CHIRON

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Typesetting
Fingers Typesetting, Box Hill

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Capitol Press Pty Ltd, Box Hill

Enquiries
University of Melbourne
Medical Society
School of Medicine
The University of Melbourne
Parkville 3052

Telephone (+61 3) 344 5888
Facsimile (+61 3) 347 7084

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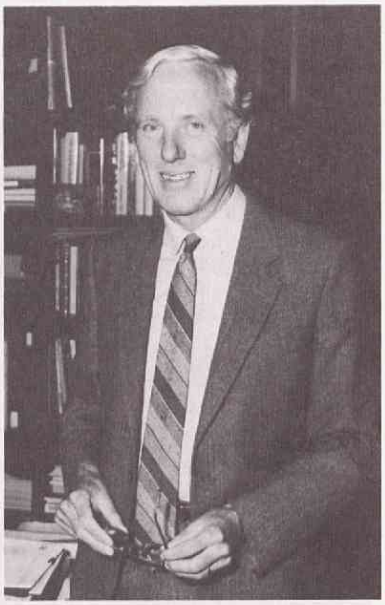
CHIRON THE CENTAUR, TEACHER OF MUSIC, MEDICINE AND HUNTING

EDITORIAL

THE MEDICAL PROFESSION – SELF-REGULATION OR GOVERNMENT REGULATION?

TRADITIONALLY, professions have jealously defended their right to self-regulation. They have, at many stages over the years, been under robust attack from people outside the professions who see them as privileged. Inevitably, there is the potential for tension because others need access to the knowledge and skills which they possess, and particularly because of the ability of a self-regulated profession to charge clients as they see fit and, consequently, to control their own income.

It must be recognised that the culture of society has changed. Government now funds fully, or in part, the services of many of the professions. Particularly this is the case for the medical profession. Government is also seen as having a role to defend the community from any form of commercial exploitation. Governments of either political persuasion have seen the need for a Trade Practices Commission, Monopolies Commissions, Consumer Protection authorities, or bodies with similar functions by other names. No longer can professional groups be seen to be completely free from the pressures of society or government any more than is the case for business or industry.



PROFESSOR DAVID PENINGTON

One of the greatest quandaries in our profession at this time is how to respond appropriately to the initiatives stemming from government attempting to secure the future of private health insurance. Private practice, in this country, must ultimately depend on survival of insurance if it is to continue on anything like a realistic scale. Government intervention, which I see as necessary and inevitable, will bring a greater degree of government control. Yet some of our colleagues cry for complete freedom to charge whatever they want, despite the element of government funding of the system and despite very clear evidence that the rate of decline in private insurance will escalate if nothing changes, as the insured population ages. I wonder whether the denizens of the territory of laissez faire free enterprise in medicine have thought through the full implications of their stance.

The Hilmer report on Competition Policy (August 1993) proposed a radical approach to competition and suggested that the professions should be subject to the regulations of the Trade Practices Act to a far greater extent than currently applies. Already they are subject to it if incorporated – a common situation – and can be seen as 'trading' across state boundaries. The recent meeting of Commonwealth Heads of Government supported the thesis that the professions should be similarly regulated regardless of incorporation or national operations. Restriction on 'unfair' competition will be likely to preclude 'restrictive practices' over entry to specialties so that market forces can have free reign. What happens to professional standards? Adam Smith rides again in a territory of which he never even dreamed!

The medical profession provides perhaps the clearest example of the limitations of applying market forces to the professions. It is not possible, for example, for someone with a sudden, severe and distressing headache to shop around for a fee estimate when the headache could result from any one of a number of causes including anxiety, migraine, a cerebral tumour or a cerebral aneurysm about to burst with fatal implications. How can the person knocked down in the street, lying on the road with a head injury, 'shop around' for the 'best buy' in casualty services?

The great disparity of knowledge between professionals and their clients severely restricts the appropriateness of market competition between professionals. The economists call this 'asymmetry of knowledge', but identifying the problem does not provide the answer. Clearly there are many situations in which only a professional is in a position to advise a client as to the type of service needed to deal with a particular problem – hence free and unfettered market forces cannot apply.

Another issue is the situations the experts refer to as 'externalities'. Many of the professions contribute to the greater good of society and these aspects have to be taken into account in deciding whether the profession can be safely committed to the dynamics of market forces. It is in society's interest to have high standards of health for all regardless, to a certain extent, of whether the individual will be in a position to pay at the time the service is most needed. Some individuals may be a danger to others for a variety of reasons, but cannot themselves be regarded as motivated to pay for care. For our sister profession the law, we must recognise that society requires that there is a system of justice that does not rest upon monetary incentives, but rather safeguards the rule of law for society as a whole.

Having said that, the medical profession must find a way to assume a much more active stance in collaborating with government. It must accept that government has an obligation to ensure that the community's needs for a cost-effective health care system are safeguarded. Unless we work with them, we will find ourselves subject to direct interference and control by government of a kind which might not recognise the important sensitivities in the doctor:patient relationship or the very necessary requirements of professional independence in many areas. It is no longer appropriate to insist government keep out when it pays for such a high proportion of costs, through subsidised insurance, funding of medical education and of most specialist training in the public sector, and through direct funding of the public hospital system which provides the essential back-up support for any private system.

There are many changes in policy 'in the offing' which may affect the future of medical practice. We cannot afford to be outside the decision-making processes.

David G Penington AC
Vice-Chancellor, The University of Melbourne
President, University of Melbourne Medical Society

Vale

PROFESSOR EMERITUS SIR SYDNEY SUNDERLAND, Kt, CMG

MBBS (1935), MD, BS, DSc (Melb), Hon.LLD (Melb, Monash)
Hon.MD (Tas, Qld), FRACP, Hon.FRACS, FAA
1910-1993

Professor of Anatomy 1939-61
Professor of Experimental Neurology 1961-75
Dean, Faculty of Medicine 1953-71
The University of Melbourne

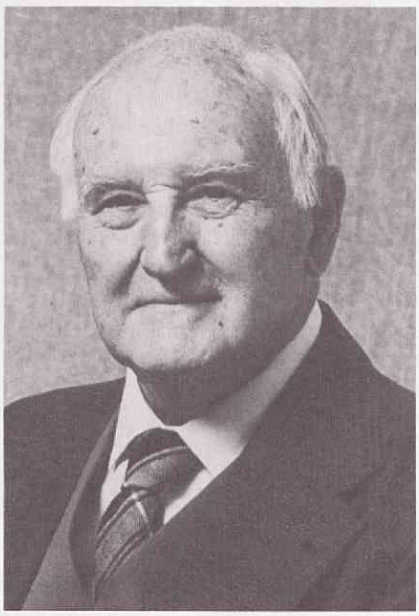
In 1975, on his retirement as a member of the Australian Universities Commission, Sir Sydney Sunderland received a letter from The Honourable Kim Beazley (Snr), Minister for Education, with a handwritten postscript which reads, 'The nation is indebted for what I can only call your superb academic statesmanship'. In the same year, the citation for his admission to the degree of Doctor of Laws, *honoris causa*, of The University of Melbourne concluded as follows:

> It is impossible to list all the ways in which Sydney Sunderland has served his country and his University. A man who has been a member of the Australian Universities Commission since 1962, Chairman of the National Radiation Advisory Committee from 1959 to 1964, a member of the National Health and Medical Research Council from 1953 to 1969, and Chairman of its Medical Research Advisory Committee from 1964 to 1969, as well as being a Foundation Fellow of the Australian Academy of Science is, in every way, a person distinguished by eminent public service. But perhaps most important of all, it is widely recognised that, more than any other individual, he has earned credit for the remarkable development of medical schools throughout Australia in the last fifteen years.

These were tributes paid some years ago to one of the most brilliant graduates and outstanding, inspirational leaders of The University of Melbourne.

Sir Sydney Sunderland, a truly exceptional man, died on the 27th of August 1993 in his eighty-third year. Typical of him, he was adamant that there be no public memorial service following his death. He had already left his mark on the University and the community – he wanted no further fuss to be made.

Born in Brisbane in 1910, Sydney Sunderland matriculated as Dux of Brisbane High School and then completed first year science at The University of Queensland. Because there was no medical school in Brisbane at that time, he then proceeded south to enter the medical course at The University of Melbourne. His undergraduate course was crowded with distinctions and prizes in every year,



Sir Sydney Sunderland

finishing at the top of his graduating class in 1935. During vacations, his interest in neuroscience was triggered by working with Dr Leonard Cox at Baker Medical Research Institute on the culture of cerebral tumour tissues. As a student he also came under the influence of the great and charismatic Frederick Wood Jones, Professor of Anatomy.

Immediately after graduation, Sunderland accepted Wood Jones' offer of a senior lectureship in anatomy enabling Sunderland to develop his neurology work in the Anatomy Department and in collaboration with Leonard Cox and Hugh Trumble at the Alfred Hospital.

At the end of 1937 Wood Jones left Melbourne to return to England and the Chair of Anatomy at Manchester. This prompted Sunderland to accept an appointment, arranged by Wood Jones, as demonstrator in the Department of Human Anatomy in Oxford with Le Gros Clark, enabling him to further his training in experimental neuroanatomy. Again on the advice of Wood Jones, he decided to apply for the vacant Chair of Anatomy in Melbourne. On 21 July 1938, he received a cable from the Registrar of the University informing him of his appointment to the Chair of Anatomy in The University of Melbourne. He was then twenty seven years of age. At his request, the date of his taking up his duties in Melbourne was delayed until early 1940. This was to allow time to complete important research in Oxford and to visit anatomical, neurological and neurosurgical centres in Europe and in North America on his way back to Melbourne.

On his return to Melbourne, as well as fulfilling his University commitments, he was immediately swept up in the war effort. From 1940 to 1945 he was in charge, with the rank of Honorary Major, of a peripheral nerve injury unit that had been established at the 115 AGH, Heidelberg, Victoria, to which all Australian servicemen sustaining nerve injuries were referred for specialist treatment. This led to a lasting interest and pioneering involvement in peripheral nerve research. Throughout his life, his work in this field was diverse and original but was at all times directed to the elucidation of those principles on which the clinical management of nerve injuries should be based.

As a result of his fundamental studies it became clear that nerve repair involved far more than the simple restoration of nerve trunk continuity: it had to be strategically planned and executed with the object of maximising the re-establishment of functionally useful connections with the periphery, while at the same time minimising the loss of nerve fibres due to wasteful regeneration. This, in turn, entailed devising new methods of repair. Innovatory amongst these was his suggestion that microsurgical techniques should be used to improve the repair of severed nerves.

Sir Sydney's work revolutionised the approach to the clinical management of nerve injuries and to nerve repair, and formed the basis of two major texts now acclaimed internationally as classics. *Nerve and Nerve Injuries*, over 1000 pages, was first published in 1968 with a second edition in 1978. *Nerve Injuries and Their*

Repair: A Critical Appraisal was published in 1991, in his eighty-first year. The contents of the latter represented the distilled wisdom of one who had been involved in laboratory investigation, study and clinical management of nerve injuries for more than fifty years.

Sir Sydney Sunderland was highly regarded and respected throughout the world. He was greatly in demand and widely sought after as an honoured guest lecturer at international symposia and conferences. He lectured in more than fifty centres in the United Kingdom, Switzerland, Holland, Norway, Sweden, Germany, France, Austria, the United States, Canada, South Africa, India, China, Japan, Singapore and Hong Kong. He was often referred to as 'the father of modern nerve surgery'. In 1980 the value of his work was recognised in a very public way when an international society dedicated to the study of peripheral nerve injury and repair was established and named the Sunderland Society in his honour. His regular attendance at meetings of the Society was a great source of pride and pleasure to him.

As well as providing outstanding leadership in research, his leadership within The University of Melbourne and on behalf of the University sector was exemplary. He remained Professor of Anatomy until 1961 when he vacated the post to become Professor of Experimental Neurology, a research appointment which he held in conjunction with the Deanship of Medicine, a position he held continuously for nearly nineteen years, from 1953 to 1971. He retired from the University formally at the end of 1975 but continued his research activities and writing as Professor Emeritus in the Anatomy Department until the 1990s.

He was a born teacher and an excellent lecturer – articulate, dynamic, lucid, concise, concentrating on the essentials and discarding the irrelevant. Two of his favourite sayings were, 'education should be lighting a lamp and not filling a bucket', and 'the central objective of medical education should be to train the student's mind to function as a factory and not as a warehouse'. He enjoyed teaching and anatomy came easily to him for he had an astounding visual memory. He never lectured from notes but was a master of the blackboard presentation. In the 'old' Anatomy School he had forty feet of blackboard space that he was known to fill during lectures, working animatedly with coloured chalks.

When he became Dean, Sydney Sunderland made it his business to promote the interests of his Faculty – which he did with great success. He quickly became a knowledgeable and experienced administrator and a shrewd, determined and skilled negotiator, with the result that, under his direction and guidance, the Medical School prospered to a remarkable degree.

During his long service as Dean he initiated and completed many important, far-reaching developments in the Faculty. He was responsible for the establishment of the first Chairs of Medicine and Surgery in the Medical School as well as new Chairs in Child Health, Radiology, Ophthalmology, Otolaryngology and Psychiatry; during his term of office as Dean, the number of Chairs in the Medical School increased from seven to twenty-four. Links with the teaching hospitals were strengthened and expanded, a new Clinical School was established at the Austin Hospital, and Clinical Sciences Buildings were established within the major teaching hospitals. In 1963, he adroitly negotiated a substantial expansion in the intake of medical students for the University from 160 to 240. In 1968, the tri-radiate medical building, regarded by many as the finest medical school building in the country, was opened in the south-west corner of the University campus.

During his Deanship, he earned respect and admiration within and without the Faculty, not only for his great achievements but also for his vision, his commitment to excellence and his friendly and encouraging mentorship of his staff, young investigators and students. His unparalleled service to the Medical School has been recognised by the establishment of the Sunderland Prize in Neuroscience in the medical course, and the naming of the main lecture theatre in the medical building as the Sunderland Theatre. This theatre is also the home of a memorial plaque and a fine full-length portrait of Sir Sydney by the artist Wes Walters.

Sir Sydney also played an important leadership role in the wider University. He served as a member of the University Council and on many of its committees, including the Finance and Buildings Committee, from 1951 to 1967. He was Vice-Chairman of the Professorial Board in 1959 but did not follow on to become Chairman in view of his other heavy commitments outside the University as well as within the Faculty.

Outside the University, his range of appointments and achievements is extraordinary. He was a member of the National Health and Medical Research Council from 1953 to 1969. He was also a member of the Council's Medical Research Advisory Committee from 1953 to 1969, serving as its Chairman from 1964 to 1969. He was a member of the Committee of Management of The Royal Melbourne Hospital from 1963 to 1971, and a member of the Board of The Walter and Eliza Hall Institute of Medical Research from 1968 to 1975. He played a leading role in the establishment of medical schools at The University of Western Australia, at Monash University and in South-East Asia.

For the Department of Defence, he served on the Defence Research and Development Policy Committee from 1957 to 1975 and on the Medical Services Committee of the Armed Forces from 1957 to 1978. For the Department of Supply, he was Chairman of the Protective Chemical Research Advisory Committee from 1964 to 1973 and of the Safety Review Committee of the Australian Atomic Energy Commission from 1961 to 1974, a member of the National Radiation Advisory Committee from 1957 to 1964 and its Chairman from 1959 to 1964.

He was the longest serving member of the Australian Universities Commission from 1962 to 1976, under all four Chairmen of the Commission – Sir Leslie Martin, Sir Lennox Hewitt, Sir Henry Basten and Professor Peter Karmel. During this period, among his many achievements, he played a key role in improving resources for medical education, particularly clinical education, in medical schools throughout Australia.

Sunderland was one of the twenty-three Foundation Fellows of the Australian Academy of Science and played an important part in its establishment and early development.

In the community sphere, he was a member of the Zoological Board of Victoria from 1944 to 1965, a Trustee and Council Member of the National Museum of Victoria from 1954 to 1982, and a Governor of the Ian Potter Foundation from its inception in 1964 until the time of his death.

In a very memorable University of Melbourne Medical Society Annual Lecture on 20 November 1990 in the Sunderland Theatre, he spoke 'off the cuff' about 'The Melbourne Medical School and Some of Its Characters: 1931-1975'. After captivating a large audience with his stories about Richard Berry, James Barrett, William Preston, Wood Jones and others, he closed as follows:

> I'd like to finish by reading just a small quotation. I'm going to quote the words that Thucydides put in the lips of Pericles in his famous funeral oration over the Athenian dead: *The whole earth is the tomb of great men. Nor is their name graven only on stone which covers their clay, but abideth everywhere without visible symbol, wrought in the stuff of other men's lives.* All honour to those who go before, even if those who come later go further.

The Faculty salutes Sir Sydney, a man of quiet dignity, of stern yet twinkling eyes, wise in counsel and passionate in his dedication to science, to the Medical School and to the University. He will be missed by his colleagues and by all with whom he found time to stop and talk – always interested in another point of view, another idea, each conversation turning in a philosopical direction, ever marvelling at life's mysteries.

Graeme B Ryan AC

SEMINAR

23 JULY 1993

THE DEAD DO TELL TALES
DECLINING AUTOPSY RATES AND THE QUALITY OF HEALTH CARE

Convener
Professor Richard Smallwood
Professor of Medicine, The University of Melbourne
Heidelberg Repatriation Hospital

THE PATHOLOGIST'S VIEW

The falling autopsy rate: what has happened in the last decade

Dr Penny McKelvie
Staff Neuropathologist
St Vincent's Hospital

The proper use of tissues removed at autopsy

Professor Stephen Cordner
Director, Victorian Institute of Forensic Pathology
Professor of Forensic Medicine, Monash University

DISCUSSION

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A funeral director's view

Mr Robert Nelson
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Nelson Bros Funeral Services

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DISCUSSION

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Dr Norman Swan
'Health Report'
Radio National

The current law and options for change

Mrs Loane Skene
Senior Lecturer, School of Medicine
Senior Lecturer, Law School
The University of Melbourne

DISCUSSION

HIC EST LOCUS UBI MORS GAUDET SUCCURRERE VITAE
This is the place where death rejoices to come to the aid of life

THE PATHOLOGIST'S VIEW

THE FALLING AUTOPSY RATE
WHAT HAS HAPPENED IN THE LAST DECADE?

Dr Penny McKelvie

DR PENNY McKELVIE

THE DEAD DO TELL TALES is certainly a provocative title for a symposium. I'd like to suggest, however, that in 1993 a more appropriate title might be 'The dead don't tell tales any more', since it is the decline in hospital autopsy rates in recent years that is the theme of the discussion today. As a pathologist, I'd like to address three issues:

1. The values of the autopsy – to medicine, society and the family.
2. The recent trend of declining autopsy rates, not only in Melbourne, but throughout Australia and worldwide. I shall discuss factors which have contributed to the decline in Victoria, with reference to St Vincent's Hospital – but many of these factors apply to the situation in hospitals more generally. 3. Proposals for the restoration of the autopsy rate.

The autopsy has traditionally provided the basis of medical knowledge, with identification of new diseases, and a greater understanding of recognised disorders. Values to medical practice include quality assurance of clinical diagnosis and hospital care; evaluation of new diagnostic technology and new therapies; and provision of tissues for transplantation and medical research. Quality assurance of medical practice is maintained by the hospital autopsy. Studies of autopsies in many medical centres throughout the world have demonstrated a 10-15 per cent discrepancy between the ante-mortem clinical diagnoses and post-mortem findings. This discrepancy rate has not declined despite the introduction of sophisticated medical technology, such as the CT scan, and endoscopic biopsy. Although the percentage of missed diagnoses has not altered in recent years, the *types* of misdiagnoses have changed: for example, fifty years ago, cirrhosis was commonly missed, whereas in the 1990s, misdiagnoses relate more often to opportunistic infections in immunosuppressed patients, or pulmonary thromboemboli in patients with severe underlying disorders. Unsuspected cancer was found in 4.5 per cent of autopsies at St Vincent's Hospital in 1992.

For medical students and clinicians, the autopsy provides education, allows identification of trends in diagnostic discrepancies, and increased accuracy of death certificate data. Values to society include improved accuracy of mortality statistics (on which public health policy is based), identification of occupational diseases, and outbreaks of infectious disease. Advantages to the family include reassurance, assistance in the grief process, and identification of hereditary diseases.

Since the 1960s, autopsy rates have been declining worldwide. Multiple factors in medicine and society have been responsible for this decline. In Victoria, a major factor has been a change in the consent process – introduced by the Human Tissue Act 1982: prior to the Human Tissue Act, there was presumed consent, that is, autopsy could be performed on all patients who died in public hospitals, unless relatives objected.

Autopsy rates in five major Melbourne teaching hospitals at that time were between 40-80 per cent. The Human Tissue Act introduced in 1982 required that consent must be obtained from next of kin before an autopsy could be performed. Last year [1992], autopsy rates in those same hospitals were 15-32 per cent, and the decline is continuing in most hospitals.

The decline has been attributed to various factors in medicine – clinicians, pathologists, hospital policy – and to society. With the introduction of sophisticated new technology for imaging, endoscopic biopsy of previously inaccessible tissues and other diagnostic techniques, clinicians may feel that the autopsy will not contribute any further understanding of the patient's disease(s). The autopsy no longer forms the central and major component of anatomical pathologists' daily work, and enthusiasm for performing autopsies has waned. Society in general and individual families may not appreciate the values of a hospital autopsy when the patient has been in hospital for some time, and has already undergone a number of investigative procedures.

At St Vincent's Hospital, the impact of various factors on the autopsy rate was investigated – ethnic and religious issues, individual medical unit policy, the consent process, and follow-up: 43% of deceased patients during the period of July 1992-June 1993 were born outside Australia, compared with 32% of the population of Melbourne, and 26% of Victoria. The autopsy rate for that period was 23.5%. However, for subgroups according to country of origin, the autopsy rate in Australians was 26.5%, in UK born 38%; in the subgroup of other (predominantly born in non-English speaking) countries 19.5%. Certain minority groups have very low autopsy rates: Italians and Greeks, both 9%; Islam and Buddhist, both 0%. Only in the Islamic group is there specific religious prohibition of the autopsy unless legally required. In the other minority groups, cultural factors contribute to the high objection rate by the families.

Data for autopsy rates within individual medical and surgical units at St Vincent's Hospital show a marked variation from 0-50 per cent. It is not surprising that the highest autopsy rates are found in those units with a strong autopsy policy, where permission for autopsy is sought in all cases. In those units *without* a strong autopsy policy, consent is sought in less than half of the cases, resulting in a rate of zero or less than 10 per cent.

For the financial year 1992-93, consent was requested in 82% of cases, and the objection rate was 71%. In the majority of cases (82%), permission was sought by junior medical staff (first, second or third year resident medical officers); in 14% of cases, by registrars (usually in their fourth postgraduate year) and the remainder by consultant medical staff. The overall objection rate was 71%, and the consent rate was only slightly higher when more senior medical staff (that is, registrars) requested permission. The two major reasons for family objection to autopsy cited by medical staff were: 'The patient has suffered enough' (which surely reflects the relatives' own grief and despair at the time), and fear of disfigurement. Other reasons, such as delaying the funeral or religious factors, were less commonly cited.

One factor which may have contributed to the poor public image of the hospital autopsy is the inconsistent provision of the results of autopsy findings to the families. It is essential that these results be conveyed to the relatives as soon as possible after the post-mortem, either by the attending hospital medical staff or via the family doctor. In the past, this process may have been hampered by delayed, lengthy autopsy reports, and the onus lies with anatomical pathologists to provide prompt, relevant and succinct reports.

Pathologists must act to 'revive' the autopsy by promoting its values within the hospitals, producing relevant and speedy reports, and participating in regular audit meetings. Communication with clinical colleagues is essential – not only before the autopsy to consider specific issues of interest, but afterwards in the overall discussion of the findings. Education, not only of medical staff, but also of paramedical staff such as nurses and social workers must be provided. Patients and families often spend more time during a hospital stay with nursing staff than with medical staff, and the families often turn to the nurses when faced with the decision of whether to permit an

Studies of autopsies in many medical centres throughout the world have demonstrated a 10-15 per cent discrepancy between the ante-mortem clinical diagnoses and post-mortem findings.

autopsy on their next of kin. The nursing staff must therefore be aware of and familiar with the many values of the autopsy, not only to medical practice, but also to society and to the family.

Hospitals must promote autopsies as clinical audit, and establish a definite post-mortem policy, for example, the request for post-mortem in all cases. Education for junior medical staff in interviewing and counselling must be provided if these staff are to be responsible for requesting permission for autopsy. In view of the significant proportion of patients for whom English is a second language, interpreter services should be involved in the autopsy process. Hospitals should also provide information to the public about their post-mortem policy, by including mention of the policy in the brochure given to patients entering hospital. This should incorporate information in several languages. If such information is provided to patients and families on admission to hospital, the request for permission for autopsy, if a patient does die in hospital, will not be totally unexpected. Systematic follow-up with autopsy results for the family by either attending medical staff or local doctors must be established by the hospital. Hospitals must also provide staff and finance for maintenance of an 'optimal' autopsy rate.

In conclusion, I have, firstly, outlined many of the values of the hospital autopsy to medicine, to society, and to the family, and tried to highlight its roles in the maintenance of high standards of medical and hospital care and the provision of accurate mortality statistics for use in design of public health policy. Secondly, I have discussed the factors contributing to the recent decline in rates in Melbourne, as well as throughout the world. And, finally, I have presented some suggestions for restoration of autopsy rates. I'd like to leave you with some words inscribed in many autopsy theatres in Europe – the cradle of the modern autopsy: *Mortui vivos docent* – Let the dead teach the living!

The Proper Use of Tissues Removed at Autopsy

Professor Stephen Cordner

PROFESSOR STEPHEN CORDNER

INTRODUCTION Questions concerning the seminar today have recently been the subject of consideration by the Royal College of Pathologists of Australasia (RCPA). This consideration has resulted in the *RCPA Position Statement on Autopsies and the Use of Tissues Removed at Autopsy*. The purpose of the statement is:

(a) to reassert the value and relevance of autopsies to modern medical practice, (b) to propose parameters both for gaining consent for an autopsy and its performance, and (c) to address, specifically, how tissues removed at autopsies can properly be used.

We have heard from Dr McKelvie of the primary importance of the autopsy in clinical audit. To emphasise this point, the Consultative Council on Anaesthetic Mortality and the Consultative Council on Obstetric and Paediatric Mortality are basically exercises in informing the medical community about potentially avoidable factors in anaesthetic, obstetric and paediatric mortality. Together with the Royal Australian College of Surgeons (RACS) and the Department of Surgery at Monash University, the Victorian Institute of Forensic Pathology (VIFP) runs, as a research exercise, the Consultative Committee on Road Traffic Fatalities which is also a formal correlation of autopsy findings with the patient's clinical course, with the aim of helping clinicians review their management in particular cases and helping pathologists learn to make the autopsy more relevant.

However, my function today is to move on to another important consequence of an autopsy: the fact that obviously tissues are removed. How might these tissues properly be used? It is important that there is public confidence in institutions performing autopsies in relation to the proper use of tissues removed at autopsy, because anxieties on this score may be contributing to a reluctance to agree to autopsies when approached.

The Australian Law Reform Commission and the Human Tissue Act 1982

The law in Australia on the use of tissues removed at autopsy is relatively uniform and is derived from the recommendation of the Australian Law Reform Commission in paragraph 165 of its report No. 7 of 1977:

> **165. Recommendation on retention of certain tissues**
>
> The procedures and characteristics of normal autopsies, and the beneficial uses to which tissues routinely removed during autopsies may be put, are such that the Commission unhesitatingly recommends some departure from the general principle of consensual giving upon which this report is based. The first recommendation is that tissue removed from a dead body for the purpose of a lawful post-mortem examination of that body may after such examination be retained and used for therapeutic purposes or for medical or scientific purposes.
>
> Secondly such retention and use must be authorised, in the case of coronial autopsies by the coroner, and in the case of non-coronial autopsies, by the hospital or other person empowered to authorise the performance of the autopsy itself. Thirdly, tissue retained pursuant to these recommendations may not be bought or sold (this does not prevent the reimbursement of expenses or the recovery of processing costs).

The relevant section of the Human Tissue Act 1982 which embodies the above is S30(2). Where there is authority for an autopsy, that is sufficient authority

> . . . for the use for therapeutic, medical or scientific purposes of tissue removed from the body of the deceased person for the purpose of the post-mortem examination.

This means that under the Human Tissue Act it is legal to use tissue actually removed at a post-mortem examination for medical, therapeutic or scientific purposes without further reference to the relatives.

The purpose of the post-mortem examination

The foregoing, of course, begs the question of what is the purpose of the post-mortem examination. The following definition of an autopsy was approvingly referred to by the Australian Law Reform Commission in the above-mentioned report:

> An autopsy has been described as a post-mortem examination of the body of the deceased for the purpose of scientific interest in determining the cause of death and other information that may be obtained that might aid medical science.

What this means is that the autopsy is performed for knowledge. However, the actual performance of an autopsy varies from place to place and I believe it is a reasonable expectation that there be greater uniformity between institutions as to what constitutes a routine autopsy. This is another job for the Royal College of Pathologists of Australasia.

The use of tissues removed at autopsy at the VIFP

Autopsies performed at the VIFP are undertaken at the Coroner's request, and in all cases tissue is retained either for further detailed examination (for example, neuropathology) for analysis for drugs, or for histological examination, or for proof that a certain finding was indeed present. The other medical, therapeutic and scientific uses to which tissues removed might be put are governed by the Human Tissue Act. These uses are basically medical and scientific research on the one hand, or transplantation on the other.

Research

- There is a VIFP Ethics Committee which is constituted under NHMRC guidelines (which therefore means lay representation) and this reviews all requests for human tissue.
- All requests for tissue from the VIFP approved by the Ethics Committee are listed in our Annual Report, which is tabled in Parliament and a publicly available document.
- There are currently 17 projects which are receiving tissue from the VIFP. I believe this is a thorough process and it will be important in the long term in helping to engender a degree of public confidence in the proper and regulated use of tissues removed at autopsies performed at the VIFP.

Donor Tissue Bank of Victoria

- The basic aim of the Donor Tissue Bank of Victoria is to offer

relatives of those who have recently died the opportunity to donate tissue for the purposes of transplantation. The Donor Tissue Bank is therefore the vehicle by which tissues (such as aortic valves and bone) are made available for therapeutic purposes.
- Again, the ethics of this activity are overseen by the VIFP Ethics Committee.
- Although not expressly required by law, consent for removal of the tissue and its use in transplantation is obtained in every case.

Summary of VIFP Ethics Committee views

1. Where tissue is not removed at autopsy, the consent of relatives is needed for removal and use for either transplantation or research. (This is also the law.)
2. Where tissue removed for the purpose of the autopsy is requested for use in medical research, the VIFP Ethics Committee balances private rights and public good in concluding whether or not the tissue can be made available for medical research. (This is a requirement in excess of the law which does not require an Ethics Committee process to make this judgment). This balance has to be struck between the importance of tissue being available for medical research on the one hand, and the principle of autonomy on the other which would require that relatives be approached in every case. In addition, although not relevant to the Ethics Committee decision, there are currently no resources to give effect to the principle of autonomy in this context.
3. Where tissue is removed for the purpose of the autopsy and can be used for transplantation, consent is needed for transplantation. (This is a requirement in excess of the law.)

Conclusion

Part of the public unconscious is an anxiety about the proper use of human tissue after death. The approach of the VIFP has been one of openness about its activities in relation to the use of human tissue, both for transplantation and in support of research. My own view is that this type of approach is one likely to engender public confidence in autopsies and the proper use of tissues removed at autopsy.

The Public View

A Funeral Director's View

Mr Robert Nelson

MR ROBERT NELSON

WHEN ASKED TO SPEAK at this symposium, I was initially bewildered as to what I may be able to offer. What could I tell people more eminently qualified than I to speak on this subject? In thinking about what I could say, I began to ask myself a number of questions:

- What does the funeral industry generally understand by the term autopsy and for what purpose do we believe it takes place?
- How does this affect the work of the funeral director?
- Could this then provide some explanation for the declining autopsy rate?

Before beginning to explain what funeral directors might feel about autopsy one needs to consider their role, and who they are, so that we can begin to understand the reasons for their attitudes.

In all states there are health regulations which, to varying degrees, impinge on the way in which funeral directors, and most other industry participants, conduct their businesses. Health regulations include such detail as to whether a coffin is required, the maximum time between death and disposition, or the way in which a crematorium or cemetery should operate. Only one state has regulations covering how a body may be transported, the minimum requirements for mortuaries, and how bodies are stored. Generally, states do not require funeral directors to be licensed. New South Wales is the only state in Australia requiring any licensing, and this concerns

Families' fears tend to be what will happen in an autopsy, and a funeral director fears telling them.

equipment and facilities. In all other states there is no requirement to even keep bodies under refrigeration.

In Australia no compulsory training is required and hence many funeral directors lack any type of formalised education. A number of courses are now run by the Australian Funeral Directors Association, covering areas of embalming, infection control, grief and bereavement, and business management. The modern funeral director is very much an organiser, contracted by the family to arrange for the disposal of the body and the services associated with the burial or cremation.

A number of factors dictate how these services may be conducted, and these are guided by traditional, cultural or religious practices, or by the beliefs of the deceased and the survivors. The funeral director is instructed by the immediate family to act on their behalf for the collection of the deceased from the home, hospital or Coroner, and to prepare the body, which may include some embalming, dressing and then casketing of remains.

The funeral services and the committal are clearly the most public aspects of a funeral director's work and the areas most people are familiar with. Yet whilst funeral directors perform many of these practical functions, they are also sought for advice on a whole range of issues relating to the death, which may include information relating to grief and bereavement as well a host of other matters. In fact many funeral companies have bereavement counsellors or educators on their staff.

How do the functions of a funeral director relate to the autopsy?

Funeral directors in their various roles see themselves as caretakers of the dead, placed in a position of extreme importance, charged with the task of taking care of the body of the deceased. It may be a grandparent, spouse, a brother or sister or child – in all instances someone who has been loved and cared for. In this sense the funeral director feels responsible for the way in which the body is treated and prepared.

