmacology, Rheumatology and Microbiology & Infectious Disease Units, continue to ensure that the departments' clinical epidemiological studies are relevant to clinical outcomes. Some examples of current research projects currently undertaken by clinical epidemiology staff are listed below.

Qualitative study of barriers to therapy adherence by asthmatic adolescents

Patients aged 10-24 years are recruited through the Centre for Adolescent Health (which incorporates a Teenage Asthma Clinic), the Department of Thoracic Medicine at the Royal Children's Hospital and the Asthma & Allergy Clinic at the Alfred Hospital. At the end of 1998, 91 in-depth interviews had been conducted. The parents of 81 adolescents had also been interviewed. Demographic data was collected about both the adolescent and parent informants, including medical opinion of adolescents' asthma severity. Adolescent informants also completed questionnaires regarding their respiratory health and their knowledge of asthma.

The interviews have been transcribed verbatim and coded into a computer software program for analysis. Reports investigated so far include barriers to therapy adherence, relationships with doctors and other health professionals, hospital and ambulance experiences, family relationships, and smoking. The results of this study will enable identification of issues, which need to be addressed to improve adherence to therapy and correct self-assessment of asthma management by adolescents with asthma. The intention is to develop and test strategies to address these issues.

European Community Respiratory Health Survey (ECRHS II)

This is a follow-up study, which involved 638 young adults in Melbourne who originally took part in a similar study in 1992. The aim of the study is to determine whether there have been any changes in the prevalence of asthma and other respiratory diseases since the study was conducted in 1992. This study is being conducted in conjunction with approximately 20 other centres worldwide (mainly in Europe). The data collection phase of this study has now been completed and analysis of the Melbourne centre data is about to commence. Analysis of the data from all centres participating in the ECRHS is not expected to commence until 2000.

Environmental Risk factors for asthma

The cohort of young adults who participated in the European Community Respiratory Health Survey in 1992 was followed up until 1998 to identify the incidence and remission rates of asthma, prevalence and residential determinants of indoor allergens and their impact on asthma. The annual incidence of current asthma in our cohort was 1.0% and the remission rate of current asthma was 4.5%.

The majority of the participants' houses had Der p 1 (house dust mite allergen) levels and Fel d 1 (cat allergen) levels higher than the threshold for sensitization and induction of asthma. Total fungal
levels in 45% of the houses were higher than the level that is considered as hazardous by the World Health Organization. Der p 1 levels were higher in older houses and those with central heating, weatherboard walls, damp bedrooms or fitted old wool carpets. Der p 1 levels in bed dust were significantly higher in houses with wooden floors built on stumps, high relative humidity, visible mould in the room, in beds with an old mattress or blankets.

Mould spores were lower in bedrooms with a ceiling fan, without visible mould, and those that were more frequently vacuumed, had a solid fuel fire, had windows closed at the time of the sampling or did not have pets. Ergosterol levels, which indicate the cumulative exposure to fungi, were significantly lower in homes without old fitted carpets, visible mould or pets and those with frequent airing and regular use of an extractor fan in the kitchen. Fel d 1 levels were related to cat ownership and having cats inside the house. High exposure to total fungi in air increased bronchial reactivity of the participants. Ergosterol levels were a risk factor for both being allergic to fungi and wheezing.

Fel d 1 levels in the floor were found to increase the risk of being sensitized to cat. High levels of bed Fel d 1 were associated with increase risk of current asthma. Surprisingly, people with high Der p 1 levels in the floor were less likely to be sensitized to house dust mites and to have wheezed within last 12 months. Bed Der p 1 levels were not related to sensitization or asthma. These results suggest that the importance of exposure to house dust mite allergen has been overrated, at least in young adults. We conclude that our homes have very high levels of indoor allergens, which have been previously identified as hazardous to health. Modifying some of the residential characteristics could reduce these levels. However further research is required to develop and evaluate interventions.

Micronutrients and current asthma in young adults

This study commenced in 1998 and is designed to look at the prevalence and risk factors associated with respiratory health in young adults. The first stage involved sending a brief respiratory health questionnaire to 4456 eligible young adults (aged 20-44 years). This stage of the study has been completed, with a 72% response rate achieved. The results of this stage suggest that the prevalence of asthma in young adults has risen since 1990. Interestingly, the prevalence of asthma symptoms and nasal allergies has not risen significantly over this time period. Whilst the prevalence of current smokers has not decreased significantly, the number of cigarettes smoked by current smokers has declined significantly over the past 8 years. The results of this phase of the study are in the process of being submitted for publication. The second phase of the study has now commenced. It involves approximately 1000 respondents undertaking some simple breathing and allergy tests and to obtain information on their usual diet in our laboratory in order to look more closely at the possible risk factors associated with respiratory disease.

A randomised placebo-controlled trial of hydrodilatation (distension arthrogram) in the treatment of adhesive capsulitis.

The aim of this project was to establish whether hydrodilatation was effective in reducing pain and disability, and improving range of motion, in a population with shoulder pain classified as adhesive capsulitis. Forty-six subjects completed the study which involved a 3 month trial period. The subjects were recruited from a community Rheumatology practice. Analysis of the results are underway and it is expected that the results will be published by the end of 1999. As a result of this study and the Cochrane review on shoulder pain, Sally Green has been invited to present at the Australian Rheumatology Association conference in Perth in May 1999.

Cochrane Collaboration

The Cochrane Collaboration is a major international effort devoted to conducting and disseminating systematic reviews of medical and other health interventions. Members of the Department have already contributed 5 reviews to the Collaboration and another 2 reviews are currently underway. During 1998, Dr. René Manser joined the department as a training fellow in clinical epidemiology and Dr Max Watson was also appointed as a research fellow for the Cochrane Consumers and Communication group. The Victorian Department of Human Services funded these positions. The Cochrane reviews are as follows:

1. The effects of self-management, asthma education and regular practitioner review in adults with asthma (M. Abramson) [completed].
2. Allergen specific immunotherapy for asthma (M. Abramson) [completed].
3. Doses of corticosteroids in hospitalised patients with acute severe asthma (R. Manser, M. Abramson) [completed].
4. A Cochrane review of interventions for shoulder pain (S. Green, R. Buchbinder) [completed].
5. A Cochrane review of interventions for lateral epicondylitis of the elbow (S. Green, R. Buchbinder) [completed].
6. Does a diet high in marine fatty acids improve asthma control? (R. Woods, M. Abramson) [in progress].
7. Effectiveness of self-management advice for adults with Type 1 diabetes (M. Watson, E. Briganti) [in progress].

Teaching

Medical students are now taught the principles of critical appraisal in fourth year, followed by a successful series of tutorials on evidence based medicine in the final year public health program. Postgraduate teaching includes a clinical epidemiology stream within the Masters of Public Health program. Six students graduated with The Diploma of Clinical Epidemiology in 1998. Graduates are able to demonstrate a sound knowledge of the principles of rational decision making in clinical practice and are able to develop small clinical research projects.
**Clinical Pharmacology Unit**

Research activities of the Clinical Pharmacology Unit are focused primarily around new drug development for cardiovascular disease states. Drugs currently undergoing clinical research include endothelin receptor antagonists, cytokine antagonists and drugs that augment endogenous vasodilator systems. As well, the unit is currently examining the benefits of non-pharmacological therapy (eg exercise) in the management of cardiovascular disease.

The main areas of research interest are those of autonomic dysfunction and endothelial dysfunction in cardiovascular disease. Clinical techniques employed include heart rate variability monitoring, titrated noradrenaline measurement of sympathetic activity, noninvasive assessment of baroreflex sensitivity and invasive and noninvasive forearm blood flows using venous inclusion plethysmography.

The unit also conducts basic research in the Department of Medicine's laboratories of the Monash Medical School. This involves animal models of heart failure with assessment of intracardiac haemodynamics, neurohormonal status and gene expression of important regulatory factors, particularly cytokines and growth factors. A number of novel and existing drugs are currently being studied in this manner. The unit is also interested in cell culture of rat fibroblasts and human mononuclear cells as markers for activity of certain growth factors in man. Currently the unit has five PhD students on NHMRC post graduate scholarship grants, an honours student in pharmacology and a full-time research assistant. The unit also conducts early phase pharmacokinetic and bioequivalence studies and has particular expertise in pharmacokinetic profiling.

The Clinical Pharmacology Unit contributes to preclinical 4th, 5th and 6th year medical student teaching as well as postgraduate teaching through the Department of Epidemiology and Preventive Medicine's numerous postgraduate programs. In addition, members of the unit are frequently called upon to speak to colleagues at postgraduate meetings external to the university on topics ranging from drug regulation to cardiovascular therapeutics and general issues in drug prescribing.

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**Head of Unit**

Henry Krum

**Unit staff**

Lisa Demos  
Sheila Killalea  
Lisa Nalipol  
Fiona Richardson  
Sue Ziolkowski  
Marina Skiba

**PhD students**

Noel Cranswick  
Mark Nelson  
Ann-Marie Pellizzer  
Paul Martin  
Hana Kazda  
Alex Tzanidis

**BSc(Hons)**

Stephen Lim

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**Sheila Killalea**
Infectious Disease Unit

Incorporating the Cooperative Research Centre for Water Quality and Treatment

The unit welcomed a new PhD student and a new staff member this year. Jim Black was awarded a CRCWQT PhD Scholarship after working as an epidemiologist in Mozambique and Tanzania for the past 10 years. Samantha Rizak joined the unit as a Research Fellow shortly after the completion of her Master of Science degree at the University of Alberta in Edmonton, Canada.

**The Water Quality Study**

The Water Quality Study is a randomised double blinded trial to determine whether point of use treatment of drinking water to remove micro-organisms reduces the incidence of gastrointestinal disease in an area served by an unfiltered disinfected water supply drawn from protected catchments. A total of 600 Melbourne families were recruited in 1997 and randomly assigned to receive either a real water filter (which sterilises drinking water) or a sham water filter (which has no effect). The data collection phase continued throughout 1998, with families recording their health status in monthly diaries. This phase will be completed early in 1999, and subsequent data analysis is expected to take several months. The results of this study will provide the community with important information for making future decisions on water treatment.

**The early detection of outbreaks of waterborne gastroenteritis**

This project involved the investigation and documentation of a variety of surveillance systems relating to the detection of gastrointestinal disease in the community, and assessment of the feasibility of linking these with water quality data. This initial phase of project funded jointly by the CRCWQT and Melbourne Water was completed in June. A proposal to undertake further work on this topic has been developed by PhD student Jim Black. The new proposal includes the application of computerised analysis with neural network modelling of water quality and health data to develop sensitive and rapid surveillance systems. Jim has also taken up a part-time position with DHS Victoria to become familiar with current surveillance systems and facilitate linkages with relevant organisations.

The effect of chlorination on the rates of gastroenteritis

The aim of this project is to assess the impact of chlorination on gastroenteritis in the city of Melbourne by examining morbidity and mortality figures in children for the interval spanning the introduction of chlorination. This may provide evidence of the benefits of chlorination in a developed country with protected water supply. The final phase of the data collection from hospitals has been completed, data analysis is now underway and a draft report is being prepared.

**Case-control study of sporadic cryptosporidiosis (Melbourne and Adelaide)**

Brent Robertson continued his PhD work on this study which will assess the importance of risk factors for cryptosporidiosis in the general community. Jessika Willis, Judy Harkin, Geoff Simmons and Hana Kazda all joined the study to perform the telephone recruitment and interviewing of cases and controls. The Pilot study in Melbourne was successfully completed in June 1998, with the main Melbourne study beginning immediately afterwards and the Adelaide study beginning in November. These two cities have been chosen to represent the opposite ends of the water quality and treatment spectrum of Australian metropolitan water supplies.

