Department of Epidemiology & Preventive Medicine

Annual Report 1996

A PARTNER IN THE VICTORIAN CONSORTIUM FOR PUBLIC HEALTH AND THE CO-OPERATIVE RESEARCH CENTRE FOR WATER QUALITY AND TREATMENT
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Report from Head of Department

1996 has been an eventful year for the department with several long term goals coming to fruition. The year began with the arrival of Henry Krum who transferred from the Austin Hospital to establish a Clinical Pharmacology Unit within the department. Henry was accompanied by several highly accomplished colleagues who have helped consolidate the department's long standing interest in the evaluation of drug therapy.

In the early part of the year, new teaching initiatives featured prominently amongst our activities. Fifteen new students comprised the first intake into our new Diploma of Clinical Epidemiology. We also continued to attract a high level of interest in our Master of Public Health degree, the Diploma of Occupational and Environmental Health and the Certificate of Aviation Medicine. The outstanding efforts of Malcolm Sim, Mervin Stanley and Marilyn Cowie must be recognised for their role in maintaining the success of these programs.

As the year progressed, we were pleased to see the increasing success of the CRC in Water Quality and Treatment. The department, mainly through Kit Fairley and Martha Sinclair, is responsible for the Public Health and Risk Assessment program within the CRC. Planning also continued towards the establishment of the water quality study which is being conducted under the auspices of the CRC and will be the largest single research project undertaken in the department. The Public Health Program newsletter, called Health Stream, (produced by Martha Sinclair and Pam Lightbody) has also proved very popular with requests for copies coming from many interstate and overseas water authorities.

Another new venture for the department was in the area of Quality Assurance. In mid 1996, research work began on a Commonwealth sponsored project to assess the validity of several potential indicators of quality of care in hospitals. The department's contribution was supervised by Drs Joseph Ibrahim and Jenny Majoor, who worked in conjunction with Associate Professor Neil Boyce of the Alfred Healthcare Group. The study has involved an enormous amount of organisation and energy and I am grateful for the efforts of all the medical, nursing and clerical staff who brought it to completion on time and (almost) on budget.

In the midst of these new activities, many of our routine tasks proceeded uneventfully. David Goddard made a superhuman effort to keep the 6th year students happy during their public health block and Flavia Cicuttini and Andrew Forbes achieved success
with the very demanding tasks associated with early year undergraduate teaching. I must also acknowledge the many other staff who contributed to the continuing improvement in both our undergraduate and postgraduate teaching programs and our research projects.

The functioning of the department is very dependent on those individuals who take on special responsibilities. 1996 saw the establishment of the most successful series of department seminars in several years. Their success was largely due to the organisational efforts of Lin Fritschi. Another very difficult task involved maintenance and supervision of the computer network which has become the linchpin of our activities. Martha Sinclair’s role in supervising our computing services and chairing our computing committee has again been fundamental to the operation of this system. Carol Barrie, who is responsible for the department newsletter and (together with Malcolm Sim) this annual report, is also deserving of our acknowledgement and thanks.

1996 also saw several changes in staff. Amongst those leaving were Jerry Beach, Cathy Finocchiaro, Jamie MacMillan and Tilman Ruff, all of whom had contributed substantially to our activities. We also welcomed many new staff including Henry Krum, Arul Mylvaganam, Alex Padiglione, Lisa Demos, Lin Fritschi, Cheryl Cahill and Annie Solterbeck.

An annual report also provides an opportunity to pay a special tribute to the many staff whose contributions and expertise have made the department’s role in teaching and research possible. In particular, I would like to thank Sonya McKeown who has maintained our administrative functions in the most competent, efficient and cheerful fashion imaginable. The other administrative and secretarial staff, including my assistants Jane Forster, Sandra Cherry, Phyllis Topalarmis and Halina Klevin, have also made an outstanding contribution.

I would also like to thank the department research nurses and technical staff who are the backbone of our research activities. Their work is often stressful and difficult but it is of fundamental importance. Finally I must acknowledge the outstanding work of the Deputy Head of Department, Michael Abramson, and the other senior members of the academic and honorary staff. The department is very fortunate to have people of their calibre.
Staff of the department

PROFESSOR
John McNeil, MB BS, MSc, PhD, FRACP, FAFPHM

ASSOCIATE PROFESSOR
Henry Krum, MB BS, PhD, FRACP

LECTURERS AND SENIOR LECTURERS
Michael Abramson, MB BS(Hons), BMedSc, PhD, FRACP, FAFPHM
Rachel Buchbinder, MB BS(Hons), MSc, FRACP (part-time)
Flavia Cicuttini, MB BS, PhD, FRACP, MSc
Christopher Fairley, MB BS, PhD, FRACP, FAFPHM
Cathy Finocchiaro*, MB BS, BHA, MPH, FAFPHM, MRACMA
David Fish, MB BS, FAFOAM, FAFPHM (part-time)
Andrew Forbes, BSc(Hons), MSc, PhD
David Goddard, BMedSc, MB BS, DOH, FAFOAM, MFOM
Bruce Hocking, MB BS, FRACGP, FAFOAM (part-time)
Greg Lockrey*, MB BS, FRACP, MPH (part-time)
James MacMillan*, MSc
Arul Mylvaganam, PhD, MSc, C.Stat(UK), Grad IS(UK)
Alex Padiglione, MB BS, FRACP (part-time)
Tilman Ruff*, MB BS, FRACP (part-time)
Malcolm Sim, BMedSc, MB BS, MSc, GDipOcchHyg, PhD, FAFOAM, FFOM, FAFPHM

SENIOR RESEARCH FELLOWS
Jeremy Beach*, MB BS, MRCP, AFOM
Lisa Demos, BPharm, GDipHospPharm, PhD
Lin Fritschi, MB BS, PhD, FAFPHM
Martha Sinclair, BSc(Hons), PhD

RESEARCH FELLOWS
Geoffrey Aldred, BBus
Geza Benke, BSc, MAppSci, GDipQuanMeth
Cheryl Cahill, BSc
John Gattera*, BPharm(Hons), PhD
Annie Solterbeck, BSc(Hons), PhD
Mandy Thrift, BSc(Hons), PhD

RESEARCH OFFICER
Sinead Garrett, BAppSc

RESEARCH ASSISTANTS
Michael Bailey, BSc(Hons), MSc(Statistics)
Elisa Bastone, BAppSc
Jan Driver, BA(Hons)
John Elliot
Shelley Fair*, BSc
Richard Hayes, BSc(Hons)
Pam Lightbody, BSc
Trudy Mai, BAppSc
John Paisley, BA
Gabriella Tikellis, BSc
Luba Robman, MD, PhD
Lynne Rodoreda, RN
Louise Shiel BSc, GradDip AppSci, DipEd
Marina Skiba, BEd

RESEARCH NURSES
Jillian Dunstan*, BA, RN
Nerida Evans, DipAppSc, SRN
Kimberley Gibson, BA, RN
Fiona Savio, RN
Anna Laffey, RN
Sally Lindros, BAppSc(Hons), RN
Judy Snaddon, BA, SRN, SRN
Jessika Willis, BSc, GDipHumServRes, RPN
Sue Ziokowski, RN

* left the department during 1996

Andrea Hinwood
Kit Fairley
ADMINISTRATIVE STAFF

Carolyn Barrie, Admin Officer, Unit of Occ & Env Health
Sandra Cherry, Admin Secretary (HOD)
Marilyn Cowie, Admin Officer, short courses & undergraduate teaching
Michelle Driver, Office Assistant (part-time)
Jane Forster*, Admin Secretary (HOD)
Halina Klevin, Receptionist/Secretary
Susan Kneebone, BSc, GDipBus, Admin Assist. Unit of Clin Pharmacol
Sonya McKeown, BA(Hons), Admin Officer, Resources/Finance
Anna Ryan, BA, Admin Sec, Ashley Rickston Centre
Merril Stanley, Admin Officer, MPH/postgraduate teaching
Phyllis Toparlatis, Office Assistant

PhD SCHOLARS

Omar Abdulwadud, MSc(Devl Countries)
Pauline Branley, BMed, FRACP
Shyamali Dharmage, MB BS, MSc, MD
Sally Green, BAppSc, GDip(Manip/Physio)
Margaret Hellard, MB BS, FRACP
Andrea Hinwood, BSc, MAppSc
Joe Ibrahim, MB BS, FRACP, MHA
Jenny Majoor, MB BS, MHA, FRACMA
Jean Meaklim, BSc(Hons), MAppSc
Mark Nelson, MB BS, MFamMed
Ann-Marie Pellizzer, MB BS, FRACP
Rhonda Stuart, MB BS, FRACP
Adrian Thomas, MB BS, MRACMA

* left the department during 1996
Summary of activities of the department

■ Teaching
■ Research
■ Consulting services

The department of Epidemiology and Preventive Medicine is involved in a broad range of teaching and research activities.