In practical terms the task of preparing a body subjected to an autopsy is not easy for many directors. Having to attend to a body with a 50cm incision down the torso, that may have to be dressed in a low cut dress or white shirt, is not an easy task. Attempting to completely cover up such an incision is extremely difficult and requires a high degree of training – many funeral directors are neither trained nor proficient in these procedures. In addition, they may feel somewhat embarrassed in having to explain the incision to the family when, in some instances, that family has been assured by the hospital that the procedure is very simple and will only require a small incision.

For some funeral directors it is much easier to recommend not to have an autopsy. However, in most cases the autopsy has been arranged long before the involvement of the funeral director, and this cannot realistically be seen as one of the reasons for the declining autopsy rates.

In *The Concise Oxford Dictionary* autopsy is defined as being: *personal inspection; post-mortem examination or critical dissection.* In *Blakiston's Pocket Medical Dictionary* the inquisitive mind is given a a little more information: *a medical insight into the examination of the body after death to confirm or correct the clinical diagnosis, to ascertain the cause of death, to improve understanding of disease process and aid medical teaching.* Yet, whilst these terms might be strictly and technically correct, they give little understanding of the procedure.

What do funeral directors understand by the term autopsy?

When the Coroner is involved, a funeral director's understanding of it is very simple: When a death occurs by unnatural causes, or when a doctor is unable or unwilling to write a death certificate, the Coroner will determine the cause of death. The understanding is that this will normally be determined by autopsy. Whilst this is a very simplistic overview of the coronial task, and for that matter not strictly accurate, it will help in understanding what a funeral director's view might be.

When the Coroner is involved it is simple and easy to understand why autopsy should take place: A death has taken place and cause of death needs to be determined. Yet some directors believe that when a traumatic death occurs, such as in a motor vehicle accident, the cause is obvious and no post-mortem should take place. Some would also believe that no autopsy should take place on the very elderly, for much the same reason.

A Mr John Christianson wrote to the *Northern Territory News* on 3 May 1993 about an article he had read regarding forensic pathology, discussing the number of autopsys conducted in the Territory. In part he had this to say: 'Using 3500 as an average, this means that some 3375 bodies were butchered for the sake of science to find what in most instances was probably obvious'. He went on to say, 'As an example, when a person is killed in a vehicle accident, it is obvious how they died. Proving which part of their body failed and caused death is irrelevant, other than to satisfy the bureaucracy'. Despite some funeral directors holding similar views, most appear to understand and accept that autopsy needs to take place to determine the cause of death.

However, their view can be quite different when the death occurs under natural circumstances in a public hospital. Often the death certificate has already been written, and the funeral director may have some trouble in understanding the need for an autopsy. Most funeral directors believe that the sole purpose of the autopsy is to determine the cause of death, and that when a death certificate has already been signed, the need for autopsy no longer exists.

It is universally agreed within the funeral industry that the death of a child is the most difficult to deal with. In itself the death, no matter what the cause, attracts a deep sense of regret in us all. Even though we can understand the need for some investigation into the cause of death, autopsy appears even more significant on the very young.

In terms of the real effect autopsy has on the workings of a funeral director, it could be described as fairly minimal. The funeral will normally take place, at the earliest, from two to three days after the death, sometimes earlier, sometimes later, depending entirely on the family's wishes. This normally gives ample time for either the coronial or hospital autopsy to take place. It can create problems for the funeral director when families wish to view their loved one immediately on release of the body from the hospital or Coroner. Families often do not understand the requirements of the funeral director in preparing an autopsied body and the additional time it takes; funeral directors are likewise reluctant to explain in any detail why this additional time is required, and the tasks they may need to perform.

Similarly, I imagine the pathologist would also find it difficult to explain some of his procedures to a grieving family.

Embalming

Simply told, the qualified embalmer will reopen the cavities, remove the viscera if they have been returned, and treat with a formalin- based mixture. The internal cavities are drained and cleaned and a number of arteries located and injected with a formaldehyde-based arterial fluid. On completion of the arterial injections, the vessels are ligated, to prevent any leakage, and the internal walls cleaned and treated with a hardening compound. The viscera are then replaced in the abdominal cavity in a leak-proof bag. A sheeting of preservative-saturated cotton is placed over the viscera bag and the abdominal and thoracic cavities are re-sutured. The cranial cavity is treated in a similar manner. Should any tissue have been removed for the Tissue Bank, such as skeletal material, the area is inspected and restored, creating some structural integrity and preventing leakage.

When the body requires any degree of reconstruction, a number of techniques may be used to mask disfigurement. The results are entirely dependent on the skill and training of the technician and the time available to complete these tasks. Some unskilled funeral directors would claim that the hospital or Coroner should be responsible for the total reconstruction of the body before it is collected by the funeral director. However, a skilled, trained embalmer should have no difficulty in the preparation of any body. After embalming the body is washed, disinfected and dressed in clothing supplied by the family, to allow the body to be viewed in the most natural state possible.

Robert G Mayer in his book, *Embalming: History, Theory and Practice,* described embalming as a process of chemically treating the dead human body to reduce the presence and growth of micro-organisms, to retard organic decomposition, and to restore an acceptable physical appearance. Whilst embalming is not performed by the vast majority of funeral directors in this country, such skills do assist the funeral director in overcoming the problems encountered in preparing an autopsied body for viewing. Should the autopsied body not be embalmed, it is simply washed and dressed in clothing supplied by the family, and kept under refrigeration until the viewing.

Grief and bereavement

In recent years the professional funeral director has become more in tune with the issues associated with major loss, and the associated emotions and reactions.

Organisations such NALAG (National Association of Loss & Grief), and FABEA (Funeral & Bereavement Educators Association) have greatly assisted the funeral director to understand the needs of the bereaved; but more importantly they have helped funeral directors to understand more about themselves.

Many organisations, including the funeral industry, have begun to address the issues of 'who cares for the carer'. The mental health of funeral workers has long been overlooked and now forms a valuable component of funeral service training. Yet, whilst many companies have identified the necessity to train and assist their staff in aspects relating to loss and grief, sadly many small funeral directors are still without that support base.

One aspect that funeral directors deal with on a daily basis, especially in metropolitan areas, is that of multiculturalism and the special requirements of funeral services. Care, sensitivity and understanding are key ingredients in ensuring that no cultural or religious laws are broken. The funeral director needs some understanding of the customs, beliefs and practices of our multicultural society. While many of these customs may seem foreign or even unusual, the funeral director needs to remain sensitive to the wishes of the family, for example, when a hospital has requested an autopsy, religious and cultural customs are often confused with the desire of the family and friends to expedite the funeral arrangements.

Conclusion

In reviewing my subject it became clear to me that as a funeral director I don't really know a great deal about autopsy, yet on a daily basis I am confronted with it. The information I was able to find in main-stream publications, such as a standard dictionary, while possibly correct in a technical sense, did not provide any insight into the procedure, nor indicate what I really understood autopsy to be.

Just as a patient will inquire from his or her doctor about the procedure that is to be undertaken in an operation, few people appear to really understand the procedures surrounding the autopsy. Many funeral directors are almost in fear of the family finding out about the procedure, or seeing any incisions on the body of the deceased. With clearer understanding of the purpose and reason behind autopsy, many of these fears could be allayed.

It does seem that families are often confused by the reasons given for autopsy, and by the details of the procedure, which can be quite misleading – sometimes intentionally, I believe, but without malice, to avoid any additional pain or heartache to the survivors. In my experience the greatest fear of either funeral directors, or the families we deal with, is not what we know, but what we don't know. Families' fears tend to be what will happen in an autopsy, and a funeral director fears telling them. Whilst I do not generally believe funeral directors have been responsible in any significant way for declining autopsy rates, clearly the comprehension of funeral directors and the information that we can provide to families is limited.

The autopsy is seen as an anomaly, and this in itself cannot be beneficial in increasing the rate of autopsy in the future. If there is a desire to increase the rate of non-forensic autopsy, those closely associated but not specifically concerned, need to be accurately and reliably informed of the reasons for the procedure.

The attitude that autopsy is required only to determine death is one that clearly needs to be addressed.

The Royal College of Pathologists of Australasia summed up, most appropriately, in their position statement:

> The falling rates reflect not only a lack of familiarity with the value of the autopsy, but also a sense of unease about the procedure itself. This means that community knowledge of the autopsy and its value needs to be improved. As a contribution to this, the discipline of pathology needs to publicly declare its position in relation to the philosophical and conceptual framework within which autopsies should be performed.

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How People Feel About It

Mr Terry Laidler

MR TERRY LAIDLER

WHEN PLANNING THE Seminar it was considered important to include a speaker who could provide some insight into how members of the general public feel about the subject of autopsies. Mr Terry Laidler, presenter of ABC Radio 3LO's evening program was approached. Unsure of what he personally could contribute to the seminar, he undertook to run and record a talkback segment on the issue. On Wednesday 14 July 1993 Mr Laidler was joined on radio by Dr Penny McKelvie, Staff Neuropathologist at St Vincent's Hospital, and what follows is a modestly edited transcript of that segment, introduced by Mr Laidler and played back to the seminar.

TL: I'm joined in the studio for the discussion this evening by Dr Penny McKelvie. Penny's a pathologist, working at the Melbourne University's School at St Vincent's Hospital. Is that right, Penny, have I got it pretty close?

PMcK: Yes, that's right.

TL: And you've done a fair bit of research looking at what's happening to autopsy rates. Can you summarise for us what the situation is at the moment and where we've come from?

PMcK: Well, traditionally the autopsy has provided the basis of medical knowledge. It has provided the discovery and the elucidation of new diseases and the understanding of diseases that we already know. It still serves this role. However, there have been recent changes in autopsy rates in public hospitals, not only in Melbourne and in Victoria, but throughout Australia and the rest of the world. Before 1983, in Victoria, an autopsy could be performed on a patient who died in a public hospital, unless relatives specifically objected. At that stage autopsy rates ranged from between 45 per cent and 80 per cent of patients who died in public hospitals. However, in 1982 the Human Tissue Act was introduced, which required that the next of kin of the patient who had died be asked for permission before an autopsy could be performed. This has resulted in quite a dramatic decline in the autopsy rate and in 1992 those same hospitals recorded rates from 15 to 33 per cent.

TL: It's down to almost half of what it used to be – is that what you're saying?

PMcK: That's right, exactly. One hospital didn't drop – the Human Tissue Act didn't affect that hospital – but all other state-run hospitals had certainly a 50 per cent decline.

TL: It must be just a terrible task in the first instance to have to go to the relatives of a deceased person, or to the executor of their estate and ask for that permission. It puts a pressure on which I presume nobody wants at that stage anyhow.

PMcK: I think that's right. We have at most hospitals, at St Vincent's at least, an objection rate of 70 per cent in families – it comes at a time when there's great distress: they've just lost a loved one and to imagine that an autopsy should be performed is almost an anathema to a lot of relatives.

TL: Tell us why it is important. Is it to confirm diagnosis in the first instance?

PMcK: Well, I think we've had almost too much forensic pathology on television, people are sort of 'Quincey' minded . . . but the values of the autopsy are essentially ones of medical education and quality assurance. One of the most interesting findings from autopsy series is that there is a 10-20 per cent discrepancy rate between the diagnosis – that is, the clinical diagnosis before death – and the post-mortem findings, even in major top medical centres throughout the world, which shows really, that medicine is still an inexact science. Despite the introduction of sophisticated technology with imaging and other techniques, this incidence of discrepancies between clinical diagnosis before death and post-mortem findings has not changed. The types of discrepancies have changed but the overall incidence hasn't.

TL: So, a person is diagnosed as having X problem with their heart or their circulatory system, and when the autopsy's done it's found that it wasn't quite the problem at all.

PMcK: That's right. For example, in last year's series 5 per cent of the patients who underwent autopsy at St Vincent's had an unsuspected cancer which was certainly contributory to the cause of death. Other problems that we're seeing, particularly with patients receiving chemotherapy or radiotherapy for cancer, are unsuspected – what we call opportunistic – infections, that is, infections with organisms that don't normally cause a problem, but in patients who have a deficient immune system, *are* causing a problem.

TL: Now that would be vital information for future treatment of people having chemotherapy or radiotherapy.

PMcK: Exactly. That's right, that's one of the values of the autopsy. It enables us to evaluate current therapies and treatments for future use, for saving patients, and for correct treatment of patients in future.

TL: John on line, good evening.

John: Good day to you. I suppose I'd support the performance of a post-mortem wherever possible. I think it's a measure of the civilisation of a society that it knows and understands how each of its citizens dies . . . and it's very important that we understand that. It's just that I wouldn't like to be the person who has to ask the grieving relatives [for permission] to perform a post-mortem on the person who has died.

TL: In talk among circles of friends you're with, John, I suppose it's not a topic that comes up often anyhow, but would you have a sense of what might be the impediments to people giving their permission?

John: I certainly am glad that I wasn't asked for permission to do post-mortems on my parents. As a student I attended whatever the requisite number of post-mortems was – and a few since graduation – I think a post-mortem room is an awful place. I don't like the smell, I don't like the look of it. But I approve of what they do.

TL: So it's easy to approve conceptually, I suppose, Penny, but it's a very different situation when it's your parent.

I think it's a measure of the civilisation of a society that it knows and understands how each of its citizens dies . . .

PMcK: Yes, I think that's right.

TL: Glenys from . . . Good evening.

Glenys: I'd just like to comment on why I think that some people might not be willing to allow their relative's body to be exposed to an autopsy. I think that television programs' presentation of coroners and what have you, talking or treating people and their bodies very trivially, doesn't help reinforce a picture of a person who has an ethical approach to their work.

TL: You want some assurance, I assume, if you're the person asked for permission, that it will be done respectfully. I suppose you're right in some ways, Glenys, that the television portrayal is not always respectful.

Glenys: That's right. And I would be unwilling, unless it was a particular case – where I really thought that a great number of people could benefit – to allow, or to give permission for an autopsy to be conducted on a relative of mine.

TL: Thanks for the call. I suppose that's the problem you've got in some ways, Penny – that you don't know how beneficial it's going to be until you do it.

PMcK: Well, that's the thing. A lot of the clinicians say, 'We don't perhaps need an autopsy in this case', but it's those very cases – we've had a couple in the last week – a straightforward, obvious, clinical diagnosis of chronic lung disease, the chest X-ray showed some changes, and then at autopsy you find a cancer of the lung. So you really can't predict in which cases you're going to find something unusual.

TL: Heather, from . . . way. Good evening Heather.

Heather: Hi. I'm just calling . . . actually . . . we had a girl last year and she only lived for twelve days after being born.

TL: I'm sorry.

Heather: That's okay. We were asked the question as to whether or not we would allow a post-mortem to be done . . . and we said yes, purely for the reason that with a case like ours – probably only one in every six thousand, or something – where this type of thing happens. So we thought, well, it really makes sense.

TL: You're pretty brave though, Heather. It must have been very hard at the time?

Heather: It was, but we thought if we could help everybody else by having this thing done, then maybe the problem – that we had – may, in the next two, three, ten, twenty years, be solved.

TL: Thanks for that call, Heather, it's good of you to speak about it. Don next on line. Good evening Don.

Don: Good day, Terry. A few years ago when my parents died, the doctor came and asked us if they could do an autopsy on them, and we had no objections because, as the doctor explained, what they find is for the benefit of mankind. We all had a little conversation, and we agreed.

TL: Did you have any concerns at all, Don?

Don: No, none whatsoever, because what they find . . . in ten, fifteen years, could help somebody else. Or it could even help me or my family.

TL: I wonder, Penny, if it has something to do with what people tell other people about what they'd like anyhow. If you said to your children it's important to you that your death serves everyone's best interests, then that must make a difference and make it easier for the children to make a decision.

PMcK: Well, that has actually happened. In the last couple of weeks we had a patient, a fellow who told his family that he wanted to donate his cornea and therefore he didn't mind if an autopsy was performed. I mean, it's very cold-blooded to speak about, but he actually did tell his relatives that he wouldn't be opposed.

TL: And that takes the pressure off everyone in some ways.

PMcK: That's right, yes. With the families I've spoken to who have had a post-mortem on a relative, that is really the underlying reason for their consent – in almost all the cases – that it's really for the good of mankind or for the benefit and future of people that are concerned with medicine.

TL: I wonder if there is a concern about . . . you can't talk about this without being very direct about it, and I'm not meaning to be gory deliberately . . . about in what sort of condition the body will be returned.

PMcK: Yes, disfigurement. There are two major objections: one that the body will be disfigured, and two, that the patient has suffered enough. And that really just reflects, I think, the family's suffering at the time we request an autopsy. If details are required, we liken it to an abdominal operation where an incision is made and the organs are examined – like during an operation – and tissue samples are taken to look at under the microscope and then returned. The face and hands and feet are not touched, so the body could be viewed clothed after a post-mortem.

TL: Brenda from . . . Good evening.

Brenda: Good evening. I would like to say that my late husband was a medico and he would have been all for having an autopsy, but he died in a private hospital and that meant it was a bit of a nuisance, so there wasn't really a decision to be made . . . because . . .

TL: No, because the body would have to be transported.

Brenda: Yes. It would have had to go to the Coroner's Court and then it would have to wait, and we would have had to wait to make funeral arrangements. So that's the reason there wasn't an autopsy. But if it had been a public hospital we certainly would have gone ahead and had an autopsy.

TL: Do you want to comment on that at all, Penny?

PMcK: I think it really depends on *which* private hospital. I know, at St Vincent's, sometimes patients who die in the private hospital are transferred to the public hospital for an autopsy. On other occasions, patients who die in other private hospitals are transferred – someone speaks to the pathology department, our hospital arranges that the post-mortem be done in our hospital. So it is possible. It does mean a little bit of shifting around, but it's certainly possible.

TL: Then again it's . . .

PMcK: Time delay.

TL: Perhaps it's the level of organisation and delay . . . it's exactly what you don't need at the time of someone's death, when you're under enough stress already. Ian, good evening to you.

Ian: Good evening. I think it should be done rather like the donor situation with corneas, where the patient has a bit more forethought and makes their wishes known – that they wouldn't mind an autopsy being done on their body.

TL: Generally, that would be true, and you could get it going with some sort of education, but it hardly behoves a hospital to be going to somebody when they're seriously ill and saying, 'Sign here please'.

Ian: Oh, no, I think it needs to be done well beforehand. I would agree with my parents that we can, if they're in a bad situation, withdraw life support. That type of agreement should be made known to the family and their wishes be known, earlier on.

TL: Certainly takes the pressure off. I take your point there. Christine from . . . Good evening.

Christine: Good evening. I suppose I can see all these sorts of things from a scientific point of view, but my own personal experience when my sixteen-year-old son died seven years ago . . .even thinking about it now, it's just hard . . . it's very difficult and . . .

TL: But what's the sense, Christine . . . just enough's enough, leave it alone?

Christine: I can see why it had to be done, but it still hurts to think that his body was cut up.

TL: So it's the disfigurement thing largely for you, you're talking about.

Christine: Yes. I suppose I just wanted to put that point of view.

TL: Perhaps what we need is an education campaign.

PMcK: I think so. I think one of the things is that there's a lack of understanding about what's actually done and, you know, this idea of disfiguration and even mutilation is very much in people's minds.

TL: Tim, from . . . You'll have to be our final caller. Good evening.

Tim: Good evening. I'm actually one of the doctors that often has to ask people about autopsy.

TL: It must be an impossible task, Tim.

Tim: Well, I think some people do find it difficult, but often I find it's actually not as difficult as people imagine, as long as you're careful about how you phrase things. Often, relatives of patients – even if they do decide not to accept the offer of an autopsy – aren't at all offended by the fact that you've asked and see reasons why you've asked.

TL: It would have to do with your manner and style of approach, wouldn't it?

Tim: I think so. I think that's very important. It's possible even to discuss this with patients themselves before they die. On a couple of occasions I've discussed this with patients before they die, and actually had permission, beforehand – before they die. But one of the problems, I find (and, obviously, working in general hospitals around

Melbourne it's not an uncommon occurrence, when a patient dies and you have asked for an autopsy) is with the other people who provide the backup to your question, often the nursing staff on the wards. The nursing staff, themselves, don't have a particularly positive view of the value of autopsy, so that they often don't support the question once you've asked it. And, sometimes later on when the relatives are having a bit of a think about it, they might ask the nurses what they feel and they usually give a direct response, 'If you don't want it, then that's fine . . . you don't . . .

TL: You don't have to have it.

Tim: Without offering to rediscuss the value of the autopsy.

TL: Thanks for that call, Tim. Penny, thanks for helping us get the discussion going this evening.

PMcK: Thank you.

In closing Mr Laidler commented that he was surprised at the positive level of responses to the issue, and that it seemed to him the low autopsy rate may, in part, be due to lack of information available to the general public. He suggested that this problem could be addressed by an education campaign.

Implications and Solutions

What are the Implications for Health Care?

Dr Norman Swan

DR NORMAN SWAN

WHAT ARE THE IMPLICATIONS of the declining autopsy rate for health care? That's the question I was lumbered with by Dick Smallwood for today's seminar. And on trying to research the area, I discovered the real debt I now owe him for this invitation: there's no information, very little hard data, the library shelves are bare . . . how else can I put it . . . no-one's got a blooming clue?

There's room for speculation you might say. But we can use the information given this afternoon alongside what we know from history and from current medical practice to make a reasonable guess at what's happening out there as a result of a pathetically low autopsy rate. And before I go on, I might add another statistic into the afternoon from my wife, Dr Lee Sutton, who's a paediatric epidemiologist working in the perinatal field. In New South Wales in 1989, for example, the autopsy rate for neonatal deaths was only 50 per cent with a 30 per cent diagnostic discrepancy rate for stillbirths and 17 per cent for neonatal deaths (1987 figures).

If you look more closely, for instance at large babies with respiratory distress, these babies have a terrible prognosis and no-one knows why, yet there is only a 42 per cent autopsy rate. Which of course is much better than adults but is still far less than it should be.

Those of us who graduated twenty years or more ago can remember the centrality of the autopsy in our teaching and later in practice. At my medical school, attendance at midday autopsy presentations was compulsory for clinical students. And it was considered essential that the consultant, registrar and resident would go across to the mortuary to see the macroscopic autopsy results from their patients. In other words, within twenty-four hours we had the opportunity to elucidate a mystery, to have our diagnoses and clinical acumen confirmed or face the discomfort of confronting our mistakes.

It didn't increase your social awareness or train you in cost control or any other of the skills that hospital doctors are supposed to have these days, but it's hard to see how it did other than make you a more effective doctor. It certainly made you humble and allowed you to talk to families quickly and answer some of the inevitable questions which arose during grieving. I know it's anecdotal and probably coloured by the mistiness of time but I was taken by Stephen Cordner's quote of Morgagni in one of the seminar papers:

> Those who have dissected or inspected many bodies have at least learned to doubt, while those who are ignorant of anatomy and who do not take the trouble to attend to it are in no doubt at all.

A one-in-five discrepancy rate of diagnostic error in death certificates is terrifying, shameful and a potentially disastrous corruption of what should be a valuable database for epidemiological research.

Autopsies go back a long way. In ancient times bodies were often opened but in those days it wasn't for anatomical knowledge. The abdomen was incised crudely and as the medical historian Sigerist said, the analysis of the contents was left to the imagination of the dissector who usually wanted to bolster his magical belief system. One wonders today with our relative lack of evaluation on clinical medicine and surgery, whether the low rate of autopsy paradoxically allows us to affirm some mistaken pseudoscientific beliefs.

In days of yore they had names for the organs; they even knew that if they speared some of them the person would die, but there was little interest in their true function. Disease was thought to be caused by the invasion of spirits which could be released by cupping, blood-letting or even physical violence. Autopsies were essential because the understanding of supernatural forces was seen to be critical for survival. So they opened bodies to detect 'witchcraft principles'. Another medical historian, Ackerknecht, suggested there was no difference in anatomical knowledge in early societies between those who performed autopsies and those who didn't.

It is very probable that treatment techniques like trephining, and caesarean section were developed randomly for religious purposes – and persisted because the odd person was helped by accident rather than design. For example, some societies where ritual amputation was practised, rarely thought to amputate therapeutically an irreversibly mangled limb.

In the Middle Ages, there is little if no evidence that the Church forbade autopsies but post-mortems took place in an almost equally futile environment where the physicians saw nothing other than signs that their Galenic theories of the four humours were correct. But a process of change occurred beginning with the Black Death in the fourteenth century to be later reinforced by the then new epidemic of syphilis in the sixteenth century. The old explanations didn't apply so easily and people began looking inside the body with their eyes less hooded by prejudice and superstition.

There was a move to systematise, to describe the natural world and a ground-breaking work was the twenty-two case series of Antonio Benivieni published in Florence in 1507. This tried to associate clinical features during life with autopsy findings. With the renaissance came a sense of realism . . . although they did continue to hunt witches! At the last witch trial in London, the leading expert witness for the prosecution was the President of the Royal College of Physicians.

In the sixteenth century, the French Court physician, Jean Fernel, made great leaps forward by using autopsies to differentiate gonorrhoea from syphilis, to describe the effects of TB, appendicitis with perforation, renal stones and endocarditis. This happened as there was a move of clinical medicine away from the library to the individual patient's bedside. And, in the sixteenth century, bedside teaching spread outwards from Padua to places like Leyden and Edinburgh.

. . . within twenty-four hours we had the opportunity to elucidate a mystery, to have our diagnoses and clinical acumen confirmed or face the discomfort of confronting our mistakes.

Morgagni, whom I just quoted, worked at the University of Padua and in 1761 published a series of seven hundred autopsies which revolutionised medical thinking through its clinico-pathological correlations. These people were so enthusiastic because they were desperate to discover the accuracy of their clinical observations. They knew that their new classification systems were pointless if the assumptions were wrong.

It might surprise you to hear the size of the clinical base on which the formidable reputation of the Leyden clinic of Boerhaave rested. The clinic only had twelve beds, six for men and six for women. But the autopsy really came into its own with the development of the modern medical school in France just after the Revolution. Unlike Leyden, they had large numbers going through. The individual bedside teaching was replaced with hospital medicine where the autopsy was closely correlated with physical findings in life. At the beginning of the nineteenth century, the Paris Clinical School saw twenty-five thousand people in five years. Symptoms were sheeted to findings at autopsy.

Bichat, one of the great medical revolutionaries, said, 'Several autopsies will give you more light than twenty years of observations of symptoms.' That's when statistics and primitive epidemiological research became valid thanks to the verification permitted by the autopsy. The French physicians had an historically unprecedented degree of certainty in their diagnoses and it allowed some of the earliest clinical trials to take place.

Now it's reasonable to put forward the argument that today the autopsy is an anachronism. That with modern imaging techniques and biochemical assays the diagnosis is clear in all but the most unusual of cases. But as we've discovered in this seminar, the error rate is unacceptably high. Not only that, we haven't properly evaluated most of our diagnostic technologies. They should have been exposed to similarly rigorous trials as drugs but haven't. We have uncomfortably little well-researched information about sensitivity and specificity for most of the tests that we perform – we know even less about the real value of using them. We need the autopsy more than ever, not less. Never have Morgagni's words about the relationship between humility and knowledge and intellectual arrogance and ignorance been truer.

We are also living in an era of great fear; fear of cancer, of pesticides, of electric fields, of anything the media or special interest groups care to stir up. The community panics at news of cancer clusters and wants to have immediate answers to perplexing problems. But it's impossible to give answers and set government policy – if that's what's needed – without data. And surely the autopsy has to provide the benchmark for that data. All too often epidemiologists have to resort to death certificate analysis when faced with an unexpected disease cluster, when we know that with a 20 per cent autopsy rate, this information is almost useless.

Medical research is the jewel in the crown of our very expensive illness care system. It's our scientific background which allows clinical medicine to separate itself from the pseudoscientific mumbo jumbo which is as prevalent now as at most other times this century. Doctors may not always use the science available to them, we may not often know about it, but it's that rigorous heritage which gives us the edge.

It was Sigerist, I think, who reckoned that it took until 1913 for it to be safer to go to see a doctor than stay at home and hope for the best. But apart from the odd colleague who's still stuck in 1912, it's been science that's saved us. And a cornerstone of that science is the autopsy.

The Current Law and Options for Change

Mrs Loane Skene

Introduction

Autopsies are vital to public health. They provide accurate information about the cause of death. This is essential to ensure that hospitals and doctors are correctly diagnosing and treating illness. Autopsies also provide an early warning system to control and prevent disease and accidents. They help to identify and characterise poorly understood diseases like Sudden Infant Death Syndrome (SIDS) and AIDS. Autopsies may comfort the deceased's relatives in the grieving process and give them information about genetic conditions and infectious diseases.

MRS LOANE SKENE

Yet the rate of non-coronial autopsies has declined by 50 per cent throughout the Western world in the last decade. A similar decline was observed in a recent empirical study of five major teaching hospitals in Melbourne.

It is commonly believed that the decline in the autopsy rate commenced after the Human Tissue Act was passed in 1982 and that the requirement in that Act that consent must be obtained from the deceased before death, or from relatives after death, is the principal reason for the decline. However that is not entirely true.

This paper explains the relevant statutory provisions and agrees that consent is necessary in most cases before tissue can be removed after death and used for therapeutic and other purposes. However, the paper suggests that the passage of the Human Tissue Act is not the only, or even the principal, cause of the declining autopsy rate. That decline had started before the Act was passed and it did not suddenly accelerate when the Act came into effect.

The paper therefore concludes not only with some suggested changes to the law and its administration that might increase the autopsy rate, but also a number of non-legal proposals. These are directed to encouraging doctors and hospitals to undertake more autopsies and to inform the community as a whole of the value of autopsy findings.

The current law

The circumstances in which tissue may be removed after death and used for medical or scientific purposes, are governed by the Human Tissue Acts in each State and Territory of Australia.[1] The legislation is similar in each jurisdiction, having been derived from the Australian Law Reform Commission's Report No 7, *Human Tissue Transplants*.[2] The following discussion focuses on the Victorian legislation.

In Victoria, there are two parts of the Human Tissue Act 1982 that deal with authorisation for the removal of tissue after death and the use of that tissue for medical and scientific purposes. They deal respectively with the donation of tissue after death (Part IV); and the conduct of post-mortem examinations (Part V). The various provisions of those Parts are considered in relation to the following questions:

- Who may authorise the removal of tissue after death?
- In what circumstances may that authority be exercised?
- For what purposes does the Act envisage that the tissue be used?
- Are there restrictions on the use of tissue taken after death for therapeutic and other purposes?
- What information must be given to the deceased before death, or to the next of kin after death, in order for them to make an informed and effective decision?

1. Who may authorise the removal and use of tissue after death?

The person who may authorise the removal of tissue after death depends on the circumstances in which the person died. There are three alternatives:

1.1 *Death within Coroner's jurisdiction*

If the person died in circumstances in which the Coroner has jurisdiction to conduct an inquiry,[3] the *Coroner* may authorise the removal and use of tissue (sections 27, 29). Whether the person died in hospital or elsewhere, no one but the Coroner may authorise the removal of tissue without the Coroner's consent (sections 27 (1) and (2); 29 (2) and (3)).

1.2 *Death in hospital*

If the person died in hospital or the body was taken to a hospital, and the Coroner does not have jurisdiction, a *'designated officer'*[4] of the hospital may authorise the removal and use of tissue (sections 26 (1) and 28 (1)).

1.3 *Death not in hospital*

Where the person did not die in a hospital, and the Coroner does not have jurisdiction, a *medical practitioner* may authorise the removal and use of tissue (sections 26 (2) and 28 (2)).

2. In what circumstances may the authority to allow the removal and use of tissue be exercised?

The Coroner's authority to direct the removal and use of tissue is dealt with in the Coroners Act and will not be considered here. It is essentially to investigate 'reportable deaths'.

In the non-coronial context, there are three cases in which a designated officer or a medical practitioner may authorise the removal and use of tissue.

2.1 The first is where 'the *deceased person* . . . expressed the wish for, or consent to, the removal after his[5] death of tissue from his body for such a purpose or use' (section 26 (1) (c); section 26 (2)(c); 28 (1); 28 (2))[6].

2.2 The second is where 'the *senior available next of kin*[7] of the deceased person makes it known to the designated officer or the medical practitioner that he consents to the removal of the tissue from the body of the deceased person for such a purpose or use' (section 26 (1) (d); 26 (2 (d); 28 (3)) and the deceased is not known to have objected (section 26 (3); 28 (4)).[8]

2.3 The third is 'where the designated officer or the medical practitioner –

i) making such inquiries as are reasonable in the circumstances, is *unable to ascertain the existence or whereabouts of the next of kin* of the deceased person; and

ii) has *no reason to believe that the deceased person had expressed an objection* to the removal after his death of tissue from his body for such a purpose or use' (section 26 (1) (e); 28 (5)).

3. For what purposes does the Act envisage that the tissue may be used?

Whether the tissue is authorised to be taken under Part IV of the Act, which deals with the donation of tissue after death, or under Part V of the Act, which deals with post-mortem examinations, the purposes for which the Act envisages that the tissue may be used are similar.

Section 25 in Part IV states, in relation to donations of tissue after death, that:

> An authority under this Part is sufficient authority for a medical practitioner . . . to remove tissue from the body of a deceased person . . . *for use of the tissue . . . for therapeutic . . . or for medical or scientific purposes* [emphasis added].

Section 30 in Part V, states in relation to post-mortem examinations, that:

> An authority under this Part is authority for the use, *for therapeutic, medical or scientific purposes,* of tissue removed from the body of the deceased person for the purpose of the post-mortem examination [emphasis added].

'An authority under this Part' means in each section an authority given by one of the people mentioned above – the Coroner, if the person died in circumstances that give the Coroner jurisdiction (section 29); a 'designated officer' if the person died in a hospital and the Coroner does not have jurisdiction (section 28 (1)); and a medical practitioner if the person did not die in a hospital and the Coroner does not have jurisdiction (section 28 (2)).

4. Are there restrictions on the use of tissue taken after death for therapeutic and other purposes?

One might think from the two sections quoted above that if the Coroner, a 'designated officer', or a medical practitioner consented to the removal and use of tissue after death, that consent would itself be sufficient authority for the use of the tissue so removed 'for therapeutic, medical or scientific purposes'. However, the matter is not so simple.