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**Head of Unit**
Assoc. Prof Kit Fairley

**Staff of Unit**
Joanne Ferguson
Kimberley Gibson
Isabel Guise
Hana Kazda
Pam Lightbody
Alex Padiglione
Sam Rizak
Geoff Simmons
Martha Sinclair
Jessika Willis

**PhD students**
Jim Black
Margaret Hellard
Brent Robertson
Rhonda Stuart

During 1998, work continued on a range of research projects in the areas of public health and water quality, clinical problems in infectious disease management, and the diagnosis and treatment of sexually transmitted diseases in groups with poor access to health care. The research undertaken by the unit through the CRCWQT has achieved international recognition for its innovative approach to measuring the health effects of drinking water quality, and collaborative links have been established with US and Canadian researchers.
Fluoridation of water supplies
This DHS funded project comprises a literature review and critical assessment of the evidence on public health effects of water fluoridation that has become available since 1990, when the NHMRC Working Group last produced a report on this issue. Hana Kazda worked with Flavia Cicuttini, Martha Sinclair and Kit Fairley to produce a draft report which was delivered to DHS early in 1998. Following review by an expert panel, the final version of the report will be completed in 1999.

Health Stream newsletter
The quarterly Health Stream newsletter edited by Martha Sinclair, with assistant editor Pam Lightbody, was established primarily to provide water industry partners in the CRCWQI with updates on the current literature and critical analyses of research relating to drinking water and health. Circulation has now risen to 1280, with one third of copies going to international readers in 44 countries.

Cryptosporidiosis in gay and bisexual men
Margaret Hellard, Kit Fairley and Jessika Willis have commenced an NHMRC funded case control study investigating the risk factors for cryptosporidiosis in gay and bisexual males in Melbourne and Sydney. Cases are being recruited from hospitals who manage HIV infected patients and General Practitioners who have a high number of gay males in their practice.

CMV-associated retinitis in HIV Patients
Kit Fairley along with Andrew Forbes, Anthony Hall, Margaret Hellard, John Spicer, Jenny Hoy and Anne Milich completed work on this study of risk factors for functional visual loss among patients with human immune deficiency virus (HIV) and cytomegalovirus (CMV) retinitis. The study was funded by Roche Pharmaceuticals, and demonstrated the life-time risk of becoming legally blind was disturbingly high (13%), highlighting the need for control strategies.

The Melbourne Mantoux Study
This major study assessing Mantoux reactivity (an indicator of tuberculosis exposure) among health care workers in Melbourne teaching hospitals was completed in 1998 by Rhonda Stuart and Lindsay Grayson. The study included 8,300 employees at 14 hospitals, and the data analysis phase is now underway. Rhonda also completed work on two other studies relating to tuberculosis: "An analysis of isoniazid toxicity when used as chemoprophylaxis" and the "Assessment of the role of a new tuberculosis skin test (QuantiFERON)".

Vancomycin Resistant Enterococcus in hospital patients
Alex Padidgione and Lindsay Grayson commenced work in April 98 on this project funded by DHS Victoria and the Centre for Clinical Effectiveness at Monash Medical Centre. This project is an examination of the prevalence and risk factors for carriage of Vancomycin Resistant Enterococcus in selected categories of patients admitted to hospitals. More than 2200 people in 3 study hospitals have been surveyed so far.

Reduction of STDs among Aboriginal communities in Northern Australia
Kit Fairley along with co-investigators Frank Bowden, Sephr Tabrizi and Suzanne Garland continued work on this randomised trial to assess the effectiveness of an intensive screening and treatment program for the reduction of sexually transmitted diseases. This NHMRC funded project has begun in far north Queensland and involves incorporating screening and treatment for sexually transmitted diseases into the already developed "Well Person's Check".

STDs in homeless youths
Kit Fairley, Doreen Rossenthal, Suzanne Garland and Sephr Tabrizi continued work on this Australian Research Council funded project. The aim is to establish the prevalence of sexually transmitted diseases in young homeless people, and to test a new method for diagnosis and treatment. One hundred homeless youths were recruited and it was found that about 10% had current sexually transmitted diseases. Strategies for this group will be developed to ensure they have better access to diagnosis and treatment for sexually transmitted diseases.

STDs in street sex workers
This Department of Human Services funded project conducted by Kit Fairley, Sephr Tabrizi and Suzanne Garland has demonstrated a very disturbing prevalence of sexually transmitted diseases in this group (25%). As with homeless youths, strategies to increase access to diagnosis and treatment are needed.
Nutrition & Preventive Medicine Unit

Head of Unit, Professor Kerin O’Dea on left with unit staff.

Unit staff
Janina Chapman
Mark Daniel
Mary Kaimakamis
Connie, Karschikua
Jane Muir
Marian Perret
Sunil Piers
Kevin Rowley
Michelle Skinner
Karen Skinner
Rachel Stoney
Karen Walker
John Willkie
Elaine Yeow

PhD scholars
Lairna Brazionis
Catherine Fisopoulos
Lu, Zhong Xian
Su Quing

Other on-going collaborations include dietary studies on isolated Antarctic bases (with Dr Des Lugg, Head of Polar Medicine) where the food supply can be modified relatively unobtrusively, and research with Dr Neville White of Latrobe University on the traditional hunter gatherer diet, food preferences and food intake patterns in Aboriginal people who have maintained a traditionally orientated lifestyle until recently. At the beginning of 1998 we were delighted to welcome Dr Mark Daniel from Vancouver Canada, who joined the Unit on a two year Canadian Medical Research Council Post Doctoral Fellowship. His doctoral studies involved the collaborative development and evaluation of a community directed program for diabetes prevention in an isolated indigenous community in Canada. We are already appreciating his critical and constructive input into our work in this area.

Obesity, diabetes and cardiovascular disease in Aboriginals and Torres Strait Islanders

Prof K O’Dea, Dr KG Rowley, Assoc Prof ID Best, University of Melbourne. Dr R Mc Dermott, Ms D Leonard, Tropical Public Health Unit, Cairns, Qld. Mr P Mills, Queensland Health, Thursday Island, Qld.

Obesity, Type 2 diabetes and cardiovascular disease (CVD) occur prematurely and in epidemic proportions among Australian Aboriginals and Torres Strait Islanders. The aim of this research program is to gain a better understanding of the interrelationships between these conditions, and their major diet and lifestyle related risk factors. The research has both cross sectional and longitudinal components, and is being conducted in collaboration with a number of Aboriginal and public health organisations in northern and central Australia, with particularly strong input from Dr Robyn McDermott and Dymphna Leonard and colleagues from the Tropical Public Health Unit in Cairns. We are measuring a wide range of CVD risk markers in relation to lipoprotein metabolism, haemostatic function, albuminuria and anthropometry.

The Looma Diabetes Program

Prof K O’Dea, Dr KG Rowley, Ms G White Ms M Skinner, Ms K Skinner, Looma Community, via Derby, WA. Ms K Edwards, Looma Community Health Clinic, Health Department of WA.

The Looma Diabetes Program began in November 1993 as a result of an earlier invitation from the Chairperson of the Looma Aboriginal Community’s Council to Kerin O’Dea to visit and discuss the Community’s growing concern over the increasing numbers of people being diagnosed with diabetes and its complications such as renal disease. We have worked closely with Michelle and Karen Skinner and others from the community to support them in their intervention program which has a focus on lifestyle modification. Initially the emphasis was on exercise with participants being retested at 6-monthly intervals over two years. As time passed the program evolved into a broader program directed at the whole community and the name was changed to ‘Looma Healthy Lifestyle’. In early 1998, the community decided to increase the emphasis on primary prevention through an integrated school program of education, sports and recreation, and the provision of low cost healthy breakfasts and lunches. Our role is to provide ‘technical support’, primarily in assisting in the design and conduct of the monitoring and evaluation of the program, and in securing on-going financial support.
Diabetes and Cardiovascular Disease: the Greek Migrant Paradox
Prof K O'Dea, Ms C Tsipopoulos, Assoc Prof ID Best, University of Melbourne Dr GG Giles, Dr P.D. Ireland, Anti Cancer Council of Victoria

Despite higher rates of the identified risk factors for coronary heart disease (smoking, elevated cholesterol and blood pressure levels, physical inactivity and central obesity), Greek migrants have lower CHD mortality rates than the Australian-born population. However, consistent with their risk factor profile, they have 2-3 times higher prevalence of known diabetes in the 45-69 year age group. It is not known whether diabetes increases the risk of CHD in Greek migrants (as it does in most other populations). The hypothesis being tested in this research project is that the Mediterranean diet, by being a rich source of a wide range from anti oxidants from plant foods, olive oil and wine, could inhibit the process of atherosclerosis. The study is being conducted in collaboration with Dr Graham Giles of the Anti Cancer Council of Victoria with subjects enrolled in the Melbourne Collaborative Cohort Study.

Why is diabetes a greater coronary heart disease risk factor in women than in men?
Prof. K. O’Dea, Ms Rachel Stoney Assoc. Prof. J.D. Best, University of Melbourne Dept Medicine, St Vincent’s Hospital Dr G.G. Giles, Dr P.D. Ireland, Anti Cancer Council of Victoria.

In the non-diabetic population, men have significantly higher risk of coronary heart disease than women. Type 2 diabetes increases the risk of heart disease 2-3 fold in men, but 4-6 fold in women. Thus, diabetic women are at roughly the same risk of heart disease as diabetic men. The aim of this project is to understand the reasons why diabetes is associated with the loss of the usual gender protection for heart disease in women. Diabetic and non-diabetic women were recruited for this study from the Melbourne Collaborative Cohort Study (based at the Anti Cancer Council of Victoria) to be more representative of the general diabetic population than had they been recruited from a hospital diabetes clinic.

Dietary composition, energy balance and regional fat distribution in diabetic women.
Prof K O'Dea, Dr K Walker. Prof G Nicholson, Anti Cancer Council of Victoria. 1995-97

While most women gain fat on their hips and thighs, women with diabetes accumulate fat around the waist which increases their risk of heart disease. This study examined the effect of weight-reducing diets (one high in carbohydrate and fibre, low in fat, and the other high in monounsaturated fat.- 'Mediterranean' diet) on patterns of fat loss in diabetic women. While both diets were associated with weight loss, the high carbohydrate diet resulted in disproportionate loss of fat from the hips and thighs, resulting in a more central pattern of fat distribution. This adverse effect of the high carbohydrate, low fat diet was no longer evident if the women also exercised during the diet period (one hour walking on at least 5 days per week over three months).

Utilisation of arabinoxylans from wheat flour as a source of dietary fibre.
Dr ZX Lu, Dr IG Muir, Prof K O’Dea. 1996-99

The project aims to determine the physiological effects of arabinoxylans, a by-product of wheat flour processing. Studies in animals have been carried out to investigate the large bowel response to diets that incorporate arabinoxylans. Its potential role in the prevention of colon cancer is being examined. A study in humans has also been performed to examine the postprandial blood glucose and insulin response to a meal containing arabinoxylans in order to examine its potential role in the management of diabetes. Another human study will be carried out in 1998-1999 to determine the effect of arabinoxylans on weight loss and diabetic control.

Red meat and colon cancer: can resistant starch and dietary fibre minimise the risk?
Dr JG Muir, Dr FA Macrae, Prof K O’Dea. 1989-2000

The project aims to investigate whether resistant starch and dietary fibre can minimise the risk factors involved with consuming red meat. It is envisaged that the data generated by this type of research will provide a sound basis upon which to develop dietary recommendations directed at reducing the incidence of colon cancer and related conditions in Australia.