Teaching

☐ Staff of the department teach in:
  • first
  • second
  • third
  • fourth, and
  • sixth year
  of the undergraduate medical course

☐ They also provide:
  • A Master of Public Health Degree
  • Graduate Diplomas in Occupational & Environmental Health, and Clinical Epidemiology
  • A range of short courses including the Australian Certificate of Civil Aviation Medicine, and other courses covering research methodology and occupational health
  • Contributions to the teaching programs of other Monash departments and institutions
  • Supervision of candidates for the degree of Doctor of Philosophy

Research

☐ Research projects covering clinical epidemiology and public health including:
  • clinical trials,
  • respiratory disease,
  • drinking water quality,
  • occupational epidemiology,
  • infectious disease epidemiology,
  • environmental health,
  • clinical pharmacology, and
  • quality in health care.

☐ Supervision of candidates for the research component of the degree of Master of Public Health

☐ A partner in the Cooperative Research Centre for Water Quality and Treatment

☐ Publications in a wide range of peer-reviewed journals.

Consulting and professional services

☐ 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
Biostatistics unit

HEAD OF UNIT: Dr Andrew Forbes

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 the data collection and data management practices in the department, and
- provisional statistical support for departmental PhD students.

The Unit underwent changes in personnel during 1996. Mr James MacMillan left the department in January 1996 after having provided statistical support for numerous Alfred Hospital research projects and contributing significantly to the successful revision of the statistics program for first year medical students. In July 1996, Dr Arul Mylvaganam joined the department. Arul completed her PhD in Epidemiology and Biostatistics in 1993 at the University of Adelaide, and subsequently held positions at the International Agency for Research on Cancer in France and also in the Department of Public Health at the University of Sydney.

In December 1996 the Unit was further strengthened with the appointment of Dr Anne Soterbeck on a half-time basis to provide statistical consultation, education and collaboration for researchers at the Alfred Healthcare Group. Anne holds a PhD in Pharmacology and a Master of Science in Statistics.

Members of the Biostatistics Unit hold coinvestigator or associate investigator status on a number of research projects within the department. Further details of these projects and associated publications are listed elsewhere in this report.

The teaching activities of the Unit in 1996 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 Diploma in Clinical Epidemiology. Other activities included a series of statistics sessions for the Graduate Diploma in Pharmaceutical Sciences at the University of Melbourne, and educational sessions for the Royal Australian College of General Practitioners.
Clinical Epidemiology Unit

HEAD OF UNIT: Dr Michael Abramson

Clinical Epidemiology (also known as Evidence Based Medicine) concerns the application of epidemiological methods to clinical practice. This includes the efficient use of diagnostic tests, assessing the benefits, risks and costs of treatments and understanding the causes and natural history of diseases. The Department is well placed to make a major contribution in this area, with a number of senior staff who are clinically trained in cardiovascular and respiratory medicine, infectious disease and rheumatology.

Teaching

Medical students are taught the principles of critical appraisal in a second year epidemiology course. A successful series of tutorials on evidence based medicine is included in the final year public health program. Further details of these courses are provided elsewhere in this report.

Postgraduate teaching includes a clinical epidemiology stream within the Master of Public Health program. A new stand alone Diploma of Clinical Epidemiology commenced in 1996 with an initial intake of 15 students. The Diploma is normally taken part time over 2 years. On completion, students are able to demonstrate a sound knowledge of the principles of rational decision making in clinical practice and be able to develop small clinical research projects.

Compulsory units in the first year of the undergraduate medical course are Epidemiology and Biostatistics, Clinical Epidemiology and Controlled Clinical Trials. In the second year students have a choice of 4 units from Meta Analysis, Measurement in Clinical Research, Chronic Disease Epidemiology, Drug Epidemiology, Advanced Biostatistics, Health Economics, Health Services Research & Evaluation and a Research Internship. Rachelle Buchbinder has made a major contribution in successfully establishing the Diploma of Clinical Epidemiology.

Research

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. In collaboration with the Department of Respiratory Medicine at the Alfred Hospital, we have established and evaluated asthma education, both for patients attending the Asthma & Allergy Clinic and also for health professionals, such as community health nurses. Other members of the Department have played similar roles in the Clinical Pharmacology, Rheumatology and Microbiology & Infectious Disease Units at the Alfred Hospital.

The Cochrane Collaboration is a major international effort devoted to conducting and disseminating systematic reviews of medical and other health interventions. The Head of the Australasian Cochrane Centre is Professor Chris Silagy, who completed his PhD in our Department. Together with members of the Department of Allergy & Clinical Immunology at the Alfred Hospital, I have recently completed a systematic review of allergen immunotherapy for asthma. Sally Green and Rachelle Buchbinder have undertaken a series of systematic reviews of interventions for shoulder disorders. The importance of evidence based medicine is now widely recognised and the department’s role is likely to expand further in the future.
HEAD OF UNIT: A/Prof Henry Krum

The Clinical Pharmacology Unit was established in 1996 within the Department and has a strong interest in all aspects of drug prescribing in public hospitals and the community.

The activities of the Unit encompass clinical involvement in clinical pharmacology, toxicology and therapeutics through the Alfred Hospital, research activities and teaching. The research activities are focused primarily around new drug development for cardiovascular disease states. Drugs currently undergoing clinical research include endothelin antagonists, angiotensin II receptor antagonists, novel calcium channel blockers and new lipid lowering agents. Clinical research into other new drugs is currently in the planning stages. The main areas of research interest in the group are those of autonomic dysfunction and endothelial dysfunction in cardiovascular disease. Clinical techniques employed include heart rate variability monitoring, tritiated noradrenaline measurement of sympathetic activity, noninvasive assessment of baroreflex sensitivity and invasive and noninvasive forearm blood flow studies using venous inclusion plethysmography.

The unit also conducts basic research in the Department of Medicine's laboratories of Monash Medical School. This involves animal models of heart failure and pressure overload left ventricular hypertrophy with assessment of intracardiac haemodynamics, neurohormonal status and gene expression of important regulatory factors. A number of novel and existing drugs are currently being studied in this manner. The unit is also interested in cultured mononuclear cells as being surrogate markers for activity of certain peptides in man. Currently the unit has three PhD students on NHMRC post graduate studentship grants, an honours student in pharmacology and a part time research assistant. The unit also conducts early phase pharmacokinetic and bioequivalent studies and has particular expertise in HPLC analysis and pharmacokinetic profiling.

The Clinical Pharmacology Unit contributes to 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 the 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.
Cooperative Research Centre for Water Quality & Treatment

HEAD OF UNIT: Dr Kit Fairley

The activities of the CRC for Water Quality and Treatment (CRCWQT) expanded rapidly during 1996 following an initial setup phase where organisational and administrative structures were established. In its role as coordinator of one of the four research areas in the CRCWQT, this department played a major part in the establishment of an effective and innovative research program covering a range of significant public health issues relating to water quality.

- **Program 1 - Public Health Risk Assessment** (coordinated by Dr K Fairley)
  focuses on the possible health risks associated with microbial and chemical constituents of drinking water.