First, the tissue that may be used for therapeutic and other purposes is limited by the legislation itself, at least in relation to tissue taken for a post-mortem examination. Secondly, where the exercise of the authority of the 'designated officer' or a medical practitioner depends on the prior consent of the deceased during life, or the next of kin after death, their consent must have been 'informed' in order to be effective. And thirdly, even if the consent was 'informed', it is effective only in the terms in which it was given; that is, only tissue covered by the consent can be lawfully used.

4.1 *Authority to use tissue for other purposes limited by statute*

Section 26 (2) refers simply to 'the use of the *tissue* (removed from the body of the deceased person) for . . . therapeutic . . . medical or scientific purposes' [emphasis added]. Once the authority to remove tissue is established, this would appear to authorise the use of any tissue that the medical practitioner wishes to remove. Section 30 (2), on the other hand, states that:

> An authority under this Part is authority for the 'use, for therapeutic, medical or scientific purposes, of *tissue removed* from the body of the deceased person *for the purpose of the post-mortem examination*' [emphasis added].

This means that the only tissue that can be used for therapeutic and other purposes is tissue that has been removed for the purpose of conducting the post-mortem. In practice, this tissue would generally include all internal organs, together with the brain and possibly other tissue as well. If those tissues were removed for the purpose of conducting the post-mortem, they could later be used for other purposes. The section would not, however, allow the use of all tissues that a researcher may wish to use. It would not cover, for example, synovial fluid from a knee joint which was sought by one doctor for research into arthritis.

4.2 *Consent must be informed*

As noted earlier, an authority to allow tissue to be removed and to be used after death depends in most cases on prior consent having been obtained from the person before death, or from relatives after death. It is only if the Coroner has jurisdiction, or if the next of kin cannot be found, that tissue may be removed and used without consent. In fact, in Victoria, even where the Coroner does have jurisdiction and can lawfully allow tissue to be removed and used without consent, a policy has been adopted of seeking consent from relatives before tissue that has been removed after death is used for transplantation (though not if it is used for 'scientific' purposes).[9]

The Act gives only a minimal indication of what is required in seeking consent. In relation to the use of tissue donated after death, the deceased must have 'expressed the wish for, or consented to, the removal after his death of tissue from his body *for such a purpose or use* (namely for the purpose of transplantation or for therapeutic, medical or scientific purposes)' (sections 26(1)(c); 26(2)(c)); or the senior available next of kin must have consented to the 'removal of tissue for such a purpose or use' (sections 26(1)(d); 26(2)(d)).

In relation to the use of tissue removed for a post-mortem, the deceased must have 'expressed the wish for, or consented to, *a post-mortem examination of his body*' [emphasis added] (section 28(1) and (2)); or the senior available next of kin must have consented to a post-mortem examination (section 28(3)(d)).

The Act gives no indication of what the deceased or the relatives need to be told in order to give an effective consent. Is it enough for them to say 'yes' when asked: 'Do you consent to the use of tissue removed from your body after your death to be used for therapeutic, medical or scientific purposes?'; or 'Do you consent to a post-mortem examination of your body after your death?'. One might think so from the Act, but it was passed before the development of the law on 'informed consent' in Australia. The Act was passed in 1982, a year before the Supreme Court of South Australia decided *F v R*[10], which was the leading case on this subject for some years in Australia, and a decade before the High Court decision in *Rogers v Whitaker*[11] last year which is now clearly the law throughout Australia.

In both of these cases, the courts emphasised the 'paramount consideration that a person is entitled to make his own decisions about his life'[12] and to be given sufficient information to make those decisions. What is 'sufficient' information depends on the circumstances of the particular patient, which in turn depends on factors including the desire of the patient for information and the temperament and health of the patient.

Both of the cases mentioned, like all the cases that have arisen in the context of 'informed consent', concerned a patient's decision whether to agree to a medical procedure during life. But there is no reason to confine the general principles of patient autonomy and self-determination that have been endorsed by the courts to this situation. Indeed, in June 1993, the National Health and Medical Research Council published a document called *General Guidelines for Medical Practitioners on Providing Information to Patients,* which acknowledged that 'The community expectation is that *people* (not *patients*) are entitled to make their own decisions' and that the right of patients to

consent or to withhold consent is based on that general right (para 7). In order to exercise their right to decide, they need to have appropriate information.

4.3 *Consent is effective only in the terms in which it is given – only tissue covered by the consent can be used*

Associated with the need for an informed consent is a requirement that the consent cover exactly what is proposed to be done. If a person requests a post-mortem examination of his body, can it be said that that request extends to a request or authority to use the tissue so removed for other purposes?

I suspect that the popularly understood meaning of the words 'for a post-mortem examination' is 'for the purpose of determining the cause of death'. The ordinary person does not know, or think of, the other reasons why post-mortems are done. These include, for example, providing information about infections or other transmissible medical conditions; use in epidemiology and public health; quality assurance to improve standards of health care; and education and training of health professionals.

A person who consents only to a 'post-mortem examination' might therefore be taken literally to be consenting only to such examination as is necessary to determine the cause of death. This is not to say, of course, that if a doctor did a more extensive examination than was necessary for that purpose, then legal action could be taken against the doctor for exceeding the patient's authority – though theoretically that is possible. Rather, the point is that the patient's autonomy should be respected by telling the patient or the relatives the wider reasons why post-mortems are undertaken and allowing them to make a properly informed choice.

This is clearly ethically desirable. But it is also likely to result in a higher number of consents to post-mortem examination and the use of tissue for therapeutic and other purposes. People who understand the diverse reasons for doing this research are surely more likely to consent than those who think only of the limited reasons.

5. What information must be given to the deceased before death, or to the next of kin after death, in order for them to make an informed and effective decision?

This leads to a consideration of the information that people need in order to make an informed decision, either on their own behalf, or as a relative, about whether to allow tissue removed after death or for a post-mortem examination to be used for therapeutic and other purposes. I suggest it includes the following:

- the purpose of post-mortem examination
  - to establish the cause of death as completely as possible
  - to tell the next of kin and the family doctor about any infection or other transmissible condition
  - to sustain and improve the standards of medical care and the health of the community and to educate health professionals. Sometimes, extra tissue has to be taken for this purpose
- that the body will be treated with respect and every effort made to minimise disfigurement
- that a doctor from the treating unit will tell the family the result of the post-mortem and will contact the family doctor if they wish
- that they may ask questions if they wish
- that they may take time to decide
- that they may limit their consent, for example the consent might be to examine only the heart, or only to aspirate tissue or body fluids without an incision.

. . . such proposals clearly undermine people's right to self-determination – to decide what will or will not be done with their own body – which underlies the modern law of informed consent.

It may be that some doctors will be deterred from seeking consent if they are required to give such a full explanation. It is naturally distressing to approach relatives at a time of deepest grief and distress. The problems for doctors may be improved by developing more detailed protocols for seeking consent from next of kin, emphasising the importance of conducting autopsies and making tissue available for therapeutic and other purposes.

Options for change

1. Legal solutions

There are several ways that the law could be changed to make more tissue available for therapeutic and other purposes: First, legislation could be enacted providing that consent need not be obtained before tissue may be removed after death for such purposes. Alternatively, an 'opting out' system could be introduced so that consent is presumed unless the deceased during life, or the next of kin after death, refuse consent for the removal of tissue or for the use of tissue for other purposes. (That was the case in Australia before the human tissue legislation was enacted. Post-mortems could be performed on all patients who died in a public hospital unless an objection was raised by the relatives within six hours of death.)

Secondly, more attempts could be made to obtain consent from people during life. Hospitals could be required by legislation to ask all patients admitted to hospital whether they wish to have an autopsy performed if they should die in hospital. Indeed, this could be part of a blanket information form in which patients state whether they have appointed an agent to make medical decisions for them if they become incompetent, whether they want to be resuscitated if they stop breathing, or whether they want to be buried or cremated.

Thirdly, a more subtle change might be achieved in the law by inserting in the legislation a wider definition of the purpose of a post-mortem than the popular meaning of determination of death.[13] Then, if people consent to a post-mortem, tissue taken could be used for research or transplant without further explanation and consent.

These proposals have the advantage of neatness and convenience. They would enable autopsies to be conducted either without consent from the deceased or next of kin, or without the need for a full explanation of the proposed research or therapeutic projects in which the tissues will be used.

However, such proposals clearly undermine people's right to self-determination – to decide what will or will not be done with their own body – which underlies the modern law of informed consent. Even if people sign a 'consent form' when entering hospital, one must question how 'informed' such a decision will be if it is not accompanied by a proper discussion and the opportunity to ask questions! Any change in the law that eliminates or reduces the need for consent should be preceded by extensive community consultation.[14]

The greatest reservation about legal changes increasing the availability of tissue for therapeutic and other purposes, however, is that the human tissue legislation is not the sole reason for the declining autopsy rate. The Australian legislation did not come into effect until the 1980s. The decline was evident before that. Also, if the legislation was the sole reason for the decline, one would expect a dramatic decline as soon as it was enacted. That did not happen. It seems likely that if other changes are not made as well, the rate will not be much increased by changing the law alone.

2. Medical solutions

The first fundamental step to make more tissue available for therapeutic and other purposes is to convince more members of the medical profession of the value of autopsies, both for the next of kin of the deceased and for the community as a whole. The divergence between the cause of death as stated in the death certificate and as determined by autopsy has been highlighted in numerous recent articles throughout the Western world. But this fact, and even more importantly, its significance, must be communicated to clinicians in hospitals. Medical schools and professional colleges must take the lead by encouraging autopsies as a teaching method and by granting professional recognition or advancement to doctors performing autopsies. Hospitals might develop a policy that autopsies are to be done in all cases unless they are not authorised for religious or other reasons. Government departments could assist by reintroducing the

requirement that hospitals must perform a certain number of autopsies each year as a condition of funding or of accreditation as a teaching hospital. Extra funding may be needed for anatomical pathology.

3. Community solutions

Effective communication is equally important in changing community attitudes. People should be encouraged to discuss their attitudes to autopsies within the family during life, along with other issues like whether they would like to be kept alive on a ventilator or resuscitated if they stop breathing, to ensure that their attitude is known.

The cost of autopsies is vitally important. It is essential that the community should bear the cost and that the next of kin can be assured that they do not have to pay for it themselves. Reports of autopsy results must be relevant, timely and sensitively communicated.

Community publicity of the benefits of autopsies, and public education programs, should be started. Religious and other community groups should be encouraged to prepare information about their views regarding autopsies, so that these are available for reference when needed.[15] [16]

Hospitals could help assuage public concern about autopsies. Already, ethics committee approval is mandatory before tissue from non-coronial autopsy is used in research. And guidelines of the National Health and Medical Research Council require that ethics committees include legal, religious, lay and medical members, the last two of whom must not be associated with the institution. That should be emphasised in the annual report of public hospitals. The report should also state the tissue taken during autopsies, the projects in which the tissue was used, and the results of autopsies. A provision could be added to the human tissue legislation requiring that a specified medical officer of any hospital performing autopsies must ensure that the post-mortem examination is conducted with propriety at all times and with dignity and respect for the deceased.

Finally, better consent forms and information materials could be prepared to explain to people during life and next of kin after death the nature and purpose of an autopsy.

Footnotes

1. (ACT) Transplantation and Anatomy Ordinance 1978; (NSW) Human Tissue Act 1983; (NT) Human Tissue Transplant Act; (QLD) Transplantation and Anatomy Act 1979; (SA) Transplantation and Anatomy Act 1983, Death Definition Act 1983; (TAS) Human Tissue Act 1985; (VIC) Human Tissue Act 1982; (WA) Human Tissue and Transplant Act 1982.
2. Australian Law Reform Commission, Report No. 7, *Human Tissue Transplants*, Canberra: Australian Government Publishing Service, 1977.
3. This means a death where the Coroner suspects homicide; the deceased was in care immediately before death; the identity of the person is not known; or the Attorney-General or State Coroner has directed an inquiry: section 17, Coroners Act 1985 (Vic).
4. 'Designated officer' is defined in section 3 as the medical practitioner appointed by the hospital as its designated officer; or if none has been appointed, the medical superintendent or person acting in his place.
5. Since the male pronoun is used in the legislation, I have used it throughout this paper for ease of reference and felicity in oral presentation.
6. Emphasis added.
7. 'Senior available next of kin' is defined in section 3 as a parent, adult sibling or guardian of a child; or the spouse, adult child, parent or adult sibling of an adult, in the order stated.
8. A designated officer is not permitted to authorise the removal of tissue if he has reason to believe that the deceased person had objected in writing during his life, or orally in the presence of two witnesses during his last illness: section 26 (3).
9. The Donor Tissue Bank of Victoria has adopted guidelines stating that the consent of next of kin must be sought before tissue is taken for transplantation. The reason for not seeking consent before tissue ie used for research is apparently economic. Since potential recipients pay for the organs that are used in transplants, that money can be used for financing the time spent by the transplant co-ordinator of the Donor Tissue Bank in approaching the donor's relatives to seek their consent. If a similar approach were required for tissue to be used in research, that would be an additional cost to scientists seeking to undertake the research.
10. (1983) 33 SASR 189.
11. (1992) 109 ALR 625.
12. *F v R* at 193; *Rogers v Whitaker* at 631.
13. The Australian Law Reform Commission suggested that an autopsy is a 'post-mortem examination of the body of the deceased for the purpose of scientific interest in determining the cause of death and other information that may be obtained that may aid medical science'.
14. One Melbourne hospital was so concerned about 'a couple of incidents of family objections after an autopsy' that it implemented a system of requesting permission from relatives even before the Human Tissue Act 1982 required consent to be obtained: Penelope A. McKelvie and Jurgen Rode, 'Autopsy rate and a clinicopathological audit in an Australian metropolitan hospital – cause for concern', *Medical Journal of Australia*, 156 (Apr, 1992): 456-462.
15. There are fewer religious objections to autopsies than people may think. The Roman Catholic church has a history favouring autopsies and in the sixteenth century, there was a papal edict permitting autopsies. Church authorities made churches available for Vesalius to perform autopsies because of the huge interest in anatomy. Pope John Paul condoned organ donation, proclaiming that it was the greatest act of self giving. Perhaps the same could apply to autopsy which could be considered as giving a very precious gift. Protestants probably hold similar views. The Anglicans and the Greek Orthodox Church have no objection. Orthodox Judaism prohibits autopsy but the more liberal groups do not. Islam is opposed to autopsy unless there is suspicion of wrongdoing. Scientific curiosity is not sufficient reason to perform an autopsy. Hinduism and Buddhism do not restrict autopsies. Jehovah's Witnesses maintain that it is an individual decision.
16. McKelvie and Rode (n. 14 above) found 'a lower than average autopsy rate in minority ethnic groups where communication could be hampered by language difficulties'.

Summary of Discussion

The pathologist's view

- The question was asked that if tissues removed during an autopsy could not be bought or sold, what would be the legal situation if a new gene was isolated from the tissue, and patented, etc. Mrs Skene replied that ownership of body parts generally is a very complex issue and no ready answer was possible.
- A member of the audience remarked that the current appropriate trend of patients dying at home (often because of the economic factors of the hospital), and the push for pathology units to adopt a business structure (possibly having to charge medical and surgical colleagues for services rendered in providing autopsies) would add to the decline in hospital autopsy rates. Dr McKelvie commented that there was a move for pathologists to provide 'merit' services which would include services such as autopsies, teaching postgraduate sessions, etc. Public hospitals are now providing figures for the number of autopsies performed annually so that a certain budget can be provided for services for which there is no remuneration from Medicare.
- The issue of 'informed consent' was raised and Professor Cordner replied that when consent to an autopsy is sought, it is important that a certain minimum of information is provided in an environment that encourages discussion, and that every question asked is answered.
- Referring to the unchanging percentage of discrepancy between ante-mortem and post-mortem diagnosis, Dr McKelvie observed that the types of misdiagnoses being made ante-mortem are changing, according to the sophisitication of medical treatment now being used.
- On the subject of the international decline in autopsy rates, Dr McKelvie commented that countries with Acts similar to the Victorian Human Tissue Act had experienced a similar reduction in autopsy rates. Countries with a system of 'presumed consent', for example Scandinavia and Austria, have generally maintained a high autopsy rate.

- The question was asked if there had been any study about the relative refusal rate of requests for organ donation and requests for autopsy, and whether there is any conflict between obtaining permission for organ donation and permission for formal autopsy. Professor Cordner replied that there is a very good argument for saying that every time tissue is taken for transplantation, there should almost automatically be an autopsy, to ensure that there is no reason why the tissue should not be transplanted.

The public view

- Mr Nelson commented that most funeral companies obtain consent for embalming, and that the funeral director usually explains the embalming process to relatives as being 'a bit like a blood transfusion'. Any further explanation depends on the questions asked.
- It was remarked that the Victorian Human Tissue Act had placed the decision about post-mortems into uninformed hands. Mr Laidler pointed out that the response in his talkback segment to the issue of autopsy did not sound to him as though the audience was uninformed, but rather that they seemed to invite collaboration and consultation in making a decision.
- The question was asked if an autopsy would add to the costs involved in the funeral director's work. Mr Nelson answered that costs associated with the funeral director's work are spread more evenly than just on the body which has undergone autopsy.
- Professor Lanham (Law School) suggested that a 'values inventory' or 'values history form', recording a person's wishes concerning medical treatment, resuscitation, organ donation, etc., could include a section on autopsy and might enable people to give greater direction as to what they would like to be done at the end of their life.
- Mr Nelson said that the emblaming process can be carried out on bodies to be cremated or buried, and that the practice varies between funeral companies.

Implications and solutions

- It was observed that the Austin Hospital performs autopsies on 35 per cent of all non-coronial cases, which they believe is adequate for audit, teaching and research purposes. Factors which contribute to the hospital's good autopsy rate include: a deputy director whose interest in autopsy has spread through the hospital and has reached the interns who ask for permission for autopsies; the practice of pathologists contacting interns at the beginning of each year to teach them how to approach relatives; and linking the request for an autopsy with the request for corneal donation. It was noted that an adviser to the Health Minister had recently been heard to comment that, by the end of the century, autopsies would only be performed at the Forensic Institute. This comment had been made in the environment of restricted funding for pathology services.
- Professor Emeritus Attwood related that a poor rate of getting permission for autopsies used to be seen as a black mark against a resident, as it was considered to be a failure in the doctor to communicate, to advise and to persuade. Professor Smallwood commented that the line between persuasion and coercion could appear very fine if a doctor's career depended on the number of autopsies secured.
- It was suggested that 'values inventories' could be filled out after discussion with a family doctor and form part of a person's medical record. Professor Cordner replied that the formality of administration of such systems is of secondary importance to the discussion of the issues. An inventory could be a record of what is discussed, but decisions about organ donation are much easier for relatives to make if there has been discussion with the deceased during their life. The same principle should apply for autopsies.

- It was noted that the seminar discussion was filling a gap in the program – presentation of the clinician's point of view. How the clinician approaches the task of gaining consent from relatives for an autopsy has an important bearing on the rate of consent.
- With regard to autopsies being publicly funded, a general practitioner related that some years ago she had tried to organise an autopsy on a patient to confirm her diagnosis of death from Huntington's Disease. She experienced difficulty in getting the autopsy done without great cost to the family until it was discovered that the patient had once been an outpatient at a large Melbourne hospital, and the autopsy was performed there at no cost. She noted that there had been other times, working in general practice, when she would have liked to have an autopsy performed to confirm her diagnosis of the cause of death. Dr McKelvie remarked that St Vincent's Hospital bills private hospitals for autopsies referred to them, but that the deceased patient's next of kin would never be billed. Professor Masters noted that he was not aware of any formal procedures in place for billing on autopsies for Alzheimer patients, but that with future financial strictures the issue would need to be addressed.
- The comment was made that communication between patient, relatives and doctors, is important before death. If students, interns and doctors could spend more time with patients and their relatives, they would have less difficulty in obtaining consent for autopsy. The importance of educating doctors and paramedical staff, especially nurses, in communicating with families was emphasised.
- The question was raised why it was the task of junior medical officers to ask permission for autopsies from the deceased's relatives when, for example, it could be distressing for an elderly relative to be asked by someone who could have been a grandchild, for permission to examine a son's body. Professor Cordner noted that the Royal College of Pathologists of Australia recommends that a senior clinician should make the approach. Professor Smallwood commented that in the public hospital system senior medical staff sometimes don't spend as much time with the families of patients as do younger medical staff who are continually on the wards. Younger medical staff might then be perceived as being the most appropriate people to ask permission for autopsy as they have come to know the family.
- A member of the audience wondered if 'provision in a will to leave one's body to science' was still useful in light of the seminar's discussion. Mrs Skene replied that another section of the Human Tissue Act deals with the donation of a body for the purposes of anatomy. She commented that making provisions in wills was a good way to make one's wishes known, but that sometimes it might take a while for the will to be found and that it is even more important for people to discuss with their relatives during life, what their wishes are in relation to these issues. □

BRAIN TUMOUR SURGERY IN THE NEXT DECADE

PROFESSOR ANDREW H KAYE
Director of Neurosurgery and Clinical Neuroscience Centre, The Royal Melbourne Hospital


PROF. ANDREW KAYE

MODERN SURGERY OF THE brain commenced on the 25th of November 1884, when Rickman Godlee operated on a 25-year-old Scottish farmer named Henderson who had suffered from left focal epilepsy and had a progressive left hemiparesis. The operation was performed at the Hospital for Epilepsy and Paralysis, Regent's Park, London and the patient died from meningitis twenty-eight days after surgery. The surgery was made possible by three discoveries of the nineteenth century – anaesthesia, asepsis and neurological localisation of cerebral lesions.

This tumour excision was not the first time a brain tumour had been removed, but it was the first time that a tumour had been localised solely by neurological methods *and* antiseptic surgical techniques had been utilised. Previously, tumours of the brain had been removed from time to time when they had eroded the skull, or the skull had been trepanned, usually for epilepsy or intractable headaches, or where a scar or depressed fracture indicated the probable site of a lesion.

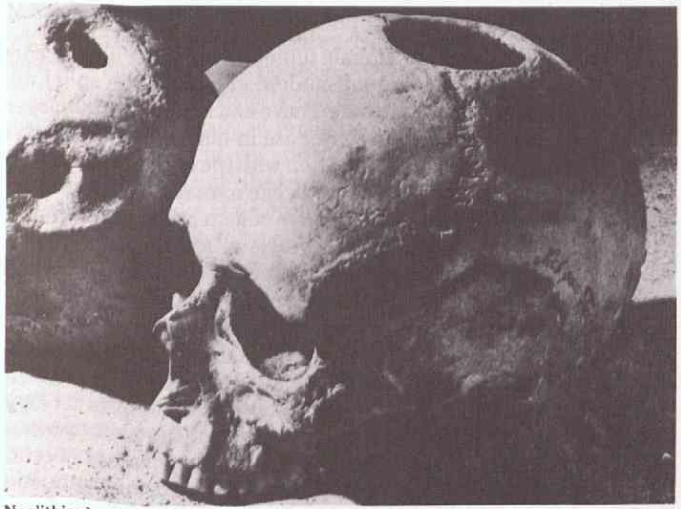
Archaeologists have found skulls with holes bored in them dating from the Mesolithic and Neolithic times. There is evidence that patients survived the operations: the holes in the bone were healed by new bone formation and the sharp edges of the bored or hacked holes have become rounded off. It is probable that these trephines were performed for magical as well as medical reasons. Trepanation persisted in some societies, such as the Serbs of Albania and Montenegro, who trephined for neuralgia and migraine until the beginning of this century. Until recently, a shark's tooth and a sharp shell were used by the peoples of the Bismark Archipelego to bore holes in the skull. Hippocrates, born on the Island of Cos in 460 BC, described trepanation and advised it's use for headaches, epilepsy, fractures and blindness.

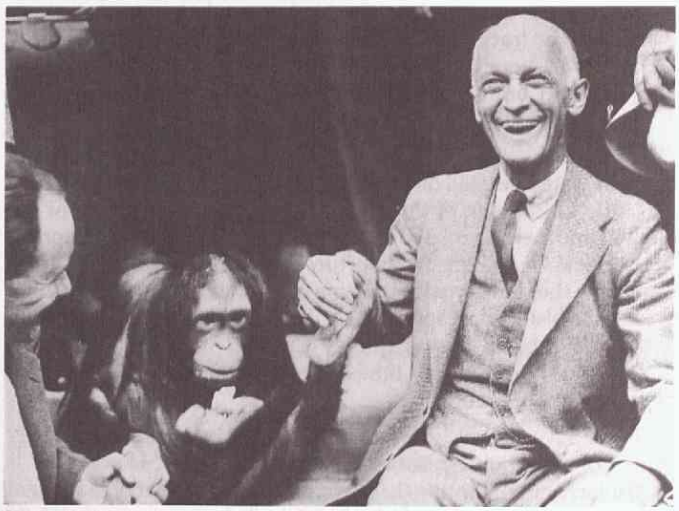
The famous Chinese surgeon Hua To, who lived in the second century, performed trepanation. His most famous patient was the warlord Kuan Yun, whose bitter enemy, Tsao Tsao, consulted Hua To with a headache. Hua To decided to trepan, but the patient thought that Hua To had been bribed by Kuan Yun to murder him. On this suspicion Hua To was executed on the spot – I am sure this has a lesson for the present day neurosurgeon!

The foundations of modern neurology, which underpin neurosurgical practice rest on three men – Galen, Versalius and Willis:

- Galen (AD 130 to AD 200) was born in Pergamon on the shores of Asia minor. Described as the first 'experimental physiologist', he became personal physician to Marcus Aurelius. Many believe that Galen's neurology was the best feature of his work. He described the corpus collosum, ventricles, sympathetic nerves, pituitary, infundibulum and seven pairs of cranial nerves. Galen's views dominated European medicine for 1500 years, and although it is a longstanding conventional belief that Galen shackled medical thought, he is unjustly blamed for the blind dependence on his writings, which were sanctified so that any adverse opinion was regarded as heresy.
- Andreas Versalius (1514-64), known as the 'founder of anatomy', was appointed to the Chair of Surgery and Anatomy in Padua. His famous *De fabrica (De humani corporis fabrica libri septem)* was published in Basle in 1543 when he was only twenty-eight. Book VII, on the brain, surpassed anything previously published, and provided the basis for our present day concepts of the structural anatomy of the brain. The books are superbly illustrated by Jan Stephan Van Calcar, the favourite disciple of Titian. Versalius was Harvey Cushing's 'patron saint', and Cushing suffered his fatal anginal attack after lifting a heavy Versalius portfolio.
- Thomas Willis (1621-75), described as the 'Harvey of the nervous system', coined the word 'neurologie'. *Cerebri Anatome*, published in 1864 with many illustrations by Christopher Wren, refined the anatomy as described by Versalius. However, many suggest that Willis's main contribution was that he realised that neurological function depended primarily on the brain itself, its stuff and substance, and not the hollows within it.

The concept of cerebral localisation was still in dispute up until the middle of the nineteenth century. Although these great men and others raised the possibility of some form of cerebral localisation, the concept was still doubted by authorities no less than the brilliant Brown-Sequard.

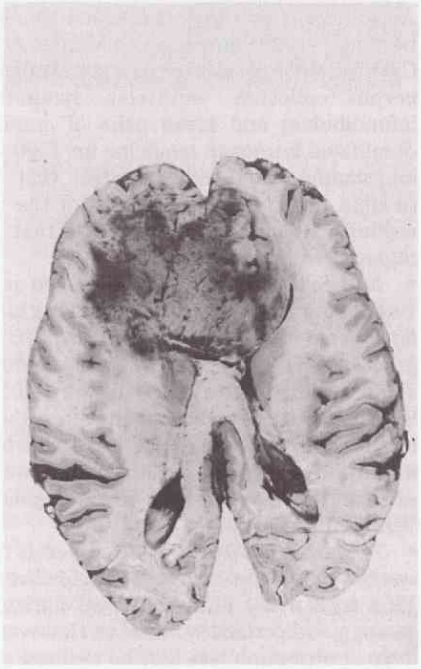

Neolithic skull with trephine hole (from *Medicine, An Illustrated History*, Macmillan).


Harvey Cushing (on right) – many consider him to be the 'father' of modern neurosurgery (from *Harvey Cushing*, AANS Publications, Park Ridge, Illinois).

Broca's description of two patients with pure motor aphasia, for which he had defined the pathological findings, was confirmed by the experimental studies in animals by Fritsch and Hitzig in 1870 in Germany, and by Ferrier in 1873 in London. The experimental results were reproduced in a human by Bartholow of Cincinatti in 1874. The opportunity for this remarkable experiment was afforded in a patient whose parietal bones had been destroyed by osteomyelitis, caused by an ill-fitting wig that had eroded the skin and bone. Bartholow stimulated the Rolandic areas of the brain by puncturing the dura with an electrode, inducing contra-lateral, local and spreading motor contractions, even convulsions.

Suppuration, putrefaction and infection had haunted surgeons up to and during the nineteenth century. Following Pasteur's and Koch's proof of the bacterial origin of putrefaction, and a demonstration by Semmelweiss that sepsis could be controlled by hygienic means, hospitals rid themselves of the dirty practices which fomented infection. To Lister belongs the credit for developing the technique to prevent bacterial contamination of wounds during surgical procedures: he introduced the use carbolic acid (initially in the form of creosote) on wounds and first reported on the treatment in the *Lancet* in 1867, which is regarded as the date of birth of antisepsis and meant that intracranial surgery could be undertaken without the previous high likelihood of infection.

The introduction of anaesthesia was a potent influence on surgery in general and neurosurgery especially. William Morton demonstrated the use of ether on 16 October 1846, which is still celebrated as 'Ether Day' in the original operating room at the Massachusetts General Hospital in Boston. With the patient asleep it became possible to carefully perform long delicate operations, such as neurosurgical procedures.



Glioma in frontal lobes at post-mortem.

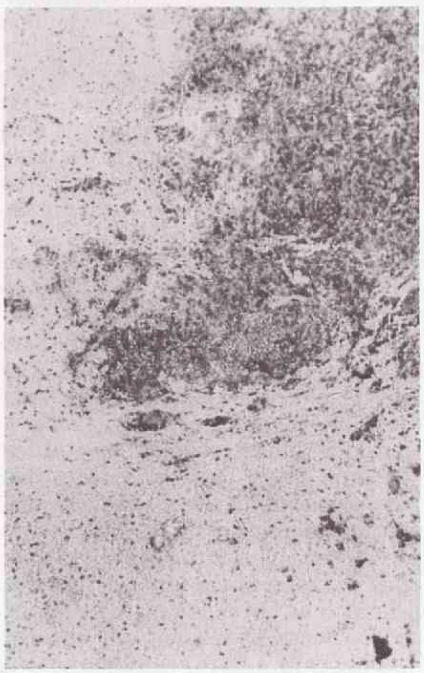
A new period of rapid advance and knowledge is often consequent upon the discovery of a novel approach or the development of a new instrument. The grinding of improved lenses by Amici in 1827 led directly to the development of a well-corrected compound microscope that made possible the recognition of the cell as a basic unit of living matter. Shortly after, Schleidan and Schwann developed the cell theory and Virchow enunciated the concept that the fundamental changes in human disease can be traced to alterations in cells. Virchow, known during his time as the 'pope of medicine', was the first to describe the neuroglia and to classify brain tumours with gliomas as a separate entity.

The initial enthusiasm over the pioneering operations for cerebral tumours had waned by 1900 and at the turn of the century cerebral tumours were operated on only as a last resort. Until the 1920s there was little knowledge of the varied histological appearance of the gliomas and their correlated clinical course. In an attempt to improve the surgical treatment of brain tumours and to determine if the treatment should vary with the type of tumour, Bailey and Cushing studied the histological appearance of gliomas and classified them on a histogenic basis. It was Harvey Cushing who introduced the methodical (although at times slow) meticulous technique to neurosurgical operations.

There have obviously been considerable advances in technology since the operation by Godlee in November 1884. However, it is particularly disappointing that the results of treatment of malignant glioma – the most common type of adult brain tumour – remain totally unsatisfactory, with most patients dying within one year from the time of diagnosis, despite the conventional treatments of surgery, radiotherapy and chemotherapy.

The glioma nearly always recurs locally, where it has been resected, indicating that the conventional treatments fail in local control of the tumour. It is these tumour cells infiltrating out into the 'brain adjacent to tumour' region that escape eradication during the initial conventional treatment and are responsible for the recurrence of the tumour. Brain tumour research has concentrated on understanding the pathogenesis of the tumours, investigating the multiple facets of the biology of the tumours and studying new treatment methods. Investigations using molecular biology and cell biology techniques have focused on the intimate and complex orchestra of activities in the normal cells and what disturbances are necessary to produce the cascade of events that result in development of the tumour cell.

Molecular biology has revolutionised our knowledge of the pathogenesis of brain tumours. It is now realised that oncogenes and tumour suppressor genes have an intimate role in the development of many cancers, particularly brain tumours. The oncogenes may act at least in part by accelerating the growth of cells directly, possibly by the overproduction of growth factors or making the cells more sensitive to growth factors. The loss of tumour suppressor genes may allow this process to occur. The challenge for medical research scientists is to find a method of blocking this intricate cascade.



Glioma cells stained with monoclonal antibody spreading out into adjacent brain.

Retroviral therapy shows considerable promise for the treatment of brain tumours. Gene transfer with vectors derived from murine retroviruses is restricted to cells which are proliferating and synthesising DNA at the time of infection. Consequently, retroviral-mediated gene transfer might permit targeting of gene integration into malignant cells in organs composed mainly of quiescent non proliferating cells, such as in the brain. Accordingly, selective introduction of genes encoding for susceptibility to otherwise non-toxic drugs into proliferating brain tumours may be used to treat this cancer. Investigations so far have utilised the herpes simplex-thymidine kinase gene inoculated into the tumour, followed by administration of the anti-viral drug ganciclovir. Initial trials on rodents have been encouraging and a Phase 1 trial has started in North America.