Meat digestibility and colon cancer risk: can fermentation of undigested carbohydrate minimise potential toxic effects?
Dr JG Muir 1997 Source of funding: Deakin University

This project aims to investigate whether resistant starch and dietary fibre can minimise the risk factors involved with consuming red meat.

Nutritional indicators and cardiovascular risk in Aborigines and Torres Strait Islanders
Prof K O’Dea, Dr KG Rowley, Assoc Prof J.D. Best, University of Melbourne. Dr R MC Dermott, Ms D Leonard, Tropical Public Health Unit, Cairns, Qld. 1998-2000

Recent studies have suggested that antioxidant vitamins and folate can protect against heart disease. Aboriginal and Torres Strait Islander people in remote areas often have poor access to fresh vegetables and fruit and so have low circulating levels of antioxidants and folate. This may contribute to their high mortality from cardiovascular disease. This project examines the associations of dietary antioxidants and folate to cardiovascular and renal diseases in Aboriginal and Torres Strait Islander communities and will evaluate community-based attempts to improve nutrition in remote communities through education and increasing the supply of fresh foods.

Diet and obesity: does the type of dietary fat influence body fat deposition?
Dr LS Piers, Prof K O’Dea, Dr KZ Walker, Dr MI Soares, Curtin University 1998-2000

The project aims to determine if the type of dietary fat has an impact on the partitioning of dietary fat energy between oxidation and storage. It is hypothesised that monounsaturated vegetable fat, such as olive oil, is better oxidised than saturated animal fat, resulting in less dietary fat being available for storage. This study has implications for the design of weight reducing and maintenance diets that are likely to be more acceptable to subjects, and should result in better long-term compliance with dietary advice.

Energy metabolism, physical activity and body composition in the elderly.
Dr LS Piers 1995-97

The project involved the measurement of energy expenditure (using indirect calorimetry), and body composition (using dual energy x-ray absorptiometry, deuterium dilution, urinary creatinine excretion and anthropometry) to identify physiological factors that predisposed older individuals to the development of obesity.
1998 was another busy year and time of expansion for the unit in research, with several new studies starting, and teaching in occupational and environmental health. Jill Ikin joined the research team working on Healthwise, David Elder commenced with the SABRE project and Judy Hankin moved from the arsenic study to Healthwise. The unit also increased its research output with several papers submitted or in the final stages of preparation. We also took on our first occupational medicine registrar, James Chan, who combined his research work in the unit with clinical work in an occupational medicine clinic.

**New studies**

**Montex**
This is a new NH&MRC funded cohort study which is part of an international investigation into cancer in textile workers, which is coordinated by the International Agency for Research on Cancer. During 1998, all current members of the Victorian branch of the Textile, Clothing and Footwear Union (TCFU), were sent a short questionnaire asking for information about their work history and general health, and asked to give consent for their names to be matched against the national cancer and death registries. Over two thousand completed questionnaires were received back. In 1999, names, demographic details and work-related information of former members will be collected from hard copy records of the TCFU and, with details of the current members, will be matched against the national cancer and death registries.

**VicLead**
The Victorian Department of Human Services provided funding for this study which aims to identify the risk factors for lead absorption in children who have at least one parent working in the lead industry. This is a potential high risk group, which was identified during the 1995 National Survey of Childhood Blood Lead Levels. Companies which use lead were identified from the WorkCover list of scheduled lead processes and leadworking companies, and eligible lead workers were approached to take part. Neighborhood controls were recruited as a comparison group. Blood samples and environmental data were collected from families which agreed to participate and data collection and analysis will be completed in 1999.

**SABRE**
In 1998, the Australian Lung Foundation funded a new research project which will provide the first comprehensive data on the incidence of occupational asthma and other occupational respiratory diseases in Victoria. SABRE (Surveillance of Australian workplace Based Respiratory Events) has recruited 72 respiratory and occupational physicians in Victoria who regularly report cases of occupational respiratory disease. An abstract was presented at the Asian Pacific Society of Respirology in 1998. It is hoped to expand SABRE in 1999 to other states in Australia. This surveillance study began as an MPH project by David Elder, who has become the SABRE co-ordinator.

**Case control study of non-Hodgkin’s lymphoma**
At the end of 1998, Lin Fritschi was successful in gaining a three year NH&MRC grant as a co-investigator on a case-control study being conducted by the NSW Anti-Cancer Council. This study aims to identify occupational and other risk factors for non-Hodgkin’s lymphoma.
During 1998 the Unit of Preventive Medicine has seen the successful continuation of its core projects as well as the implementation of a number of new initiatives which have been accompanied by new grants and additional staff.

The MAVET and VECAT projects.

Two previously established clinical trials, the Melbourne Atherosclerosis and Vitamin E Trial (MAVET) and a community based clinical trial investigating the role of vitamin E in the prevention of cataract and age-related macular degeneration (VECAT), have continued to progress during 1998.

**MAVET**

Study team: P. Branley, L. Shiels, J. Snaddon

MAVET is a double blind placebo controlled randomized trial of Vitamin E (500iu/day) established to determine if Vitamin E will retard the progression of atheroma in smokers. It is being conducted jointly with the Vascular Unit at Monash Medical Centre. Recent studies have suggested that the more rapid progress of atherosclerosis in smokers may result from oxidation of the cholesterol particles in blood. Some vitamins, including Vitamin E, are natural antioxidants and can protect cholesterol particles from oxidation. MAVET is measuring the effect of Vitamin E on the rate of progression of this disease.

Since 1994, 409 volunteers have been recruited to join this study, half receiving 500iu of Vitamin E daily, and the other half receiving a placebo. Each participant attends the study centre initially on a semi-annual and thereafter an annual basis. At each visit, an ultrasound is performed on the carotid arteries and these images are digitised and analysed for changes in artery wall thickness. The MAVET study will be completed by the end of 1998 and we look forward to determining the results. The MAVET research personnel are very grateful for the commitment by all the voluntary study participants.

**VECAT**

Study team: S. Garrett, L. Robman, A. Ryan, T. Mai, G. Tikellis

Cataract occurs when the lens inside the eye becomes opaque leading to an interference with normal vision. Although cataract surgery has a high success rate, an intervention which delays or prevents the development of lens opacities would greatly reduce the social and economic burden of cataract in our society. Age-related macular degeneration results from damage to cells at the back of the eye and is another common cause of visual impairment in the community. Unlike cataract, there is no effective treatment for this disease. A variety of evidence now suggests that both of these conditions may result from abnormal oxidation taking place within the lens or macular of the eye.

The VECAT study was established in association with Professor Hugh Taylor of the Department of Ophthalmology at the University of Melbourne. It aims to determine whether Vitamin E exerts a useful role in delaying the onset and/or progress of these conditions. In 1996, 1204 volunteers were recruited to join this 5 year study, half receiving 500iu of natural Vitamin E daily, and half taking an identical placebo capsule. 1998 was another successful year for this study with 87% of our original participants examined for their 36 month review. This extremely low drop-out rate is a credit to the study team. The VECAT study will continue for one further year, through additional funding from NH&MRC. We expect to commence analysis of the
results in March 2000 after the completion of the 48 month review visits.

As the first randomised controlled trial on vitamin E for cataract in the world, the VECAT study team had eight papers accepted for publication in peer-reviewed journals in 1998. The VECAT study also had five papers presented at the Australasian Ophthalmic Visual Sciences Meeting in Canberra in November 1998.

ASFAST
Study team: S. Zoungas, S. Ristevski, J. See
ASFAST is a joint initiative between this department, Monash Medical Centre, the Royal Melbourne Hospital and the Austin Hospital. It is a randomised double blind clinical trial designed to examine whether high dose folate acid supplementation reduces the rate of progression of atherosclerosis amongst patients with chronic renal failure (CRF). It is known that individuals with CRF experience an approximately ten-fold increase in the risk of stroke and coronary heart disease which is not substantially reduced by control of conventional vascular risk factors. Recent evidence suggests that over 85% of patients with CRF have elevated homocysteine levels, linked in other studies to an elevated risk of coronary and cardiovascular disease. However, there is no evidence yet that reducing such levels will benefit these patients.

Patient recruitment commenced in 1998 and all three hundred and fifty patients are expected to be recruited by 1999. The actively treated group receive 15mg of folic acid daily and the controls will receive a matching placebo, or low dose folic acid supplementation (less than 2 mg/week), only if plasma folate levels are found to be subnormal. Progression of atheroma will be measured yearly for three years using carotid duplex ultrasound measurement of the intima-media thickness of the carotid artery. This technology is well established within the department in other collaborative studies between John McNeil and Barry McGrath.

Take Heart
Study team: A. Peeters, N. Doherty in collaboration with BP Ltd.
While much is known about cardiovascular disease, it is still one of the major causes of death in Australia. One reason for this is the difficulty in identifying individuals whose risk comes from a combination of mildly elevated risk factors and then in effectively communicating this risk. A computer program, Take Heart, has been designed by the unit. Take Heart uses results from the American MRFIT studies, adapted to Australian data, to enable determination of an Australian individual’s risk of cardiovascular events based on the individual’s gender, age and levels of smoking, serum cholesterol and diastolic blood pressure. Take Heart is an interactive program, allowing the client to manipulate risk factors and view the subsequent effect(s) on their cardiovascular risk and has been developed both as an aid for workplace health promotion consultations and as an aid for general practitioners.

In 1998, a pilot study evaluation of Take Heart commenced at BP Ltd.'s central Melbourne office. Volunteers have their blood pressure and cholesterol measured and are counseled about coronary heart disease (CHD) risk using Take Heart. One year after the consultation, the effect on knowledge of CHD risk, desire for appropriate lifestyle change and blood pressure and cholesterol levels will be assessed. Interim results have indicated that the pilot program has:
(i) increased individual awareness about CHD risk (as determined by knowledge of individual risk factors and integrated CHD risk), and
(ii) resulted in an desire for changes in lifestyle in 70% of participants (in a manner significantly associated with CHD risk)

First responder pilot analysis
K. Smith, A. Peeters
In 1997, a ministerial steering group recommended that a six month pilot program be conducted to determine whether the simultaneous dispatch of both Metropolitan Fire Brigades Board and Metropolitan Ambulance Service resources to cases of suspected cardiac arrest will lead to more rapid application of defibrillation. Data analysis of this project commenced in June 1998 by the Unit of Preventive Medicine.

A model of primary coronary heart disease risk distribution to enable appropriate targeting of preventive interventions
Study team: J. McNeil, A. Peeters
We are involved in the development of a model for primary coronary heart disease (CHD) risk distribution in which the Australian population is divided into percentages of integrated CHD risk. The model is based on a life table approach, taking into account the prevalence of CHD risk, individual estimates of integrated CHD risk, and current CHD mortality and event rates. Approximately 25 percent of CHD deaths were predicted to occur amongst those in the top 10 percentiles of integrated CHD risk, regardless of age group or gender. It was found that while all cause survival did not differ markedly between percentiles of CHD risk before the ages of around 50-60, event-free survival began to visibly differ about five years earlier. We aim to evaluate the results of targeting CHD preventive interventions to various percentiles of CHD risk, in terms of average and incremental cost-effectiveness, total years of life saved and total cost of intervention.
New and continuing grants

NH&MRC funded - continuing

• Case control study of cerebral glioma and prevention of cerebrovascular disease.
  Dr A Thrift
  NH&MRC PHRDC Postdoctoral Fellowship, 1996-1998, $251,972.00.