Other programs in the CRCWQT are:
- **Program 2 - Catchment and Source Water Management**, 
- **Program 3 - Water Treatment Technology**, 
- **Program 4 - Maintaining Water Quality in Distribution Systems**, and 
- **Program 5 - Education and Training**.

The research programs share common themes of health risk reduction and water quality improvement.

The CRCWQT is based at the Australian Water Quality Centre in Adelaide, with partner organisations in most states.
Active partners in Program 1 are:
- CMPS&F Environmental, Melbourne, 
- Melbourne Water Corporation, Melbourne, 
- National Centre for Epidemiology and Population Health, ANU, Canberra, and 
- University of Adelaide, South Australia.
The importance of the research questions being addressed by Program 1 and their relevance to the Australian community is reflected by the success of projects in attracting significant external funding. Of particular note is The Water Quality Study. With a cash budget exceeding $2 million over 2 ½ years, this is one of the largest projects ever undertaken in the department. The study represents a major innovation in research emphasis from measuring water parameters to measuring the effects of drinking water on human health.

Program 1 also produces a newsletter four times a year edited by Martha Sinclair with assistant editor Pam Lightbody. The newsletter, "Health Stream" includes information about new research projects, an epidemiology spot, reviews of the current literature, dates of forthcoming meetings and more. Health Stream's mailing list has increased from a distribution of 178 copies to over 320 copies, with readers in a variety of countries including Canada, USA, UK, the Czech Republic and New Zealand.

The number of department staff involved in CRCWQT projects continued to expand in 1996. Dr Christopher Fairley was appointed to take primary responsibility for Program 1 coordination and Dr Martha Sinclair was promoted to the position of CRC funded Senior Research Fellow. Dr Alex Padiglione, an infectious diseases physician, joined the department to work on a joint CRCWQT/Melbourne Water surveillance project, and Ms Pam Lightbody is a Research Assistant for CRCWQT projects. Dr Margaret Hellard was awarded a CRCWQT PhD scholarship commencing in January 1996.
Unit of Occupational & Environmental Health

HEAD OF UNIT: Dr Malcolm Sim

1996 was a very active year for the Unit of Occupational & Environmental Health, which continues to expand its teaching, research and advisory activities.

Dr Jerry Beach left the Healthwise study and returned to Birmingham at the completion of his post-doctoral year in Melbourne. Jerry made a very valuable contribution in getting the study up and running and he has been missed by all the study team. To replace Jerry as Senior Research Fellow on the study, we were very fortunate to recruit Dr Lin Fritschi. Lin is a cancer epidemiologist who had just completed a postdoctoral year in Montreal, Canada, with a strong focus on occupational epidemiology and exposure assessment.

During the year, Alcoa of Australia decided to fund the Healthwise study for a further triennium (1997-1999). Other successful grants were from Worksafe Australia, to fund a study on skin disease in hairdressers, and from Human Services Victoria, to fund a study of inorganic arsenic exposure in rural Victoria. Ongoing grants included the NHMRC project grant for study of phosphine use in farmers.

On the teaching front, 1996 saw the introduction of the Graduate Diploma in Occupational and Environmental Health which replaced the Graduate Diploma in Occupational Health. This change was a result of the increasing recognition of the environment as an important influence in the health of the community. We are also making plans to change the format of teaching to block mode from 1996. We hope that this will increase access to the course, particularly for students from interstate.

In the Master of Public Health, we continue to attract a number of students each year who wish to undertake the occupational and environmental health stream. 1996 also saw the introduction of the new Part I MPH subject, "Environmental Influences on Health", which is coordinated by Malcolm Sim and David Goddard. This subject proved very popular with students and the evaluations were very favourable. 1996 also saw the introduction of a prize in occupational medicine for 4th year medical students, and we are grateful for the support of Dr Kevin McDonald and Envirohealth.

Short courses in occupational health topics run in 1996 were the Australian Certificate of Aviation Medicine and a course for doctors in the Australian Government Health Service on assessment of psychiatric disability. The aviation medicine course has now run twice a year for several years and continues to attract more doctors than the number of places available. The number of international students continues to increase. The AGHS course is the third in a series of annual courses and was again very popular with participants. It is planned to run a further course in 1997 on evidence-based medicine and musculo-skeletal disorders. Plans are also underway to develop a course in impairment assessment in 1997.
Undergraduate teaching

The mission of the Department includes teaching medical students:

• How to read and understand papers in medical journals for their continuing education.

• How an understanding of the health of groups of people helps doctors to treat patients and promote health in the community.

The department now teaches medical students in all 6 years of the undergraduate (MB BS) course. There is a vertically integrated progression from biostatistics (first year), epidemiology (second year), health promotion (third year), preventive medicine and occupational health (fourth year), clinical pharmacology (fourth, fifth and sixth year) to public health (sixth year). Dr Michael Abramson has overall responsibility for the undergraduate teaching program, with major contributions from Dr Andrew Forbes, Dr Flavia Cicutini, Dr David Goddard, Dr Henry Krum and Professor John McNeil.

As in 1995, 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 format/structure of the tutorials and appeared interested in learning about research methods in medicine. In summary, the biostatistics subunit proceeded fairly successfully, and all tutors reported interesting and lively tutorial sessions.

FIRST YEAR
Health, Illness & Human Behaviour

Biostatistics in 1996 was 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; to 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.
SECOND YEAR
Introduction to Epidemiology & Statistics in Medicine

In this unit, students learn:
- to interpret epidemiological information in medical journal articles;
- the difference between descriptive and analytical epidemiology;
- the strengths and weaknesses of different epidemiological study designs;
- to conduct a small clinical trial; and
- to perform simple statistical analyses.

The curriculum includes descriptive and analytical epidemiology, epidemiological study designs, diagnostic and screening tests and statistical applications. 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 multiple choice 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 provide a vertically integrated course progressing from the pre-clinical years towards clinically-oriented teaching in Years 4-6. Fourth year teaching is a series of lectures given by Clinical Pharmacologists and clinical subspecialists. 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. Lectures are provided on women's health, respiratory diseases in the elderly and travel medicine. As in previous years, a further block of teaching has been provided for preventive medicine during the third term. The lectures included the rationale for prevention, chronic fatigue, occupational skin diseases, eye diseases and cervical cancer screening. Tutorials were conducted on strategies for prevention and screening for prostate cancer. The end of year examination included an Objective Structure Clinical Examination (OSCE) station on preventive medicine.

Occupational Health

The major component of occupational health teaching for medical undergraduates takes place in fourth year. The total of two days of teaching in 1996 introduced occupational history taking, fitness for work, occupational diseases and their prevention. As has long been the practice, one half-day was devoted to small-group visits to worksites, which were again popular with the students. We remain grateful to the occupational health personnel in manufacturing industry who make these visits possible.
SIXTH YEAR
Integrated Public Health

Public health teaching was further developed in 1996. Under the leadership of this department, several departments within the Faculty of Medicine collaborated to present an integrated program during a 6-week block of teaching at the beginning of the academic year. The subject was structured to horizontally integrate knowledge and problem solving skills across the disciplines of public health, clinical pharmacology, geriatric medicine, rehabilitation medicine and forensic medicine.

This subject combines evidence-based decision making, problem solving and self-directed learning. It 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. This is achieved through a variety of teaching approaches including symposia, small group discussions, bedside teaching and on-site visits to a range of organisations involved in public health.

Final year teaching in clinical pharmacology comprises 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, polypharmacy, 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 subspecialty groups were covered in these sessions. The aim is for all of the above components of clinical pharmacology teaching to be brought together in a clinically meaningful way.

The sessions on evidence-based medicine aim to develop in students an understand of how information derived from research studies should be used to support clinical decisions; and 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 appraise recent papers from the medical literature dealing with therapy, diagnosis, causation and prognosis and apply their conclusions to clinical problems.