The study of the biology of brain tumours has been enhanced by the development of new tumour models, especially the spheroid. Previously, laboratory investigations have had to rely on monolayer cultures which do not reflect the disease in humans, or on animal models that often have little in common with the human disease and may be difficult to study. The spheroid, like a small ball, is a tumour in miniature with a growing proliferative edge, a necrotic centre and its own micro environment. The confocal laser scanning microscope optically sections the cell using a very precisely focused laser beam and has considerably enhanced our understanding of tumours. Together the spheroid and confocal laser scanning microscope form a potent tool to study the biology of the tumour cell, the metabolism of the cell and the tumour and the uptake of chemotherapy agents. These techniques have given new insight into the complex biology of the tumour, particularly tumour cell kinetics, the heterogenous nature of cerebral gliomas with many different populations of cells, the immunogenicity of tumours, the immune status of patients, and the importance of the blood brain barrier, blood tumour barrier and blood supply to the tumour. The metabolism of the tumour itself and

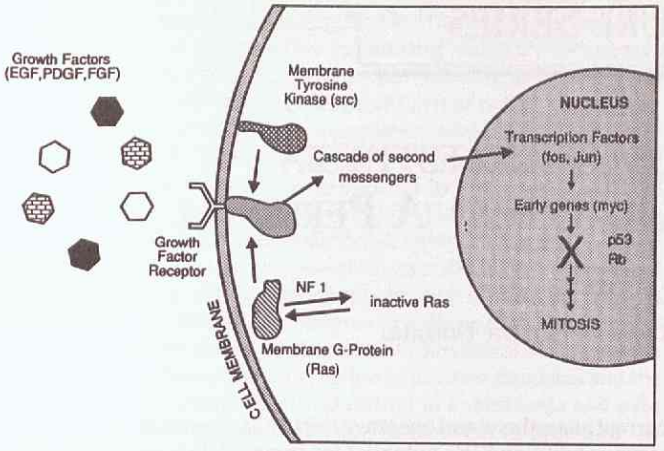
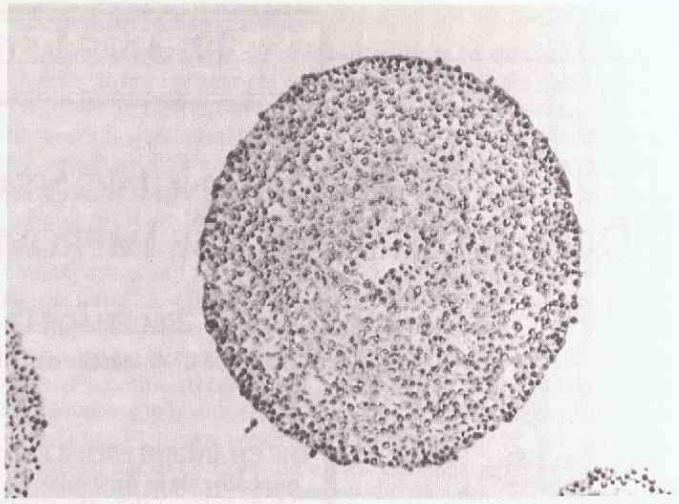


Diagram of growth factor interactions on cell membrane and the cascade of reactions through the cytoplasm to involve the nucleus.



Glioma spheroid with proliferative edge, quiescent mantle and inner necrotic core.

the brain adjacent to the tumour can be studied as well as the interaction of the now increasing number of important growth factors that have been found to influence both the tumour cell and the adjacent micro environment.

The hallmark of the glioma is the relentless infiltration of the tumour cell through the brain. This might be due not only to the innate capacity of the tumour cell but also be facilitated by changes in the extra cellular matrix possibly influenced by secretions of the tumour. Studies have been directed to identifying the matrix proteins which both enhance and retard infiltration with obvious potential for treatment.

At the present time the treatment of cerebral glioma is unsatisfactory. Surgery offers the patient only a definite diagnosis and palliation of symptoms of raised intracranial pressure. The median survival time for patients with malignant glioma following surgery alone is approximately seventeen weeks. Radiotherapy is the mainstay of treatment and most series utilising conventional radiotherapy techniques report median survival times of approximately thirty-six weeks. Conventional adjuvant chemotherapy has not proven to be of value and the best results consistently show median survival times of less than one year. Many different adjuvant therapies are being investigated, including the use of new chemotherapy agents, new methods of administering cytotoxic chemicals, immuno-therapy, hyperthermia, new techniques of radiotherapy and photodynamic therapy.

Advances in surgical techniques allow a safer and less traumatic excision of the brain tumour. Standard neurosurgical equipment now includes ultra sonic aspiration devices and lasers of a wide range of wave lengths which enable their ablative properties to be tailored to the particular tumour type and results in a less traumatic excision of the tumour. Stereotactic equipment has enabled a safer and more accurate exposure of deep intracranial tumours, and when combined with the laser enables a precise excision of deep cerebral tumours in eloquent and dangerous positions.

Photodynamic therapy is a technique that has special advantages as an adjuvant therapy of malignant brain tumours as it has been shown to be particularly effective in the control of local tumour growth. Photodynamic therapy consists of two distinct components: the selective uptake of a sensitizer by tumour followed by irradiation of the tumour containing the sensitizer with light of a wave length that will penetrate through tissue (for example, the brain) and activate the sensitizer within the tumour cells, selectively killing the tumour cells and sparing the adjacent normal tissue. *In vitro* and *in vivo* studies have shown the selectivity of various sensitizers into brain tumours as well as the selective destruction of tumour with sparing of brain. Boronated porphyrins are a particularly exciting new class of sensitiser that combine the potential of photodynamic therapy with another binary treatment system, boron neutron capture therapy. This treatment relies on the selective uptake of boron by tumour cells, followed by irradiation of the tumour with a special neutron beam which activates the boron. The alpha particle which is released has an effective biological activity confined to the cell in which it is produced, thereby causing selective tumour destruction. Boronated protoporphyrin (BOPP) was synthesised by Dr Stephen Kahl at UCSF and has been evaluated by a team of scientists led by Dr John Hill in our laboratories. This compound has been shown to be incorporated into tumour cells with a selectivity 400 times compared with adjacent normal brain. Importantly, this sensitizer and others have been shown to be taken up into the tumour cells spreading out into the adjacent normal brain as it is these cells that adjuvant therapies must target if the tumour is to be controlled.

Photodynamic therapy has now been used in over 100 patients with malignant brain tumours at The Royal Melbourne Hospital. The median survival time for glioblastoma multiforme, the most malignant of the brain tumours, is three times that of the historical controls and there are long term survivors with patients living up to seven years.

Cerebral glioma is a terrible cancer with no effective treatment. It is the fourth most important tumour in terms of 'life years lost' in Victoria. However, there is now a real basis for cautious optimism that effective therapies will be developed over the next decade. These will result from both a better understanding of the pathogenesis and basic biology of the tumours as well as the new techniques that are being developed by scientists studying biological control of tumours, as well as those developing new instruments. The challenge will remain for the next century that we must develop treatments that should be available to all people, and not just those of privileged countries.

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DEAN'S LECTURE SERIES

5.30 p.m. SUNDERLAND THEATRE

21 June 1994

ACUTE STROKE: A NEW ERA?

Professor Geoffrey Donnan
Director of Neurology
Austin Hospital

THE CHANGING STATUS OF ANAESTHESIA DOES BETTER SCIENCE IMPROVE OUTCOME? A PERSONAL VIEW

PROFESSOR DUNCAN W BLAKE
Director of Anaesthesia, The Royal Melbourne Hospital


PROF. DUNCAN BLAKE

THE CHANGING PROFILE of anaesthesia in Australia: In Melbourne, the Medical Faculties of both The University of Melbourne and Monash University have recently acknowledged the importance of research and teaching in anaesthesia with additional academic appointments in this discipline. The lack of progress in Melbourne, relative to other Australian cities, had been of concern to the then Faculty of Anaesthetists of the Royal Australian College of Surgeons and vigorously debated by Victorian anaesthetists. However, the community may reasonably ask whether these developments have the long-term potential to improve outcome for patients undergoing surgery and anaesthesia.

Anaesthesia has followed a stormy course to reach its current level of scientific achievement with periods of frenetic advancement followed by steady consolidation of ideas. The haphazard use of a variety of herbs and sedatives in conjunction with surgery was rejected in the 1840s. The advances of that time were not solely related to the knowledge of substances with properties suitable for anaesthesia, for this had been present for some years. Other revolutions in thinking, the development of a humanitarian ethic and progress towards a rational medical science were also necessary for the goal of true anaesthesia to be sought[1]. The practitioners actually responsible for the first application of anaesthesia – Crawford Long, Horace Wells and William Morton – were all young, willing to explore a totally new concept and not preoccupied with an established medical practice. It is likely that the major contribution of academic departments of anaesthesia today will be to encourage specialists-in-training to continually provide new perspectives on established anaesthesia practice.

Ralph Waters at the University of Wisconsin, Madison, was appointed as the first Professor of Anaesthesia in 1927. He initiated the first formal postgraduate training program for physicians in anaesthesia. Professor Waters had an important influence on Australian anaesthesia by his association with a 1926 University of Melbourne graduate, Geoffrey Kaye. Dr Kaye was a founder member of the Australian Society of Anaesthetists and by his contacts with anaesthetists overseas and his USA travels, did much to keep Australian anaesthesia up to world standards. The first text-book on anaesthesia to be written in Melbourne, *Practical Anaesthesia,* was published by the Alfred Hospital and The Baker Medical Research Institute in 1932 (the first monograph published by The Baker Institute)[2]. The University of Melbourne contributed to anaesthesia in its early years by provision of laboratory space in the Department of Physiology. This temporary scientific headquarters for the ASA was opened in 1946, the centenary of Morton's demonstration of ether in Boston. Dr Kaye also established anaesthesia as part of the undergraduate curriculum at The University of Melbourne.

Current anaesthesia risk

Why should anaesthesia research be given a higher priority and why is it necessary for anaesthesia to be seen as a separate and unique specialty? This question can only be answered after consideration of current anaesthetic and operative risks, the scope of the anaesthetist's responsibility and the potential for basic science to be applied to problems in anaesthesia.

Public recognition that anaesthesia mortality was even a problem was delayed for many years. The first professor of anaesthesia at Oxford, Sir Robert Macintosh, in the 1940s contended that many anaesthesia-related deaths were preventable and poured scorn on the then common practice of labelling these deaths as due to 'status thymicolymphaticus'. The final diagnosis of 'generalised organ failure' can also be used today to mask specific adverse events in the perioperative period that are important for the evaluation of anaesthetic practice. A recent NHMRC report on anaesthesia-related deaths in Australia for 1988-90 criticises failure to report 'inevitable' deaths.

In a lecture delivered in 1990, Dr Keats of the Texas Heart Institute[3] dismissed claims of a decreased anaesthesia mortality in the past forty years despite assumptions that factors such as the introduction of post-anaesthesia recovery rooms and continuous respiratory monitors must have achieved such a reduction. It is probably true that improved anaesthesia care as well as improvements in other medical care (such as cardiac resuscitation) have reduced mortality. However, there is evidence that the incidence of human error is similar and that new mechanisms of mortality have been introduced along with the new interventions required with anaesthesia for more complex surgery.

Difficulties encountered in studies of anaesthetic outcome include the problem of separating primary anaesthetic from surgical causes of morbidity, variation in definitions of morbidity and difficulty in determining trends when the actual rate of anaesthetic complications is low. A landmark prospective study was the Confidential Enquiry into Perioperative Death (CEPOD) undertaken in the UK in 1987 which involved about 500,000 surgical procedures associated with a crude mortality rate of 0.7 per cent[4]. Both surgical and anaesthetic causes were assessed, with voluntary reporting of data, guaranteed confidentiality and protection from subpoena. Avoidable factors were identified in about 20 per cent of cases, but the study concluded that generally pre-existing disease, surgery and anaesthesia all contributed to the mortality.

In Australia our most recent information regarding anaesthesia risk is the NHMRC report which covers the 1988-90 period[5]. The estimated mortality was about 2/100,000 anaesthetics, with 50 per cent of the mortality being due to combined anaesthetic and surgical causes. There are however many problems in interpreting their data. For example, the total number of anaesthetics given during that period in Australia is unknown and definitions of anaesthesia-related mortality and the procedures for reporting vary between the states. Deficiencies in the pre-operative assessment of patients, in recovery room facilities and in the application of knowledge by anaesthetists and trainees were observed. However, data collected in NSW for the past twenty-five years does suggest that the incidence of anaesthesia-related deaths has declined in that state, although the types of error reported may be unchanged[6].

Although errors in anaesthetic management are nearly always part of a complex cascade of events in circumstances that cannot be predicted, improvements can be made with better staff training and supervision and with the introduction of standards of care, particularly in regard to patient monitoring. In the 1980s practice standards for patient monitoring were introduced by the American Society of Anesthesiologists involving continuous monitoring of expired carbon

dioxide (capnography) and arterial oxygen saturation (pulse oximetry). The Australian and New Zealand College of Anaesthetists has also introduced standards for monitoring which are fortunately widely adhered to. However, the use of monitoring in itself will not decrease risk unless it produces information that will be acted upon. Analysis of a group of probable anaesthesia-related deaths that had been the subject of litigation in the USA, revealed that about a third of the deaths could have been prevented by the correct use and interpretation of respiratory monitors[7]. This assumes that the information would have been 'assimilated, interpreted and acted upon correctly'. In the future, developments in anaesthesia equipment and monitoring will depend upon the demonstration of cost-effectiveness in comparison to existing techniques as well as demonstration of clinical efficacy. The process will involve the identification of patterns associated with adverse outcome, review of practice standards and the provision of good postgraduate education in anaesthesia and pain management. Anaesthesia must aim, in addition to providing an unconscious or sedated patient, to treat the response to surgical stress and to compensate for the effects of systemic disease already present.

The influence of anaesthesia on cardiovascular control

Investigation of the role of the autonomic nervous system (ANS) in cardiovascular control and its modification with chronic cardiovascular disease is one example of how basic science can be usefully applied to the practice of anaesthesia. This area of research has been a priority for many anaesthetists because of the significance of myocardial infarction, cardiac failure and dysrhythmias in perioperative morbidity and mortality. The major studies of perioperative cardiac risk have found that autonomic nervous system dysfunction associated with hypertension, congestive heart failure and diabetes contributes to this risk. However, clinical studies alone often do not provide adequate data and there is a need to develop hypotheses based on controlled experiments. In order to isolate the effects of individual drugs and to analyse different therapeutic interventions, studies must be performed in isolated tissues, preferably human and from both control and disease groups, and also in animal models of these disease processes.

Most cardiovascular complications in the perioperative period, other than those due to error, hypoxia or hypovolaemia, are a result of the high incidence of coronary artery disease in patients presenting for both cardiac and non-cardiac surgery. Improved medical management of coronary artery disease with the beta blockers and then calcium channel entry blockers has aided the anaesthetist, but probably resulted in a greater number of these patients being offered surgery. For these patients the relationship of choice of anaesthetic to outcome is unclear, which is not suprising given the number of drug interactions possible and the continual changing of the range of drugs used for both general and regional anaesthesia. Understanding the pathophysiology of chronic heart failure (CHF) for example, an ominous outcome predictor, will help to design interventions likely to be effective in improving outcome. Whatever the anaesthetic choice, it is evident that changes in autonomic cardiovascular control and vascular tone are important. Increases in heart rate and hypotension are the gross features that can be related to episodes of myocardial ischaemia. However, when ventricular function is marginal it becomes very sensitive to the changes in preload and afterload that may result from anaesthesia. There is evidence that a degree of autonomic blockade is desirable during surgery as this is likely to prevent some episodes of myocardial ischaemia related to sudden haemodynamic changes.

Conclusions from the Perioperative Ischaemia Research Group in the USA were reported in 1992[8]. Anaesthesia itself appeared safe with no deaths occuring during surgery in the high-risk patients studied. Clinical factors that correlated with postoperative death or myocardial ischaemia could be identified, but little information was available about the pathophysiology of the development of the myocardial ischaemia or altered vascular responsiveness after surgery. With an ageing population a great increase in non-cardiac surgery carried out in high-risk patients is expected. It is estimated that of the 25 million patients who undergo non-cardiac surgery each year in the USA, about one quarter of a million sustain non-fatal perioperative myocardial infarction or serious dysrhythmia resulting in costs of greater than 1 billion US dollars per year.

Acute pain management

Anaesthetists now consider themselves to be the clinicians most qualified to have primary responsibility for acute pain management. They have detailed knowledge of both the relevant pharmacology and the necessary technical competence to apply it using nerve blockade, intravenous, epidural, spinal and other routes. Current practice in this country still falls short of patient expectations and what should be possible with the techniques at our disposal. In addition, pain has important physiologic consequences that may result in postoperative complications and adverse outcome. Acute pain does have a biologic function and is useful in diagnosis, but this clearly cannot be used as an excuse for inadequate post-operative treatment.

Acute pain is often inadequately relieved. A report of the NHMRC in 1988[9] identified this problem and observed: 'medical and nursing staff involved in postoperative pain management have insufficient knowledge of pharmacokinetics, fail to recognise the need for analgesia, fail to observe the effects of analgesic drugs and have inappropriate concerns over side-effects'. The provision of adequate resources for acute pain relief is therefore an important issue for society in general, as well as for physicians. Many Australian teaching hospitals have developed an 'acute pain service', organised by anaesthetists, to ensure regular review of certain groups of patients and to enable the introduction of new drug delivery systems and routes, whilst guarding against the additional complications that these new methods inevitably introduce. Such organisation requires the co-operation of surgical colleagues, nurses, physiotherapists and other staff who must all be familiar with new techniques.

Anaesthesia research in Australia

What should be our future goals for anaesthesia research in Australia? There are limited patient numbers at our individual teaching hospitals, small by world standards, which makes it difficult to conduct outcome studies to answer specific questions about choice of anaesthetic technique in well-defined groups of patients. However, there are opportunities to co-ordinate studies between hospitals and possibly across the country. The progress of anaesthesia has been associated with the continued introduction of new drugs which, in some cases, for example the muscle relaxants, are becoming close to 'ideal' drugs. However, there is concern that clinical research is primarily driven by pharmaceutical companies and oriented towards marketing.

Anaesthetists also hope to make better use of the resources of Australia's excellent departments of physiology and pharmacology and the research institutes associated with our major hospitals. Their research output has a high international standing and the time is ripe for Australian anaesthesia to make a more substantial contribution.

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Acknowledgement

Professor Blake's article will appear in *The Australian and New Zealand Journal of Surgery* later in 1994. The Editorial Board thanks the Royal Australasian College of Surgeons for their permission to publish this abridged version.

Faculty of Medicine, Dentistry & Health Sciences

From The Dean

Academic Centres

During 1993, the Faculty strengthened and broadened its national and international focus with the approved establishment of a further four academic Centres:

- World Health Organisation Collaborating Centre for Women's Health designation for the Key Centre of Teaching and Research in Women's Health in Society, Department of Public Health and Community Medicine, under the Directorship of Associate Professor Lorraine Dennerstein.
- The University's International Conflict Resolution Centre, School of Behavioural Science, under the Directorship of Dr Diane Bretherton.
- The Joint Centre for Epidemiology and Public Health Medicine, between Monash University and The University of Melbourne, under the Co-Directorships of Professor John McNeil, Department of Social and Preventive Medicine, Monash University, and Professor Hedley Peach, Department of Public Health and Community Medicine, The University of Melbourne.
- The University's Interim Centre for Food Science and Engineering, under the Directorship of Dr Barrie Davidson, Department of Biochemistry.

The establishment of a University Centre for Rural Medicine, Department of Public Health and Community Medicine, located at Ballarat Base Hospital, under the Directorship of a new Professorial Fellow or Associate Professor position, was also recommended in 1993 and approved in 1994.

The Faculty is linked directly with the following other Centres:

- Co-operative Research Centre for Cellular Growth Factors
- Co-operative Research Centre for Cochlear Implant, Speech and Hearing Research
- Co-operative Research Centre for Vaccine Technology
- Human Communication Research Centre
- Key Centre of Teaching and Research in Women's Health in Society
- National Centre in HIV Research
- National Centre for Health Program Evaluation
- WHO Collaborating Centre for the Prevention of Blindness
- The Arthritis Foundation of Victoria Centre for Rheumatic Diseases.

Higher Degree Programs

The Faculty's objective of promoting the participation of Australian and overseas medical, dental, physiotherapy, science and psychology graduates in higher degree programs has continued with great success, as measured by the extraordinarily strong demand for higher degree programs of the Faculty. In 1993, 669 EFTSU (Equivalent Full Time Student Unit), compared with 585 EFTSU in 1992, were enrolled as higher degree students in the Faculty. This is 19.2 per cent of the total teaching load of the Faculty, compared with 18.3 per cent in 1992 and 10.2 per cent in 1980; for the University the proportion of higher degree load to total teaching load in 1993 is 12.9 per cent. The proportion of Faculty higher degree load to University higher degree load in 1993 is 22.7 per cent, compared with 13 per cent in 1980.

The breadth and success of these programs can be seen from the list of Higher Degrees and Diplomas awarded in the School of Medicine in 1993 (see page 26).

Having regard particularly to the establishment of the University's Graduate School and the continuing growth in Faculty postgraduate activities for local and overseas candidates, Faculty agreed to fill the vacant position of Assistant Dean (Postgraduate Studies) from 1 January 1994. Professor Peter Phelan was elected to this post in December 1993. The Assistant Dean (Postgraduate Studies) will have responsibility on behalf of the Dean for postgraduate studies/research matters and postgraduate continuing education.

Quality of Educational Programs

This Faculty continues to place great emphasis on promoting and monitoring the quality of its teaching programs. This commitment includes the preparation of educational objectives, monitoring through questionnaire feedback from students on subjects and on courses as a whole, deliberation concerning the results of the feedback through curriculum review processes and ongoing adaptation, and development of educational programs including the use of new technologies and adoption of new initiatives.

As part of the Faculty's interaction with the University's Quality of Education Working Group in 1993, the Faculty's Curriculum Review Committee analysed responses from schools and departments of the Faculty in its review of current practices in quality assurance and the management of quality in teaching and learning. Faculty agreed that there is a need for a process by which the monitoring by departments of teaching programs is formally reported back to Faculty. Commencing in 1993, an annual report from the teaching units of the Faculty will be prepared at the end of each year, and the heads of the teaching units have been asked to nominate a departmental representative to serve as a 'Quality of Education Co-ordinator' for the purpose.

The Singapore Government announced at the end of 1993 that the medical schools at The University of Melbourne and The University of Sydney have been selected from the ten medical schools in Australia as the only institutions in the southern hemisphere accredited for registration of overseas-trained Singaporean medical practitioners by the Singapore Medical Council. The other approved international medical schools are situated in Canada, the UK and USA. The measure has been introduced to control the supply of doctors in Singapore. In accrediting overseas medical schools, the Singapore Medical Council has indicated that consideration had been given to entry requirements, grades of students, teacher-student ratio, reputation and research strength.

Teaching

During 1993 approval was given for this Faculty and the Faculty of Arts to introduce a seven-year combined MBBS/BA course in 1994. Up to 10 places will be available within the MBBS quota for medical students to pursue studies in the humanities, languages or social sciences fields. Discussions are well advanced with the Faculty of Science for a combined MBBS/BSc course to commence in 1995, with a similar quota of 10 places within the MBBS intake. A significant curriculum innovation for the first year of the MBBS course was approved for 1994. First year students will each be given structured clinical exposure at Royal Children's Hospital, comprising a one-day session in a general medical or general surgical ward, and one evening of casualty/admission experience.

The School of Physiotherapy, under the leadership of Professor Joan McMeeken, has successfully completed its third year of operations. Following the first two years of admissions to the Bachelor of Physiotherapy course, the number of places at first year level for local students doubled from 40 to 80 in 1993. This intake will continue for the future. The third year of the course was mounted for the first time, and the fourth (final) year program was developed and approved for 1994.

The strong demand for biomedical teaching by the School of Medicine to BSc students (years 2, 3) and for BSc(Hons) teaching from the School's pre-clinical and clinical departments continues. Since 1989 second and third year BSc teaching has increased from 279 EFTSU to 411 EFTSU in 1993, and an agreed target teaching load in 1994 of 424 EFTSU. Teaching of BSc(Hons) students has increased from 56 EFTSU in 1989 to 83 EFTSU in 1993.

During 1993, it was agreed that the School of Dental Science will introduce changes to the final year of the BDSc course in 1994. The changes provide for an increase in students' clinical experience with

greater emphasis being placed on ethics in dental practice, quality assurance and comprehensive total patient management.

Building on the successful programs offered for the Graduate Diploma in Women's Health and the Master of Medicine (Women's Health) by the Key Centre of Teaching and Research in Women's Health in Society, Department of Public Health and Community Medicine, approval was given for the establishment in 1994 of the degree of Master of Women's Health by thesis or by course work/minor thesis. An innovative intensive teaching program, devised in the first instance for overseas students, was commenced during 1993 as an alternative means for gaining the Graduate Diploma in Women's Health.

During the year, Faculty approved in principle the development of a new Master of Public Health course work program for medical and non-medical graduates in conjunction with Monash University, for both local and overseas students. It is intended to commence these programs in 1995.

A postgraduate Diploma in Advanced Clinical Nursing program was approved in the latter part of the year for commencement in 1994 or as soon as possible thereafter. With the agreement of The Royal Melbourne Hospital and Royal Children's Hospital, and close collaboration with the respective Divisions of Nursing, a one-year full-time course has been developed to be administered through the University Department of Medicine (The Royal Melbourne Hospital/Western Hospital) in the case of specialty programs at The Royal Melbourne Hospital, and through the University Department of Paediatrics in the case of specialty programs at Royal Children's Hospital. It is proposed in the first instance to prepare graduate nurses for specialty practice in intensive care, coronary care, cardiothoracic, emergency and perioperative nursing (The Royal Melbourne Hospital) and paediatric and paediatric intensive care nursing (Royal Children's Hospital).

Research

For 1993 this Faculty again was successful in obtaining the largest allocation of NHMRC funding of any medical/health sciences faculty in Australia. Approximately $10.1 million of NHMRC funds were obtained to support 110 Project Grants and 6 Program Grants in the Faculty for 1993, as well as approximately $2 million of NHMRC funds awarded to associates of University departments in affiliated teaching hospitals. From all sources outside the University, this Faculty attracted in 1993 a total of approximately $27.9 million (42 per cent of the University total) in funding to support research.

The Faculty is the largest recipient of contract research in the University. It is responsible also for 42 per cent of the publications emanating from the University, as documented in research reports from departments.

The Microsurgery Research Centre, St Vincent's Hospital, and the Neuromuscular Research Centre, St Vincent's Hospital, were approved as recognised research organisations for postgraduate training and research purposes.

Staff

Academic appointments taken up in 1993

- Professor Jim Angus, Chair of Pharmacology
- Professor John Furness, Chair of Anatomy (transfer from Chair of Physiology)
- Professor John Trinder, Chair of Psychology
- Professor Greg Whelan, Professor/Director of Drug and Alcohol Studies (St Vincent's Hospital)
- Professor David Copolov, Director, Mental Health Research Institute
- Professor Bruce Kemp, Deputy Director, St Vincent's Institute for Medical Research
- Professor Ian Gust, Director of Research and Development, Commonwealth Serum Laboratories
- Professor Graham Mitchell, Director of Research, Commonwealth Serum Laboratories
- Professor Geoffrey Donnan, Professor/Director of Neurology (Austin Hospital/Heidelberg Repatriation Hospital)
- Professor Frank Oberklaid, Professor/Director of Community Child Health and Ambulatory Paediatrics (Royal Children's Hospital)
- Professor John Hamilton, Professorial Fellowship, Department of Medicine (The Royal Melbourne Hospital/Western Hospital).

Approved new positions

- Professor/Director of Radiation Oncology (Peter MacCallum Hospital)
- Professor/Director of Paediatric Surgery (Royal Children's Hospital)
- Professor/Director of Haematology & Oncology (Royal Children's Hospital)
- Professor/Director of Medical Imaging (St Vincent's Hospital)
- Chief Psychologist with the title of Professor (Royal Children's Hospital).

Appointments taken up in 1994

- Professor Joseph Sambrook, Professor/Director, Peter MacCallum Cancer Institute Research Laboratories
- Professor Peter Disler, Professor/Director of Rehabilitation Medicine (The Royal Melbourne Hospital).

Positions pending appointment

- Chair of Dental Science
- Chair of Physiology
- Chair of Orthopaedic Surgery (Royal Children's Hospital)
- Professor/Director of Cardiology (The Royal Melbourne Hospital)
- Professor/Director of Infectious Diseases (Fairfield Hospital and Austin Hospital)
- Professor/Director of Murdoch Institute for Research into Birth Defects (Royal Children's Hospital)
- Professor/Director of Orthodontics (The Royal Dental Hospital of Melbourne).

Bereavements

- Professor Emeritus Sir Sydney Sunderland, formerly Dean of the Faculty of Medicine, Professor of Anatomy and Professor of Experimental Neurology
- Professor Emeritus A E Doyle, formerly Professor of Medicine (Austin Hospital)
- Professor Emeritus J G Waterson, formerly Dean of the Faculty of Dental Science, Professor of Restorative Dentistry
- Sir Edward (Weary) Dunlop, formerly surgeon and clinical teacher, The Royal Melbourne Hospital
- Mr B Mc O'Brien, formerly Director, Microsurgery Research Centre, St Vincent's Hospital
- Mr A J Murphy, formerly Committee of Convocation nominee (medical graduate) on Faculty of Medicine, Dentistry and Health Sciences.

1993 Honours, Awards and Other Appointments

- *Order of Australia:* Professor Donald Metcalf AC, Professor Henry Burger AO, Dr Peter Bladin AO, Dr Margaret Garson AO, Professor Graham Mitchell AO, Ms Rae Anstee AM, Dr Brian Collopy AM, Dr John M Court AM, Mr Harry M Hearn AM, Mrs Patricia Heath AM, Dr W H Kitchen AM, Ms Delys B Sargeant AM
- *1993 Albert Lasker Clinical Medical Research Award:* Professor Donald Metcalf
- *Vice-President and President-elect of the World Medical Association:* Professor Emeritus Priscilla Kincaid-Smith
- *President-elect of Australian Psychological Society:* Dr B J Fallon
- *Ian Clunies Ross National Science and Technology Award for 1993:* Mr G I Taylor
- *Organon Senior Research Award of the Royal Australian and New Zealand College of Psychiatrists:* Associate Professor Fiona Judd
- *1993 Susman Prize of the Royal Australasian College of Physicians:* Dr S Berkovic
- First Prize (for the third time in succession) in the *Basic Science Category by the Educational Foundation of the American Society of Plastic and Reconstructive Surgery:* Mr G I Taylor
- *Election as a Fellow of the Australian Academy of Science:* Professor A W Burgess
- *Kathleen and Lovat Fraser Award, National Heart Foundation of Australia:* Dr R J Summers
- *Alcon Research Institute (USA) Award:* Professor H R Taylor
- *Degree of Doctor of Science, University of Edinburgh:* Professor G J A Clunie
- *University of Melbourne Medical Society BMedSc Prize (two awards):* Mr Peter Mount, Mr Wai-Ting Choi.

1994 Australia Day Honours

- Professor Graeme B Ryan AC, Associate Professor Lorraine Dennerstein AO, Dr John Paterson AO, Dr Bernard Neal AM, Dr David Brownbill AM.

Students

The Faculty continues to attract outstanding students to its undergraduate courses. During the year the 1993 Australian Students Prize winners were announced based on 1992 Year 12 performances. There were 132 Victorian winners out of a national total of 498, with The University of Melbourne students gaining 94 of the 132 prizes. This Faculty's students received 46 (or 49 per cent) of the 94 University prizes comprising MBBS 44, BDSc 1, BPhysio 1. At the higher degree level, Ms Inge-Lise Bygott, a higher degree student in Physiotherapy, received the Young Researcher Award at the 1993 Australian Sport Medicine Federation Conference.

For the medical course, under the new VCE system, the primary Tertiary Entry Score (TES) cut-off was 161 out of a maximum possible score of 172 (for students taking an Extensions mathematics subject) and a maximum of 168 otherwise. Students selected on the margin had scores ranging between 157 and 160. Of all students who had either Melbourne or Monash Medicine as first preference and who had a TES (calculated for Melbourne Medicine) of at least 161, 82 per cent had Melbourne Medicine as first preference.

The first year medical quota of 169, comprised 43 per cent female students, and included nine students with social and/or educational disadvantage admitted under the University's Special Admissions Scheme. The second year quota of 182 included seven Lateral Entry Scheme Students and eight Extended Special Admissions Scheme students, who gained admission after the satisfactory completion of two years of Science to prescribed standards. Twenty-eight full-fee overseas students were admitted to first year, and 54 such students were enrolled in second year, 34 in third year, 31 in fourth year, and two in fifth year. Four refugee students admitted to the course previously were undertaking studies in the later years in 1993, one of whom successfully graduated.

Community Relations

The Faculty continues to place a very high priority on promoting good relationships with alumni and with related professional groups in the community.

The University of Melbourne Medical Society (UMMS), well established and with a strong membership, has built up excellent links with medical alumni. At the annual UMMS Lecture in November 1993, Dr Nigel Gray captivated the audience with an outstanding lecture and presentation entitled 'How to Win Friends and Influence People – Forty Years in Public Health'. Many graduates enjoyed medical reunions in 1993, with several groups returning to the medical building for reunion seminars. The UMMS journal *Chiron*, was again of the highest standard in 1993 thanks to the commitment and work of its joint editors, Mr Peter Jones and Mrs Margaret Mackie. For several years UMMS has sponsored an annual prize for the best BMedSc Research Report submitted by a medical student. In further support of medical undergraduate education, UMMS has agreed to award prizes each year to Final Year students for essays submitted in connection with their elective studies, and four such awards were made in 1993.

The Society of Alumni and Friends of Dental Science (SAFODS) has recently approved a new constitution and appointed a new Committee of Management. The Society has continued to provide valuable support to the School of Dental Science and is looking forward to accelerated development and new initiatives in the coming year.