• MAVET: A randomised trial of an antioxidant to prevent atheroma progression in smokers.
  Prof JJ McNeil, A/Prof BJ McGrath,
  NH&MRC Project Grant, 1994-1998, $328,913.00.

• VECAT: Prevention of cataract in the elderly with low dose aspirin and vitamin E.
  Prof JJ McNeil, Prof H Taylor, Prof C Silagy,
  NH&MRC PHRDC Development Program Grant, 1994-1998, $1,031,203.00.

• A randomised trial of high dose folic acid to slow the progression of atheroma in renal failure.
  Prof R Atkins, A/Prof BP McGrath, Dr PG Kerr,
  NH&MRC Project Grant, 1998-2000, $366,054.00.

• Cancer in textile manufacturing workers.
  Dr L Fritsch

• Case-control study of risk factors for cryptosporidium infection in people with HIV.
  A/Prof CK Fairley, Dr ME Hellard, Dr GJ Dore

• Clinical trial of antioxidants to slow progression of osteoarthritis.
  Dr FM Ciutlini
  NH&MRC Project Grant, 1998-2000, $110,865.00.

• Diet and obesity: Does the type of dietary fat influence body fat deposition?
  Dr S Plens, Prof K O’Dea, Dr MJ Soares, Dr KZ Walker
  NH&MRC Project Grant, 1998-2000, $209,345.00.

• Diabetes and cardiovascular disease: the Greek migrant paradox.
  Prof K O’Dea, Dr C Itriopoulos, A/Prof JD Best, Dr PD Ireland
  NH&MRC PHRDC Grant, 1998-1999, $120,291.00.

• Effects of hydraulic weight training in patients with chronic heart failure.
  A/Prof H Krum, Dr SE Selig, Dr DL Hare, A/Prof MF Carey
  NH&MRC Project Grant, 1998-1999, $121,243.00.

• Is diet responsible for the high asthma prevalence among young adults?
  Dr R Woods
  NH&MRC PHRDC Postdoctoral Fellowship, 1998-2000, $203,873.00.

• Nutritional indicators and cardiovascular risk in Aborigines and Torres Strait Islanders.
  Prof K O’Dea, A/Prof JD Best, Ms D Leonard
  NH&MRC Project Grant, 1998-2000, $132,126.00.

• Nutritional markers and coronary risk in Aborigines and Torres Strait Islanders.
  Dr K Rowley

• Obesity, diabetes and cardiovascular disease in Aborigines and Torres Strait Islanders.
  Prof K O’Dea, A/Prof JD Best, Dr P Mills, Dr C Guest
  NH&MRC PHRDC Program Grant, 1998-1999, $412,908.00.

• Randomised trial of intensive screening program to reduce prevalence of STD’s in Aboriginal communities.
  A/Prof CK Fairley, Dr FJ Bowden, Dr SN Tabrizi, Dr SM Garland

• Red meat and colon cancer: can resistant starch and dietary fibre minimise the risk?
  Dr J Muir, Dr FA Macrae, Prof K O’Dea
  NH&MRC Project Grant, 1998-2000, $220,982.00.

• Relationship between micronutrients and the prevalence of current asthma among young adults.
  A/Prof M Abramson, Dr FCK Thien, Dr PD Ireland, Prof EH Walters
  NH&MRC Project Grant, 1999-2000, $257,760.00.
New and continuing grants continued

NH&MRC funded

New

- Immunological, infectious, occupational and environmental risk factors for non-Hodgkins lymphoma.
  Prof BK Armstrong, Dr L Fitischi, Dr ST Miliken, Dr A Krickier.
- Prevention of cataract and age-related macular degeneration with vitamin E in the elderly.
  Prof JJ McNeil, Prof HR Taylor, Prof CA Slagel.
  NH&MRC Project Grant (extension), 1999-2000. $419,137.00.

Other competitive funding

Continuing

- Case crossover study of air pollution and asthma
  A/Prof M Abramson, Dr A Forbes
  Dept of Human Services, 1998, $9,000
- Computer-aided presentation of cardiovascular risk
  Prof JJ McNeil
  Dept of Human Services, 1998, $145,00.
- Determining the volume of joint cartilage by magnetic resonance imaging and advanced computing software.
  Dr F Cicuttini
  Cabrini Clinical Education & Research Collaboration, 1998, $4000.
- Does oestrogen replacement therapy (ORT) prevent osteoarthritis?
  Dr F Cicuttini
- Effects of Irbesartan on the endothelin system in chronic heart failure.
  A/Prof H Krum
  Bristol Myers Squibb (USA), 1998, $36,695.00.
- Immunological responses in the development of adult asthma.
  Dr MJ Abramson, Dr J Rolland, A/Prof EH Walters
- Preventive medicine and occupational health training videos for use in medical undergraduate teaching.
  Dr F Cicuttini, Dr M Sim
- Preventive medicine and occupational health training videos for use in medical undergraduate teaching.
  C Finocchiaro
  Shepherd Foundation, 1996-1997, $13,100.00.
- Information technology based teaching to facilitate distance education in public health.
  Prof JJ McNeil
- Modified diet for the treatment of gestational diabetes?
  Prof K O’Dea, Dr KZ Walker, Dr A Nankervis
  Diabetes Australia Research Trust, 1998, $21,255.00.
- Occupational causes of prostate cancer - development and pilot of a workplace exposure database.
  Dr M Sim
New and continuing grants continued

* Occupational exposure to solvents and electromagnetic fields and development of brain tumours in adults.
  Dr M Sim, Dr L Fritschi
  Shepherd Foundation, 1997-1998, $18,360.00.

* Role of endothelin in the progression of chronic heart failure.
  A/Prof H Krum

* SABRE (Surveillance of Australian workplace based Respiratory Events) - a pilot study.
  A/Prof M Sim, A/Prof M Abramson
  Australian Lung Foundation, 1998-99, $97,662.00.

* The Looma Diabetes Program.
  Prof K O'Dea
  Diabetes Australia, 1997-1998, $50,000.

New

* Prevalence of sexually transmitted diseases among street workers.
  A/Prof CK Fairley
  Dept of Human Services, 1999, $36,000.00.

Industry/government funding
Continuing

* Arsenic exposure and human absorption.
  Dr M Sim, Prof JJ McNeil, Ms A Hinwood
  Health and Community Services, 1996-1997, $109,710.00.

* Asthma and allergies in tea packers.
  A/Prof MJ Abramson, Dr L Fritschi, Dr J Rolland, Dr MR Sim
  Industry funded, 1997, $36,629.00.

* Case crossover study of air pollution and asthma.
  A/Prof MJ Abramson, Dr A Forbes
  Department of Human Services, 1998, $9000.00.

* Computer aided presentation of cardiovascular risk - Take Heart.
  Prof JJ McNeil
  Department of Human Services, 1998, $145,000.00.

* First responder pilot project.
  Prof JJ McNeil

* Healthwise: A study of health and work in employees of Alcoa of Australia Limited, Portland Aluminium and KAA1Rolling Mill.
  Dr M Sim, Dr L Fritschi, Prof AW Musk, Prof JJ McNeil
  Industry funded, 1994-1999, $1,712,599.00.

* Home environment, allergies and asthma.
  A/Prof MJ Abramson, Dr D Guest, Prof EH Waitors

* Reliability, validity and risk adjustment study of a pilot set of hospital wide clinical indicators.
  A/Prof N Boyce, Dr J Ibrahim, DR J Majoor, Prof JJ McNeil
  Commonwealth Dept Health & Family Services, 1995-1997, $420,000.00.

* VicLead: A study of lead absorption in the children of lead workers.
  Dr M Sim
  State Chemistry Laboratories, 1998, $90,000.00.
New and continuing grants continued

Collaborative Research Centre for Water Quality and Treatment
Continuing

* A case-control study of cryptosporidium - Adelaide.
  A/Prof CK Fairley, Dr B Robertson, Dr M Sinclair, Dr M Hellard, Mr M Veitch, Dr L Pilotto, Dr M Kirk
  Co-operative Research Centre for Water Quality and Treatment, 1998-2000, $184,158.00.

* A case-control study of cryptosporidium - Melbourne
  A/Prof CK Fairley, Dr B Robertson, Dr M Sinclair, Dr M Hellard, Mr M Veitch, Dr L Pilotto, Dr M Kirk
  Co-operative Research Centre for Water Quality and Treatment, 1998-2000, $181,755.00.

* Cross-sectional study to identify microorganisms in faecal samples of individuals without gastroenteritis.

* Health Stream newsletter.
  Dr M Sinclair
  Co-operative Research Centre for Water Quality and Treatment, 1995-2000, $173,692.00.

* The early detection of outbreaks of waterborne gastroenteritis.
  Dr CK Fairley

* Water Quality Study.
  A/Prof CK Fairley, Dr M Sim, Dr M Sinclair, DR M Hellard
  Co-operative Research Centre for Water Quality and Treatment, 1996-1999, $2,130,000.00.

New

* A system for the early detection of outbreaks of water-related gastroenteritis in Australia.
  Dr J Black, A/Prof CK Fairley, Dr M Kirk
  Co-operative Research Centre for Water Quality and Treatment, 1999-2002, $70,615.00.

Major Collaborative Grants

  GA Donnan, JJ McNeil, RAL Macdonell, AG Thrift, RC Carter

* Stroke subtypes: a population based study.
  GA Donnan, AG Thrift, JJ McNeil, HM Dewey
Undergraduate teaching

The Department teaches medical students in all 6 years of the undergraduate (MBBS) course. There is a vertically integrated progression from biostatistics (first year), epidemiology (second year), health promotion (third year), preventive medicine, critical appraisal, occupational health, medicine and research (fourth year), clinical pharmacology (fourth, fifth and sixth years) to public health (sixth year). There are major contributions to the undergraduate teaching program by AProf Michael Abramson, AProf Flavia Cicuttini, Dr Andrew Forbes, Dr David Goddard, AProf Henry Krum and Professor John McNeil.

First year

Health, Illness & Human Behaviour

Biostatistics in 1997 was again taught as an 8 hour unit within this larger subject. This unit enables students to demonstrate an understanding of basic concepts and methods of biostatistics in medical research; interpret statistical information presented in medical research publications, and to appreciate the relevance of statistical information in medical research publications to patient management in medical practice.

As in previous years, the unit consisted of one lecture and seven small group tutorials. Each tutorial exercise began with a clinical scenario which involved a consultation with a patient, then introduced the statistical methods as required, and applied the methods to the individual patient's concerns. The latter tutorials also involved the reading of a medical research article. The tutorials were designed not to cover the mathematics or computational details of the statistical methods, but instead to concentrate on the clinical use and interpretation of the methods.

Assessment consisted of questions in the examination; an assignment involving appraisal of an article from a leading medical journal and participation in the tutorials. The unit evaluation indicated that the students could see the relevance of biostatistics to medical practice, they enjoyed the formal/structure of the tutorials and appeared moderately interested in learning about research methods in medicine. In summary, the biostatistics subject proceeded fairly successfully, and all tutors reported interesting and lively tutorial sessions.

Second year

Introduction to Epidemiology/Statistics in Medicine

In this unit students learn to interpret epidemiological information in medical journal articles and the strengths and weaknesses of different epidemiological study designs.

The curriculum includes descriptive and analytical epidemiology, epidemiological study designs, diagnostic and screening tests, and interpreting results. The subject comprises lectures and tutorials in the first semester of second year. The tutorials emphasise self-learning and are used to consolidate the important concepts. The emphasis is on interpretation of medical literature. Students are assessed on a mid year short answer examination, tutorial exercises and an assignment.
Third year

Health Promotion
Our Department has continued to support the teaching of Health Promotion in Year 3. Our major involvement has been with student projects on topics such as the prevention of industrial deafness. We helped students in the preparatory phase and in the marking of posters and reports. We contributed to the planning of the unit and provided a lecturer from our honorary staff.