The subject received generally good reviews from the students who participated in extensive evaluation, although some minor logistic difficulties were identified with the site visits. The students were assessed by a multidisciplinary multiple choice examination. The Department also provided a number of examiners for the final MBBS long case and OSCE examinations.
Post graduate teaching

The department has a large postgraduate education program comprising:

- a Masters degree in Public Health
- a Graduate Diploma in Clinical Epidemiology
- a Graduate Diploma in Occupational & Environmental Health
- PhD training
- a series of short courses aimed at continuing education of medical and other graduates in the health sciences.

Dr Malcolm Sim has overall responsibility for the postgraduate education program and Merril Stanley is the postgraduate courses administrator.

The major initiatives in postgraduate courses during 1996 were the introduction of the second year of the expanded MPH program under the Victorian Consortium for Public Health, the introduction of the new Graduate Diploma in Clinical Epidemiology and the expansion of the Graduate Diploma in Occupational Health into a Graduate Diploma in Occupational and Environmental Health.

Master of Public Health

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 Australasian 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:

- this department;
- the department of Public Health & Community Medicine at the University of Melbourne;
- the Faculty of Health Sciences and Faculty of Economics, Education and Social Sciences at Latrobe University; and
- the Faculty of Health & Behavioural Sciences at Deakin University.
In 1996, the new second year of Part I of the MPH was offered by consortium partners for the first time. These four subjects were:

- Environmental influences on health
- Research methods and computing
- Public health policy and planning
- Health economics, management and evaluation

Monash has responsibility for the first two of these subjects, which were coordinated by Malcolm Slim and Kit Fairley.

In Part II of the MPH at Monash, students are able to stream into clinical epidemiology or occupational/environmental health specialisations, or complete a general stream. In addition, a new specialisation, international health was developed for introduction in 1997, in conjunction with Dr Mike Toole and other teaching staff of the International Health Unit at the Macfarlane Burnet Centre for Medical Research.

In 1996, 21 students were enrolled by Monash from 40 applicants. A total of 108 students were enrolled across all four years of the course.

The MPH degree meets the requirements of the Australasian Faculty of Occupational Medicine 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.

During 1996, 18 MPH students graduated and a full list with projects is presented in Appendix 1.

We are very grateful to the subject coordinators, especially those external to the department, who helped to ensure the continued success of the MPH in 1996 (see Appendix 2). Our thanks also go to the many project supervisors who gave up their time to guide the students through to completion of their MPH projects.

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Graduate Diploma in Occupational & Environmental Health

The number of applicants was maintained in 1996 with eleven prospective students applying and six taking a place. Ten students completed the requirements for graduation during the year (see Appendix 1).

To help widen the appeal of this diploma and to better reflect the increasing importance of environmental health, it was expanded to a Graduate Diploma in Occupational and Environmental health for 1996. Dr David Fish, on part-time secondment from the Australian Government Health Service, continued to play a major role in subject coordination and Dr Bruce Hocking, an occupational physician who is also a Fellow of the Royal Australian College of General Practitioners, joined the teaching team on a part-time basis.

Graduate Diploma in Clinical Epidemiology

This new diploma was introduced in 1996 to replace the Graduate Diploma in Epidemiology and Biostatistics. The aim of the diploma is to assist health professionals to make rational evidence based decisions in clinical practice and to undertake small clinical research projects.

Of the sixteen applicants to this new course, fifteen students took up a place. This was a large increase in interest compared with the previous diploma and reflects the increasing importance of the discipline of evidence-based practice and the previous lack of training opportunities in Melbourne. The course is coordinated by Dr Michael Abramson and will be offered full-time from 1997.
Short courses

The main focus of the short course program continues to be the Australian Certificate of Civil Aviation Medicine for medical practitioners. This course is conducted twice a year and is attracting many overseas students. Other courses were Noise at Work and a course for the Australian Government Health Service: The Impact of Psychological and Psychiatric Disorders on Capacity for Work.

Marilyn Cowie is the short-course administrator.

The impact of psychological and psychiatric disability on capability for work
This course was provided for the Australian Government Health Service, with thirty doctors attending from many states of Australia. The course aimed to:

- introduce clinical, radiological and investigation methods of assessing psychiatric and psychological disorders;
- introduce the range of psychiatric and psychological disorders;
- outline methods of assessing the impact of psychiatric and psychological disorders and brain injury on fitness for work.

Noise at work
This course is designed for occupational health and safety staff, including hygienists, nurses, safety coordinators, engineers, health consultants and plant managers. It is held in collaboration with the Department of Mechanical Engineering at Monash. Seventeen students attended the course held in November 1996. The course is a mixture of lectures, demonstrations, practical sessions and a factory visit.

Australian Certificate of Civil Aviation Medicine
The Australian Certificate of Civil Aviation Medicine course is run by this department in conjunction with the Department of Physiology, the Civil Aviation Safety Authority and the Aviation Medical Society of Australia and New Zealand. The course has attracted students from several overseas countries including Iran, Tonga, Israel and Fiji.

The course is a prerequisite for medical practitioners wishing to become a Designated Aviation Medical Examine (DAME) 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.

The course consists of two modules over two weeks, the first covering physiology and principles of flight, and the second concentrating on clinical aspects.

Forty-four participants completed the requirements for the certificate in 1996.
Research program

The department had an active research program including projects in such diverse areas as:

- clinical trials,
- respiratory diseases,
- drinking water quality,
- occupational epidemiology,
- infectious disease epidemiology,
- environmental health,
- clinical pharmacology, and
- quality in health care.

A common thread which links these projects is the application of epidemiological methods.

In 1996, the research program for the department's new role in the Cooperative Research Centre for Water Quality and Treatment commenced. Also, several other new grants were received by academic staff of the department. We continue to attract a high level of research funding from a variety of sources, including the NH&MRC, other competitive granting bodies, industry and government.

Following are summaries of the new grants received during 1996 and updates of continuing grants from previous years.
Clinical Research

A randomised trial of an antioxidant to prevent atheroma progression in smokers: MAVET Study
Prof JJ McNeil  A/Prof BP McGrath
1994 - 1998
NH&MRC PHRDC Project Grant

This is a large community based, double-blind randomised trial designed to determine whether the daily intake of an antioxidant compound (vitamin E) can reduce the rate of progression of carotid atheroma in cigarette smokers. There has been evidence that the progression of atherosclerosis may be related to the oxidation of low density lipoprotein (LDL-cholesterol).

Three hundred and forty smokers have been recruited and each has randomly been allocated to receive either vitamin E or a placebo capsule. The rate of progression of carotid atheroma is measured using a vascular ultrasound machine capable of accurately measuring the thickness of the inner lining of the carotid artery from a probe placed on each person’s neck. Each participant returns yearly for a progress measurement of their arterial thickness and these follow-ups will continue until 1999.

Prevention of cataract in the elderly with low dose aspirin and vitamin E: VECAT Study
Prof JJ McNeil  Prof H Taylor  Prof C Silagy
1994-1999
NH&MRC PHRDC Development Program Grant

The VECAT study is a large community based clinical trial designed to test whether daily vitamin E can slow the advance of cataract and macular degeneration in elderly patients. Animal studies have suggested that cataract and macular degeneration result from slow oxidation of the lens and the macula of the eye. Vitamin E is a powerful antioxidant which may slow the progression of these conditions.

The study has recruited 1200 volunteers aged between 55 and 80 years. These have been randomly allocated so that half receive vitamin E and half receive a placebo. The individuals enrolled undergo yearly examinations using a recently developed computer imaging system which allows precise measurement of the extent of cataract formation and provides an accurate assessment of its rate of progression. This technology is the only example of its type in Australia.

Risk factors for functional visual loss amongst patients with Human Immune Deficiency Virus (HIV) and cytomegalovirus (CMV) retinitis
Dr CK Fairley  Dr A Forbes  Dr A Hall
Dr M Hellard  A/Prof WJ Spicer
1996 - 1997
Roche Products Pty Ltd

Patients with the acquired immune deficiency syndrome (AIDS) develop CMV retinitis more commonly than non-affected individuals. Of those who develop CMV retinitis, 5% will become legally blind and one third of patients will experience less marked visual loss. Until recently maintenance therapy for CMV retinitis involved daily intravenous ganciclovir, usually through an indwelling intravenous device such as a portocath. There is reluctance to use oral ganciclovir as maintenance therapy in patients with CMV retinitis because of concern that it may be less efficacious than intra venous therapy.