Providing mutual support and interaction between the School of Physiotherapy and the physiotherapy profession, Friends of Physiotherapy – University of Melbourne, increased its membership in 1993. Friends of Physiotherapy gave funding and support to meet various needs of the School of Physiotherapy during 1993.

A survey of graduates conducted by the School of Behavioural Science identified the need for continuing education in clinical areas of psychology. In response to this the School held a summer school on post-trauma reactions as well as a joint course, sponsored by the Australian Psychological Society, entitled 'The Assessment and Treatment of Severe Mental Disorders'.

The Faculty actively promotes continuing education. Under the leadership of Professor Emeritus Priscilla Kincaid-Smith, the Continuing Medical Education Unit offered eleven courses in 1993. These courses, mostly for general practitioners, were developed by departments with the support of the Department of Public Health and Community Medicine General Practice Unit and the Continuing Education office. Associate Professor John Harcourt, Co-ordinator of Continuing Dental Education, and academic staff of the School of Dental Science, with the support of the Continuing Dental Education office, developed 13 courses for dental practitioners in 1993. In addition, the School of Dental Science ran a series of research seminars throughout the year for School and Hospital research staff. The School of Behavioural Science continues its summer schools for clinical psychologists as part of the University's Summer School program. Occasional seminars for members of the physiotherapy profession and a summer school were offered by the School of Physiotherapy.

The Dean's Lecture Series continued to provide a valuable forum for inaugural orations and other special lectures with an interesting program in 1993. Speakers were Professor John Mills, Professor Jim Angus, Professor Graeme Smith (who gave the Beattie Smith Lecture), Professor Edward Byrne, Professor Bruce Kemp, Professor Irwin Faris, Professor Andrew Kaye, Associate Professor Martin Tyas and Professor Duncan Blake. The major seminar on an ethical topic which completed the series was 'The Dead Do Tell Tales – Declining Autopsy Rates and the Quality of Health Care', convened by Professor Richard Smallwood. This was very well received, attracting a large audience and generating discussion through the media.

Many members of staff of the Faculty participate in public debate, contribute to the media, interact with politicians and advise government agencies as well as involve themselves heavily in leadership roles in professional organisations and other external bodies.

On a global level, staff of the Faculty have an outstanding network of international links reflecting the great internationally competitive research strengths of the Faculty. Academic staff at all levels participate actively in overseas meetings and in collaborating with international colleagues. Many overseas postdoctoral fellows and more senior visitors participate in the research programs of the Faculty each year. Arising from the visit of the Dean to Indonesia in April/May this year, a Memorandum of Understanding was signed between the Faculty of Medicine, University of Indonesia, and the School of Medicine, The University of Melbourne. During the trip discussions were held with the Dean of the Faculty of Dentistry, University of Indonesia, concerning extension and broadening of the existing agreement between that Faculty and the School of Dental Science, The University of Melbourne. In a separate development, approval was given for an agreement to be established between The University of Melbourne and Khon Kaen University, Thailand, for academic exchange and co-operation in Dental Science.

Following the visit of the Dean to Indonesia, Brunei and Malaysia in April/May 1993, the Faculty has confirmed as an objective the development of strong links with medical, dental and physiotherapy schools in South-East Asia, particularly to promote increased numbers of postgraduate students from the region undertaking degree programs and short courses. A short course to be offered through the Key Centre of Teaching and Research in Women's Health in Society in early 1994 has the keen interest of prospective participants from China, Malaysia, Philippines, Indonesia, India and Vietnam. Planning also has commenced to promote Master of Medicine course work programs and short (continuing education) courses in Internal Medicine, Child Health, Public Health and Women's Health.

The Faculty has undertaken a serious commitment to promote its interaction with schools. Following the Dean's chairmanship of the University's Schools Liaison Working Group, the Dean has maintained his involvement with the Schools Liaison Unit and chaired the University's Year 12 Residential Program (Unilife) Working Group. The Dean, and other academic and administrative staff visited several schools, accompanied by current undergraduate students, during the year. These visits were supplemented by a program of Faculty tours for groups of school students visiting the campus.

Faculty Administration

A special tribute again needs to be paid to the outstanding support given to the Faculty by the staff of the Faculty Administration under

the excellent leadership of the Assistant Registrar (Medicine, Dentistry and Health Sciences), Mr Darrell Mead, with the assistance of his staff: Ms Joan Reese, as Executive Officer (Dentistry); Ms Helen Revell, Executive Officer (Behavioural Science); Ms Glenda Nicol, Executive Officer (Physiotherapy); Ms Kaye Lincoln, who has filled the new position of Executive Officer (Medicine) since March; Mr Cyril Yardin taking special responsibility for budgetary, finance and research including NHMRC matters, assisted by Ms Joan Forrest; Ms Anne Szadura, and Ms Claire Stevenson, assisted by Ms Judith Hillier, in providing support to the School of Medicine; Ms Robin Orams and Ms Elizabeth Brentnall, in overseeing the Continuing Education and Alumni Relations activities of the Faculty; Mrs Julie Meinken assisting with Continuing Dental Education; and Mrs Iris Welcome for continuing to run the Dean's office with great efficiency.

Graeme B Ryan AC
Head, School of Medicine
Dean, Faculty of Medicine, Dentistry & Health Sciences

Medical Education Programs 1993 Delegation to Indonesia, Brunei and Malaysia

Professor Graeme Ryan and Mr Darrell Mead in front of the Indonesian wall hanging which was presented to the Faculty by Professor Mardiono Marsetio, MD, Dean of the Faculty of Medicine, University of Indonesia, during the delegation's visit to Jakarta in April 1993.

The University of Melbourne

In 1956 and 1957, during the deanship of the late Sir Sydney Sunderland, The University of Melbourne Medical School took part in the exploratory and preparatory phases of the federal government's scheme to assist medical education in Indonesia. At that time the Australian government had been asked by the government of Indonesia to help, under the Colombo Plan, with the establishment of a medical school in the University of Andalas at Bukittinggi in Central Sumatra. The project was approved by Faculty, though at that time there was concern about the lack of provision for clinical teaching. Civil unrest in Indonesia during the early part of 1958 delayed and finally put an end to an important international co-operative undertaking in the field of medical education. Contact has been maintained, however, through the many graduates and consultants who continue to work and collaborate with colleagues in Southeast Asia.

New links were established in April 1993, when the Dean, Professor Graeme Ryan, accompanied by Professor Peter Phelan and the Assistant Registrar of the Faculty, Mr Darrell Mead, visited faculties of medicine and dentistry in Jakarta, Brunei and Malaysia, to promote the participation of high quality overseas students in the Faculty's undergraduate courses, postgraduate programs and continuing (short course) medical education. Access to funding and scholarships was an integral part of the discussions. The group, which was joined by Ms Glen McIntyre from the University's International Office during the Jakarta meetings, met with full co-operation, warmth and enthusiasm at each university, and returned to Australia with a sense of achievement. The following contacts were established:

University of Indonesia

Gadjah Mada University

INDONESIA. The medical schools of the University of Indonesia (Jakarta) and Gadjah Mada University (Jogjakarta) expressed considerable interest in postgraduate programs. A formal agreement was established to promote further co-operation between The University of Melbourne and University of Indonesia not only in postgraduate programs but also in staff training and exchange and research programs. A signing of 'Memorandum of Understanding' between the Faculty of Medicine, University of Indonesia and the School of Medicine of The University of Melbourne occurred in Jakarta on 26 April 1993.

University of Brunei Darussalam

BRUNEI. Discussions were held with the Vice-Chancellor of the University of Brunei Darussalam, the Australian High Commissioner and staff, the Ministry of Education and the Ministry of Health. As a result interest was generated in the possibility of Bruneian students attending undergraduate courses at The University of Melbourne Medical School and in the School taking part in a program to upgrade standards in the Bruneian hospital system.

National University of Malaysia

MALAYSIA. The group held discussions in Kuala Lumpur with representatives of the Faculty of Medicine of the National University of Malaysia, Faculty of Medicine of the University of Malaya, Malaysian proponents (VXL Holdings) of the proposed Monash/Malaysia Medical School, the Dean-elect of the proposed International Medical College, the Malaysian Government Public Services Department, the AEC (Australian Education Centre) and IDP (International Development Program).

Significant interest was identified for selected numbers of staff and medical/dental graduates of the National University of Malaysia and the University of Malaya in postgraduate courses – MMed, MD, PhD, MDSc. In addition, the pathways through which Malaysian students may gain entry to undergraduate programs were clarified.

University of Malaya

The proposal for the involvement of Faculty in the International Medical College in Kuala Lumpur, where a pre-clinical program will be based, after which students will be sent to medical schools worldwide, was also discussed. No commitment was made and the proposal will be reviewed on the basis of the calibre of students in the established program. □

1993 Higher Degrees and Diplomas in The School of Medicine

HIGHER DEGREES

DOCTOR OF PHILOSOPHY

SCHOOL OF MEDICINE DEPARTMENTS

Margaret Leigh Ackland, MSc – Paediatrics
John David Allen, BSc (NSW) – Medical Biology
Nicholas Brian Allen, MSc – Psychiatry
Angela Bacelj, BSc – Medical Biology
Naheed Banu, MSc (Dhaka) – Physiology
Melissa Anne Brown, BSc – Medical Biology
Ashley Ian Bush, MBBS, DPM – Pathology
Lai Wah Daisy Cheung, BSc – Medicine
Nam Sang Cheung, MSc (Taiwan) – Medicine
Flavia Maria Cicuttini, MBBS (Monash) – Medical Biology
Peter John Cowan, BSc (Monash) – Microbiology
Leanne Maree Durham Delbridge BSc (Monash), DipEd – Physiology
Paris Plutarch Deliyannis, BSc – Medicine
Heidi Drummer BSc – Microbiology
Joy Elnatan, BSc – Pharmacology
Jennifer Margaret Favaloro, MSc – Medical Biology
Rosemary Ann Ffrench, BSc – Microbiology
John Lawrence Fitzgerald, BSc – Pharmacology
Doris Leonard Flett, BSc (LaTrobe), MSc (ANU) – Physiology
Clara Louise Gaff, BSc – Medical Biology
Mark Cedric Gillies, MBBS – Medicine
Tulasiram Gireesh, BVSc, MSc (Bangalore) – Biochemistry
Jane Angela Glatz, BSc (Flinders) – Medicine
Simon Paul Green, BSc (Monash) – Medicine
Winita Hardikar, MBBS – Paediatrics
Ygal Haupt, BSc (ANU) – Medical Biology
Matthias Wilhelm Hoffmann, MD (H'burg) – Medical Biology
Ji Hong, MBBS (Beijing) – Medicine
Rebekah Anne Jenkin, MSc – Medicine
Georgia Kapaklis-Deliyannis, BSc – Medicine
Trevor John Kilpatrick, MBBS – Medical Biology
Lai Wai Kong, MEngSc (Monash) – Otolaryngology
Peter Anthony Koopman, BSc – Paediatrics
Natalia Vera Korszniak, BSc – Pharmacology
Sotirios Kolivas, BSc – Biochemistry
Kenia Gwenneth Krauer, BSc – Medicine
Sandro Carmine Longano, BSc (Monash), DipEd (ACU) – Biochemistry
Theo Mantamadiotis, BAppSc (RMIT), BSc (Monash) – Medicine
Michael Lee Mathai, BSc – Physiology
Tracey Lee McInerney, BSc – Microbiology
Lynne Rosanne McMartin, BA, BSc (Monash) – Pharmacology
Jennifer Percival Messenger, BSc (ANU & Flinders) – Anatomy
Kathleen Anne Moore, BA (Deakin), DipPsych (CIT), MSc – Medicine
Damian Eric Myers, MAppSc (RMIT) – Medicine
Sandra Eilleen Neil, BEd (LaTrobe), MA – Psychiatry
Poorinma Rajasekariah, MSc – Pathology
Maryanne Skeljo, BSc (Monash) – Medicine
Melissa Caroline Southey, BSc – Medicine
Larry John Suva, BAppSc(SIT) – Medicine
Nopparatn Tippayatorn, MSc (Mahidol) – Anatomy
Helen Elizabeth Trowell, BSc – Medicine
Jane Elizabeth Ward, BSc – Biochemistry
Peter Bernard Ward, BAppSc (RMIT) – Medicine
Roderic James Warren, MBBS – Medicine
Ian Peter Wicks, MBBS (Sydney) – Medical Biology
Darren Wyatt Williams, BSc – Medicine
Jian-Guo Zhang, BSc (China) – Biochemistry

DOCTOR OF MEDICINE

Bing-Zhong Chen, MMed (China)
Stephen John Collins, MBBS
Susan Leigh Elliott, MBBS
Michael Gerard Laurence Flynn, MBBS
Ian Robert Fraser, MBBS
Richard Patrick Gerraty, MBBS
Day Way Goh, MBBS (Malay)
Xin-Hua Gu, BMed (China), MSc
Alicia Josephine Jenkins, MBBS
Peter Kabo, MBBS (Indonesia), PhD
Cheok Soon Lee, MBBS
David Anthony Mackey, MBBS
Andreas Marangou, MBBS, (UK)
Jane Helen McKendrick MBBS, DPM
Frank Oberklaid, DipChildHealth (London), MBBS
Richard Francis Peppard, MBBS
David Charles Reutens, MBBS (Western Australia)
Morry Silberstein, MBBS (Monash)
Dominic Subbiah Thyagarajan, MBBS
David Valdemar Tuxen, MBBS
Martin Christopher Wright, MBBS (Monash)
Junichi Yamanaka, MB (Japan)
Bryan Douglas Youl, BMedSc, MBBS

MASTER OF MEDICINE

Sita Ram Choudhary, MBBS (Lucknow)
Nicholas John Ferris, MBBS (Monash)
Jillian Elizabeth Grogan, MBBS, Dip Women's Health
Mylyono Kosasih, MBBS (Jakarta)
Leopoldo Lanuzo, BSc, MD (Philippines)
Kian Ju-Budi Liem, MD (Padjad)
Gina Panuncialman, MD (Philippines)
Shigehiro Suzuki, MBBS (Japan)

MASTER OF SURGERY

William Howard Bruce Edwards, DipAnat (ASANZ), MBBS
Kenneth John Hardy, MBBS, MD
Anne Elizabeth Malatt, MBBS

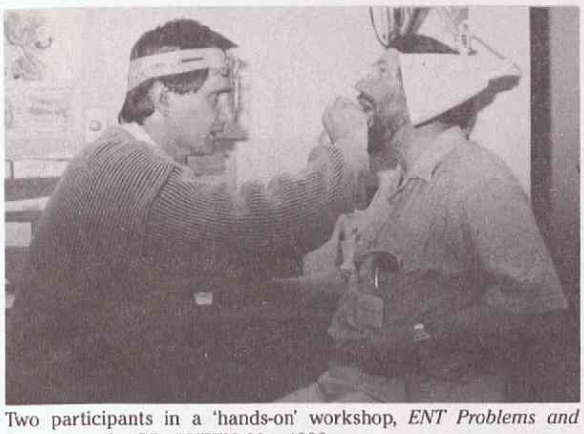
DIPLOMAS

GRADUATE DIPLOMA IN AUDIOLOGY

Vincent Wardlaw Brown, BSc
Vivienne Buratto, BA
Patricia Chetcuti, BScHons (LaTrobe)
Voula Paraskevi Dorkos, BSc (Monash)
Nehama Epstein, BA (Monash)
Iman Farah, BSc (Adelaide)
Wei Cheng Li, MBBS (CMU China), MD, MMSc (AMS China)
Melissa Pasqualina Liburti, BSc (Monash)
Vanessa Ruth Loechel, BA (Adelaide)
Angus Matthew John Macalister, BSc
Amanda Kay Martiensen, BSc
Belinda Maree O'Shea, BAppSc (LaTrobe)
Meredith Bronwen Prout, BSc (Monash)

GRADUATE DIPLOMA IN WOMEN'S HEALTH

Heidi Johanne Andersen-Dalheim, MBBS
Lorraine Baker, DipObs (RACOG), MBBS
Tatiana Borisow, BSW (Curtin)
Robyn Ann Gardner, BPharm (Victorian College of Pharmacy)
Ruth Goldwasser, DipEd (LaTrobe), BSc
Jennifer Anne Jobst, MBBS
Danielle Mazza, MBBS (Monash), DipObs (RACOG)
Kim Grace Robinson, BA, BSW (LaTrobe)
Leanne Margaret Tarran, BAppSc (PIT)



Two participants in a 'hands-on' workshop, *ENT Problems and Procedures for GPs*, RVEEH, May 1993.

Continuing Medical Education
What's New?

Keeping abreast of continuing education in the medical profession is important. Identifying needs is the first step in planning the School of Medicine's continuing education program. Each year courses are designed to meet these requirements using the educational resources of the University with its research links and association with the clinical work of the hospitals.

Recently an opportunity to assist medical practitioners with access to information was identified by staff of the Brownless Medical Library, who were frequently being asked for help to gain computer access to the latest medical literature. In response, a new course has been developed – KEEPING UP-TO-DATE WITH MEDICAL LITERATURE USING A PC OR MAC AND A TELEPHONE LINE ON YOUR DESK. This will provide doctors with computer skills for literature surveillance and information retrieval using MEDLINE – a bibliographical database that can be searched via different brands of software (such as Grateful Med, After Dark and Colleague) to find and retrieve medical information and journal articles. Available in May 1994 and restricted to twelve participants, the Continuing Education Unit is investigating the feasibility of offering this course on a regular basis.

The continuing education requirements of medical graduates in various fields become apparent through the extensive interaction between staff of the School of Medicine, their colleagues and their professional associations. Another new course, THE CONDUCT AND DESIGN OF CLINICAL TRIALS, will run in August 1994. This is aimed at medical practitioners involved in clinical research and will instruct them in setting up a clinical trials centre, developing clinical protocols and in conducting clinical trials. It will be directed by Drs Michael Green and Russell Basser from the Department of Medicine at The Royal Melbourne Hospital in association with the NHMRC.

Each year the continuing education program includes a number of courses which respond to a constant demand for up-to-date information in areas such as psychiatry, radiography, ophthalmology, paediatrics, obstetrics and gynaecology and dermatology. Courses for general practitioners are designed by specialist departments in collaboration with staff at the Department of Public Health and Community Medicine General Practice Unit. This provides each course with a clinical setting in a hospital, a vital teaching and research base, and a strong general practitioner focus.

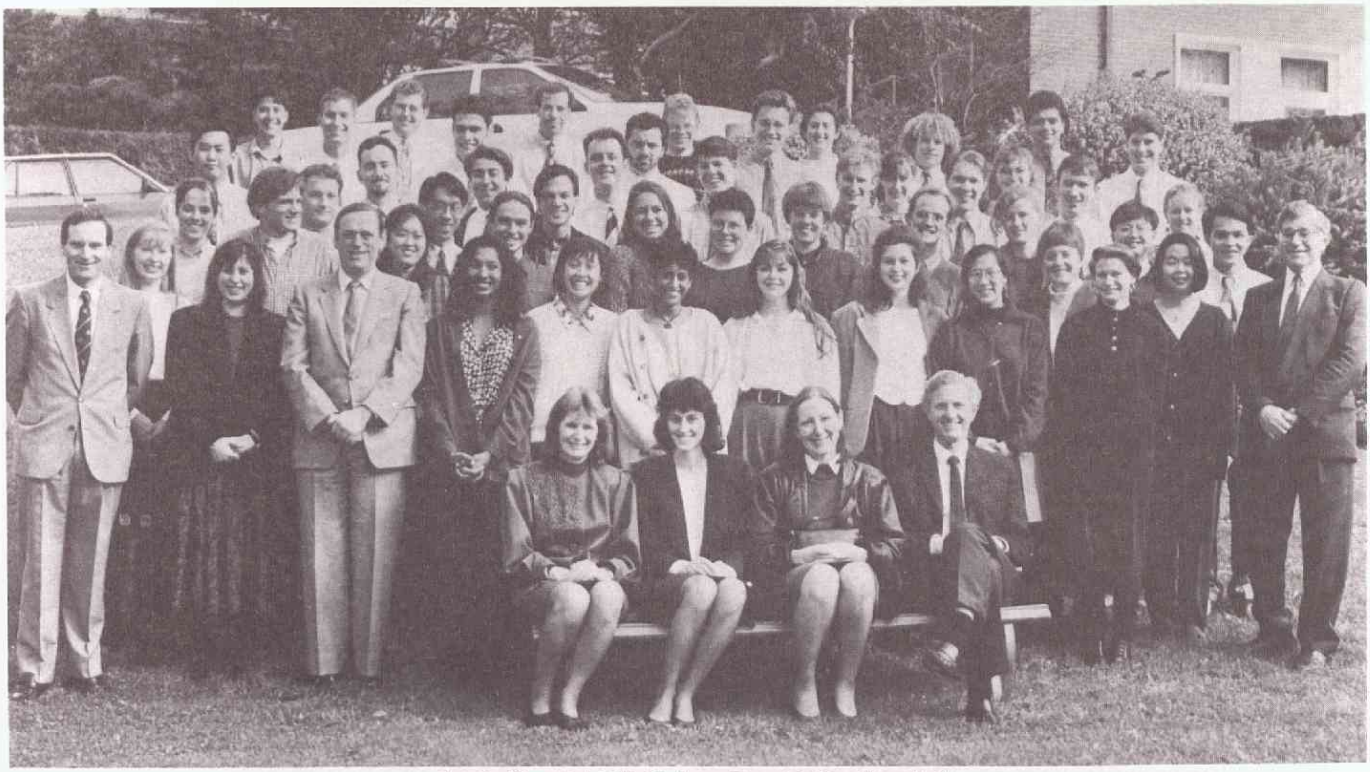
The 1994 continuing medical education program is listed on the back cover of this issue of *Chiron*. We welcome your comments and suggestions for future programs. A brochure is available from:

Continuing Education and External Relations
Faculty of Medicine, Dentistry & Health Sciences
The University of Melbourne
PARKVILLE VIC 3052
Telephone: (+61 3) 344 5888
Facsimile: (+61 3) 347 7084

A JOURNEY THERE AND BACK

Tyres and tarmac having parted we were up,
prop thrust west to sundown
beyond which place the woman lay
skull thumped flat to Ramingining dirt.
Everything else fell away:
airstrip, hangars, Gove town and its hospital
where I'd tried to see her
through the silences between the words
that spoke the apprehension of a nurse
likewise seated by a radio.
So now I was flying,
heartbeats and adrenalin enough for two.
I thought of us as nosing out
into the slipping stream of atmosphere,
crossing rivers and escarpments,
chasing the sun to get there in time.
Reality was less romantic.
The Nomad was losing its struggle
against gravity and spin.
The earth dragged us backwards from the day.
The rivers silvered then vanished
through night's void reflection.
Had I stepped outside
I would have seen a cabin of plastic and tin
vibrating across the sky.
A pilot suspended like a mind's eye
in space before his luminous dials.
Lit windows and silhouettes:
a nurse reading her magazine;
a young doctor studying a book,
fumbling with a trepanning drill,
thinking to himself that out here
the only reference point is me.
A plane beginning to fall.
Flickering yellow lights appearing.
5 gallon drums of kero defining a runway.
A crescendo of noise. Rubber scuffing dust.
An unearthly silence. A corridor of flame.
A nurse walking through firelight, beckoning.
Sound of voices reappearing. A reversing vehicle.
Cacophanous battle: land-rover versus potholes.
Rattling teeth and bones.
Fragmented sentences: – no power-fruit
bats in the generator shed –
not alcohol, not kava- . . .
Eye whites by torchlight.
Night black as night, blacker.
A body breathing, sometimes.
Glinting instruments.
Scraping feet.
Some words.
Some minutes
passing.
Then briefly the lights on. Off.
The doctor standing saying
'leave now or stay to die'.
The woman unasked on the stretcher.
The land-rover crashing back.
Engines and burning flares
raising an island from the darkness.
Doors sealed, cabin lights full power.
Silence muted. The plane lifting off again
into night's fast-flowing river.
Back inside we plugged in: oxygen,
intravenous mannitol to shrink her swollen brain,
a catheter to drain the fluid off.
Vital signs stable then unstable then . . .
somehow the woman like a body half submerged
bobbing to the surface, up, down again,
coming closer; a form more distinct,
a pattern to the wavering of pulse and respiration . . .
For hours we anticipated
the flicker of an eyelid.
I remember when she opened her eyes
because dawn, which had overtaken us unseen,
now strode before us, and lit up Darwin:
all bright orange glass reflecting.
I put the unused drill back in its bag
and closed the book. She murmured
and I thought that success is measured more
by what one doesn't have to do.
I didn't know what had happened
in her head (nor will I ever), but
she was waking up, scowling at the hot sun
as we waited for the ambulance.
We flew back to Gove.
They said she was alert
at the hospital, yet only asked one thing,
that question always on our lips:
"What am I doing here?"
And no-one knew the answer;
so she arose, and went back home.

Tim Metcalf (MBBS 1984)



Austin Hospital & Heidelberg Repatriation Hospital
Final Year Clinical School 1993

Back row L-R: Marcus Choo, Anthony White, Mark Whiting, Peter Mount, Marija Borosak, Peter Jordan, John Haddad. *Between rows:* Paul Plank, David O'Donnell. *Fifth row L-R:* David Lim, Sandy Zalstein, Askin Gunes, Alex Paspaliaris, Martin Tuszynski, Juli Moran, Elizabeth Williams, Cameron Norsworthy. *Between rows:* Craig Donohue. *Fourth row L-R:* Anne Money, Patrick Moore, Eric Tay, Brett Sutton, Andrew Crockett, Rodney Richardson, Damien Holdaway, Warwick Rouse, Danielle Haller. *Third row L-R:* Jane Froster, Michael Garrett, Alicea Y M Kyoong, Matthew Wood, Kirsten Seipolt, Miranda Sandars, Monica Nolan, James Fordyce, Kath Fethers, Conrad Chiu, Hien N Nguyen. *Between rows:* Louise Goggin. *Second row L-R:* Prof Donald MacLellan, Suzanne Schemali, Prof Colin Johnston, Annete Ekanayake, Pearly Khaw, Sarita Jassal, Rachel Stokes, Felicity Heale, Katherine Yu, Jennifer Anderson, Jane Hii, Assoc Prof Bernard Sweet (Clinical Dean). *Front row seated L-R:* Margaret Neale, Barbara Goss, Helen Kouzmin, Prof Ken Hardy. *Absent:* Jonathan Graham, Melinda Humphries, Andrew Ludekens, Andrew Mau, Ishita Palit, Tracey Pickersgill, Ian Routley, Tamara Seneviratne, Peter Salama.

The Royal Melbourne Hospital & Western Hospital
Final Year Clinical School 1993

Back row L-R: Andrea Smith, Catherine Falconer, Michael Poon, Tien Duc Nguyen, Karl Gassert, Reuben Krishnananthan, Trung Ngoc Vu Nguyen, Alexander Hopper. *Third row L-R:* Jason Winnett, Mark Duane, Simon Horne, Peter Carne, Nicole Allard, Eugene Neo, Ajit Selvendra, Andrew Symons, Geoff Chong, Brian Reynolds, Prem Chopra, Emmanouele Karpathakis, Con Dolianitis, Shamilah Anthony, Andrew Leaver, Nicole Goh, Jo Stevenson, Tom Fisher, Richard Clements, Mathew Hargreaves, Andrew Hardidge, Dinh Bui, Ronald Sultana, Adam Bystrzycki, Jonathan Akikusa, Ken Quach, Mandar Gokhale, Natasha Livingstone, Mark Jeans, Don Liew, Cuong Duong, Thao Le, Shirley Wong. *Second row seated L-R:* Heather Wark, Melinda Hii, Mei Ling Lee, Sharon Van Doornum, Jacqui Brown, Toni Marquardt, Amanda Wilkin, Associate Professor Robert Moulds (Clinical Dean), Dr Christine Penfold (Clinical Sub-Dean), Sook Meng Lee, Sina Malki, Yousong Xing, Louis Luu, Frankie Wong, Shomik Sengupta, Nina Kilfoyle. *Front row seated L-R:* Craig Barnett, Peter Chu, Lena Chan, Sarah Larkins, Belinda Greenwood-Smith, Delia Tores, Huey Miin Tan, Flora Wong, Titi Tang, Lynette Wong, Nicholas Spanos, Julie Thomas, Vasilios Nimorakiotakis. *Absent:* Theresa Chui-Wah Chung, Suzanne Cochrane, Dharsh Fernando, Chris Fiddes, Vivian Mathews, Helen Mitropolos, Kay Sin Tan, Peter Wong.

Clinical Schools

Austin Hospital & Heidelberg Repatriation Hospital

STUDENTS UNDERGO TRAINING at the Clinical School in the last three years of their course, with an introductory Wednesday afternoon program (over nine weeks) in the second semester of third year.

In 1993, 189 students attended the Clinical School in fourth, fifth and sixth years, however the number is likely to rise during the next few years to over 200, again further straining the resources of the hospitals and putting additional pressure on patients and staff. As in the past, it is becoming increasingly obvious that the number of inpatient beds is decreasing, that the complexity and degree of sickness of the patients is increasing and that students will need to gain more clinical experience in the ambulatory care setting and in regional hospitals.

Although the Austin Hospital privatised many of the outpatient clinics during the year, care has been taken to maintain their teaching role. In certain specialty areas, such as dermatology, rheumatology, endocrinology and orthopaedics, much or all of the teaching is done in the outpatient departments. To date no difficulty has been experienced with teaching in these areas.

As well, during the year agreement was reached with *Warringal*, a private hospital opposite the Austin, for it to be used for undergraduate teaching, with certain controls regarding the involvement of patients and consultants in the teaching program. This arrangement will allow for some increase in our patient base both in numbers and in the type of patient treated.

The introductory two weeks of the fourth year program were changed, becoming more structured and ensuring that each area of examination is demonstrated to students in small group tutorials; these are supplemented by a talk and, where appropriate, a video. Following the introductory period there are two intermediate terms in medicine and surgery, leading up to the final three terms when the students do two terms of medicine and one of surgery. Students spend two four-week rotations in a country base hospital to broaden their experience in medicine and surgery. In addition to assessments at the end of each term, each student has two formal, long case presentations (one in April and one in September) at which their performances are discussed with them. These tests have proved useful in assessing a student's progress and allowing for corrective action. During the fourth year, students spend time in geriatrics and in Accident & Emergency (mainly during country hospital rotations). They undertake a comprehensive course in communication skills and sessions on medical ethics. Their progress is carefully monitored in this year, and they are encouraged to discuss difficulties with the Clinical School staff.

The fifth year program remained the same with most of the teaching taking place away from the Clinical School, at the Royal Children's Hospital, Mercy Hospital for Women, Community Medicine and Public Health, and at North Eastern Psychiatric Service, Austin Hospital and Heidelberg Repatriation Hospital for psychiatry.

The final year consists of two 14-week terms of medicine and surgery, with half the time spent in the general area and half in the specials. Difficulties arise in trying to undertake teaching in the eight or so specialty areas covered in this time and in being able to involve the students in the ongoing management of their patients during the general term. The balance between formal teaching and allowing students time in the wards becomes a very important issue and needs to be constantly reviewed.

In spite of the many difficulties, the teaching programs run extremely smoothly thanks to the unstinting participation of the Hospital staff of the Clinical School. I would like to record my thanks to them for the time and effort they put into teaching.

Associate Professor Bernard Sweet
Clinical Dean

The Royal Melbourne Hospital & Western Hospital

AS IN PREVIOUS YEARS, fourth year was divided into two surgical and two medical terms, each of eight or nine weeks duration, and the core of clinical instruction occurred within general medical and general surgical units.

Students were either at The Royal Melbourne Hospital or Western Hospital during term one and in the course of the other three terms spent one term at either Ballarat Base Hospital, Wangaratta District Base Hospital or Wimmera Base Hospital. Each student group also spent two of the four terms at The Royal Melbourne Hospital and one of the four terms at Western Hospital.

In 1993, the three-week introductory period at the commencement of term one was altered a little from the 1992 program: a broader range of introductory lectures and 'examination days' were included, with students seeing a video tape or a demonstration of the examination of a particular system (including the cardiovascular system, central nervous system, abdomen, respiratory system and the musculo-skeletal system), then undertaking self-examination under the supervision of tutors, and finally having a ward tutorial demonstrating the examination of a patient. This introduction to physical examination proved extremely successful, and it is planned to continue and possibly improve the process.

The formal course in the teaching of communication skills continued in 1993. Two preliminary lectures were given during the introductory period, in addition to the usual lectures on history-taking given by the Professors of Medicine and Surgery. During first term each student group then participated in four tutorials with members of the Department of Psychiatry, when individual students were observed taking a short history from a patient and given feedback on their communication skills. Lastly, during the second or third terms, a 30-minute videotape was taken of each student performing a patient interview. The video tapes were replayed during a group tutorial with comments from a senior clinician in the unit to which the students were attached at the time. Although this procedure is demanding of both tutor and student time, it has been reasonably well received by students. We think it is an important component in the acquisition of communication skills and the program will continue in 1994.

As in past years, a core of daily lectures was presented in term one, with the teaching of pathology also covering all the major areas. Lectures and pathology teaching during terms 2–4 'fleshed out' the core teaching of term one. In a similar manner to the medical rotations at Ballarat Base Hospital and Wangaratta Base Hospital and the surgical rotation to Ballarat Base Hospital, the Wimmera Base Hospital surgical rotation, which was initiated in 1991, continues to be very successful.

Advanced Study Units (ASUs) were undertaken in fourth year, during either second or third terms, at The Royal Melbourne Hospital or Western Hospital. Each ASU consisted of either a verbal and or a written presentation about a single topic at the end of the term.

A 'revision week' was introduced at the end of fourth year for the first time, during which all students returned to either The Royal Melbourne Hospital or Western Hospital, and practised clinical presentations and OSCE stations. Feedback will be obtained regarding the success of this week, but it will probably be similarly undertaken in 1994. In addition, it is planned to have a trial OSCE test in the middle of the year in 1994 to give students an indication of their progress.

Sixth year consisted of an eight-week elective period, finishing in early March, followed by blocks in each of general medicine, special medicine, general surgery and special surgery.