Fourth year

Clinical Pharmacology
The primary role of Clinical Pharmacology teaching is to vertically integrate basic pharmacology teaching from the pre-clinical years with clinically-oriented teaching in Years 4-6. Fourth year teaching is a series of didactic lectures given by Clinical Pharmacologists and clinical sub-specialists. The major areas covered are basic principles of clinical pharmacology (pharmacokinetics, drug disposal etc.), as well as in-depth therapeutics of specific disease states.

Preventive Medicine
The Department makes a relatively minor contribution to the integrated clinical subject, which runs over the first two terms. There were lectures on women’s health, respiratory diseases in the elderly and travel medicine. As in previous years, there was a further block of teaching in preventive medicine during the third term. The lectures include the rationale for prevention, chronic fatigue, occupational skin diseases, eye diseases and cervical cancer screening. The end of year examination included an Objective Structure Clinical Examination (OSCE) station on the terminology of critical appraisal.

Critical appraisal
The course focusing on critical appraisal of medical literature was continued in 1998. This course is based on knowledge that students obtain in first and second year biostatistics and epidemiology, and extended with further consideration of bias, power, intention-to-treat analysis, meta-analysis and causation. Examples from medical literature were critically appraised. Teaching was in small groups with some general discussion.

Sixth year

Occupational health
Most teaching in occupational medicine takes place in fourth year. The total of three days teaching in 1998 introduced occupational history-taking, fitness for work, occupational diseases and their prevention, the assessment of occupational exposure and modes of occupational medicine practice. As has long been the practice, one half-day was devoted to small-group visits to workplaces. We remain grateful to the occupational health personnel in manufacturing industry who make these visits possible. The Environhealth prize, $1000 split three ways, was again very keenly contested.

Public Health
This Department contributes substantially to the program called “Clinical & Community Health Studies” which takes the first 6 weeks of the sixth year. The program integrates knowledge across the six disciplines of public health (including evidence-based medicine), clinical pharmacology, geriatric medicine, rehabilitation medicine, palliative care and forensic medicine. The program aims to demonstrate a multidisciplinary approach to patient care and to assist students to see the link between the theory and practice of population medicine.

In public health, both lectures and small group sessions were used to cover topics such as the Australian Health Care System, travel medicine, child safety, domestic violence, workers’ compensation and return to work after injury, youth homelessness, infectious disease and radiation.

Final year teaching in clinical pharmacology comprised plenary seminars and large group interactive sessions. The seminars covered overdose and poisoning, variability of pharmacokinetic response, drug abuse, problems in drug therapy such as good and bad combinations, poly-pharmacy, adverse drug reactions and prescribing in special patient populations such as in children and the elderly.

The large group sessions comprised discussion of drugs in an interactive manner around clinical cases presented by specialists in the field. All of the major sub-specialty groups were covered in these sessions. The aim was for all of the above components of clinical pharmacology teaching to be brought together in a clinically meaningful way.

After attending sessions on evidence based medicine, students were required to understand how information derived from research studies should be used to support clinical decisions, and to demonstrate the basic skills required to evaluate the quality of published studies in order to know whether the information is likely to be useful. Students critically appraised recent papers from the medical literature dealing with therapy, diagnosis, causation and prognosis and applied their conclusions to clinical problems.

The program was well received by most students and assessed by a multiple choice question examination. An OSCE station at the end of the year concerned Aboriginal health. The department provided examiners for this OSCE as well as for the long-case examinations.

Medicine and research
Medicine and research was offered for the first time in 1999. The aim of this subject is to enable students to experience first hand the interaction between clinical research and medical practice. Students used a clinical research project which was already underway as a case study, and were required to do a small study within the major study. A written report and oral presentation was then prepared.

Summary
The undergraduate teaching program built upon the achievements in earlier years. The biostatistics course in first year provided the springboard for active student participation in the revamped second year epidemiology teaching. However the Department has still not achieved an appropriate level of involvement in third year health promotion. Our clinical teaching was well received, with the successful introduction of critical appraisal into fourth year. This will provide a firm basis to extend evidence based medicine into other clinical disciplines.
Ashley Opat (far left) and Michael Gingold were BMedSc students in the department during 1998.

Ashley was looking at alternative treatments for asthma and his supervisors were Michael Abramson and Marc Cohen.

Michael investigated alternative treatments for rheumatic diseases and was supervised by Rachelle Buchbinder and Marc Cohen.
Postgraduate teaching

Postgraduate coursework degrees offered in 1998 were:
- Master of Public Health degree
- Graduate Diploma in Clinical Epidemiology
- Graduate Diploma in Occupational & Environmental Health
- Graduate Diploma in International Health

Associate Professor Malcolm Sim is Director of the Postgraduate Education Program and Rhonda Blaich is the postgraduate courses administrator.

The major initiatives in postgraduate courses during 1998 were:
- the introduction of a Graduate Diploma in International Health;
- the introduction of a block/distance format for the Graduate Diploma in Occupational and Environmental Health;
- development of a course proposal for a Graduate Diploma in Clinical Health Management to be offered in 1999;
- development of a course proposal for a Graduate Diploma in Preventive Medicine to be offered in 1999;
- development of a Master of Clinical Epidemiology to begin in 1999; and
- development of a Master of Occupational and Environmental Health to begin in 1999.

Our postgraduate courses continued to be very popular in 1998. The number of applicants, especially for the MPH, continues to greatly exceed the number of places available. There is a steadily increasing number of applications from international students, which is a reflection of the increasing influence of the department's education program in the region. The names of graduates from our courses in 1998 are included in this publication and we wish these students well in their future careers.

Our main philosophy behind further developments in postgraduate education is to develop a program of postgraduate courses in a range of disciplines at Masters, Diploma and Graduate Certificate levels, with strong vertical and horizontal articulation between courses. This structure will increase flexibility for students and provide the opportunity for students to gain increasing skills, in stages, throughout their professional careers. The other main strategy is to introduce more flexibility in the mode of offering for post-graduates. This will include a combination of on campus, block and off-campus modes and will be designed to meet the specific educational needs of each of our courses.

We are very grateful to the subject coordinators, especially those external to the department, who helped to deliver an increasing number of Masters and Diploma subjects and ensure the continued development and success of the MPH and Graduate Diplomas in 1996. A full list of subject co-ordinators is on page 40. Our thanks also go to the many project supervisors who gave up their time to guide the MPH students through to completion of their projects.

For more information visit our website at http://www.med.monash.edu.au/epidemiology/teaching/postgrad/pgrdinfo.htm
Postgraduate teaching continued

Towards the end of 1998, Lyndall Thompson was offered a place in the graduate medical program at the University of Sydney, and decided to leave her position with us for a major career change. Lyndall had been instrumental in developing new course proposals and developing new systems to cope with the increasing administrative demands. We wish her well in her medical course and future career. To replace Lyndall, the department was very fortunate to recruit Rhonda Black as postgraduate courses administrator. Rhonda has a Bachelor of Education from Deakin University and worked for a short time as a teacher. For ten years Rhonda worked in a variety of administrative positions at RMIT, including a period as alumni officer. She had previously worked in this department assisting with short courses. Rhonda brings a wealth of educational, administrative and office management experience to this position and we look forward to her contribution to further development of the department's postgraduate education program.

Master of Public Health

Coordinator - Associate Professor Malcolm Sim

The MPH degree is a vocational course which aims to equip students with the full range of quantitative, analytical and communication skills necessary to work in the broad domain of public health. This requires competence in the quantitative methods of the population-based health sciences and the ability to apply these methods to solve problems in areas such as health services research, public health policy and planning, public health administration, occupational health practice and the provision of primary care within the Australian community.

Objectives of the course are to develop in students the skills necessary to:

- critically appraise quantitative papers published in the epidemiological and public health literature;
- design, conduct, analyse, interpret and write up research projects relevant to public health;
- demonstrate an understanding of the historical, social, political and industrial relations context of public health within Australian society;
- demonstrate an understanding of the health care system in Australia;
- assess the influence of environmental factors on health and effectively communicate the risks to health of such factors;
- develop public health policy, health promotion and planning strategies to reduce the impact of health problems within the community, and
- conduct an economic evaluation of these programs.

The Master of Public Health is run as part of the Victorian Consortium for Public Health which comprises:

- the department at Monash University;
- the department of General Practice and Public Health at the University of Melbourne;
- the Faculty of Health Sciences and Faculty of Economics, Education and Social Sciences at La trobe University; and
- the Faculty of Health and Behavioural Sciences at Deakin University.

After completing the 8 core Part 1 subjects, the specialisations offered to Monash students by this department are:

- Clinical Epidemiology
- Occupational and Environmental Health
- International Health
- Health Services Management (from 1999)
- Preventive Medicine (from 1999)
- General stream

The new stream in Health Services Management aims to give graduates leadership and administrative skills for the effective management of health services. The preventive medicine stream aims to give health practitioners knowledge and skills to provide effective evidence-based prevention care and to develop health promotion programs. The MPH degree (Occupational and Environmental Health stream) meets the requirements of the Australasian Faculty of Occupational Medicine (AFOM) of the Royal Australasian College of Physicians as approved coursework for progression to the Fellowship examination. Several of the subjects are also accredited for CME points for Fellows of the Royal Australian College of General Practitioners. The MPH is also designed to meet part of the training requirements for trainees of the Australasian Faculty of Public Health Medicine.
Graduate Diploma in Occupational & Environmental Health

Coordinator - Associate Professor Malcolm Sim

The number of applicants increased in 1998, with the distance/block format allowing interstate students to enrol in the course. Further development of subjects into this mode occurred during the year. The block/distance format for each subject has a problem-oriented approach and comprises completion of a distance manual containing background information, followed by a five day block of on-campus teaching. The block teaching comprised mainly case studies, problem-solving exercises, group work and work-site visits to demonstrate the practical application of the background material. The new format for the diploma comprised four core subjects and a larger range of elective subjects to meet the differing needs of students who come from a wide range of backgrounds and interests.

Graduate Diploma in International Health

Co-ordinator: Dr Mike Toole (International Health Unit, Macfarlane Burnet Centre)

This course was offered for the first time in 1998 and there was also continuing development of the format and subjects. This diploma aims to provide health and development professionals with the skills to design, implement and evaluate health projects in developing countries. International health has been a very popular and important part of the MPH and it was decided to offer students the choice of undertaking a shorter diploma course with a greater international health focus than the MPH, particularly for overseas students. Mike Toole and Damien Morgan took the prime role in this development, with input from the other professional staff at Macfarlane Burnet.

Graduate Diploma in Health Services Management

Coordinator - Dr Jenny Majoor

This is a major new development in the department's expanding postgraduate education program. During 1998, the department received a Monash Strategic Initiatives Fund grant to offer this course, develop associated Graduate Certificate and Masters level courses, and introduce off-campus delivery of subjects. The diploma is to be first offered in 1999, with the other two courses and off-campus subjects planned for first delivery in 2000. Jenny Majoor, Fellow of the Royal Australasian College of Medical Administrators, and a recent PhD student in the department, has taken the lead role in course development with assistance from the Faculty of Law, Faculty of Business and Economics, and the Sub-Faculty of Nursing.
Postgraduate subjects & co-ordinators

We are very grateful to the following subject coordinators, especially those external to the department, who helped deliver an increasing number of Masters and Diploma subjects and help to ensure the continued development and success of the MPH and Graduate Diplomas in 1997. Our thanks also go to the many project supervisors who gave up their time to guide the MPH students through to completion of their research projects.