The aim of this study is to identify the risk factors for functional visual loss in patients with CMV retinitis and HIV infection and to document the morbidity and mortality associated with intravenous devices for maintenance ganciclovir in patients with CMV retinitis and HIV infection. No studies have previously been undertaken to determine the characteristics of patients who are at risk of visual loss. A retrospective cohort study of all patients who have had CMV retinitis at Fairfield, the Alfred and Royal Melbourne Hospitals has been established and is being followed prospectively for CMV retinitis development.

Risk factors for the development of tiapronenic acid (Surgam) associated cystitis.
Dr R Buchbinder  Prof JJ McNeil
1994 - 1996
Roussel Uclaf Pharmaceuticals

The use of Tiapronenic acid has been associated with inflammation of the bladder, characterised by increased frequency of voiding and pain on passing urine. This case control study aims to determine whether there are any identifiable risk factors that predispose to the development of cystitis among recipients of tiapronenic acid.
Preventing death and hospital admission from pneumococcal pneumonia: Is vaccination in the patient's best interest?
Dr CK Fairley  DR A Padiglione
1996
Health & Community Services Victoria

This project addresses the issue of why the pneumococcal vaccine is not used widely in Victoria and Australia, despite being safe and effective in preventing a relatively common condition that is often fatal in the elderly. The study will look at the quality of life of people currently being admitted to hospital with this diagnosis, and the survival and current quality of life of those who had pneumococcal pneumonia live - ten years ago. It is hoped that this information will be used to support the campaign for wider use of this vaccine in our elderly population.

How do physiotherapists manage common musculoskeletal disorders and what are the determinants of this management as reported in a mailed questionnaire?
Dr R Buchbinder  Ms S Boyd-Squires
1996
Physiotherapy Research Foundation

The aim of this project was to ascertain the strategies used by Victorian physiotherapists in the management of common musculoskeletal disorders. Specifically: Which combinations of treatment techniques, referrals, advice, education and other strategies are most commonly employed in the management of five common musculoskeletal disorders; and how do these management strategies compare with those determined, through a consensus decision-making process, by a CPP of experienced physiotherapists? The project also aims to develop a measurement instrument which will assess self-reported physiotherapy management of five common musculoskeletal disorders in Victoria.

Is there an increased risk of cancer in polymyositis?
Dr R Buchbinder  Dr A Forbes  Dr R Buchanan
Dr X Dennett  Dr G Giles
1996
Arthritis Foundation of Australia

Polymyositis and dermatomyositis are inflammatory conditions of muscles that cause progressive muscle weakness. A belief that there is an increased risk of cancer in patients with these diseases is widely held. However, the available data are unconvincing. It is possible that screening for cancer both at the time of diagnosis and thereafter may improve the long term outcome of these patients. On the other hand, patients may be subjected to unnecessary investigations and anxiety. This study will estimate the risk of cancer in patients with these conditions and compare it to that of the general population. Patients with biopsy proven inflammatory myopathy since 1982 will be ascertained from the State Neuropathology Service, private laboratories and Melbourne hospitals, and cancer cases will be identified from the Victorian State Cancer Registry.

Preventive medicine and occupational health training videos for use in medical undergraduate teaching.
Dr C Finocchiaro
1996
Shepherd Foundation

The purpose of this project is to assist student's understanding of public health concepts. The project involves the design of structured observation and hands-on learning activities at public health sites, including the Anti-Cancer Council of Victoria, the Child Safety Centre, Drug Rehabilitation Services, Macfarlane Burnet Centre for Medical Research and a number of municipal councils. Assessment tasks are being developed to link into learning activities at the sites and to test students' understanding of the public health concepts addressed.

Cervical screening and Vietnamese women: How can they be encouraged?
Ms J Jones  Dr M Sim
1996
Anti-Cancer Council of Victoria

This project aims to determine ways in which the Australian cervical screening program might be made more acceptable and culturally appropriate for women from a Vietnamese background, who are presently under-represented in routine cervical screening. The study is investigating the understandings, views, beliefs and experiences, relating to the cervical screening program, of a sample of married Vietnamese women living in Melbourne, and Vietnamese service providers, including general practitioners. If the reach of the national cervical screening program can be increased in the community of Vietnamese women, the incidence of morbidity and mortality associated with cervical cancer for these women may be reduced.
Quality of health care

Reliability, validity and risk adjustment study of a pilot set of hospital wide clinical indicators.
Prof JJ McNeil A/Prof N Boyce
Dr J Ibrahim Dr J Majoor
1996
Commonwealth Department of Health and Family Services

This project has involved the assessment of the validity, reliability and risk adjustment of a set of pilot hospital wide quality of care indicators. Risk adjustment models which may allow individual hospitals to compare their performance with each other in the future are also being examined. The research has involved twelve hospitals with more than 10,000 separations from Victoria, NSW and South Australia.

The clinical indicators evaluated have been:
- rate of emergency patient hospital readmissions with 28 days of separation;
- rate of post-operative wound infection;
- rate of hospital acquired bacteraemia; and
- rate of unplanned return to an operating room.

A retrospective case-control study was conducted comparing independent assessment of quality of care based upon the medical records of patients positive for the indicators with the medical records of patients who did not have evidence of the indicator being present, using explicit and guided implicit review tools. Reliability of indicator data has been examined in tandem with the collection of information for the validity study.

Data collection for the study was completed on target in May 1997 and work is now underway to analyse the results.
Asthma related research

Helping to win the fight against Asthma in Victoria

Michael Abramson

A three generation population based study of the genetic epidemiology of asthma and atopy.

Dr J Hopper Prof S Harrap Dr MJ Abramson
Prof G Bowes 1995-1997
NH&MRC Project Grant

This case control study recruited 158 potential cases through the Victorian Deaths Registry. The General Practitioners and next of kin of cases were interviewed with a questionnaire previously used in South Australia. After reviewing the evidence, 81 deaths were due to asthma. Blood was taken from 52 coronial cases at the Victorian Institute of Forensic Medicine (VIFM). The controls were 313 patients presenting with acute severe asthma to participating Emergency Departments. Controls and their General Practitioners were interviewed. Blood usually taken for clinical purposes was analysed for salbutamol at the VIFM.

We found that asthma morbidity was high in both cases and controls. Use of a peak flow meter by itself did not reduce the risk of death from asthma. Written action plans appeared to be more effective than verbal instructions. Although controls were more likely to report using any class of medication during their last asthma attack, cases had higher blood salbutamol levels. Possible explanations include reporting bias, postmortem redistribution of salbutamol or toxic levels in a subgroup of asthma deaths.

Norida Evans labelling blood samples for the asthma study.
Survey of asthma management practices of pharmacists
Dr M Abramson  Dr L Roller
1996
National Asthma Campaign

Postal questionnaires were sent to 1610 pharmacists randomly selected from all Australian pharmacy registers. Those engaged in community pharmacy were the focus of the study. The questionnaire asked about symptoms of asthma, preventive medication, a case scenario, supply of asthma medication and equipment, asthma management practices for patients receiving prescription and over the counter medication and sources of asthma information.

Pharmacists’ knowledge of asthma symptoms and preventive medication had improved significantly since 1991. Prescription inhaled bronchodilators, inhaled corticosteroids and over the counter bronchodilators appeared to be the most frequently supplied medications. Sales of peak flow meters appeared low. Pharmacists often advised patients on adherence to asthma medications. However, a high proportion seldom or never advised on identification and avoidance of trigger factors or recommended a spacer. The frequency of checking asthma management plans has improved, but remains low. The Pharmacists Asthma Management Handbook was generally considered a useful source of information.

Recommendations arising from this study have been forwarded to the National Asthma Campaign.