General surgery and general medicine consisted of six- and seven-week blocks respectively and in each case comprised a 'student internship' in a general medical or general surgical ward at The Royal Melbourne Hospital or Western Hospital. Student internships also occurred in general medicine and surgery at Ballarat Base Hospital, made up of three or four weeks at Ballarat Base Hospital coupled to three or four weeks at The Royal Melbourne Hospital.

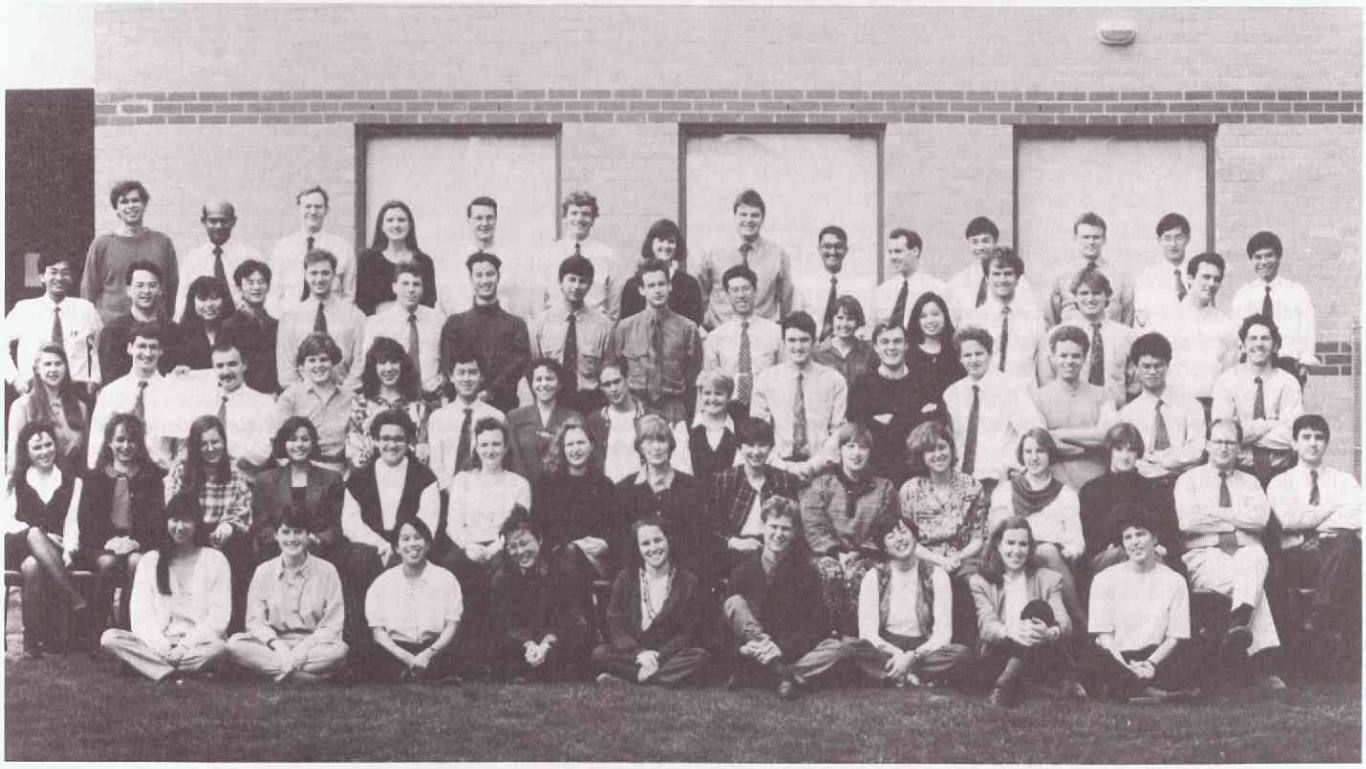
Special medicine and special surgery consisted of blocks of seven and five weeks respectively and, in addition, students attended three weeks of anaesthetics and emergency as part of the surgical rotation at either The Royal Melbourne Hospital, Western Hospital or Ballarat Base Hospital. During the special medicine and surgical terms, students rotated through a wide variety of specialties, and teaching occurred in outpatient clinics, at the bedside or in seminar format depending on the requirements of the specialty involved.

Daily case discussions were presented through the year by the senior medical and surgical staff consisting of interactive discussions of cases selected by staff to illustrate points of diagnosis or management. As in previous years, each student group had a medical and a surgical 'mentor', with whom they met regularly.

1993 saw the introduction of physiotherapy students to clinical studies. Fifteen students were attached to the Clinical School with rotations at The Royal Melbourne Hospital, Western Hospital and Essendon Hospital. Most of the organisation of the teaching of these students has occurred within the respective Departments of Physiotherapy, but the Clinical School office has taken some administrative responsibilities. The exact responsibilities of the various departments involved will be sorted out during 1994.

With the increase of students at Western Hospital and the development of The University of Melbourne's Department of Medicine and the Department of Surgery, a new Clinical School office has been located on the ground floor of the main hospital. In addition, new student quarters have been opened, and the new library and lecture theatre are now available for students. We are very grateful to the administration at Western Hospital, in particular to Dr Mary Stannard, for these facilities.

Associate Professor Robert F W Moulds
Clinical Dean



St Vincent's Hospital & The Geelong Hospital
Final Year Clinical School 1993

Back row L-R: Philip Aitken, Benjamin Solomon, Robert McLeod, Rachel Cann, Andrew Whan, James Mitchell, Belinda James, Scott Mackie, Dishan Chandrasekara, Ross Carne, Vincent Yuen, Robert Millar, Martin Chin, Hoa Dinh. *Fourth row L-R:* Thien Nguyen, Eric Poon, Melissa Wong, Allen Chang, Richard Dallalana, Julian Stella, Chris Chang, Amin Sadruddin, Dean Arnot, Alvin Chong, Kylie Staggard, Selina Lo, Justin Lade, Shane Barwood, Steve Brown. *Third row L-R:* Kate Mordue, John Marty, Mark Krawczyszyn, Liz Uren, Sonya Morrissey, Andrew Wei, Anastasia Pellicano, Todd Cameron, Elena Provenzano, David Morgan, Tim Whitehead, David Penn, Brendan Condon, Herman Chiu, Andrew Wilson. *Second row seated L-R:* Elissa Armitage, Robyn Laurie, Sarah Mackay, Sharon Moss, Anita D'Aprano, Anne Poliness, Jenny Wintle, Dr Jacqueline Walters, Assoc Prof Wilma Beswick (Clinical Dean), Georgina Phillips, Kylie McLachlan, Justine Birchall, Sally Dooley, John Heath, Paul Ruljancich. *Front row seated L-R:* Ling Toh, Santha Traill, Michele Yeo, Irene Sein, Josephine Samuel, Matthew Snape, Gabrielle Santospirito, Daniela Micheletto, Helen Stergiou.
Absent: Naveen Singh, Quoc Tiet, Siobhan Dobell, Fiona Lee.

St Vincent's Hospital & The Geelong Hospital

IN 1993 ST VINCENT'S HOSPITAL celebrated the Centenary of its foundation and during this very special year our students were able to participate in the celebratory events, when many distinguished former graduates revisited the Hospital.

During 1993 the clinical school had a complement of 202 students with 70 students in final year, 59 in fifth year and 73 in the fourth year class.

Final year students commenced the year with an eight-week options term which saw many undertaking elective attachments overseas. A number chose more adventurous electives in Asia, Africa, New Guinea and outback Australia, and gained significant benefit in terms of clinical experience and personal development.

In the 14-week medicine teaching term students spent four weeks attached to a general medical unit at St Vincent's Hospital or The Geelong Hospital. The remaining ten weeks were spent in rotations through the various medical specialties.

The surgical teaching term comprised rotations in general and specialty surgery. The rotations in general surgery were at Preston & Northcote Community Hospital and, for the first time, at The Geelong Hospital. The specialty surgical terms were at St Vincent's Hospital.

The teaching program also included small group tutorials at St George's Hospital (Kew), The Royal Victorian Eye and Ear Hospital and at Peter MacCallum Cancer Institute. Students found the experience at these hospitals very valuable and they appreciated the opportunity to see a wide range of clinical conditions.

This was a highly successful year in the Clinical School with all 70 final year students passing their final examinations well. All students worked very hard during the year and were well rewarded for their efforts. A high percentage received honours and a number distinguished themselves by winning various prizes and scholarships: Dux of final year was Dr John Heath, BVetSc(Hons),PhD, who has had

a distinguished undergraduate medical career having also been dux in his fourth year; Mark Krawczysyn, who was placed equal second in the year, and Kylie McLachlan (equal fifth), together with John Heath, distinguished themselves by obtaining first class honours in both medicine and surgery. Our congratulations go to all the 1993 graduates and we wish them well in their future careers.

There has been an expansion of the general practice component in the fifth year community medicine program, which now comprises five weeks of the nine-week rotation. While there has been a reduction in ethics teaching, other components such as Aboriginal health, have been expanded.

Fourth year students enjoyed their first clinical year and coped well with a very full curriculum. In Term One, when all students were in Melbourne, there was a strong emphasis on the teaching of communication skills as well as clinical examination technique. Small group tutorials focusing on interviewing skills were held each week, and each student recorded a patient interview on video, which was reviewed at their group tutorial with a dedicated tutor.

A new initiative this year was the introduction of a clinical ethics teaching program for fourth year students. This was conducted over an eight-week period during Term One, and half of the students were involved in this pilot program. Students participated in weekly tutorials which were directed by a dedicated ethics tutor. These sessions focused on ethical considerations relevant to the management of patients being clerked by the students. The students who undertook the program found it interesting and relevant and it is planned that all students will participate in a similar program in 1994, either at St Vincent's Hospital or at The Geelong Hospital.

As always, students greatly enjoyed their country rotations. In addition to their medical activities, our students at Goulburn Valley Base Hospital joined in the community effort in combating the flood damage.

We were very pleased with the academic results of our fourth year students who were well represented in the honours list: Kirsten Herbert, as top student in medicine and surgery, was awarded the Manu Thomas Prize, and Robin Cassumbhoy won The Harold Attwood prize for top student in pathology.

As in previous years, third year students came to the hospital for the course in clinical method, and they appeared to enjoy their contact with hospital practice. We look forward to welcoming them as full-time clinical students in 1994.

We are most grateful to the dedicated and hard-working teachers associated with our Clinical School during 1993. Their willingness to teach and commitment to undergraduate education is most gratefully acknowledged.

Associate Professor Wilma M Beswick
Clinical Dean

Final Year MBBS 1993

Top Student

DR JOHN HEATH

JOHN ANDREW HEATH, BVetSc(Hons), PhD, was the top student in 1993, when he gained 1st Class Honours in both Medicine and Surgery, and was awarded the Australian Medical Association Prize, the CIBA-GEIGY Prize, Rowden White Prize, the John Cade Memorial Medal in Clinical Psychiatry and the University's Proxime Accessit Prize in Surgery. He also won the Division of Surgery Prize from St Vincent's Hospital and the Michael Ryan Prize from the RACS. As a fourth year student, John won the Manu Thomas Prize in Clinical Medicine and Surgery, the St Vincent's Graduates' Association Prize and the Geriatric Medicine Prize.

John has, in fact, taken quite a long time to achieve his current success, and might be described as a chronic student: born in Washington DC, the scion of a distinguished Melbourne medical family, he arrived in Australia as a three-year old. School days were spent at St Roch's, Glen Iris, and Xavier College, where he achieved five A levels in HSC. He entered The University of Melbourne in 1980, and gained a BVetSc(Hons). 1985 was spent in Equine Veterinary practice in Kyneton, before John returned to academe as a PhD student, investigating the role of parathyroid hormone-related protein in placental calcium transfer and foetal/neonatal bone transformation in lambs. Collaborative studies with Professor TJ Martin and Associate Professor JD Wark of the University led to several publications in learned journals. John finally realised the ways of the righteous, and entered the MBBS course as a lateral entry student in 1989.

John Heath may have had a relatively late start in the medical profession, but there is an outstanding tradition of medicine in the family. His father is Dr Bill Heath, consultant physician, who himself trained and worked at St Vincent's Hospital, as did John's grandfather, Andrew Brenan, the anatomical pathologist (whose name is well known to St Vincent's students from the eponymous pathology lecture theatre), and John's uncle, Dr John Brenan, the consultant dermatologist.

Outside medicine, John's interests include sport (golf, tennis, ski-ing), and contract bridge, all of which he plays with skill. His major interest, however, is his wife, Annabel Mary (Hawkins), a solicitor, to whom he was married one year ago, and whose support has been invaluable.

John will take up an internship at St Vincent's Hospital, and plans to pursue an academic career in paediatrics. (WMB)

Prizes & Awards 1993

Final Year

Australian Medical Association Prize
John Heath SVH/GH

The CIBA-GEIGY Prize
John Heath SVH/GH

Rowden White Prize
John Heath SVH/GH

Medicine

Keith Levi Memorial Scholarship in Medicine
Mark Krawczyszyn SVH/GH

The Robert Gartly Healy Prize in Medicine
Mark Krawczyszyn SVH/GH

Jamieson Prize in Clinical Medicine
Peter Salama AH/HRH

Upjohn Award in Clinical Pharmacology & Therapeutics
Mark Krawczyszyn SVH/GH

Surgery

Beaney Scholarship in Surgery
Sarah Larkins RMH/WH

The Robert Gartly Healy Prize in Surgery
Sarah Larkins RMH/WH

Proxime Accessit Prize in Surgery
John Heath SVH/GH

Geoffrey Royal Prize in Clinical Surgery
Damien Holdaway AH/HRH

Ryan Prizes in Surgery (RACS) (RMH/WH, SVH/GH)
Andrea Smith RMH/WH
John Heath SVH/GH

Smith & Nephew Prize in Surgery (AH/HRH)
Damien Holdaway AH/HRH

EH Embley Prize in Anaesthetics
Shomik Sengupta RMH/WH

Neil Bromberger Prize in Orthopaedics (AH/HRH)
Miranda Sandars AH/HRH

Obstetrics & Gynaecology

The Robert Gartly Healy Prize in Obstetrics
David O'Donnell AH/HRH

Prize in Clinical Gynaecology
Kylie Mclachlan SVH/GH
David O'Donnell AH/HRH

Alfred Edward Rowden White Prize in Clinical Obstetrics
Kylie Mclachlan SVH/GH

Edgar and Mabel Coles Prize in Obstetrics (RMH/WH, SVH/GH)
Sarah Larkins RMH/WH

Paediatrics

Howard E Williams Prize in Paediatrics
Jonathan Akikusa RMH/WH

Child Growth & Development Study in Paediatrics
Robyn Laurie SVH/GH

Clara Myers Prize in Surgical Paediatrics
Jonathan Akikusa RMH/WH

Psychiatry

John Cade Memorial Medal in Clinical Psychiatry
John Heath SVH/GH
John Marty SVH/GH

Community Medicine

RACGP Prize in Community Medicine
Emmanouele Karpathakis RMH/WH

Infectious Diseases

Sir Albert Coates Prize in Infectious Diseases
John Marty SVH/GH

General Clinical

Edgar Rouse Prize in Occupational Medicine
1st Prize: Shomik Sengupta
2nd Prize: Andre Kheng Ho Chong

Royal Australian College of Ophthalmologists Prize
Matheen Mohamed (Monash University)

Hedley F Summons Prize in Otolaryngology
Peter Chu

Herman Lawrence Prize in Clinical Dermatology
Peter Chu

Australian College of Occupational Medicine Prize
No entries received in 1993

Fourth & Fifth Year

Fifth Year

Community Medicine Prize
Marnie Buckwell SVH/GH
Leanne McNamara AH/HRH

Crawford Mollison Prize in Forensic Medicine
Glenn Guest SVH/GH

Medical Officers of Health Section of AMA
Cameron Leopold RMH/WH

The Fulton Scholarship
Joanne Said AH/HRH

The Kate Campbell Prize in Neo-Natal Paediatrics
Richard Brouwer SVH/GH
Jillian Sass SVH/GH

The Max Kohane Prize
Joanne Said AH/HRH

The Vernon Collins Prize
Giuliana Antolovich SVH/GH

The John Adey Prize
Robert Chu SVH/GH

Fourth Year

The Harold Attwood Prize in Pathology
Robin Cassumbhoy SVH/GH

Geriatric Medicine Prize
Hangwi Tang RMH/WH

Manu Thomas Prize
Kirsten Herbert SVH/GH

Pre-Clinical

Third Year

Pharmacology

Boots Prize
Sujith Seneviratne

Pathology

The Walter & Eliza Hall Exhibition
Guy Bylsma

Microbiology

Microbiology Prize
Yuri Frenklah

Second Year

Anatomy

Dwight Prize
Lean Peng Cheah

Exhibition Prize
Lean Peng Cheah

TF Ryan Prize
Lean Peng Cheah

Physiology

Wellcome Prize
Sin Hing Mok

General Biochemistry

Exhibition
Lyn-May Lim
Ruth Lim

Functional Biochemistry

Exhibition
Yong Ming Por

Neuroscience

Sunderland Prize
Lean Peng Cheah

Physiology/Integrated Body Function

RD Wright Prize
Sin Hing Mok
Joseph Vetro

Behavioural Science

The CIBA-GEIGY Prize
Chun Wai Yip

First Year

Medical Physics

GA Syme Exhibition
Scott Patterson

TF Ryan Roentgen Prize
Edward Upjohn

Introduction to Medicine

The Australasian College for Emergency Medicine, Victorian Region, Prize
Natalie Barton

Medical Biology

WH Swanton Exhibition
Valerie Shiok Hann Tay

Baldwin Spencer Prize (for Zoology Practical Work)
Finn Romanes

Chemistry

Exhibition
Casey Ka-Shun Chan

Anatomy

Mathew W McKenzie Award
David Alexander
Haris Haqqani

MBBS Graduates 1993

John P Aitken, Jonathan D Akikusa, Nicole Allard, Jennifer A Anderson, Agnes Anthony, Elissa Armitage, Dean G Arnot, Craig Barnett, Shane Barwood, Justine E Birchall, Marija Borosak, Jacqueline Y Brown, Steven Brown, Dinh G Bui, Adam B Bystrzycki, Todd Cameron, Rachel Cann, Peter Carne, Ross Carne, Lena Chan, Sisira Chandrasekara, Christopher M Chang, Allen C S Cheng, Martin C K Chin, Theresa Chui-Wah Chiu, Conrad F S Chiu, Herman A Chiu, Geoffrey Chong, Heong O Chong, Marcus Choo, Prem K Chopra,

Peter Chu, Richard M Clements, Suzanne Cochrane, Brendan P Condon, Andrew N Crockett, Richard J Dallalana, Anita D'Aprano, Trung H Dinh, Siobhan Dobell, Con Dolianitis, Craig T Donohue, Sally-Anne T Dooley, Mark J Duane, Cuong P Duong, Annete Ekanayake, Catherine S Falconer, Dharshana Fernando, Katherine Fethers, Christopher H Fiddes, Thomas A Fisher, James Fordyce, Jane V Froster, Michael Garrett, Karl A Gassert, Louise Goggin, Nicole S L Goh, Mandar H Gokhale, Jonathan Graham, Belinda Greenwood-Smith, Askin Gunes, John Haddad, Danielle Haller, Andrew Hardidge, Mathew Hargreaves, Felicity Heale, John Heath, Jane Hii, Melinda Hii, Damien Holdaway, Alexander Hopper, Simon Horne, Melinda Humphries, Belinda K James, Sarita J Jassal, Mark Jeanes, Peter Jordan, Emmanouele Karpathakis, Pearly Y L Khaw, Nina C Kilfoyle, Mark Krawczyszyn, Ruben Krishnananthan, Alicea Kyoong, Justin A Lade, Sarah Larkins, Robyn Laurie, Thao Le, Andrew H Leaver, Mei Ling Lee, Mo Yin Lee, Sook Meng Lee, Donald Liew, David Lim, Natasha Livingstone, Selina Lo, Andrew Ludekens, Quoc Vinh Luu, Sarah J Mackay, Peter Scott Mackie, Sina A Malki, Tonia Marquardt, John S Marty, Vivian Matthews, Andrew Mau, Kylie Mclachlan, Robert N McLeod, Daniela R Micheletto, Robert Millar, James A Mitchell, Helen Mitropoulos, Anne H Money, Patrick Moore, Juli A Moran, Katherine A Mordue, David J Morgan, Sonya N Morrissey, Sharon Moss, Peter Mount BMedSc, Eugene C Neo, Hien Ngoc Nguyen, Thien C Nguyen, Tien Duc Nguyen, Trung Ngoc Vu Nguyen, Vasilios Nimorakiotakis, Monica Nolan, Cameron J Norsworthy, David O'Donnell, Ishita B Palit, Alex S Paspaliaris, Anastasia Pellicano, David S Penn, Georgina Phillips, Tracey Pickersgill, Paul Plank, Anne Poliness, Eric Poon, Michael A Poon, Elena N Provenzano, Kien Lap Quach, Brian J Reynolds, Rodney I Richardson, Warwick A Rouse, Ian C Routley, Paul J Ruljancich, Amin Sadruddin, Peter Salama, Josephine J Samuel, Miranda Sandars, Gabrielle M Santospirito, Suzanne Schemali, Irene H Sein, Kirsten Seipolt, Ajit Jeya I Selvendra, Tamara Seneviratne, Shomik Sengupta, Naveen Singh, Andrea J Smith, Matthew Snape, Benjamin Solomon, Nicholas Spanos, Kylie L Staggard, Julian B Stella, Helen Stergiou, Jonothan Stevenson, Rachel Stokes, Ronald V Sultana, Brett Sutton, Andrew Symons, Huey Miin Tan, Kay Sin Tan, Titi Nhu N Tang, Eric T Tay, Juliana Thomas, Phat Quoc Tiet, Myew-Ling Toh, Delia Tores, Santha N Traill, Martin J Tuszynski, Elizabeth Uren, Sharon Van Doornum, Heather A Wark, Andrew Henry Wei, Andrew Whan, Anthony White, Timothy S Whitehead, Mark Whiting, Amanda M Wilkin, Elizabeth Williams, Andrew Wilson, Jason Winnett, Jenny Wintle, Flora Y Wong, Frankie K Wong, Kee Kee Wong, Lynette Wong, Melissa Wong, Shirley Wong, Matthew C Wood, Yousong Xing, Michele S Yeo, Katherine C H Yu, Vincent A Yuen, Sandy Zalstein.

DEAN'S HONOURS 1993

On the recommendation of the University, Faculty has established a Dean's Honours List, taking effect from 1993, to give formal recognition to the achievements of its most outstanding students. The list comprises a small number of students of high distinction at each year level of the MBBS course based on the weighted average performance obtained in each year level for years 1-5, and the weighted average performance across years 2-6 for final year.

Final Year

Suzanne Cochrane, John Heath, Mark Krawczyszyn, Sarah Larkins, Robyn Laurie, John Marty, Kylie Mclachlan, Elena Provenzano, Shomik Sengupta, Benjamin Solomon.

Fifth Year

Giuliana Antolovich, Richard Brouwer, Marnie Buckwell, Caroline Dowling, Linda Mileshkin, Catherine Wise.

Fourth Year

Kirsty Buising, Julian Castro, Robin Cassumbhoy, Kirsten Herbert, Joshua Kausman, James King, Melanie McCann, Terrence Jong Yeong Ong.

Third Year

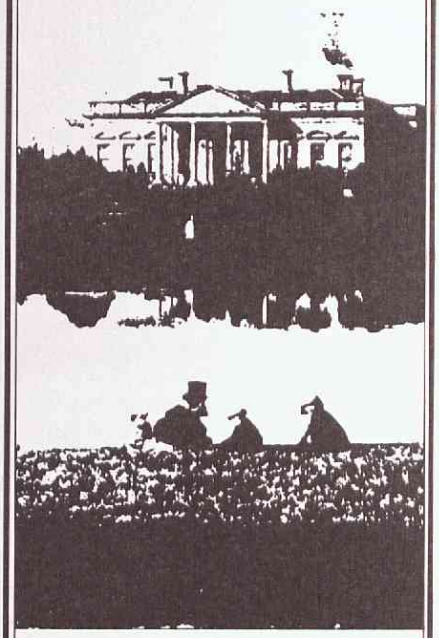
Guy Bylsma, Catherine Drury, Chien Boon Lye, Pathirajage Chaminda Saranasuriya, Sujith Seneviratne, Tin Ming Shiu.

Second Year

Colin Chun Keng Chan, Lean Peng Cheah, Lisa Laidlaw, Lip Wai Lee, Keat Eu (Andrew) Lim, Ruth Pec Shian Lim, Sin Hing Mok, Ashley Peng Chee Ng, Yong Ming Por, Pi Ang Seet, Nadesapillai Subanesan.

First Year

Casey Ka-Shun Chan, Adrian Fox, Kent Yik-Kin Hoi, Paik Yee Ng, Sin Kuan Tan, Valerie Shiok Hann Tay, Koh Cheng Thoon, Rosalind Webby.



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Prof Emer HD Attwood

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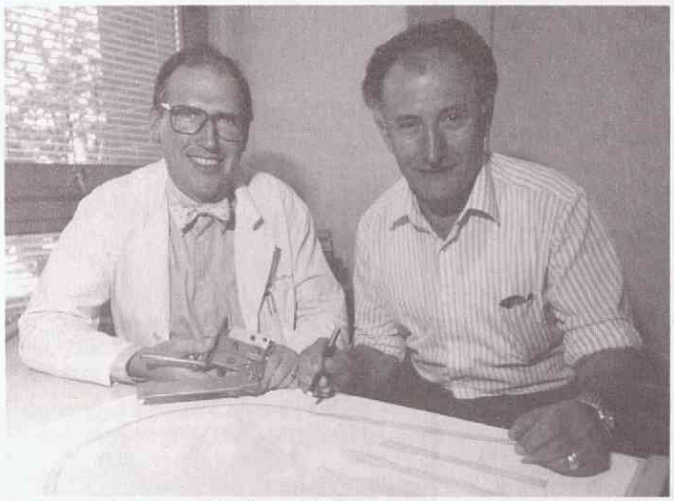


Professor Hugh Taylor and Mr Ljubo Pericic reviewing the design of tools needed for the MUDO Microsurgical Needles.

Dr Jill Keeffe working in the Philippines. She is testing the material she has developed to assess children with low vision.

IN APRIL 1993 THE RINGLAND ANDERSON CHAIR of Ophthalmology celebrated its 30th Anniversary. It was the first Chair of Ophthalmology to be established in Australia, and began in the same year as the first academic department in England at the Institute of Ophthalmology, London. In accordance with the wishes of Dr J Ringland Anderson, and of many in the community of ophthalmologists whose enthusiasm and financial support had helped endow the Chair, the Department was sited at The Royal Victorian Eye and Ear Hospital and was to share the Hospital's aims: commitment to patient care, to teaching, and to research.

Professor Gerard Crock was appointed the Inaugural Professor, a position he held until his retirement in 1987. He is a world renowned ocular surgeon with a particular interest in the development of surgical instruments, for both diagnosis and treatment. Under his guidance, the Department introduced into Australia a number of improvements in many specialised fields of ophthalmology: techniques such as fluorescein angiography, microsurgical instruments for corneal grafting, cataract and vitreoretinal surgery, and diagnostic instruments such as the head-worn indirect ophthalmoscope. Special microsurgical instruments were designed to aid the management of ocular trauma and for vitreal and corneal surgery. The Units of Bio-Engineering, Electron Microscopy and Photography were established and each has played a fundamental role in the ongoing research and teaching of the Department. Emeritus Professor Crock has an important continuing relationship with the Department; we appreciate his participation.

In August 1990, Professor Hugh R Taylor returned to Australia from the Johns Hopkins Hospital, Baltimore, USA, to take over the Chair in Ophthalmology. He is a grandson of Ringland Anderson, and trained under Professor Crock at The Royal Victorian Eye and Ear Hospital before going to Baltimore. His interests and commitment to preventive and therapeutic ophthalmology, in both developed and underdeveloped populations is manifested in the establishment of two new Units in the Department, Epidemiology and Low Vision, and in the official designation of the Department by the World Health Organization as a WHO Collaborative Centre for the Prevention of Blindness. It is the first such centre in Australia and Oceania.

The Department has made a commitment to develop a strong research base. This has been facilitated by the receipt of two important personal research awards by Professor Taylor: The Sir John Eccles Award from the NHMRC, which is given to assist expatriate researchers to return to academic departments in Australia; and the Alcon Research Institute Award of US$100,000 – the first time this prestigious American award has been given to an Australian.

Dr Catherine Carson has recently been appointed the Head of the Epidemiology Unit, following Dr Charles Guest who did a fine job in starting the Unit. The long term goal of the Unit is to use the tools of epidemiology and public health to understand and prevent eye disease. It will examine the distribution and aetiologic associations of eye diseases and evaluate the efficacy of various forms of intervention.

The major initiative of the Epidemiology Unit is to establish an accurate picture of the impact of eye disease and the common causes of vision loss. This information is needed to develop appropriate programs for either the prevention or treatment of eye disease before visual loss and disability occur. The Unit has established The Melbourne Visual Impairment Project (VIP) which is examining a selected sample of people living in and around Melbourne. This will be representative of the Australian population.

There is a great difference in the distribution and causes of eye diseases between developed and developing countries. In Australia, most eye diseases relate to ageing; in the Asia-Pacific regions, trachoma and Vitamin A deficiency are found in a much younger population. These conditions, as well as cataract, can either be prevented or treated with current technology – or adaptations of existing technology and skills appropriate to specific regions. Half of all blindness is due to cataract. Mr Ljubo Pericic of the Bio-Engineering Unit is currently involved in developing instruments and equipment designed to do modern cataract surgery in developing areas. A new lightweight operating microscope, the MUDO Loupe, has been developed for cataract surgery. It is worn like a pair of glasses and is freely portable. It costs a fraction of conventional operating microscopes and should be commercially available early in 1994. Simple tools have been designed to allow microsurgical needles and sutures to be manufactured at low cost in developing countries. These MUDO needles can be made for a fraction of the price of currently available suture material and they will complement the intraocular lens factories being built by the Fred Hollows Foundation. These needles have already been evaluated in Australia and in India, China and Nepal.

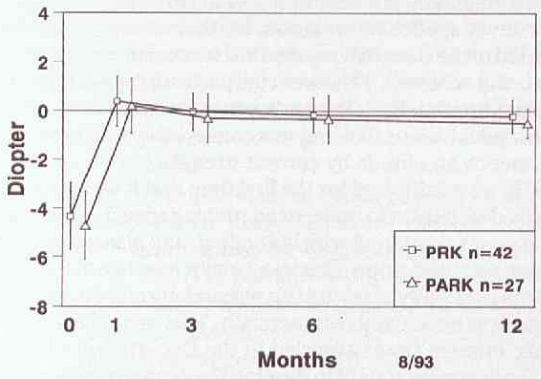
The most common operation in ophthalmology is cataract surgery, and approximately 80,000 operations are performed each year in Australia. With the introduction of intraocular lenses about twenty years ago, visual rehabilitation was improved dramatically as patients no longer needed thick and disabling aphakic glasses. Now, much cataract surgery is done on an out-patient basis, to the relief of the patient, and the substantial lessening of costs to the health care system. However, many different factors contribute to the formation of cataract: amongst them, UV-B exposure from sunlight, some dietary factors, certain drugs (including cigarette smoking and alcohol) and diabetes. Associate Professor Hector Maclean has had an ongoing interest in cataract research, and worked with a new computerised cataract camera from Nidek to track and record the slightest change in cataract progression. We are also initiating a long-term collaborative

trial with Professor John McNeil from Monash University to assess the efficacy of both aspirin and vitamin supplements against cataract.

The Low Vision Unit is headed by Dr Jill Keeffe. The Unit's first goal is to develop simple ways of testing and assessing visual disability in underdeveloped countries. It has distilled the essential ingredients for the complex testing used in developed countries and adopted locally available resources and appropriate technology. An accurate assessment of vision, followed by the correct remedial training can greatly enhance rehabilitation and the ability of the individual to function in the community. The testing kits must be simple, capable of interpretation regardless of language, and the instruction manuals such that locally trained workers can accurately assess each child. So far Dr Keeffe has tested her materials in India, the Philippines, Fiji, Kenya and Uganda. Currently her simplified system is being assessed by others in a total of forty countries. The initial focus has been on children, but trials will now be extended to include the assessment of adults. Once finalised, these kits will be made available to WHO and other interested agencies for use throughout the developing world.

As a World Health Organisation Collaborating Centre, the Department participates not only in global and regional meetings, but in special workshops and training programs of local personnel. For example, a two-week training course for primary eye health workers was held in Fiji in 1992, in conjunction with Dr J E K Galbraith and the Aspect Foundation, an Australian voluntary organisation which provides eye care for South Pacific nations lacking their own services. Representatives from nine Pacific countries attended. This has been followed by sub-regional training workshops conducted by the ophthalmic teams from Aspect. Similarly, Dr Keeffe held a workshop in 1993 for low vision workers. It is only with the enthusiasm and expertise of locally trained people that better eye health for all will become a reality.

The Lions Eye Bank – Melbourne, has been established within the Department with Dr Graeme Pollock as Deputy Director. The Eye Bank provides a world-class eye banking service with top quality donor material. The waiting time for a corneal graft has been reduced from eighteen months or more in 1990 to about six weeks in 1993. The second goal of the Eye Bank is to further our understanding of corneal disease. To do this it is focusing on factors that affect corneal wound healing in an attempt to speed up the healing of corneal ulcers.



Early results of excimer laser treatment for short-sightedness (myopia). Mean refractive error before excimer laser treatment and at 1, 3, 6 and 12 months after treatment. This shows the almost complete correction of myopia (photorefractive keratectomy, PRK) and of myopic astigmatism (photo-astigmatic refractive keratectomy, PARK).

The Excimer Laser and Research Group is a unique joint undertaking: a group of 26 ophthalmologists in private practice purchased the first VisX Excimer Laser in Australia and placed it within the Department. This exciting new technology enables the ophthalmic surgeon to sculpt or shave layers of cornea to correct myopia and astigmatism, in many cases eliminating the need for glasses or contact lenses. Part of our research is to evaluate the safety and efficacy of laser treatment, and its usefulness in new areas.