Advanced biostatistics
Dr Andrew Forbes

Biological environment
Dr David Fish

Chemical environment 1
Dr David Fish

Chemical environment 2
Dr David Fish

Child public health
Ms Elizabeth Waters

Chronic disease epidemiology
Dr Lin Fritschi

Clinical epidemiology
Dr Rachelle Buchbinder

Communicable disease control in developing countries
Dr Christine Drummond
Dr Tim Ruff

Controlled clinical trials
A/Prof Michael Abramson

Disease prevention and rehabilitation
Dr Bruce Hocking

Drug epidemiology
A/Prof Henry Krum
Prof John McNeil

Environmental influences on health
Dr Malcolm Sim
Dr David Goddard

Epidemiology and biostatistics
A/Prof Michael Abramson
Dr Anul Mylvanaganam

Epidemiology and demography
Mr Damien Jolley

Health economics management and evaluation
Dr Graeme Hawthorn

Health promotion
Ms Catherine Issiopooulos

Health, ethics and human rights
Ms Bebe Loff

Injury epidemiology and prevention
Prof Joan Ozanne-Smith

Introductory statistics
Mr Stephen Farish

Measurement in clinical research
Dr Rachelle Buchbinder

Meta analysis
A/Prof Michael Abramson

MPH Projects
Dr Malcolm Sim

Physical environment
Dr Bruce Hocking

Primary health care in developing countries
Dr Tamara Aboagye-Kwartz
Dr Peter Deutschmann

Public health policy and planning
Dr David Legge

Research methods and computing
Dr Kit Fairley

Risk, management and law
Dr Bruce Hocking

Sociological foundations of public health
Dr Jeanne Daly
Short courses

The department held several successful short courses through 1998.

Australian Certificate of Civil Aviation Medicine
The Australian Certificate of Civil Aviation Medicine course for medical practitioners was held in February. This course is a prerequisite for medical practitioners wishing to become Designated Aviation Medical Examiners and is designed to provide a basic knowledge in civil aviation medicine. This enables medical practitioners completing the course to perform medical examinations on pilot licence holders, give relevant advice to air crew and air traffic service officers and make appropriate decisions on air crew medical fitness for flying status. Marilyn Cowie is the course coordinator.

Modern methods of data analysis for the health researcher
Mark Goldberg, an epidemiologist from the University of Quebec, visited the department and presented this short course which was held at the Victorian Diabetes Institute.

Measuring health outcomes on an individual, group and population level.
Nancy Mayo, from McGill University, also visited the department and presented a seminar titled "Measuring health outcomes on an individual, group and population level". This course attracted a wide range of professionals, including physiotherapists, nurses, epidemiologists, physicians, occupational therapists and representatives from the Health Department. Nancy Mayo is a physical therapist and epidemiologist whose main research program relates to health outcomes in chronic diseases.

Evidence based drug development and prescribing
A three day course on evidence based drug development and prescribing was held in March. Presenters were Professor John McNeil, Associate Professor Henry Krum, Susan Zbikowski, Marina Skiba, Noel Cranswick, Fiona Richardson, Lisa Natoli and Kay Hynes. Professor Richard Day gave the keynote address. Over sixty people took part in the course and associated workshops.

Infectious diseases
A course on infectious diseases was provided in October for Health Services Australia, coordinated by David Goddard and attended by approximately thirty doctors.

Risk management workshops
This course was provided for the Department of Human Services and coordinated by Bruce Hocking.

Impairment assessment training
This department, in collaboration with The University of Melbourne, successfully ran the first series of courses for doctors undertaking impairment assessments. The courses cover the 4th Edition of the AMA Guides and the requirements of VMA and TAC. It is now a statutory requirement that doctors undertaking impairment assessments complete this training. Four hundred and twenty

For information on current courses -
Visitors to the department..

Professors Mark Goldberg and Nancy Mayo visited the department in March 1998. Mark is Assistant Professor at the University of Quebec and an epidemiologist with particular expertise in occupational causes of cancer. Mark presented a workshop on Modern methods of data analysis for the health researcher while he was visiting.

Nancy is a physical therapist from McGill University, whose main research program relates to health outcomes in chronic diseases. Her work on stroke is recognised internationally and she was among the first to demonstrate an end to the decline in stroke incidence. Nancy presented a short course "Measuring health outcomes on an individual, group and population level".

Opening of new department offices..

Due to the department's expansion, in February 1998 some staff moved to extra space on the fourth floor of 563 St Kilda Road. Professor Porter, the Dean of Medicine, and Professor John McNeil officially opened the fourth floor offices at a lunch for department staff.

The CRC for Water Quality and Treatment are situated on the fourth floor as well as other research groups.

Professor Porter left Monash at the end of February to take up a position at James Cook University.
Master of Public Health Graduates

Congratulations to the following students who successfully completed their MPH in 1998

◆ Angelo Annunziata
Supervisor: Dr Peter Cameron
The Emergency Services Enhancement Program At The Royal Melbourne Hospital: A preliminary study.

◆ Christine Bessel
Supervisors: Dr Robin Bell, Dr Jane Halliday
The effects on caesarean section rates of the changing demographic characteristics of the childbearing population.

◆ Karen Jane Campbell
Supervisor: Dr David Crawford
Management of overweight and obesity: Attitudes and current practice of dietitians.

◆ Sue Cromie
Supervisor: A/Prof Frank Dudley
Determination of the prevalence of hepatitis G virus in an Australian population of patients with chronic Hepatitis C and its effect on morbidity and treatment outcomes.

◆ Margaret De Campo
Supervisor: Dr Rosemary Lester
Maintenance of the vaccine cold chain by councils and general practices in Victoria.

◆ David S Elder
Supervisor: Dr Malcolm Sim
Surveillance of Australian workplace-Based Respiratory Events (The SABRE project).

◆ Felicity Finlayson
Supervisors: A/Prof Michael Abramson, Prof Haydn Waters
An investigation into current asthma knowledge and professional practice of health workers who have attended a three day course on asthma management.

◆ Pamela Gilbert
Supervisor: Ms Priscilla Robinson

◆ Rachel Martin
Supervisor: Dr Louise Brown
Periodontitis in young adults.

◆ Kylie O’Brien-Gedye
Supervisor: Dr David Goddard
Colour vision and the road environment: Conspicuity of road signs – does colour detectiveness matter?

◆ Janine J Roney
Supervisors: Dr Tilman Ruff, Ms Lynette Howden
Pre-travel advice provided by general practitioners.

◆ Margaret Sheehan
Supervisor: Dr Robin Burns
In the spirit of fun: An exploration of the uses and meaning of alcohol in young women’s lives.

◆ Jan Shield
Supervisor: A/Prof David Ranson
Master of Public Health Graduates continued

- **Denis Spelman**  
  Supervisor: A/Prof Kit Fairley  
  Surgical wound infection and bacteremia in cardiac surgery: Risk factors, risk adjustment and surveillance.

- **Rwth Stuckey**  
  Supervisor: Dr Malcolm Sim  
  Dietary and related factors in the health of Japanese expatriate workers.

- **Fiona M Williams**  
  Supervisors: Prof J McNoil, Dr Bella Brushin  
  Attitudes towards organ donation among Melbourne's Italian community.

- **Phillipa Wilson**  
  Supervisors: Dr David Goddard, Dr Peter Morley  
  Does the use of a mnemonic aid the cognitive and psychomotor retention skills of single rescuer adult cardiopulmonary resuscitation (CPR) rates and rhythm for lay persons in a six hour training programme.

- **Slobhan Boyd-Squires**  
  Supervisor: Dr Rachelle Buchbinder  
  How do physiotherapists manage common musculoskeletal disorders and what are the determinants of this management as reported in a mailed questionnaire?

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Graduate Diploma Graduates

**Graduate Diploma in Clinical Epidemiology**

- Susan M Evans
- Marion Hoffman
- Bronwyn Levey
- Renee Manser
- Caroline L Marshall
- Louise McCall
- Fiona Savio

**Graduate Diploma in International Health**

- Eunice Bruce
- Susan Downie

**Graduate Diploma in Occupational and Environmental Health**

- Grace Anelll
- James Wei-Ching Chan
- David Court
- Murray Gee
- Anne Griffin
- David Holding
- Leonie Jess
- Den Ching Angel Lee
- Angela Peerman
- Bogdan Sikorski
- Marnie Williams
Seminar series

Anna Poeters coordinated an excellent series of weekly seminars in 1998. These included presentations by staff of the department and invited guest speakers.

The staff presentations included Jim Black speaking on cholera control in Mozambique; Hugo Stephenson on neural networks: artificial intelligence in clinical research; Mark Daniel discussed the effectiveness of community-directed diabetes prevention and control in a rural Aboriginal population in British Columbia, Canada; Henry Krum explaining what is clinical pharmacology and what do they do? Kerin O'Dea talked about diet-related chronic diseases; studies in different Australian population groups; Rosalie Woods, Michael Abramson and Shyamali Dharmage spoke about the epidemiology of asthma in Australia, 1998

The external speakers included:

- **Tom Beer**, Division of Atmospheric Research, CSIRO - Air quality health risk and the NEPM.
- **John Catford**, Director, Public Health Division, Victorian Department Human Services - New horizons for public health in Victoria.
- **Tim Costello** - Private wealth, public health.
- **Sue Davis**, Jean Hailes Research Institute - Preventing heart disease in women.
- **Paul Dietze**, Turning Point Alcohol and Drug Centre - The epidemiology of drug use and related harms in Victoria: Indicator studies involving alcohol and heroin.
- **David Flewitt**, University of Sheffield & the Central Sheffield University Hospital Trust - Organic dusts are harmful to the lungs! Can research help?
- **James Hanley**, McGill University, Canada - Connections between case-control and survival analyses.
- **Jozica Kutin** - Pharmacotherapeutic treatment options for heroin dependence. A series of clinical trials.
- **Nancy Mayo**, McGill University - Stroke in Canada: Occurrence to outcome.
- **Jeff Richardson**, Director, Health Economics Unit, CHPE - Economic evaluation of health programs.
- **Julian Savulescu**, Murdoch Institute - Ethics, clinical trials and rare diseases.
- **Nick Santamarla**, Victorian Centre for Ambulatory Care Innovation, Alfred Hospital - An analysis of the information and support needs of the carers of Hospital in The Home patients.
- **Andrew Sinclair**, Dept Food Science, RMIT - Why there is a need for omega 3 fatty acids in our diet?
- **Michael Walsh**, Chief Executive, Alfred Hospital - The future of the public health system.
- **Nicholas Withers** - The natural history of respiratory symptoms.

Thank you to all presenters for making this year's seminar series so successful!

The seminars are held in the 3rd floor lecture room at 553 St Kilda Road and are open to everyone.

PhD students 1998

Geza Benke
Retrospective assessment of occupational exposures by job exposure matrices and expert evaluation.
Supervisors - Malcolm Sim, Michael Abramson
This research involves the development and evaluation of an exposure data matrix for retrospective studies in occupational epidemiology and investigation of the use of questionnaires and experts in the evaluation of retrospective exposures in community-based case-control studies. During 1998, Geza completed the Healthwise task exposure matrix. He also had a paper published on exposures in the aluminium industry.