Immunological responses in the development of adult asthma
Dr MJ Abramson  Dr J Rolland  Prof EH Walters
1996-1998
Victorian Health Promotion Foundation

This project is following nearly 500 young adults to identify those who will get asthma over three years. We know that allergies and very sensitive airways predispose people to asthma, but this has not previously been studied in adults. During the first year, we have visited people’s homes and collected dust and air samples from their bedrooms. The dust has been analysed for house dust mites, tiny creatures to which many people are allergic. We have found very high levels of dust mites, particularly in old houses with woollen carpets and in old mattresses.

We have also identified a large number of mould spores in the air samples. Mould is particularly a problem in damp homes which are not cleaned frequently and also in old mattresses. The participants have had breathing and allergy tests in our laboratory. Over the next two years, we will be looking at the relationship between dust and mould exposures and the development of allergies and asthma. Our final results should suggest some simple ways to prevent adults getting asthma.

The Anderson air sampler used to collect fungal propagules
Occupational & Environmental Health Research

Healthwise
A study of health and work in employees of Alcoa of Australia Limited, Portland Aluminium and KAAL Australia.

Healthwise is a major study program of employee health which is funded by Alcoa of Australia Limited and Portland Aluminium. The study is being conducted in collaboration with the Department of Respiratory Medicine at the University of Western Australia.

Healthwise consists of three major studies:
• A CROSS-SECTIONAL STUDY OF RESPIRATORY MORBIDITY;
• AN INCEPTION COHORT STUDY, AND
• A CANCER INCIDENCE AND MORTALITY STUDY.

In Victoria, sites taking part in the study are
☐ Point Henry smelter
☐ Portland Aluminium smelter
☐ Anglesea power station
☐ KAAL rolling mill at Point Henry.

In Western Australia, sites taking part are
☐ Jarradale,
☐ Huntly, and
☐ Willowdale mines;
☐ Kwinana,
☐ Pinjarra, and
☐ Wagerup refineries;
☐ and the shipping terminal at Bunbury.

Five thousand and ninety-five participants were recruited into the cross-sectional study over 1995/96, almost 90% of the workforce. Over three hundred employees have been recruited so far into the inception cohort study and information from almost ten thousand employees will be used in the cancer incidence and mortality study.

Healthwise staff are now collating exposure monitoring data using a task exposure database (TED) developed for the study. This information will be used to determine individual exposure indices for several contaminants in all three studies.

Alcoa of Australia and Portland Aluminium have decided that Healthwise will continue for at least another three years, (1997-1999) to build on the initial work completed in the first triennium.

Healthwise staff carrying out field work during 1996. Above, Kimberly Gibson about to do lung function testing on an employee. Below, Jill Dunsall performing skin prick testing for allergies.
Usage patterns in phosphine users
Prof J McNeil Dr M Sim Dr A Forbes
Dr P Williams
1995-1996
NH&MRC PHRDC Project Grant

The aim of this project is to investigate patterns of fumigant use and to test the hypothesis that phosphine, a widely-used grain fumigant, is carcinogenic in users. Victorian grain farmers are being interviewed to collect data including exposure to phosphine, other fumigants and pesticides, other relevant chemicals, tobacco and alcohol exposure and medical history. During 1996, data collection was completed involving farmers from randomly selected branches of the Victorian Farmers' Federation throughout rural Victoria.

Environmental arsenic exposure and human absorption - The ENVAS Study
Dr M Sim Ms A Hinwood Prof J McNeil
Ms E Bastone
1996-1997
Human Services

The EnvAs Study commenced in 1996. The aim of this study is to identify sources of arsenic exposure which make an important contribution to arsenic absorption in people living in areas with high concentrations of arsenic in soil and/or drinking water. A total of 213 residents have been recruited from 8 rural areas in Victoria. Residents were asked to complete a questionnaire as well as providing samples of urine, hair and nails to measure absorption of arsenic. Data is being collected on a seasonal basis and data for 2 out of the 3 seasons has been collected for most areas. An ecological study has also been completed using cancer registry data for 22 areas in Victoria with elevated arsenic concentrations in soil and/or water.

The early detection of outbreaks of waterborne gastroenteritis - feasibility study
Dr C Fairley Dr A Padiglione
1995-1996
CRC for Water Quality and Treatment, Melbourne Water

The aim of this study is to investigate the feasibility of establishing a rapid surveillance system capable of detecting outbreaks of waterborne gastroenteritis. In particular it aims to link regional water quality data to incidence of gastroenteritis in regions of Melbourne. The development of such a system would ensure that rises in gastroenteritis within specific regions can be rapidly linked to deteriorating water quality in the same region. Once developed such a system could be adapted for other states and capital cities.

The initial report on current and potential new data sources is nearing completion, and the next stage is to liaise with other authorities around Australia about their surveillance systems.

The Water Quality Study
Dr C Fairley Dr M Sinclair Prof J McNeil
Dr M Hellard
1996 - 1998
CRC for Water Quality and Treatment
Water Services Association of Australia
Department of Human Services Victoria
Melbourne Water, City West Water, South East Water and Yarra Valley Water

The Water Quality Study is a double blind controlled randomised study which will test whether filtration of Melbourne's drinking water reduces the incidence of gastrointestinal illness (GI). The study will recruit a total of six hundred families from the south eastern suburbs of Melbourne. The families will be randomly assigned to intervention (real filter) or control (sham filter) groups, and will be followed for 15 months. Participants will be required to fill in a daily diary and record details of any medical treatment, time taken off work or school etc. During episodes of GI, faecal specimens will be collected and tested for a variety of pathogens. Blood samples will be taken from adult participants at the beginning, middle and end of the study for serology testing. Data on water consumption will also be collected. Regular water monitoring will be supplemented by additional tests for indicator organisms and selected pathogens.
PhD students

An important role for the department is research training at PhD level. During 1996, we had a further six PhD students commence their training in research projects in the department.

Omar Abdulwadud

Evaluation of asthma management strategies in the hospital and community
Commenced 1994
Supervisors - Michael Abramson, Haydn Walters
NH&MRC Public Health Scholarship

This study aims to assess the level of asthma knowledge, attitudes and beliefs, self-management skills and quality of life among patients of the Alfred Hospital Asthma Clinic and neighbouring general practices. Subject recruitment has been completed. A hospital based randomised controlled education trial was implemented and out of a total of 64 potential candidates allocated to the intervention group, 34 attended the full program and 30 of these completed six month follow up questionnaires. The project has now been completed and the thesis submitted.

Geza Benke (part-time)

Retrospective assessment of occupational exposures by job exposure matrices and expert evaluation.
Commenced 1995.
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 1996 Geza attended a course in occupational exposure assessment at Wageningen Agricultural University, The Netherlands, and assisted in the development of the Healthwise job exposure matrix.

Sally Green

Management of the stiff and painful shoulder
Commenced 1995
Supervisors - Rachelle Buchbinder, Michael Abramson
Departmental scholarship

A reliability study of the measurement of shoulder range of motion was conducted in 1995 and is now being written up for publication. A Cochrane review of interventions for shoulder pain, in conjunction with the musculoskeletal Cochrane review group was undertaken, and all literature searching and methodological assessment done. The protocols for a general practitioner audit and a trial of physiotherapy in the management of shoulder pain have been finalised.

Andrea Hinwood

Arsenic exposure, human absorption, risk and cancer
Commenced 1994
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. In 1996 an absorption study was commenced which aims to determine the degree of arsenic absorption in people living in areas with elevated arsenic concentrations in the environment.

In addition, analysis was commenced for the ecological cancer study investigating links with environmental arsenic contaminations.

Joseph Ibrahim

The reliability, validity and risk adjustment of a set of pilot hospital wide clinical indicators.
Commenced 1996
Supervisor - John McNeil
Commonwealth Department of Human Services and Health

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 indicators to be studied include rate
of emergency patient hospital readmissions within 28 days of separation; rate of post-operative wound infection; rate of hospital acquired bacteraemia and rate of unplanned return to the operating room.