Dr Julian Rait is a part-time senior lecturer who leads our Glaucoma Research Unit. He is committed to seeking more efficient ways of detecting the earliest changes in glaucoma in order to provide appropriate therapy or intervention prior to irreparable damage. He is currently investigating the potential of adapting a confocal scanning laser ophthalmoscope to chart very early glaucomatous changes. In another study the diagnostic role of new electrophysiologic tests is being assessed. Dr Rait also assists in the glaucoma aspects of the VIP study.

In 1994 Dr Michael Loughnan will return to the Department after a post-doctoral fellowship at Harvard. He did his ophthalmology training at The Royal Victorian Eye and Ear Hospital, and completed his PhD at The Walter and Eliza Hall Institute. He will set up an Ocular Molecular and Cellular Biology Laboratory focusing initially on the growth of new blood vessels in the eye. Neovascularization leads to the major complication seen in diabetes and age-related macular degeneration, two of the most common causes of vision loss in our aging society.

Miss Nanette Carroll has run the Electron Microscopy Unit for many years. While her initial work used the Department's scanning electron microscope to study the ultrastructural pathology of the cornea, particularly the corneal endothelium, increasingly she now uses her skills in transmission electron microscopy as well.

Teaching is of fundamental importance in an academic department, in the training of ophthalmologists, and in both postgraduate and undergraduate training. The Department maintains close links with the Hospital at many teaching levels. The Professor serves as the Director of Eye Services and also as the Chairman of the Clinical School at the Hospital. Many clinical members of the Department hold joint hospital appointments and head a number of general and specialist eye clinics. This association between hospital and university is particularly important and valued, and greatly facilitates the clinical, teaching, and research interests of each institution.

Dr John Colvin continues to give his famous voluntary lecture series on Saturday mornings. For thirty-three years he has given these most popular lectures to generations of medical students. They have been outstandingly successful and are still the essential course on eye care for medical students from both Melbourne and Monash Medical Schools. There is not a graduate who does not hear a bugle blow when he sees a unilateral red eye!

Associate Professor Maclean has been active in both clinical and teaching capacities. He has a strong interest in the problems of low vision, particularly in children, and he has organised the highly successful 'Update in Ophthalmology', a continuing education course given to general practitioners. We have been overwhelmed by the interest expressed in these courses, which reflects the importance of eye disease in the day-to-day work of GPs. There is clearly a need for GPs to keep abreast with the many advances made in ophthalmology and the management of eye diseases over the past few years.

For many years registrars have assisted with the Aspect Foundation surgical programs in the Pacific. More recently some have gone to Nepal and worked in conjunction with the Fred Hollows Foundation at cataract surgery camps which are set up in remote areas . Their participation has helped raise an awareness of the lack of resources, the poverty and the lack of trained personnel in the more impoverished regions of the world. It is important for us all to be aware of these problems and to do what we can to address them.

Training for higher academic degrees is also an important activity. Several medical graduates are currently pursuing Master's degrees prior to entering the training program; others make a longer commitment for either a Doctorate of Medicine or a Doctorate of Philosophy.

It is not always easy to predict future development. However, looking ahead in ophthalmology, it seems likely that in the next few years reshaping corneas with lasers will become so standard that many will no longer need to wear glasses or contact lenses. It seems likely that artificial corneas will become available by the end of the decade, and so avoid the need for many corneal transplants. Flexible intraocular lenses or replacements for the cataractous lens may be perfected in the not-too-distant future; these would allow the eye continuing focus on small things, even after cataract surgery. Much work is being done in the aetiology of glaucoma, and once this has been more clearly understood, appropriately targeted therapy is likely to follow shortly after. Although a bionic eye seems a long way in the future, transplantation of the retina, or at least of the retinal pigment epithelium, to combat some of the degenerative retinal diseases may not be so far away. Of even greater practical importance will be the effective application or delivery of today's knowledge to prevent or treat the vast bulk of unnecessary blindness.

Hugh R Taylor
Ringland Anderson Professor

Department of Otolaryngology

Professor Graeme Clark with first implant patient, Mr Rod Saunders (Bionic Ear), 1978.

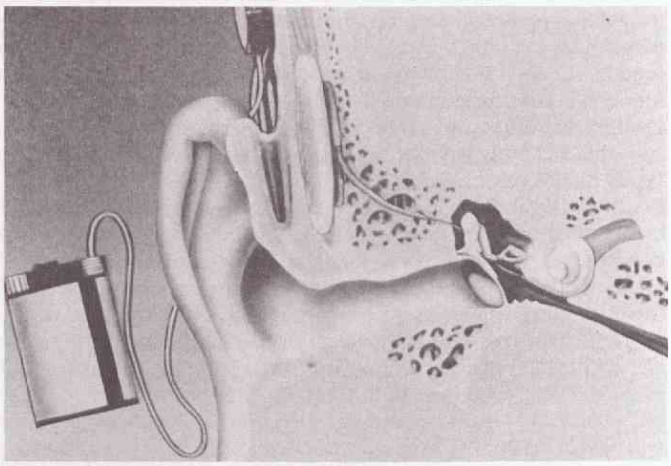


Diagram of the Cochlear implant and speech processor.

THE DEPARTMENT OF OTOLARYNGOLOGY at The University of Melbourne commenced on the 1st of January 1970. It was established because otolaryngology had become a major specialty and one of importance to medical students: 15 per cent of referrals in family medicine can be attributed to conditions of the ear, nose and throat. The Chair was the first in Australasia and was also meant to have a significant role outside The University of Melbourne. Its specific aims were to foster teaching and research in the discipline.

Teaching, in the case of undergraduate medical students, has focused on special formal lectures at different stages during the course, clinical training associated with the Clinical Schools, and examination for the Hedley F Summons Prize in Otolaryngology. The Department of Otolaryngology has also encouraged undergraduate medical students to take a year off during their course and carry out research for a Bachelor of Medical Science degree. This has been a successful venture and Melbourne University's medical students have played important roles in research relating to the development of a cochlear implant (Bionic Ear) for profoundly deaf children and adults. The postgraduate educational activities of the Department have primarily been concerned with the training of professionals in audiology. The Department established the first course in audiology in this country and it still runs the major training course in this discipline in Australia: 342 students have graduated over the last twenty years and a proportion returned to Europe and South East Asia. The training leads to a postgraduate Diploma in Audiology. The units in this postgraduate diploma are: acoustics, anatomy and physiology, otology, perception of sound and speech, general audiology, paediatric audiology, aural rehabilitation, hearing aids and other sensory devices, and audiology and the hearing impaired child. Advanced studies can be undertaken for a Master's degree by coursework in audiology, in which case special studies take place. Postgraduates in medicine can receive training through a postgraduate Diploma in Laryngology and Otology, and more recently, a Master's degree in Audiology and Otoneurology or in Surgery. The Department has been active for twenty years in training postgraduate students for Master of Science and Doctorate of Philosophy degrees. It has approval from the Faculty of Science to conduct research for both Bachelor of Science Honours and Master's degrees within the Faculty of Science.

The research of the Department has focused primarily on the development of a multiple-channel cochlear implant, or Bionic Ear, for profoundly-to-totally deaf people. This work started when the Department was first established in 1970. At the time it was generally considered that it was not possible to give people hearing by direct electrical stimulation of residual hearing nerves, and therefore funding for the research was extremely difficult. The initial research received significant support from the Telethon undertaken by Channel 0 (10) from 1973 to 1976. The Department was also awarded a National Health and Medical Research Council Project Grant in the 1970s that enabled basic research to be done. The development of prototypes and work leading to its industrialisation was then supported by a Commonwealth Government Public Interest Grant in 1978.

After a series of biological and surgical studies, as well as engineering work in collaboration with the Department of Electrical Engineering at The University of Melbourne, a prototype Bionic Ear was achieved and implanted in the first patient in 1978. This patient had been totally deaf for two years following a head injury. A series of studies was undertaken on this patient to see what he perceived when stimulating different electrodes. The first important finding was that he experienced different pitch sensations depending on the site or rate of stimulation; but initially it seemed difficult to find a suitable code to convey speech information. Further studies on the patient, however, led to the clues that resulted in a successful speech processing strategy being achieved. This extracted particular speech frequencies of importance for intelligibility, particularly for consonants – these are called second formants. Voicing was conveyed by rate of stimulation and the speech amplitude by current strength.

In 1979, we established for the first time that it was possible for a profoundly deaf person to understand running speech when electrical stimulation was combined with lipreading, and also when electrical stimulation was used alone. This was a major advance at the time, and it raised the possibility of taking this research through to industry and having devices developed commercially. This was achieved through the Public Interest Grant awarded to the Department of Otolaryngology. Tenders were sought to develop the device commercially and the Australian pacemaking firm, Teletronics, was the successful tenderer. Its parent, the biomedical firm, Nucleus, and its subsidiary, Cochlear Pty Limited, developed the cochlear implant for clinical trial for the United States Food and Drug Administration (FDA), and this was first implanted by The University of Melbourne team at The Royal Victorian Eye and Ear Hospital in 1982. It was shown to be effective and successfully implemented the initial research findings from the Department of Otolaryngology. This was trialled in a number of centres in the United States, West Germany, Melbourne and Sydney and was shown to be both safe and effective and approved by the US Food and Drug Administration in 1985. This was the first time the US Food and Drug Administration had approved a multiple-channel device for use in adults, and it still is the only multiple-channel device to have received approval to this day.

At about this time it was realised there was a need to carry out further research to improve the cochlear implant so that as wide a range of people as possible could benefit. The Department of Otolaryngology was awarded a NHMRC Program Grant in 1985 to help undertake the necessary research. In addition, it received a US National Institutes of Health (NIH) Grant in 1984 to carry out cochlear

implant research. This was the first time the NIH had awarded a grant in this area outside the United States. In 1985 the Department of Otolaryngology received an NIH contract to further develop speech processing for the cochlear implant, and in 1986 an NIH contract to study biological safety for implantation in young children.

The success of the cochlear implant has also led to the possibility of other hearing prostheses for deaf people. One of these possibilities is the use of a cochlear implant in one ear, combined with information transmitted via a special speech processing hearing aid in the other ear. Another possibility is the use of two Bionic Ears so that a two-ear advantage for improving the signals in noisy backgrounds can be experienced. The development of a Tickle Talker, or electrotactile method of presenting speech to the digital nerve bundles on the non-dominant hand is in progress. The development of speech processing hearing aids for people who have some residual hearing but do not get adequate help with their conventional hearing aids is being investigated. A central brainstem implant for direct implantation into the cochlear nucleus in the case of people who have lost the hearing nerves and cannot be stimulated by a cochlear implant has commenced. There is also important research being undertaken in the Department which has led to the development of a means of analysing evoked potentials from the scalp in response to complex acoustic signals, and is a great help in accurately diagnosing a hearing loss at all speech frequencies.

The research to develop a variety of hearing prostheses was supported in 1988 by the award of a Special Research Centre for Human Communication Research to the Department of Otolaryngology from the Australian Research Council and Commonwealth Department of Employment, Education and Training. This Special Research Centre has been actively involved in a number of areas of research, and this has led to improvements in speech processing for the cochlear implant that has kept the Australian cochlear implant the leading device in international markets. The Australian firm, Cochlear, has 90 per cent of the world market. As at July 1993 over 7,000 people, including 2,750 children, have been implanted worldwide in 38 counties and more than 30 languages.

A bimodal speech processor, or Combionic aid, has been taken to the prototype stage for initial clinical trial. This aid, which combines an implant in one ear and a hearing aid in the other, has been tested now through the Melbourne University's clinic at The Royal Victorian Eye and Ear Hospital as well as at the Denver Ear Institute. Furthermore, a means of diagnosing hearing loss accurately, even in one-day-old babies, has been researched and is now being developed commercially by industry.

More recently, the Department of Otolaryngology's work led to the award of a Co-operative Research Centre from the Department of Prime Minister and Cabinet for Cochlear Implant Speech and Hearing Research. The core parties for this Co-operative Research Centre are The University of Melbourne, in particular the Department of Otolaryngology, the Australian Bionic Ear and Hearing Research Institute, Australian Hearing Services and Cochlear Pty Limited. The supporting parties are The Royal Victorian Eye and Ear Hospital, Taralye, St Mary's School for Deaf Children, The Royal Prince Alfred Hospital, Sydney, The Royal Alexandra Hospital, Sydney, and The University of Sydney. The aim of this centre is to further develop the products that have already arisen from the basic research at The University of Melbourne, and carry out research leading to other devices. The particular devices being researched and developed at the moment are an advanced Bionic Ear, a Combionic Aid, a new generation of speech processing hearing aids, the Tickle Talker, a brainstem implant and a computer aided speech and language program.

As far as future directions are concerned, much has been accomplished with the Bionic Ear and other hearing prostheses, but much remains to be done. Our goal is to see that most people (children and adults with severe to profound hearing loss) can communicate normally and understand environmental sounds. To achieve this goal it will be necessary to learn more about how the brain codes sounds and how this can be transmitted by direct electrical stimulation of the hearing nerve. To know how best to help children, basic studies are also required to determine when the auditory brain is plastic, how it develops neural links to speech sounds and how this ability is affected by different modes of electrical stimulation with the Bionic Ear.

Not only is it necessary to have a greater understanding of how the brain functions at a physiological level, but it is important to know how the complex patterns of electrical stimulation produced by the Bionic Ear are perceived. The perception of simple and complex stimuli can lead to a knowledge of how the brain processes speech, particularly for electrical stimulation. Along with this research on further improving the Bionic Ear, there is also a need to learn why there is variation in patient results, and how patients with below average performance can benefit.

With children, present trends indicate that they should receive a Bionic Ear at a young age, and research will need to focus on issues that are relevant to this special group. This includes biological safety, assessment and training procedures. It will also be important to learn how children best learn language and to speak with a good quality voice. Finally, we must learn how these children are most effectively integrated into the hearing world.

As most people with a hearing loss have difficulty understanding speech in the presence of background noise, a significant part of our research will need to be directed to improving this situation. This may involve improvements in microphone design, 'intelligent' speech processing to 'listen' selectively to certain sounds, and the use of Bionic Ears in each ear. Two normal hearing ears are a big advantage when listening in noise, as they enable the noise to be cancelled out when signals reach the brain, with the signals of importance still processed. Bionic Ears in each ear may also allow us to improve overall speech perception in quiet, by presenting some parts of the speech signal to one ear and different parts of the signal to the other ear. This may require some 'intelligent' decision making by the electronic circuitry.

As the results with the Bionic Ear for profoundly deaf people can be better than those obtained by severely deaf people with hearing aids, there is now a need to operate on people with some residual hearing. To give these people the best results there will be a need to carry out research to combine electrical stimulation in one ear with processed speech sounds presented to an aid in the better ear. Research will also examine how best to use residual hearing in the implanted ear.

Not only must our research aim to give people the clearest possible speech signal, but we must teach them how best to use it. While it remains an approximation to normal sound there will be a need for training. This applies, in particular, to children, who will be learning language for the first time.

Some unfortunate patients cannot receive the benefit of a Bionic Ear because their hearing nerves have been destroyed, for example, by tumours. Speech processing advances with the Bionic Ear now mean that these patients too could be helped with an implant directly into the brain. More research is needed before this will be as safe and effective as the Bionic Ear.

As an adjunct to electrical stimulation of the hearing nerve, we have been carrying out research with a Tickle Talker, and now know that some children can also lipread better when speech elements are presented as patterns of stimulation to the skin. They can learn to incorporate touch sensations as speech. The challenge for the future research is to enable these children to understand speech without the help from lip-reading, which is the case for some when using the Bionic Ear.

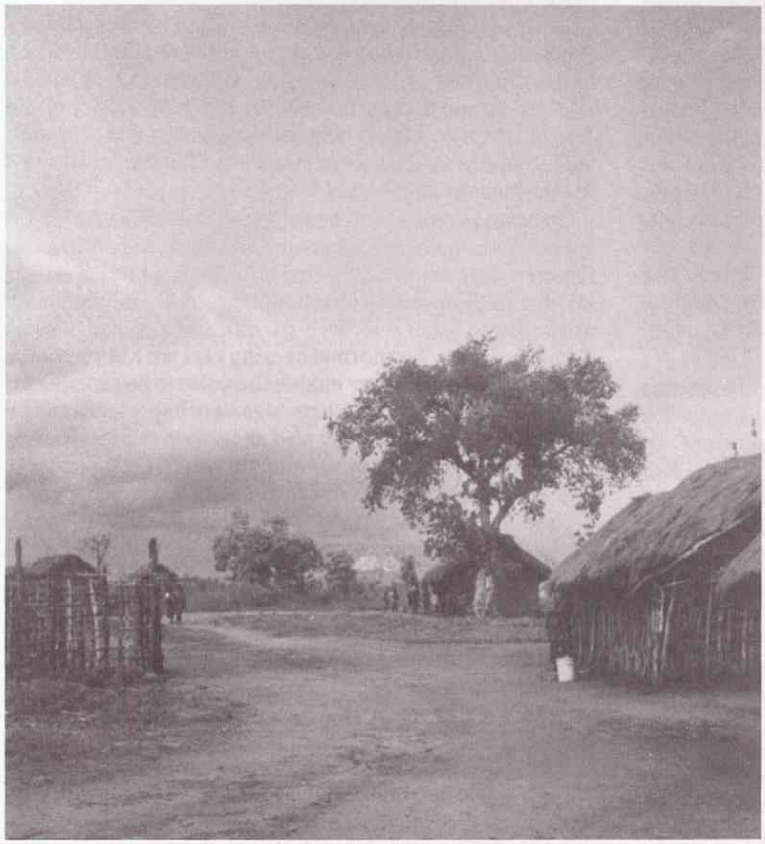
It is not enough to help only severely-to-profoundly deaf people, but those with a moderate-to-severe hearing loss need assistance, as they often do not obtain optimal help with present hearing aid designs. For this reason we are extending our speech processing research to this group of people and hope to develop a new generation of hearing aids which process the speech to specially suit the person by using a form of 'intelligence' in the electronic circuitry.

Finally, future research directions are not complete without extending the work of the Department which led to the development of an objective computer-based system for analysing brain-waves from the scalp of infants in response to sounds. This research has the potential to determine how children's brains work when decoding complex sounds and what happens with malfunction.

Graeme Clark AO
Foundation Professor of Otolaryngology

Eight Weeks in Tanzania

Georgina Phillips*, MBBS 1993



Towards the end of 1992 I journeyed to East Africa to spend eight weeks working and living amongst the people of Berega, a small, isolated rural community in the mountains of central Tanzania. Choosing Berega involved a combination of medically and personally motivated goals:

- to experience the practice of medicine in a non-western developing country, and to observe and understand the impact of western-style medicine;
- to observe and understand the impact of social, cultural, geographical, political and spiritual factors on health;
- to challenge my current understanding and to develop a more world-oriented approach in my dealings as a doctor with people from other cultures, languages and traditions;
- to participate in the life of an isolated rural village and a small Anglo-Saxon missionary community and to experience the role the community plays amongst the local village and tribe; and
- most importantly, to determine whether I could spend some of my future working life in Tanzania or a similar country, and in what particular area of health.

*Dr Phillips is one of the four 1993 UMMS Elective Essay prize-winners.

The community

Berega is a small village over 120 km from the capital of Tanzania, Dodoma, and some 400 km inland from Dar-Es-Salaam, the largest city. It has a population of approximately three hundred people, mainly from the Wakiguru tribe, and a small number of Masai people. Apart from the hospital and an adjoining orphanage, Berega boasts a small market where tomatoes, onions, oil, rice, beans, flour, sugar and tea (as well as an assorted collection of oddments, including 'Gripe Water') can be bought. The majority of fresh fruits and vegetables, pulses and groceries must be bought at Morogoso, a large town one hundred kilometres away.

The mission hospital is run by the Anglican Church of Tanzania and funded to a certain extent by mission agencies in the United Kingdom and Australia; thus, as hospitals go in Tanzania, it is one of the better organised and equipped. It caters for between 120-160 in-patients and up to 800 out-patients a day. It is the closest hospital for approximately 400,000 people in an area with a radius of about 200 km. The hospital has two-way radio, which can occasionally make contact as far away as Kenya – any other form of communication or contact with commercial life must be made through Morogoso.

Health service and the hospital

Health service is severely limited by a combination of factors related to the life of the local people and the conditions under which the hospital operates. The work of the hospital is affected by the socio-cultural setting of the community. At times western medicine is viewed suspiciously and linked, understandably, with Christianity. Whilst for some, this western (white) and Christian link is thought to be powerful – in the village, the white Christians are affluent, educated and powerful – for others it is unfamiliar and threatening. Traditional healers (witch-doctors) and traditional birth attendants maintain a high profile in the community and are a cheaper alternative to a prolonged stay at the hospital and the cost of drugs. Health is viewed in spiritual terms – sickness being the work of evil spirits – and there is a degree of fatalism in attitudes to health care. Active intervention in the course of an illness occurs to a limited extent only: the patient is destined to live or to die. Nursing duties are viewed in this light despite western training of staff nurses, and as a result concepts of resuscitation, physiotherapy and intensive care are difficult to establish. The local people take little interest or note of their own state of health – and the traditional medical interview has far less weight in Berega than in a western community.

The average level of education is mid-primary school, thus concepts taken for granted in a western environment are unfamiliar to both patients and staff alike. Understanding the spread of infection, notions of wound care and sterile technique, are important aspects of health care which have to be taught and reinforced at every opportunity.

Polygamy is common and extra-marital sexual relations quite acceptable. The incidence of sexually transmitted diseases is high – most notably that of pelvic inflammatory disease (PID) in women. This, of course, has implications for the spread of HIV infection (about a 5 per cent incidence in the Berega hospital community), especially when combined with the fact that condom usage is low and very unpopular. Numerous offspring are important as insurance for old age, contraception is culturally unpopular, a childless couple or 'infertile' women earning a stigma and some degree of social isolation in the community. The result is that the obstetric and gynaecological health of women involves significant aspects rarely experienced in a western environment.

Living conditions of the local people are poor, comprising mud and stick one- or two-roomed huts with thatched roofs and dirt floors. An open fire in each hut is

a great health hazard – a number of children and teenagers came into hospital with severe burns, having fallen into the fire, often as a result of an epileptic fit. Commonly, a large family crowd into one hut, or a small family-based compound caters for the immediate and extended family as well as housing animals and storing food. Water comes from a single village pump, which also supplies running water to the hospital and hospital staff houses. The pump, however, breaks down frequently, parts are expensive and difficult to find, and in all events the water requires additional boiling to be completely safe. There is no sewerage system and pit latrines serve as toilets for both the hospital and the villagers, although the small western community has flush toilets connected to sewerage tanks in their homes.

The hospital provides accommodation and cooking facilities for relatives of patients – a relatives' camp. All food and much of the day-to-day care of the patients is provided by the relatives rather than the hospital. The camp consists of a series of adjoining concrete rooms and a large open fire for cooking, as well as a pit latrine. Sometimes whole families will occupy a room, with more relatives camping in the courtyard outside or sleeping on the floor of the hospital wards.

These conditions have a significant impact on health – not least the spread of infection. During a cholera epidemic in 1992, hampered by lack of space, communal latrines, poor organisation and reinforcement of restrictions, the relatives' camp was severely affected despite attempts at quarantine and barrier nursing, and infection spread rapidly resulting in mass hospitalisations and many deaths. Similarly, the prevention of spread of tuberculosis is made almost impossible by crowded living conditions and the communal way of life. It is said that one grandmother in a nearby village successfully infected her whole family with TB, simply by failing to complete her treatment program.

The frequent lack of pumped water has had a number of consequences, especially for the health of the village women, who have the responsibility of collecting water for the household, involving long journeys with a ten litre load of water carried on the head, often several times a day. Cleanliness and sanitation suffer when water is scarce: trachoma and resulting blindness is a significant problem in surrounding villages, which could be prevented by frequent and careful washing of eyes and faces. Minor wounds become infected quickly through lack of cleansing – a problem not only in the village, but also in the hospital. Lack of hand washing contributes to the contamination of food and the spread of infective gastro-intestinal diseases.

However, one of the great advantages of their communal lifestyle is the extensive kinship support on which such a system thrives. The health and care of each individual is the community's responsibility, no problem is too difficult to handle, and the social and emotional health of the community is optimal.

Health services in Berega and the surrounding region are affected by geographical factors: distances to be travelled and the time taken to reach the hospital mean that a number of diseases are complicated by late presentation. For example, infective diarrhoea in children developing into gross dehydration, irreducible hernias leading to gangrenous bowel, and a variety of obstetric problems presenting as severely compromised foetal and/or maternal health. The modes of transport – usually walking, occasionally bicycling, and (rarely) hitching a ride on a truck – serve to hasten rather than delay exhaustion and decline in the patient. The hospital's isolation means that referral to specialisist health professionals is virtually impossible and a number of tasks have to be attempted in acute situations by inexperienced and under-qualified staff. On one occasion when a woman needed a semi-urgent hysterectomy, the hospital was fortunate enough to organise a lift for her to Dodoma. For the luxury of having her uterus removed by a surgical specialist, the woman was subjected to a journey of about three hours lying in the back of a truck, surrounded by relatives and various spare machinery parts, along a bumpy, unmade road.

Another factor is the climate. December is the beginning of the rainy season after a prolonged period of dry infertility. With the rains, the land is transformed and the soil made ready for planting maize, which is grown as a subsistence crop by the majority of the local people. The planting season is short-lived and involves long hours of intense, hard work for all those old enough to carry a hoe. It is the most important time of the year, ensuring that there will be enough food to last the family through the following dry season. This, then, is a major issue when deciding whether to bring a sick relative to hospital. Rather than risk the family food supply for the coming year by leaving the farm and accompanying a relative to hospital (the concept of going to hospital unaccompanied is simply unacceptable), a decision is often made to wait and see if the patient recovers spontaneously. The outcome, of course, is that some illnesses, especially in children, increase in severity almost to the point of being too late, before presenting to hospital.

The rainy season also affects the health of the people in a more direct way: in January as the downpour becomes heavier, the number of people presenting to hospital with malaria rises dramatically. During my stay, this sudden influx of seriously ill adults and children placed a significant strain on both the staff and the resources of the hospital – the crowding of sick patients and (well) relatives into the wards at night, with a great number of mosquitoes and no mosquito-nets, led to a disastrous spread of infection. The rains of the previous year had been poor, with resulting hunger and malnutrition during the dry season; the most recent rains were substantial – thus making the threat of a similar 'famine' less likely. The rain added to the isolation of the hospital by filling a nearby river, effectively forming a moat around the the complex.

The economics of poverty

Poverty in Tanzania can be found at government and administrative levels as well as in the many rural villages of subsistence farmers. Lack of money places severe and, from a western perspective, unacceptable constraints on the work of the hospital, as well as on the life and health of the people.

Sharing food – patient, family and staff.

The Tanzanian government pays the wages of the Tanzanian staff at the hospital, but the hospital depends on funds and donations from the Anglican Church in Tanzania, the United Kingdom and Australia, as well as donations of drugs and other goods from mission agencies in both these western countries, for its survival. Despite income from outside sources, the hospital runs at a loss, and recently had to increase its nominal fee for admission and treatment to a slightly more substantial amount. Basically the hospital only just manages to survive at its current level, with virtually no reserve for extra drugs, new facilities or even replacing worn-out or damaged equipment. A close watch is kept on all stock, including sheets and blankets and IV fluid bottles, to the point of counting out every paracetamol tablet used and balancing the figures at the end of the day. Infected wounds are often not re-dressed for a week because of the chronic shortage of dressing materials. Every item is re-used, recycled or spread very thinly, simply because of the lack of supply and the uncertainty as to when the next shipment of goods and equipment will arrive. Any form of treatment is sub-optimal, and occasionally leads to a longer stay in hospital because of more complications than would have arisen had the necessary drugs and equipment been available.

A key element in the financial situation of the hospital is bribe-money. The unwillingness and inability of the hospital to pay bribes has led to a significantly disadvantaged health service. Bribes are necessary to ensure that most jobs are done at a reasonable pace, indeed to ensure that they are done at all. This has serious implications for the hospital, especially when bringing drugs and other essential goods through customs, and also in getting untrained local staff into nursing and medical-assistant training programs.

Poverty, poor nutrition and housing and a low standard of education, naturally affects the health of the community. The financial strain of being admitted to hospital, having investigations done and treatment instigated, is a major barrier to attending the hospital while still in a manageable stage of illness. Patients remain in hospital until their bills have been paid, which often leads to overcrowding in the wards and begging by relatives (on behalf of the patient) in order to find the money within a reasonable period of time.

Berega hospital is staffed by two Australian doctors and one English laboratory technician, who together form the Anglo-Saxon population of the hospital. The Tanzanian staff consists of three medical assistants, two laboratory technicians, one medical administrator, one matron, nine trained staff nurses, two untrained theatre technicians and a large number of untrained nurses with a mid-primary school level of education. Given the demands on the hospital and the sheer volume of people presenting as in-patients and out-patients, the health service is grossly understaffed. Overwork and social isolation brings stress and exhaustion, vital problems for hospital staff, especially for the two doctors who rarely have a full 'day off'.

A major issue for the hospital is the threat of losing trained staff, particularly the nurses, most of whom are not from the Wakiguru tribe, have families elsewhere, and find Berega too isolated from any major towns. The solution is to train local people who would have more of a long-term commitment to the hospital and the village. However, their acceptance into training courses requires a good command of English (all secondary and tertiary education is in English) and the inevitable bribe-money to be paid to the appropriate people. It is easy to understand the hopelessness and despair that might develop from such a situation, as the hospital seeks to guarantee health care for the region in the future.

The elective

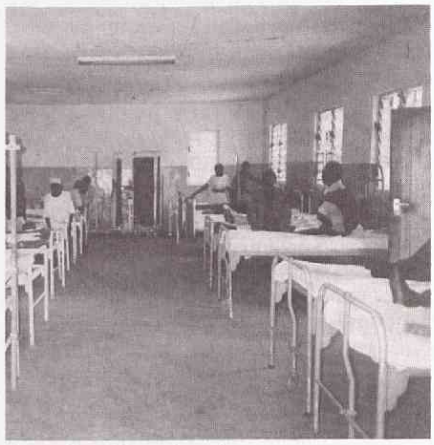
The work I undertook depended on my own personal preference. The hospital caters for general adult medicine and surgery, orthopaedics, paediatrics, obstetrics and gynaecology, out-patients, maternal and child health clinics and occasional ophthalmology. I spent time in all of these fields but concentrated on the women's ward (general medicine, surgery and gynaecology), the obstetrics ward, and the meningitis ward (there was a meningitis epidemic whilst I was in Berega). Ward rounds were conducted on three out of five weekdays and I was often given the responsibility of conducting the ward round with a staff nurse for translation purposes. However, this was only one aspect of my work as I was on call every second day. When on call I admitted all new patients to the ward and initiated management, and I was first to be called to see any patient who had deteriorated or changed since last seen. The major part of my responsibility lay in deciding whether the patient required immediate assessment by the doctor or whether this could wait until the evening ward round, which I attended every second evening. Surgery was performed on two weekdays and I either assisted with the major procedures or administered the anaesthetic. I also performed many minor procedures myself and assisted in all emergency procedures, whether officially 'on call' or not – the majority being caesarean sections. I accompanied the doctors on any community health-related outing.

The teaching I received was not formalised or structured; however, at every opportunity I was included in consultations regarding diagnosis and management of particular patients. Because of chronic understaffing, my presence was greatly appreciated and I was able to relieve the heavy workload of the two doctors significantly.

The conditions at the hospital are poor by western standards, with overcrowding, lack of facilities and haphazard supply of goods the major problems. Wards are concrete rooms with open windows and dirty floors. All bedding is donated and each ward has a collection of old-fashioned beds in variable states of disrepair; mattresses are often rotten and torn; sheets and blankets are in short supply. There is only one mobile screen and it serves for patients undergoing invasive or embarrassing examinations in the ward. Equipment and stocks are scarce, and goods such as dressings, packs, plaster, catheters etc used only sparingly. All syringes, needles and gloves are re-sterilised (sharpened if necessary) and re-used; hospital waste only amounts to soiled dressings and packs, and packaging of certain goods.

There is a limited range of drugs available and even essential medications are in short supply. For the whole of the elective eight weeks there was no pain relief available apart from paracetamol tablets, and towards the end of my stay the hospital ran out of sedatives to control fitting, and one of the standard tuberculosis drugs.

Diagnostic facilities include one solar-powered microscope (enabling blood slides, sputum, urine and stool microscopy) and some simple tests – including haemoglobin and blood typing materials (for blood transfusions), and an unreliable HIV test. The only storage facility is a small kerosene refrigerator in which some vaccines and test-kits are kept. There is no way of storing blood or blood products; blood is taken directly from an appropriate donor and transfused into the patient immediately. Other diagnostic facilities include a recently acquired X-ray machine (donated from Germany) and a laparoscope which proved to be useful in diagnosing abdominal TB and hepatitis infection. There are no pathology facilities on site (although one of the doctors was preparing and training to use fine-needle aspiration) and specimens have to be sent



Berega Hospital, men's ward.

long distances (sometimes to Kenya) for investigation.

Electricity, which is supplied by a generator outside the hospital grounds, is only available during the day when certain tasks needed to be performed – sterilisation (in one ancient autoclave), X-rays, or an operation. Solar-powered lighting is used all night in one ward only; generator-powered lighting in all wards is used until mid-evening. Hurricane lamps are used in the labour rooms and by the nursing staff in all other wards at night. Running water is available irregularly, and intravenous solutions are made in the hospital from a large storage tank of sterile water.

The level of staff training is low. Specialised medical knowledge and habits are lacking and this was particularly obvious in theatre where both sterile technique and sharps technique were not well practised. The lack of sharps containers and disregard for used sharp objects was particularly disturbing given the increasing incidence of HIV infection in the community.