Pauline Branley
A model of future needs and associated costs for renal replacement services in Australia to predict the impact of altering the organ donation rate. Aspects of rapidly progressive atheroma in chronic renal failure are also being investigated.
Supervisors - John McNeil, Henry Krum
NH&MRC Medical scholarship
Dr Pauline Branley has a background in renal medicine and is conducting a study looking at vascular disease in patients with renal failure who are dependant on dialysis. The study will compare the amount of vascular disease in renal patients and in age matched healthy people, measuring carotid artery intimal-medial thickness with ultrasound, vascular compliance and forearm blood flow response to exercise and to ischaemia. This study will assist in determining the best techniques for use in an intervention study of folate supplementation in renal failure. A dose response study of folic acid supplementation in dialysis patients has also been undertaken.

Laima Brazionis
Retinopathy and the Greek paradox
Supervisor - Korin O’Dea
This study aims to document, in Australian and Greek-born diabetic men and women aged 45-69, the prevalence of diabetic retinopathy and aged related macular degeneration (AMD), and any association between diabetic retinopathy and AMD of a wide range of risk factors, both established (glycaemic control for diabetes and CHD risk factors for AMD), and suspected (hypertension, plasma antioxidant levels and coagulation factors). It will also attempt to determine whether any difference in prevalence or severity of diabetic retinopathy or AMD can be explained by the dietary intake and plasma levels of a wide range of antioxidants, or by any modifiable risk factors for these conditions.

Shyamali Dharmage
Environmental risk factors for asthma.
Supervisors - Michael Abramson, Haydn Walters
NH&MRC Medical Scholarship
A follow up of a cohort of the young adults who participated in the European Community Respiratory Health Survey (ECRHS) has involved 485 participants and their homes. Participants completed a respiratory questionnaire, skin prick tests and lung function tests in the Lung Function Laboratory at the Alfred Hospital. Home visits were made to collect dust and air samples from bedrooms and to collect information on residential characteristics. Dust samples were analysed for house dust mite and cat allergens. Air samples were cultured for fungi. A study was carried out to examine the validity and reliability of the home visit report that was used in this study. Three papers have been published so far and another in preparation. The effects of attrition in this follow-up study have been evaluated and published as an abstract and a manuscript is in preparation. Another paper was published after analysing the available data of these participants in the second phase of ECRHS.

Another study was carried out to assess the seasonal variation in indoor allergen levels and its impact on asthma on a sample of 40 atopic asthmatics in 1997. Two abstracts have been published on the results of this study and a manuscript is in preparation. A research grant was obtained from the Department of Human Services in 1998 to conduct a clinical trial to assess the efficacy of encasing bedding on controlling house dust mite allergen levels and asthma. This is a randomised placebo controlled trial of 6 months duration. The trial was commenced in April 1998, and will be completed at the end of October 1999, as the recruitment took 12 months. The PhD thesis will be submitted at the end of 1999.
Sally Green

Management of the stiff and painful shoulder. Supervisors - Rachelle Buchbinder, Michael Abramson

Departmental scholarship

A reliability study of shoulder range of motion has been conducted and published in Arthritis Care and Research. A Cochrane review of interventions for shoulder pain, in conjunction with the Musculoskeletal Review Group has been completed and published in the British Medical Journal. A validity study of various methods of measuring disability in the shoulder has been presented at the Australian Rheumatology Conference in Perth, and a randomised controlled trial of interventions for adhesive capsulitis (frozen shoulder) are in write up phase. This thesis is due for submission at the end of 1999.

Margaret Hellard

The Water Quality Study. Supervisors - Christopher Fairley, John McNeil

NHMRC Scholarship

The Water Quality Study (WQS) is a randomized double-blinded trial designed to measure the gastrointestinal health affects of drinking water. The study commenced in September 1997 and data collection was completed in February 1998. Six hundred families were recruited from the outer southeastern suburbs of Melbourne. 300 hundred families had a water treatment unit (WTU) installed into their home which removed viruses, bacteria and protozoa from their tap water. 300 had an identical but non-functioning unit installed into their homes. Both the participating families and the researchers were blinded as to whether a family had a "real" or "sham" filter. A weekly Health Diary recorded the amount of gastroenteritis for each participant for the 65 weeks of the study, and a comparison of the amount of gastroenteritis in the groups with real and sham WTUs will be performed. Participants also answered a series of questionnaires about water consumption, gastroenteritis, food intake and food handling. Participants submitted faecal specimens prior to the commencement of the study when they were asymptomatic and throughout the study when they had an episode of gastroenteritis. Faecal specimens were examined for a variety of viruses, bacteria and protozoa. Serum samples were also obtained from adult participants for Cryptosporidium and Hepatitis A serology.

Andrea Hinwood

Arsenic exposure, human absorption, risk and cancer.

Supervisors - John McNeil, Malcolm Sim

Australian Postgraduate Award

Although health effects from arsenic have been well-documented, at the present time little is known about the degree of human absorption for people living in an area of very high environmental contamination and whether potential exposure sources including drinking water, inhalation and ingestion of soil and ingestion of contaminated food are important contributors to arsenic body burden. The study of the risk factors of arsenic absorption (Envias) was completed which aimed to determine the significant sources of arsenic exposure in people living in areas with elevated arsenic concentrations in the environment and the risk factors for absorption. In addition, data collection commenced for an intervention study whereby usual tap water was substituted with bottled water which was free of arsenic. Andrea is due to submit her thesis in early 1999.

Joe Ibrahim

The reliability, validity and risk adjustment of a set of pilot hospital wide clinical indicators. Supervisors - John McNeil, Flavia Cicutti

Australian Post-graduate Award

The aim of this project is to establish the reliability, validity and risk adjustment of a pilot set of hospital wide clinical indicators as quality of care markers. The indicator studied included rate of emergency patient hospital readmissions within 28 days of separation. The project has involved an extensive examination of the use of administrative databases for clinical indicator data collection along with case-control studies. Data collection has been performed at ten hospitals in Victoria, NSW and SA. The field research of the project has involved screening of 2771 medical records and the photocopying of 1367 de-identified medical records. In addition, 2730 medical records underwent expert clinical peer review for quality of care ratings. Submitted November 1998.

Catherine Itsiopoulos

Diabetes and cardiovascular disease - the Greek migrant paradox

Funded by Diabetes Australia and PHRDC.

Supervisor K O'Dea

Despite higher rates of the identified risk factors for coronary heart disease (CHD), Greek migrants have lower CHD
mortality rates than the Australian-born population. However, consistent with their risk factor profile, they have 2-3 times higher prevalence of known diabetes in the 45-69 year age-group. In some populations diabetes is associated with a 2 to 4 fold increase in the risk of CHD. There are no data available on whether diabetes increases the risk of CHD in Greek migrants. This study looks at whether the Mediterranean diet, by being a rich source of a wide range of antioxidants derived from plant foods, wind and olive oil, could inhibit the process of atherosclerosis by inhibiting LDL oxidation. By acting at this critical step in the disease process, it is possible that it attenuates the harmful impact of the traditional risk factors (such as elevated cholesterol levels, hypertension, central obesity, diabetes, smoking and physical inactivity).

**Hana Kazda**

*Effect of Drug Therapy on Autonomic Function in Chronic Heart Failure (CHF).*

* Supervisor: Assoc Prof Henry Krum

*Australian Postgraduate Award*

This is a single-centre, double-blind, prospectively randomised cross-over study which aims to investigate the effect of candesartan (AT1 antagonist) and hydrochlorothiazide (diuretic) therapy and its withdrawal, on autonomic function and central pressures in patients with mild to moderate essential hypertension. Investigation into withdrawal of antihypertensive drug therapy is of more than academic significance, as a trial of drug withdrawal is an appropriate therapeutic action in patients who have long standing, well-controlled hypertension on therapy. Effect on autonomic function is assessed by comparing treatment and washout period values of several parameters including heart rate, blood pressure, circulating levels of plasma noradrenaline, forearm blood flow response to a cold pressor test, and 20 min and 24 hour ECG recordings. Data has been collected for a trial looking at the effect of a calcium antagonist on autonomic function in normal subjects and CHF patients. Hana is also working on the analysis of several hundred 24 hour ambulatory ECG recordings of heart rate variability for a multi country clinical trial.

**Anthony Kwok**

*Systematic review of the physiotherapy management of lower back pain.*

This study aims to find out the epidemiological data of low back pain and the best combination of physiotherapy modalities to reduce back pain. A clinical trial will be conducted to evaluate the effectiveness of the application of physiotherapy in treating both acute and chronic back problems.

**Bebe Loff**

*Health and human rights.*

*Supervisors: Flavia Cicuttini, Roger Short*

*NH&MRC Public Health Scholarship*

This thesis examines the relationship between health status and the observance of human rights in remote aboriginal communities in the context of sexual health. The analysis is of an interdisciplinary nature, combining both the identification of prevalence of disease via a systematic analysis with an examination of the legal implications of this analysis both locally and internationally.

**Jenny Majoor**

*The reliability, validity and risk adjustment of nosocomial infection clinical indicators.*

*Supervisors - John McNeill, Flavia Cicuttini*

*NH&MRC Medical Scholarship*

This project involves an examination of the reliability, validity and risk adjustment of nosocomial infection clinical indicators and is part of a larger project examining the reliability, validity and risk adjustment of a pilot set of hospital wide clinical indicators. The project has involved an extensive examination of the use of administrative databases for clinical indicator data collection along with case-control studies. Data collection has been performed at ten hospitals in Victoria, NSW and SA. The field research of the project has involved screening of 2771 medical records and the photocopying of 1367 deidentified medical records. In addition, 2730 medical records have undergone expert clinical peer review for quality of care ratings. The thesis has now been submitted and passed.

**Jean Meaklim**

*Risk assessment of grain protectants.*

*Supervisors: John McNeill, Malcolm Sim*

This project is investigating the human health effects of using chemicals to protect stored grain from insect infestation. Data collection was completed during 1997 and involved farmers from randomly selected branches of the Victorian Farmer's Federation throughout rural Victoria. Data was coded and preliminary analysis commenced.
Mark Nelson

Predictors of success of the maintenance of normotension after withdrawal of antihypertensive drugs in the Second Australian National Blood Pressure Study.

Supervisors - John McNeil, Henry Krum, Chris Reid.

This study aims to show that independent predictors of success of withdrawal of antihypertensive drugs can be identified that would permit the identification of individuals for implementation of withdrawal in general practice. Subjects aged 65-64 years and previously on antihypertensive medication are admitted to the study according to the protocol of the Second Australian Blood Pressure Study and managed by their usual treating GP throughout the study. Over 500 subjects were identified and classification of these subjects will be completed by mid-1999.

Anne-Marie Pellizzer

The effect of pharmacological and non-pharmacological therapy on autonomic function in patients with heart failure.

Supervisors - Henry Krum, John McNeil

NH&MRC Medical Scholarship

Chronic heart failure (CHF) is characterised by abnormalities of the autonomic nervous system, which have been shown to be of prognostic significance. Baroreflex sensitivity is an integrated measure of autonomic function. We have developed a non-invasive method to assess the baroreflex. The aim of this project is to use this technique to evaluate the possible benefits of various therapeutic interventions in CHF. A study was completed in 1997 examining the use of this non-invasive baroreflex assessment in normal subjects after perturbation of the autonomic nervous system. In 1998 a study was commenced in conjunction with the Alfred Hospital Department of Respiratory Medicine looking at degree and type of sleep apnoea and correlating this with haemodynamic and autonomic parameters in CHF patients. Other studies completed in 1998 looked at the effect of low and standard dose digoxin in CHF patients in sinus rhythm and in normal subjects, and also the effect of an innovative antihypertensive drug on the autonomic nervous system.

Alastair Meyer

Pre-hospital emergency care

Supervisor: Prof John McNeil (Monash University), Assoc Prof Peter Cameron (Royal Melbourne Hospital)

Departmental scholarship.