To date, 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 have undergone expert clinical peer review for quality of care ratings.

Jenny Majoor

The reliability, validity and risk adjustment of nosocomial infection clinical indicators.
Comenced 1996
Supervisor - John McNeil
Department 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.

To date, 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 have undergone expert clinical peer review for quality of care ratings.

Jean Meaklim

Risk assessment of grain protectants
Comenced 1992
Supervisors - Prof JJ McNeil, Dr M Sim
Victorian Health Promotion Foundation

This project is investigating human health effects of using chemicals to protect stored grain from insect infestation. During 1996, data collection was completed involving farmers from randomly selected branches of the Victorian Farmer's Federation throughout rural Victoria.

Adrian Thomas

Antioxidant medication and senile cataract progression
Comenced 1994
Supervisor - John McNeil
PHRDC Scholarship

This study is looking at the effect of Vitamin E on the progression of nuclear and cortical cataract in people 60 years and older. Specialised photographic techniques are being used to assess the progression of cataract in active treatment and control groups.

New students in 1996

Pauline Branley

A model of cost effectiveness for renal replacement services in Australia used to predict the impact of altering cardiovascular risk factors in the chronic renal failure population.
Comenced 1996
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 dependent on dialysis. The study will be comparing the amount of vascular disease in renal patients and in age matched healthy people. We will be measuring carotid artery intima-medial thickness with ultrasound, vascular compliance and forearm blood flow response to exercise and to ischaemia. Carotid intima-medial thickness is a surrogate end-point for cardiovascular disease which has been used in many large studies. In addition this study will compare homocysteine levels and isoprostane F2-alpha, a measure of oxidant stress, in the two groups of people. This study will assist in determining the best techniques for use in an intervention study of folate supplementation in renal failure. In addition Pauline Branley's PhD involves the MAVET (Melbourne Atherosclerosis and Vitamin E Trial) study, an interventional randomised clinical trial in 400 smokers of vitamin E supplementation. The primary end-point in this study is also change in carotid intima-medial thickness. This study completed all one year follow-up visits by the end of 1996. Pauline is also looking at the anti-oxidant effects of the drug Carvedilol when used in chronic heart failure. Blood is collected before patients are prescribed carvedilol, and again 14 weeks after they have been on therapy. Isoprostane F2-alpha will again be measured. It may be that this is one of the beneficial mechanisms of action of this drug.
Shyamali Dharmage

Environmental Risk Factors for Asthma
Supervisors: Dr M Abramson  Dr F Thien

This project is planned to follow up a cohort of young adults yearly over three years. The first year of this project was completed successfully during 1996 in which 485 participants and their homes were investigated. Participants completed a respiratory questionnaire, skin prick tests and lung function tests in the Lung Function Laboratory, Alfred Hospital. Home visits were made to collect dust and air samples from bedrooms and to collect information on residential characteristics via a questionnaire survey. Dust samples were analysed for house dust mite allergen and cat allergen. Air samples were cultured for fungi. Data entry and cleaning have been completed. Some analyses have already been carried out. Two posters were presented at the Thoracic Society of Australia and New Zealand meeting and a manuscript has been prepared for publication on associations between residential characteristics and indoor allergen levels.

Margaret Hellard

The Water Quality Study
Commenced 1996
Supervisor - Kit Fairley, John McNeil
CRC for Water Quality and Treatment

The Water Quality Study is a randomised double blind controlled trial being run in Melbourne under Programme One (Public Health Risk Assessment) of the CRC for Water Quality and Treatment. Six hundred families will be recruited into the study of which 300 will have a functioning water filter and 300 will have a sham water filter. The primary objective of the study is to determine whether filtration of drinking water reduces the incidence of gastrointestinal disease in an area served by a disinfected water supply drawn from protected catchments.

In the past year the budget was finalised and the Project Agreement was signed by all stakeholders. The water treatment units were chosen and a contractor selected. Recruitment for the study will begin early in 1997 and be completed by August 1997. A six week pilot study will be conducted before the main study begins. The study should be completed by early 1999.

Anne-Marie Pellizzer

The effect of pharmacological and non-pharmacological therapy on autonomic function in patients with heart failure.
Commenced 1996
Supervisor - Henry Krum
NH&MRC

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.

In 1996 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. An ongoing study is looking at the effect of low and standard dose digoxin in CHF patients in sinus rhythm. Ready to commence in 1997, is a study examining the use of this non-invasive baroreflex assessment in normal subjects after perturbation of the autonomic nervous system.

Rhonda Stewart

Tuberculosis - Mantoux testing
Commenced 1996
Supervisor - Lindsay Grayson
Department Scholarship

The major study being undertaken is an assessment of the 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 such reactions such as past history of BCG vaccination, country of birth, age and tuberculosis contacts. Additional studies are being undertaken looking at new diagnostic tests for tuberculosis in both health care workers and patients with proven tuberculosis.
Service activities of ACADEMIC STAFF

John McNeil is a member of several external committees, including the Ministerial Council on Medical Workforce management, the Scientific Advisory Committee of the Australasian College of Dermatologists, the Scientific Advisory Committee of the Sir Edward Dunlop Medical Research Foundation and the Australian Drug Evaluation Committee (until December 1996). He also chairs the Ethics Committee, and is a member of the Management Executive Committee of the Alfred Group of Hospitals (until April 1997). Professor McNeil is a visiting physician in the vascular medicine service at Monash Medical Centre.

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.

Michael is also a member of the National Asthma Campaign Evaluation Committee, the Asthma Foundation of Victoria Medical and Scientific Advisory Committee and the Ministerial Asthma Working Party project subcommittee. He is also Occupational and Environmental Special Interest Group Co-Convenor for the Thoracic Society of Australia and New Zealand.

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.

Lisa Demos is a member of the Australian Society of Hospital Pharmacists (SHPA) and the Australian Society of Clinical and Experimental Pharmacologists and Toxicologists (ASCEPT). Lisa is currently on the ASCEPT Working Party for Drug Usage Evaluation and is the ASCEPT representative for the Medical Scientists Competency Standards Board of Australia. Lisa is also coordinator of the Alfred Hospital Drug Use Subcommittee and a member of the Melbourne Teaching Hospitals Drug Usage Group, the Victorian Drug Use Evaluation Special Interest Group and the Victorian Drug Usage Advisory Committee on Adverse Drug Reactions.

Christopher Fairley is responsible for the Public Health arm of the CRC for Water Quality and Treatment and a visiting physician to the Infectious Disease Unit of the Alfred Healthcare Group. Kit is Victorian State Convenor for the Australasian Society for HIV Medicine, a member of the Australian Society for Infectious Diseases and the Victorian Society of Venerology.

David Fish is the Victorian Regional Censor for the Australasian Faculty of Occupational Medicine. He is also a member of the Regional Committee and the Board of Censors. David is also a Fellow of the Australasian Faculty of Public Health Medicine.

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 an interest in occupational causes of cancer. She is a member of the Australasian Epidemiological Association, the Canadian Society for Epidemiology and Biostatistics, and the Clinical Oncology Society of Australia.

David Goddard is a consultant in occupational medicine to the Royal Australian Air Force and an examiner for the Australasian Faculty of Occupational Medicine. David is a Fellow of the Australasian Faculty of Occupational Medicine and a member of the Australian and New Zealand Society of Occupational Medicine.

Henry Krum is a member of the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists, and is currently convenor of the Clinical Interest Group of that society. He is also 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 Medical Faculty Board, the Faculty of Medicine Research Committee and 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.

Alex Padiglione is an infectious diseases physician and a member of the Royal Australian College of Physicians, Australasian Society of Infectious Diseases and the Australasian Society of HIV Medicine.

Malcolm Sim is the Chief Censor and Chair of the Board of Censors for the Australasian Faculty of Occupational Medicine, a member of the Radiation Advisory Committee of the Victorian Department of Human Services, a member of the Editorial Board of the Journal, Occupational and Environmental Medicine and a member of Worksafe Australia’s Expert Working Group on Health Surveillance. He is also a member of the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists, the Australasian Epidemiological Association and the International Commission on Occupational Health.

Martha Sinclair is a member of the Genetics Society of Australia and the Australian Society for Microbiology. Martha is also the departmental network manager.
Department seminars

In 1996 the department expanded its regular program of seminars, which became weekly rather than monthly. These were presented by PhD students, academic staff, associates of the department and invited guest speakers. These presentations were attended by staff of the department and professionals external to the department, working in public health, clinical disciplines and in occupational and environmental health areas. Post graduate students of the department were also encouraged to attend.

Seminars presented by invited speakers were:

Environmental exposures and genetic susceptibility as risk factors for Parkinson's disease.
Professor Harvey Checkoway, University of Washington.

Pre-term birth: prediction and prevention.
Robyn Beil, Department of Perinatal Medicine, Royal Women's Hospital.

Update on diabetes.
Professor Paul Zimmet, The International Diabetes Institute.

The promise of molecular biology.
Professor John Funder, The Baker Institute.

Disaster epidemiology.
Professor David Bradt
Department of Emergency Medicine, Johns Hopkins University.

The epidemiology of solar keratoses
Christine Frost, Department of Nephrology, Monash University.

The pendulum is moving - the ever changing nature of children's health services.
Professor Frank Oberklaid, Centre for Community Child Health, Royal Children's Hospital.

Smoking cessation.
Ron Borland, Anti-Cancer Council of Victoria.

Condoms.
Damien Jolley, Department of Community Medicine, University of Melbourne.

Epidemiology of hepatitis C.
Nick Crofts, Macfarlane Burnet Centre for Medical Research.

Epidemiology of disease markers in donors and risk of transmission.
Gordon Whyte, Red Cross Blood Bank, Victoria.

Genetics of common diseases.
Prof Steve Harrap, Department of Physiology, University of Melbourne.

Total quality management in a technical service:
What we can learn from industry.
Howard Smith, ICI Pharmaceuticals.

Perceptions and reality: Risk in a remote environment (Antarctica)
Robin Burns, Graduate School of Education, LaTrobe University.

The Second Australian National Blood Pressure Study
Chris Reid, The Baker Institute.

We are grateful to all these speakers for their presentations. The knowledge gained from these sessions is important to staff and students of the department, and an invaluable insight into the work of other research institutions.

The presentations made by staff and students of the department were an important opportunity for discussing methodology and practising demonstration skills. They covered many research areas, including cardiology, environmental factors in asthma, occupational exposure assessment, sessions on the Cochrane Collaboration RevMan software, the internet and multiple hypotheses.
Appendix 1

Graduates 1996

Master of Public Health

Vicky Ashton
Occupational health promotion: Healthy Heart Program
Supervisor: Dr David Goddard

Dominique Barnard
Mothers' country of birth and aboriginality: are these independent risk factors for Caesarean delivery in Victoria, Australia
Supervisor: Dr Judith Lumley

Jillian Bennett
A survey of Victorian general practitioners knowledge, practices and understanding of adult immunisation
Supervisor: Dr Lindsay Grayson

Erin Cassell
An investigation of the adverse obstetric profile and pregnancy outcomes among Filipino women in Victoria, 1982-92
Supervisor: Dr Judith Lumley

Monica Cooper
Supervisor: Dr Alison Vann

Michael Glasby
A survey of Victorian Practitioners: priorities for prevention
Supervisor: Dr John Carnie

Lynette Howden
Travel health advice received by Australian residents travelling to Southeast Asia
Supervisor: Dr Tilman Ruff

Helen Kelsall
A study of health effects in swimmers: are swimmers in pools with different disinfection systems at increased risk?
Supervisor: Dr Malcolm Sim

Elizabeth Koff
Casemix funding and acute stroke treatment - consistent with the hypothesis that older patients are more costly to treat
Supervisor: Dr Terri Jackson

Andrew Lark
A retrospective cohort study of respiratory function (FEV1) and its predictors in employees of the Victorian brown coal power-generation industry
Supervisor: Dr Michael Abramson

Gregory Lockrey
Incident monitoring in endoscopic procedures
Supervisor: Prof John McNell

Sylvia Mackay Pomeroy
Comparison and description of shopping practices in two different income areas in Melbourne
Supervisor: Dr Peter McDonald
Master of Public Health Graduates continued

Andrew Newman-Morris
Short term health outcomes of Coode Island fire fighters
Supervisor: Dr John Bisby

Rosemary Nixon
Occupational skin disease from epoxy resin compounds
Supervisor: Dr David Goddard

Kimberley Oman
Infant Hepatitis B immunisation in Victoria
Supervisor: Dr John Curnie

Ralph Poppenbeek
A comparison of RSI and back injury cases: Their similarities and differences with particular reference to presence of objective clinical findings and its relationship to vocational outcome and severity of the condition
Supervisor: Dr David Goddard

Deborah Vallance
Understanding of information contained in a Material Safety Data Sheet by Victorian Health and Safety Representatives
Supervisor: Dr David Goddard

Peter Weare
Factors influencing the length of postnatal stay in a regional hospital obstetric unit
Supervisor: Prof John McNeil

Diploma in Occupational and Environmental Health

Angelo Annunziata
Lynley Bartlett
Sandra Code
Elisa Day
Kate Hammond
Cathryn Hoppner
Stewart Humphreys-Gray
Steven Koutsantonis
Prudence McKeown
Vikki Waser

Doctor of Philosophy

Noni Holmes
Workplace understandings and perceptions of risk in occupational health and safety
Supervisor - Dr Sandy Gilford

Doctorate of Medicine

Paul S Myles
Anaesthesia for high risk cardiothoracic surgery
Advisor - Prof John McNeil
Appendix 2

Postgraduate subjects & coordinators

Child Public Health
Ms Elizabeth Waters

Clinical Epidemiology
Dr Rachelle Buchbinder

Controlled Clinical Trials
Dr Michael Abramson

Diseases of Occupation
Dr David Fish

Environmental Influences on Health
Dr Malcolm Sim
Dr David Goddard

Epidemiology and Biostatistics
Dr Michael Abramson
Dr Andrew Forbes

Epidemiology and Demography
Mr Damien Jolley

Ergonomics
Dr David Fish

Health Economics, Management and Evaluation
Dr Graeme Hawthorne

Health Promotion
Ms Catherine Itsiopoulos

Health Promotion and Illness Prevention
Dr Cathy Finocchiaro

Health, Ethics and Human Rights
Ms Bebe Loff

International Health II
Dr Sandra Gifford
Dr Mike Toole

Introductory Statistics
Mr Stephen Farish
Dr Arul Mylvaganam

Legal and Management Aspects of Occupational Health
Dr Bruce Hocking

Public Health Policy and Planning
Dr David Legge

Public Health Project Part A
Dr Michael Abramson

Rehabilitation and Health Promotion
Dr Bruce Hocking

Research Methods and Computing
Dr Kit Fairley

Sociological Foundations of Public Health
Dr Jeanne Daly
Appendix 3

PUBLICATIONS

REFEREED JOURNALS & BOOK
CHAPTERS


NON-REFEREED ARTICLES IN A
SCHOLARLY OR PROFESSIONAL
JOURNAL


REVIEW ARTICLE

Appendix 4

Honorary staff members

ASSOCIATE & CLINICAL ASSOCIATE PROFESSORS

GE Aldred
SM Garland
GG Giles
ML Grayson
GD Johnstone
DJ Hill
GJ Rouch
HJ Smith
GW Whyte

HONORARY SENIOR LECTURERS

DG Barton
RM Borland
RJ Bell
RJ Burns
VR Collins
JN Crofts
FMPJ de Courten
WG Hart
D Kotzman
EW Knight
VK Lin
DJ McCarty
SM McGhee
EJ Ozanne-Smith
MJ Toole
CM Reid

HONORARY LECTURERS

MAW Curran
DJ Jolley
PW Kamen
KJ Macdonald
P Robinson