This project has been designed to investigate methods for improving emergency care of patients in the prehospital setting. Sudden cardiac death is a leading cause of death in industrialised nations. The gap between the world's best survival rates and those of metropolitan areas in Australia is large. Metropolitan Melbourne has one of the lowest survival rates in the world. The initial stage of this project is a review article which has been developed tracing the history of pre-hospital cardiac care and the development of the Emergency Medical Service (EMS) systems. The aetiology of sudden cardiac is discussed and the review examines the "Chain of Survival" from an Australian perspective. It also identifies areas of weakness in the chain and recommends areas for further research.

A retrospective study of Out of Hospital Cardiac Arrest (OHCA) as it presents as asystole has been performed. The majority of survivors of OHCA present as ventricular fibrillation (VF) or ventricular tachycardia (VT). However, asystole is being reported with increasing frequency both in Australia and the USA. Existing Australian experience with asystole indicates that the outcome is universally poor. It has been argued that "less vigorous" resuscitation efforts be made and postulated that no resuscitation be offered to those found in asystole. In this study, there were 778 cases identified and data analysis indicates that overall survival from out of hospital asystolic arrest is very poor (less than 0.5% survival rate). This project aims at improving such survival and Alastair is part of a team developing a database for OHCA which will assist the planning and analysis of a variety of trials, which may result in improved survival from OHCA in Melbourne.

Quing Su

Antioxidants and cardiovascular disease

Supervisor - Kerin O'Dea

Monash Dept Scholarship

Fruit and vegetables are the major sources of dietary antioxidant compounds and several large epidemiological studies have shown that dietary intake of antioxidants is inversely associated with the risk of coronary heart disease. Aboriginal and Torres Strait Islander people in remote areas often have poor access to fresh vegetables and fruit and so have low levels of antioxidant vitamins in their blood. This may contribute to their high death rate from CHD. Despite higher rates of the identified risk factors for CHD (smoking, elevated cholesterol levels, hypertension, apparent physical inactivity and central obesity), Greek migrants have lower CHD mortality rates than the Australian-born population. Those findings suggest that factors other than the traditional CHD risk indicators are operating to protect Greek migrants from CHD even in the presence of diabetes. This project will set up a HPLC method to measure retinol, tocopherols and carotenoids from plasma and will provide the population-based information on antioxidant vitamin status in Aboriginal and Torres Strait Islander communities and Greek and Australian-born diabetic and non-diabetic man and women. The results should help to assess the contribution
that low levels of antioxidant vitamins make to the risk of cardiovascular and renal diseases in Aboriginal populations. The study will also test the effects of diet on plasma vitamin levels in Antarctic expeditioners consuming a poor diet over a period of one year.

**Brent Robertson**

*Case-Control Study of sporadic cryptosporidiosis.*  
*Supervisors - Christopher Fairley, John McNeil*  
*CRC for Water Quality & Treatment Scholarship*  
This study will assess the importance of risk factors for cryptosporidiosis in both Melbourne and Adelaide. The preliminary stages of the project involved the validation of water consumption estimates and a pilot of the main case-control study. Cases are people with cryptosporidiosis identified by pathology laboratories. Controls will be people without diarrhoeal illness selected randomly and matched by age and gender to the cases. The Department of Human Services in Victoria and South Australia are collaborating with the study.

**Hugo Stephenson**

*The development of a reusable computerised decision support tool.*  
*Supervisor - John McNeil*  
*Funded by Bankers Trust, Health & Family Services & Department of Veterans Affairs*  
This research involves the development and testing of software that supports doctors when making diagnostic and treatment decisions. This software is being trialed in the management of stroke, congestive cardiac failure and chronic obstructive airways disease.

**Rhonda Stuart**

*Tuberculosis - Mantoux testing.*  
*Supervisor - Lindsay Grayson, John McNeil*  
*Monash Graduate Scholarship*  
The major study being undertaken is an assessment of Mantoux reactivity among health care workers in Melbourne teaching hospitals. This study is supported by the Health Department of Victoria, and aims to establish the prevalence of strongly positive Mantoux readings among this population. It will also identify risk factors for reactions such as past history of BCG vaccination, country of birth, age and tuberculosis contacts. This study is now complete and is in the process of being analysed. More than 8000 individuals in 15 major teaching hospitals have been screenedin. Studies have also been completed evaluating the human gamma interferon assay in tuberculosis, comparison of 5 vs TU in the Mantoux test, and Isoniazid toxicity during tuberculosis chemoprophylaxis.

**Zhong Xian Lu**

*Utilisation of arabinofuranos from wheat flour as a source of dietary fibre.*  
*Funded - Australian Food Industry Science Centre*  
*Supervisor - Kerin O'Dea*  
The main aim of this project is to determine whether there are demonstrable health benefits (in relation to reductions in colon cancer risk markers, cholesterol levels and/or glycaemic index) from the consumption of arabinofuranos derived from the pentosan stream byproduct of wheat flour processing. If such health benefits can be established in studies with human volunteers, there is great potential to use this currently discarded waste product to develop a natural food additive rich in dietary fibre for incorporation into a wide variety of processed foods.
Book chapters


Journal Articles


Editorials/Reviews

Letter or note


Service activities of academic staff

Michael Abramson is Deputy Head of Department and a fellow or member of many societies, including the Royal Australasian College of Physicians, the Thoracic Society of Australia and New Zealand, the American Thoracic Society, the Australasian Faculty of Public Health Medicine, the Australasian Epidemiological Association and the International Society for Environmental Epidemiology.

Esther Briganti is a fellow of the Royal Australasian College of Physicians and a member of the Australian Diabetes Society. She is also an active committee member of the Victorian Medical Women's society.

Rachelle Buchbinder is a member of the Australian Rheumatology Association, the Royal Australian College of Physicians, the Australian Medical Association and the American College of Rheumatology. She is a member of the Economic Sub-committee of the Pharmaceutical Benefits Advisory Committee.

Flavia Cicuttini is a member of the Australian Rheumatology Association, the Royal Australian College of Physicians, the AustralasianFaculty of Public Health Medicine, the NH&MRC Regional Grant Interviewing Committee and the Victoria Centre for Ambulatory Care Innovation Advisory Group.

Lisa Demos has a part-time position as a senior research officer with the Victorian Centre for Ambulatory Care Innovation and honorary appointments with Monash University Pharmacology Department and the Victorian College of Pharmacy. She is a member of the Society of Hospital Pharmacists of Australia (SHPA) and the Australian Society of Clinical and Experimental Pharmacologists and Toxicologists (ASCEPT). Lisa is currently on the SHPA Committee of Specialty Practice on Acute Home Care and the Executive of the Australian Home and Outpatient Intravenous Therapy. She is also a participating member of the Victorian Drug Use Evaluation Special Interest Group and the Victorian Drug Usage Advisory Committee on Adverse Drug Reactions.

David Elder is a Fellow of the Australasian Faculty of Occupational Medicine (RACP), a member of ANZSOM and a Member of the Royal College of General Practitioners (UK).

Christopher Fairley is on the NH&MRC Regional Grants Committee in Brisbane and the NH&MRC Committee on Antibiotic Resistance. He is a member of the NH&MRC Australian Drinking Water Guideline Review for Protozoa, on the writing group for the Australian Antibiotic Guidelines and is the medical director for the Victoria Centre for Ambulatory Care Innovation Advisory Group.

David Fish is Chief Examiner for the Australasian Faculty of Occupational Medicine (RACP), a Fellow of the Australasian Faculty of Public Health Medicine, and a member of the Aviation Medical Society of Australia and New Zealand.

Andrew Forbes is a member of the Statistical Society of Australia, the American Statistical Association, the Institute of Mathematical Statistics and the International Biometric Society.

Lin Fritschi is a cancer epidemiologist with a particular interest in occupational causes of cancer. She is a member of the Council of the Australasian Epidemiological Association (AEA) and co-editor of the official publication of the AEA (the Australasian Epidemiologist). She is also a member of the Canadian Society for Epidemiology and Biostatistics, the Clinical Oncology Society of Australia, and the Monash Medical Centre Human Research and Ethics Committee B.

David Goddard is a member of the Australasian Faculty of Occupational Medicine assessment sub-committee, a member of the Australian and New Zealand Society of Occupational Medicine and a consultant in occupational medicine to the Royal Australian Air Force.
Bruce Hocking is a member of the Australian Standards Association Committee TE/7 and the Australian Standards Association Subcommittee on medical standards for laser exposures. Bruce also chairs the Committee for Medical Standards for Commercial Drivers of the National Road Transport Commission.

Henry Krum is a Council Member of the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists, and a member of the Cardiac Society of Australia and New Zealand and the American Heart Association. Henry is a member of several Monash committees including the Monash University Human Research Ethics Committee. He is Head of Clinical Pharmacology at the Alfred Hospital, a visiting physician to the Alfred Heart Centre, a member of the Professorial General Medical Unit, the Pharmacy and Therapeutics Advisory Committee and the Research Ethics Committee of the Alfred Healthcare Group.

Arul Mylvaganam is a Chartered Statistician with the Royal Statistical Society of the UK and a reviewer of the Australian Journal of Public Health.

John McNeil is visiting physician in the Hypertension and Vascular Medicine Unit at Monash Medical Centre. He is a member of the NH&MRC Research Grants Committee and is chair of the research committee for the National Stroke Foundation and the Dunlop Foundation for Medical Research. He also chairs the Ethics Committee of the Alfred Hospital.

Alex Padiglione is a Fellow of the Royal Australian College of Physicians and a member of the Australian Society for Infectious Diseases and the Australian Society for HIV Medicine.

Anna Peeters is a member of the Health Issues Centre, Victoria, the Public Health Association of Australia and the Health Consumers Group. Anna is also a member of the Steering Committee for a Coronial Enquiry and Victorian Institute of Forensic Medicine Research Project into Deaths by Heroin Overdose, and the Steering Committee for the Metropolitan Ambulance Service Emergency Operations Plan.

Martha Sinclair is a member of the Australian Society for Microbiology, and Editor of the Health Stream newsletter of the CRC for Water Quality and Treatment. Martha is also the departmental network manager, a member of the Education Committee and the Editorial Committee of the CRC for Water Quality and Treatment.

Malcolm Slim is an ex officio member of council and Chief Censor and Chair of the Board of Censors for the Australasian Faculty of Occupational Medicine, a member of the Editorial Board of the Journal, *Occupational and Environmental Medicine*, and a member of the Scientific Committee in Occupational Epidemiology of the International Commission in Occupational Health. He is also a member of the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists, the Australasian Epidemiological Association, and the Public Health Association of Australia.
Honorary staff members

Associate & Clinical Associate Professors
SM Garland  
CN Gray  
DJ Hill  
EJ Ozanne-Smith  
HJ Smith  
GW Whyte  
GG Giles  
ML Grayson  
GD Johnstone  
GJ Rouch  
M J Toole

Honorary Senior Lecturers
MZ Ansari  
RJ Bell  
RJ Burns  
P Deutschmann  
WR Holmes  
VK Lin  
SC Thompson  
DG Barton  
RM Borland  
JN Crofts  
D Fish  
EW Knight  
T Ruff  
MJ Toole

Honorary Lecturers
T Aboagye-Kwarteng  
MAW Curran  
R Horsley  
PW Kamen  
D Kotzman  
DW Morgan  
PM Robinson  
S Whorlow  
N Cranswick  
FMPJ de Courten  
DJ Jolley  
S Kilalea  
DJ McCarty  
CM Reid  
H Sutcliffe