The ability of the hospital and its two doctors to be actively involved in community health is severely limited by time and by financial constraints. Perhaps the major input of the hospital towards community health is in working for good eye health in Berega and neighbouring villages. I was fortunate to participate in an 'eye safari' to a village about 50 km away from the hospital. This consisted of education, consultation and screening for disease extent and severity with a view to

further treatment (including surgery), and follow-up. The eye health of even the young people is appalling, with trachoma a major infective cause of blindness. Thus an important aspect of the eye health campaign is the emphasis on hygiene and washing the eyes and face with fresh water. Berega is also involved in educating health workers in remote areas in the recognition and treatment of eye disease and basic surgical techniques in and around the eye.

The hospital supports a large but isolated community health centre in a village about 40 km further into the mountains, with finance, personnel and training. This centre runs a number of clinics catering for maternal health, child health, tuberculosis and general medical health, and I was able to participate in one education-based visit to the village health centre.

Berega village has its own maternal and child health clinic where education and basic ante-, post- and neo-natal health screening is emphasised. Nutritional advice is a high priority, as anaemia in pregnancy and failure to thrive are common problems in the region. This clinic, run by a respected village elder, is an important watershed between the hospital and village life. It is often the first introduction young women have to the hospital, and to concepts of problems in pregnancy and childbirth which could be rectified by early presentation to hospital. The clinic takes training sessions with the traditional birth attendants of the region; contraceptive advice is available and most forms of contraception are provided at no charge – but confidentiality cannot be guaranteed and this has proved to be a major obstacle to its practice.

Despite the presence of a maternal and child health clinic, improvement in women's health will only really come about with major structural changes in the traditional lifestyle of the people. Women around Berega do most of the field work on the farms, do all of the gathering and preparation of food and, while cooking all the meals, eat last and only what is left over. Although a matrilineal tribe, Wakiguru women do not own land and are often involved in polygamous marriages. They will be pregnant a great many times during their reproductive life and give birth in a society where maternal morbidity is dangerously high. Domestic violence is certainly present in the community and often considered acceptable; sexual abuse of children and rape are concepts which have a low profile in the community.

Given the sexual attitudes of the community, the spread of HIV infection is a major problem. Posters exhorting the use of condoms and to beware the spread of the AIDS virus were displayed in each ward of the hospital. More commonly however, the emphasis was not so much on the prevention of spread of the virus, but rather on the care and love that HIV infected people deserve, as HIV positive status still carries much social stigma resulting in isolation from the community. Whilst I was in Berega a series of lectures, including a questionnaire regarding HIV infection and the spread of the virus was run by the church. However, the lectures were for women only, despite the fact that they are usually powerless to insist on the use of condoms – the virus's main vector is men who continued to have a variety of partners and indulge in unprotected sexual intercourse.

The Christian church plays an important role in the health of the community, especially in terms of sexual health. By advocating sexual monogamy within marriage and abstinence outside marriage, at least the church helps to minimise the spread of HIV and the incidence of sexually transmitted diseases. It is strongly linked with the hospital where each worker, including the doctors and their families, participates actively in the life of the church community, lending acceptability to the medicine practised there.

Alcohol abuse affects the health of the people both directly and indirectly. The local alcoholic drink is made from maize – also the staple food source, thus hunger and inadequate nutrition are aggravated by the diversion of grain from basic food to alcohol. Much violence, especially against women, is connected with alcohol, although the disease-effects of alcohol (liver cirrhosis, etc) are not apparent in the health spectrum of the people.

Much of my work was in the area of women's health. With one of the doctors, I began formulating a study of maternal mortality in the local region, including translating questions into Swahili and talking to some local women for feedback. Unfortunately the study became impossible due to time constraints, but the formulation process itself was quite worthwhile. I managed to speak on a more personal level with a number of women regarding cultural attitudes and traditions in the realms of pregnancy, childbirth and childcare. This was fascinating and enlightening and I was privileged to gain a small insight into the rich culture and beliefs of the local women; this was especially valuable as one of the women I spoke to was a traditional birth attendant. The other area of ongoing study related to a case of a woman with an abdominal pregnancy who presented to the hospital whilst I was at Berega and whose story I will hopefully be able to write up for publication.

Conclusions

Medically, the benefit of this elective in Berega was learning to take responsibility and to use initiative in the diagnosis and management of patients. I quickly developed a confidence and resourcefulness that had not been a part of my medical experience previously, and I attribute this largely to being completely included by the two doctors in the 'therapeutic team'. I also developed an ability to recognise medical and surgical emergencies, and to differentiate between the acutely ill and those who could wait before treatment was initiated. Practising medicine in such a limited and relatively deprived environment extended my ability to think laterally and creatively about the health and life of the people.

In return, I feel that my presence was of benefit to the community if only to give the overworked, exhausted doctors a break from the intense work of the hospital. The freshness of a new face, with recent news from 'home', also helped, I believe, to lift morale and energy within the small mission community in the village. In a more practical way, my visit

Dr Phillips (right) – the last of the plaster.

enabled the support groups and mission agencies back in Australia to hear more about the needs of the hospital and the village, and to better direct their donations of equipment and other goods. On my departure from Berega I was exhorted to spread the story of the hospital and people of the region, so that the awareness and support of such work would grow.

When reflecting on the aims with which I journeyed to Tanzania, I think it is clear they have been fulfilled beyond my original expectations. Many aspects of those aims have been mentioned, however, I wish to emphasise that working in Berega played an important part in developing my thoughts about my future life and work as a doctor. I was able to leave Africa with the firm knowledge that I would return to use my skills and education in helping to improve the health status of Africans such as those I lived with in Berega, possibly working in the field of of women's health, obstetrics and gynaecology.

In summary, the elective experience was of immense practical and spiritual value. I gained a greater understanding of health as an holistic phenomenon related to the political, social, cultural, spiritual and geographical environment of the community, vital to my education and training as a doctor and a world citizen.

Postscript – since returning to Australia I have heard that Berega Hospital still functions, but that the Western doctors have left and Western funding has ceased. GP. □

1952 Royal Melbourne Hospital Junior Residents Reunion, Cup Day 1992

In Kingsley Mills' garden, back row L-R: John Penington, Jim Milne, Grant Pattison, Arthur Clark, Ian Goy, John Middleton, Brian Entwisle, Bill Hare, Keith Goulston, Bill Chanen, Kingsley Mills.
Front row L-R: Jan Finney, Judy Henzell, Lois Janes, Frank Bishop. *Seated:* Dog.

Fifth Year 1898
From the Medical History Museum Archives

Standing, back row L-R: AER White, FM Thomas, WH Orchard, WH Marsden, B Kilvington.
Second back row L-R: FS Butler MA, JAR Smith BSc, RC Withington, EA Spowers, WR Sanders BA, PF Manchester, MS McSweeney. *Seated L-R:* WC McKenzie, JC Muir, J Hodgson Nattrass, GD Praagst, CE Wilson. *On floor L-R:* E Feilchenfeld, GM Hains and bear.

NOTICE OF ANNUAL GENERAL MEETING 1994

The Annual General Meeting of the University of Melbourne Medical Society (UMMS) will be held at 6.30 p.m. in the Sunderland Theatre, ground level, Medical Building, The University of Melbourne, Grattan Street, Parkville, on Tuesday, 24 May 1994. This meeting is preceded by the Dean's Lecture in which Professor Greg Whelan, Director of Drug and Alcohol Studies, St Vincent's Hospital, will deliver a lecture entitled 'Is there still a role for medical practitioners in contemporary treatment of drug and alcohol problems?'

Business

1. Minutes of 1993 Annual General Meeting
2. Chairperson's Report
3. Financial Report 1993-1994
4. General Business.

MINUTES OF ANNUAL GENERAL MEETING 1993

The Annual General Meeting of the University of Melbourne Medical Society (UMMS) was held at 6.30 p.m. on Tuesday, 18 May 1993, in The Sunderland Theatre, Medical Building, The University of Melbourne. The meeting was preceded by the Dean's Lecture entitled 'Brain Tumour Surgery Beyond 2000 – Shining a Light on the Future'. This was delivered by Professor Andrew Kaye, Director of Neurosurgery, The Royal Melbourne Hospital.

1. **Minutes of the Annual General Meeting 1992**
   The minutes of the 1992 Annual General Meeting, previously circulated, were accepted as an accurate record of the proceedings.
2. **Chairperson's Report**
   - The 1993 *Chiron* was published in April and Professor Ryan congratulated the editors, Mr Peter Jones and Mrs Margaret Mackie, for another excellent edition. He thanked the Medical Defence Association of Victoria for their continued generous support of *Chiron* and noted its importance in enabling the journal to continue.
   - Membership of UMMS as at 1 May 1993 is 2193 compared with 2327 at a similar time in the previous year.
   - The UMMS Bachelor of Medical Science Prize for 1991 was awarded to Ms Elizabeth Uren for her study entitled 'Antiviral strategies in chronic hepatitis B virus infection: use of ampligen alone and in combination'. A report on this award was published in *Chiron*.
   - Activities in 1992 include the annual UMMS Lecture in which Professor Emeritus Priscilla Kincaid-Smith presented a very engaging lecture entitled 'Half a Century of Medicine – a Personal View'. UMMS members enjoyed refreshments served prior to the lecture.
   - Many attended the Dean's Lecture Series in 1992 which was completed, once again, by an ethics seminar entitled 'Looking After Ethics – a Decade of Change'. The ethics seminars were initiated by Professor Emeritus Richard Lovell and this was the final one at which he was convener.
   - Medical graduate reunions continue to be popular and details of reunions held in 1992 have been published in the recent *Chiron*.
   - Professor Ryan reminded those present of forthcoming events including the remainder of the Dean's Lecture Series and the Continuing Medical Education Program. In particular, he drew attention to the medical ethics seminar, to be held on Friday 23 July 1993 in The Sunderland Theatre, entitled 'The Dead do Tell Tales – Declining Autopsy Rates and the Quality of Health Care'. The Convener this year is Professor Richard Smallwood and the seminar will complete the 1993 Dean's Lecture Series program. Members were reminded of the UMMS Lecture and function, details of which will be announced later this year.
3. **Financial Report 1992-93**
   Copies of the financial report were distributed at the meeting. It was noted that UMMS finances were satisfactory, showing an income of $97,466 (including $47,475 carried forward from the previous year) and expenses of $45,419, leaving a balance of $52,047. Professor Ryan again emphasised the importance of the sponsorship provided by the Medical Defence Association of Victoria in supporting the production of *Chiron*.
4. **Membership of the UMMS Committee**
   Professor Ryan noted with regret that two resignations from the Committee had been received. Ill health had forced Sir Sydney Sunderland to resign as President of the Society and member of the Committee and Dr Diana Sutherland had resigned from her position as Honorary Secretary of the Committee. He thanked them for their invaluable contributions to the Committee. Nominations were called for President of the Society. Professor David Penington was nominated and it was noted that he had agreed to be nominated for the position. No other nominations were received and Professor Penington was duly elected.
5. **UMMS Insignia**
   The UMMS insignia adopted by the Committee on behalf of UMMS was displayed at the meeting. The insignia was designed by Mrs Margaret Mackie, Co-editor of *Chiron*, and incorporates representations of the portico of the original Medical School at The University of Melbourne and the serpent of Aesculapius. It is anticipated that a tie, a brooch and a scarf will be designed using the insignia.

   There being no further business the meeting closed at 6.45 p.m.

UMMS 1993 ELECTIVE ESSAY PRIZES

In 1993 the University of Melbourne Medical Society established an essay prize for sixth year MBBS students. Prizes of $100 are offered annually for the best essays of up to 1500 words describing the student's elective period and what was gained from it, both professionally and in terms of personal development. Prize winning essays are also considered for publication in *Chiron*.

The 1993 winners of UMMS Elective Essay Prizes were Jacqueline Brown (RMH), Peter Chu (RMH), Georgina Phillips (SVH), and Shomik Sengupta (RMH). Georgina Phillips' essay is published in this issue of *Chiron*.

UMMS 1992 BMEDSC PRIZES

Wai-Ting Choi

for his study entitled

Kennedy's disease: Androgen receptor dysfunction in a hereditary form of motor neurone disease.

The thesis submitted by Wai-Ting Choi for the degree of Bachelor of Medical Science reports his investigations into an inherited form of motor neurone disease called Kennedy's disease or X-linked spinal and bulbomuscular atrophy. Motor neurone disease affects an estimated 1,100 people in Australia. This disease causes degeneration of motor neurones in the anterior horn of the spinal cord. It causes severe muscle weakness and atrophy but the pathogenic mechanism remains obscure.

Immediately prior to the commencement of Mr Choi's research, evidence was published linking mutations in the androgen receptor gene with the occurrence of Kennedy's disease. Mr Choi investigated

this mutation in 12 patients with Kennedy's disease and their relatives. Neurological, endocrine, and androgen receptor function was characterised in these patients. The mutation which consists of an increased number of a triplet nucleotide repeat sequence, CAG, in the first exon was demonstrated in all 12 patients with the disease. Mr Choi developed a simple, straightforward, reliable test for the genetic diagnosis of Kennedy's syndrome and used this test to identify female heterozygotes at risk of passing on the disease to their male offspring. Mr Choi's thesis included a significant discussion of the ethical issues raised by this test, in particular whether asymptomatic sons of carrier females should be tested.

He has made a significant contribution to our knowledge of this serious disease. This well characterised group of patients can now participate in further investigations into the pathogenic mechanisms and possible treatments for Kennedy's disease.

Peter F Mount

for his study entitled

Production of a chimeric (mouse/human) monoclonal antibody against a colorectal carcinoma-associated antigen.

The project carried out by Mr Peter Mount has provided a potentially powerful therapeutic reagent for the treatment of colorectal carcinoma. Colorectal carcinoma is the second most common cause of cancer-related death in both males and females in our community, and accounts for more than 3,000 deaths annually in Victoria. While lesions that are confined to the mucosa or bowel wall can usually be resected, the prognosis in cases where the disease has spread into mesenteric lymph nodes or beyond is poor. Such tumors are resistant to chemotherapy, and only palliative care can be offered to these patients. It is therefore imperative that novel treatment modalities be developed for this serious illness.

The development of monoclonal antibody technology has offered the hope of novel immunotherapeutic strategies for carcinoma. Monoclonal antibodies directed against an antigen expressed predominantly on cancer cells have been used both as diagnostic agents and as means of delivering cytotoxic drugs and radioisotopes to tumor deposits. One such mouse monoclonal antibody, m30.6, has been shown previously to be potentially useful in the diagnosis and treatment of colorectal carcinoma, however clinical trials were curtailed because of the immunogenicity caused by administering mouse antibodies to humans.

The project carried out by Mr Mount involved the production of a mouse/human chimeric antibody to overcome the human anti-mouse antibody response, so that clinical trials might proceed. His work involved the highly skilful manipulation of genetic material and its introduction into myeloma cells to produce a novel anti-cancer antibody. Firstly, the genes encoding the variable domains for the Ig heavy and light chains were isolated by polymerase chain reaction amplification, using degenerate oligonucleotide primers to conserved framework sequences. Plasmid constructs were then produced for the heavy and light chains which contained the genes encoding the mouse variable domains linked to human constant domains (IgG1, K). These were co-transfected into the myeloma cell line, SP2/O and stable transfectants were selected with hygromycin B. Hybridoma clones secreting human antibody (c30.6) were detected by ELISA assay, and the antibody was shown by flow cytometry and immur operoxidase studies to detect the same specificity as the original mouse antibody, and to bind its target with the same affinity.

The production of c30.6 is now in the process of scale-up, with a view to resumption of clinical trials in colorectal carcinoma patients.

INFORMATION NEEDED

Dr Emma Constance Stone

1856–1902

Dr Shirley Roberts (see 'Not Just Doctors') is gathering information on the life of Dr Constance Stone, Australia's first woman doctor. Shirley would be delighted to hear from anyone who has advice or information to offer.

Please telephone (03) 866 1367.

What's On In 1994

Seminar

A BETTER DEATH

Convener: Professor Richard Smallwood

Speakers

Rev Dr Davis McCaughey AC

Rev Canon Dr John Morgan,

Dr Ruth Redpath, Ms Sanchia Aranda,

Professor David Lanham, Mrs Loane Skene

Friday 22 July, 2.00 to 5.00 pm

Sutherland Theatre, Medical Building

The University of Melbourne

UMMS 1994 Function

Watch for announcement

UMMS Annual General Meeting

Tuesday 24 May 1994, 6.30 pm

Sunderland Lecture Theatre, Medical Building

The University of Melbourne

Dean's Lecture Series

Continuing Medical Education

Details on the back cover of this issue

General enquiries: (03) 344 5888

Alumni Association

Gala Concert

Ronald Farren-Price (PIANO)

7.30 pm, Friday 5 August

Melba Hall, The University of Melbourne

Bookings essential

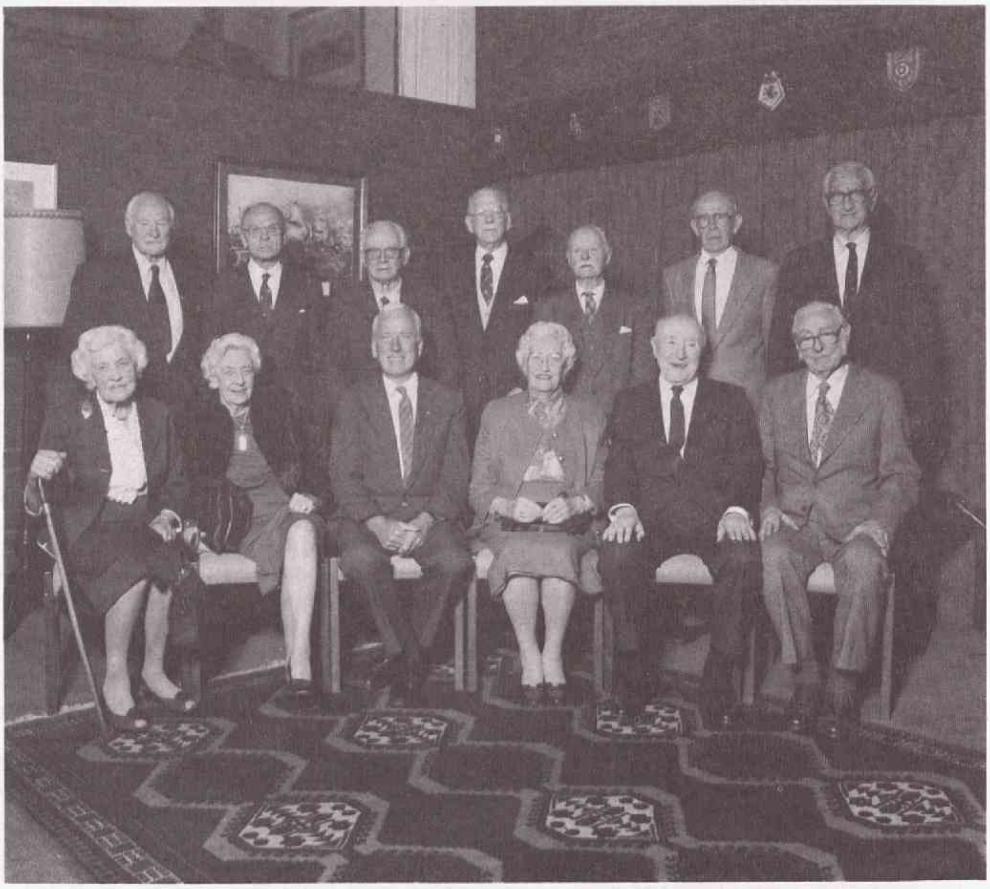
Cost: $15 (members), $18 (non-members)

Enquiries:

Kathryn Clarke, Alumni Office

The University of Melbourne, Parkville, 3052

Telephone: (03) 344 7469



Class of 1933 – 60 Years Reunion
L to R, Back row: Alec McGregor, John Hayward, Cam Duncan, Anthony Green, Norm Cust, Russell MacDougall, Spot Turnbull.
Front row: Dorothy Sinclair (Gepp), Sheila Peters, Vice-Chancellor Professor David Penington, Lorna Lloyd-Green, Harry Sinn, George Watters.

MBBS 1933
Sixty Years Reunion
Naval & Military Club
13 September 1993

From Reginald (Spot) Turnbull – The sixtieth anniversary of those graduating in medicine at The University of Melbourne was held at the Naval & Military Club, on Monday 13 September 1993. There were twelve present, the remaining six that were contacted were either in the UK, interstate or too frail to attend.

Although our reunions have lately been held every year, there have been a few changes made because of age, such as substituting a midday gathering for an evening one, and by allowing our 'minders' to be present. This year being a special occasion, we invited Professor David Pennington, as Vice-Chancellor and Professor Graeme Ryan as Dean of the Medical School, to be present. Unfortunately the latter became ill on the morning of the event. We had three toasts: the Queen, The University of Melbourne (proposed by John Hayward to which the Vice Chancellor responded), and The University of Melbourne Medical School, proposed by Lorna Lloyd-Green.

It is our fervent hope that we octogenarians will have several more reunions and to this end we are searching for meeting places where our wheel chairs will be accepted! Apologies were received from: Arthur Carroll, Harry Drury, Frank Ebell, Ernest Green, Mendel Starke and Bill Holdsworth.

MBBS 1943
Fifty Years Reunion
Royal South Yarra Tennis Club
15 March 1993

From Ian Tulloch – On 15th March 1993 over forty graduates celebrated the 50th anniversary of their graduation on 15 March 1943.

There were seventy-five at dinner at the Royal South Yarra Tennis Club. Apologies were received from a number of others who, because of distance, illness, or other commitments were unable to be present. Unfortunately, Professor Sir Sydney Sunderland, who had hoped to be the guest of honour, was unable to come because of his health.

His place was ably filled by Professor Emeritus Richard Lovell, who evoked memories of other days in speaking about his first months in Melbourne, mentioning many of those who had been our teachers, and others we remembered well. He also gave us an indication as to how to enjoy retirement, as he has just had his biography of Lord Moran published. This was a labour of love carried out over a number of years, and shows that the best way to be happy in retirement is to keep busily doing something one really loves.

All those present were pleased that the man who one of the speakers described as 'the doyen of our year', namely Sir Edward Hughes, was present, in spite of having a recent pertrochanteric hip fracture and prostatectomy. He arrived in a wheel-chair, thanks to the

special taxi service for the physically handicapped, and thoroughly enjoyed the evening.

The later part of the evening was taken up by an open forum at which contributions were called for from the floor.

Those who had travelled furthest were given the first chance to speak, and we heard from Stevens Dimant from Washington, Warwick Macky from Auckland, Tom Early from Perth, and Keith Sisson from Maryborough. There were plenty of opportunities for meeting old friends and reminiscing, and the consensus was that it had been a very happy evening which should be repeated in five years time.

The evening was attended by: *Alf Bardsley, Garry Bennett, Max Brett, Peter Brett, Bell Brodrick, Rona Charters, John Cloke, Percy Cowen, David Cowling, Bettie Cameron, Ron Davies, Effie De Ravin, Steve Dimant, Gwen Donald, Tom Early, Stuart Esnouf, Maurice Etheridge, Sandy Ferguson, Peter Fox, Des Hoban, Ken Howsam, Bill Hughes, John Jones, Russell Jones, Keith Lipshut, Olive Logan, Bob Manser, Warwick Macky, Bernhard (Karl) Ostberg, Haydon Martin, John Perry, Peter Read, Winston Rickards, Alan Rosenhain, Dulcie Rayment, Bob Sellwood, Michael Shaw, Keith Sisson, Mike Slavin, Betty Spinks, Bill Spring, Bruce Stafford, Bill Swaney, Marie Swaney, Margot Sussex, Ian Tulloch.*

MBBS 1948
Forty-Five Years Reunion
Lakeside Function Centre
Melbourne Zoological Gardens
4 November 1993

From Graham Cooper – The '48 graduates' reunion was held at the Lakeside Function Centre at the Zoo and attended by thirty-four graduands. There were three interstate graduands; Vic White from WA, Allen Tye from SA and Joel Margolis from NSW. A most enjoyable evening was had by all.

The evening was attended by: *Peg Archer, Margaret Ashbarnes, Marian Brookes, Keith Brown, Peter Colville, Graham Cooper, Norman Dowell, Bruce Edwards, Howard Farrow, Peter Freeman, John Grant, Bruce Guaran, Len Hartman, John Hewitt, Gertie Hiller, Bob Kelly, Barry Kneale, Keith Layton, Molly Longfield, Joel Margolis, Bob Marshall, Joan Maxwell, Murray O'Neill, Graeme Pollock, Wal Richards, Durham Smith, Colin Speck, Fairlie Springall, Hugh Tighe, Allan Tye, Vic White, Bill Wilson, Bob Zacharin.*

MBBS 1953
Forty Years Reunion
University House
27 November 1993

From Neville McCarthy – University House was the venue for sixty-four graduates of 1953 and their partners to celebrate the 40th anniversary at a reunion dinner.

Guests of honour were David and Sonay Penington; David started Medicine with the group but became our most famous 'drop-out' by taking a Nuffield Travelling Scholarship to Oxford in third year.

Mailings during the year indicated that 127 of the original 158 graduates were still alive and regretful apologies came from 29 who were unable to attend. Confirmation of contact was achieved with 100 of the 127.

A survey showed that most would do Medicine again if given the chance, notwithstanding the bureaucratic intrusion they had seen in the past forty years; but quite a few wondered if they would meet current cut-off points for entry.

Memory of things past proved strong at the dinner, and led by Harold Schenberg and Peter Macneil in turn at the piano, there was surprisingly accurate and complete recall of some of the less respectable ditties from 'Charcot's Joint', that particularly excellent Medical Medleys of the early 1950s. A register of formal and informal curricula vitae has been commenced and will be 'progressed' over the next few years; encouragement to provide one's own version of one's career has been stimulated by the compilation and circulation of a souvenir booklet of brief biographical notes by an independent committee not primarily concerned with accuracy!

A good night was had by all. Continuing the custom, graduates and partners will assemble again in five years time to complement each other on how well preserved they are.

MBBS 1958
Thirty-Five Years Reunion
University House
29 October 1993

From Ralph Lewis – Fifty-five alumni accompanied by thirty-two partners attended our reunion held on 29 October 1993. It was particularly pleasing that several people travelled from interstate and overseas to attend: Lang Lo and Sze Kwong from Hong Kong, Ken Thean from Kuala Lumpur, Les Hill from USA, Graham Dudgeon from Cairns, Helene Wood from NSW, Graham Boyd and Jim Cartledge from Tasmania and Jim Robinson and Tom Thomas from Perth.

There appeared to be somewhat less hair, and altered colour compared to previous meetings! Name tags proved useful as there have been some changes in various characteristics which made rapid recognition difficult at times. However, there were no embarrassed silences – far from it, there was continuous laughter and talk as reminiscences were exchanged.

The highlight of the evening was an address by Mr Michael Long, a senior surgeon at The Royal Melbourne Hospital and Chairman of the RFDS (Royal Flying Doctor Service). He presented a cameo style autobiography of a man who has done it all! Surgeon, aviator with commercial licence, pathologist and accident appraisal expert, sheep farmer, clinical teacher and student mentor, Board member and Chairman of RFDS – and a polished after dinner speaker. He left us at the classic stage for a speaker – still wanting to hear more. In thanking Michael, we presented him with a pair of book ends of polished Australian stone.

Lang Lo represented the overseas contingent. It is the first reunion which he has been able to attend and he reminded us all that we should remain as he – proud of being a graduate of The University of Melbourne.

Budgeting appears to allow for a modest surplus, which MC Peter Nelson suggested should be donated to RFDS and the Weary Dunlop Fund, it having been noted that Weary – speaker at the 30 year dinner -had died in the last year. Attendees indicated their concurrence by spontaneous applause.

Those photos! Catherine O'Brien (827 4785) is a lady who can organise a rabble of doctors better than most. It may be wise to get her into the AMA! Somehow, in a brief time, she managed an in-focus shot of the assembled group and had them ready to be picked up by the end of the evening.

The general consensus was that it was a good evening, and that there should be another at forty years. One person even suggested annual reunions from here on! Probably not, but certainly the big 'four-o' will be a good one.

MBBS 1968
Twenty-Five Years Reunion
The University of Melbourne
ANZ Pavilion, Victorian Arts Centre
Wildwood Vineyards
13-14 November 1993

From John Stuckey – The twenty-fifth reunion of The University of Melbourne Medical Graduates of 1968 was celebrated on the weekend of the 13th and 14th of November 1993 with the following events:

Saturday 13 November – Lectures during the afternoon at The University of Melbourne. A total of sixteen lectures were given, all by graduates of the year. Topics ranged from 'Lumbar laser discetomy' to 'Healing in the medical course'. A total of sixty-four graduates attended the lectures. Dinner in the evening at the ANZ Pavilion, Victorian Arts Centre, was attended by a total of 136 graduates and partners.

Sunday 14 November – Lunch at Wildwood Vineyards – a family day attended by fifty-four adults and fourteen children.

Class of 1953 – 40 Years Reunion

Back Row: J D Rankin, W H Koschade, J B Webb, W C Heath, R A Currie, M A Mckenzie, W C Lawrence, N C Birnie, F Slater, F Corry, D L Morton, J D Muir, J M Calvert, J G Sloman. *Fourth Row:* J T Breen, G Trigg, C G Price, M R Barrett, J M Court, E S Cole, J D Cannon, H M Walker, N J Gray, D R Kennedy, J W Upjohn, G F Adler, A M Cuthbertson, J K O'Donnell, J S Galbraith. *Third Row:* H Schenberg, V K Spowart, R C Kerr, D G Penington, R Rosanove, I G Lyall, P B Symes, R C Gutch, B R McKeon, H C de Castella, J B Hartnett, W F Briedahl, P G Castran, G S Hale, E E Allchin, J S Pettit. *Second Row:* J J Martin, F I R Martin, M P McMahon (Bullas), D M Sutherland, J F Pyper, G F Hinrichsen, E M Cannon (Franklin), E J Batt (Lowson), M H Brennan, V K Maxwell, H E McKenzie (Peden), P J Gladwell, M J Sanders, F N Kirkwood, R C W Williams. *Front Row:* J A Fuller, N J McCarthy, P R Macneil, D W Oxbrow, A K Lethlean, D M O'Sullivan.

Class of 58 – 35 Years Reunion

L to R, Back row: Henry Horne, Alan Kermode, Wilton Carter, John Cleaver Woods, Grahame Dudgeon, Colin Mathews, Barrymore Walters, Graham Schmidt, James Robinson, Lang Lo, Geoffrey Conron, Alan Bodey. *Standing:* Ralph Lewis, Donald Macdonald, Anthony Capes, Bernard Zerman, James Cartledge, Maxwell Hankin, Chenakkatkalangamari Thomas, Ken Hardy, Peter Nelson, Srboljub Preradovic, David Lunn, John Hall, Frank Evans, Kathleen Hayes, Gad Trevaks, Brian Davie, Julian Heinze, Charles Peter Clarke. *Seated:* Maria Milecki-Chelius, James Cummins, Colin Williams, Isabel Wluka (Sutton), Rosemary Grant (Hallowes), Russell Ferguson, Helene Wood, Wendy Donoghue (Macdonald), James Munro, Renata Valentine, Graham Boyd, Bernard Clarke. *Front row:* Leon Carp, Ken Thean, David Simpkin, Elizabeth Lenaghan, Arthur Victor Leslie Hill, Doreen Ellingham (Hancorne), Robert Molnar, Sze Kwong, Chi Mok, Richard Kelly, George Klempfner, Eugene Spangaro.

All three events were a great success. Dr Max De Clifford is to organise the 30 year reunion in 1998.

Attending graduates were: *John Allsop, Ellen Balaam, Michel Best, David Birks, Kaye Birks, Mary Brooksbank, Jenny Brown, Anthony Cass, Lindsay Castles, Jenny Cawson, Max de Clifford, Peter Collier, Ian Driscoll, Carol Driscoll, Damien Connelly, Michael Davies, Eric Fairbank, George Golding, David Gome, John Harrison, Roger Haskett, Sandra Hogg (Barnes), Damien Jensen, Bernard Kagan, Marie Kemp, Geoffrey Kerr, George Koniuszko, Stephen Larkins, Paul Lim, Martin Liu, Les Markman, Terry Mason, Peter Mayall, Lynda McBride, Minas Mina, Adrian Mitchell, Norman Morris, Rob Moulds, Bob Newnham, Ken Nicholson, Paul Nisselle, Leslie Norton, Les Oliver, Justin O'Day, Vilans Oppenheimer, Irene Palgan, Christine Penfold (Hibberd), Neil Phillips, Christopher Priest, Bruce Reid, John Richardson, Graeme Richardson, Jill Rosenblatt, Michael Rozen, Gerard Ryan, John Schaefer, John Serry, Heather Simmons, Jeff Slonim, Murray Stapleton, Wayne Stott, John Stuckey, Barbara Taylor, Roy Taylor, David Thomas, John Tickell, Angelika Zimmerman.*

MBBS 1973
Twenty Years Reunion
The University of Melbourne
and
Sheraton Towers Southgate
13-14 November 1993

From Hamish Ewing – The 1973 graduates held a most successful weekend reunion on Saturday and Sunday 13-14 November 1993. Proceedings commenced with a conference held in the Sunderland Lecture Theatre on Saturday morning. Speakers from our year addressed the theme 'Graduates of '73 Approach the New Millenium' as follows: Don Esmore – 'Heart & lung replacement towards 2,000', John Lambert – 'Peptic ulcer disease – an infectious disease', Paul Shekleton – 'Foetal surgery', Andrew Kaye – 'Brain tumour treatment in the next decade – A light on the future', Norm Eizenberg – 'How has our curriculum changed?', Ros Terry – 'Aspects of rural medicine' and Phil Bekhor – 'New LASER applications in dermatology'.

The highlight of the morning was perhaps a guided tour through the dissecting rooms where the first cranial nerve recalled many formalin soaked memories. One hundred graduates then headed to University House for a light lunch and much talk.

On Saturday evening a grand ball was held at the Sheraton Towers Southgate. It was here that over one hundred of our year enjoyed wine, food, much conversation and many photographic recollections as well as stressing our aging frames on the dance floor to music of the 60s and 70s provided by 'Psychedelicatessens'.

The reunion concluded with a family picnic held in the Edinburgh Gardens which gave families time to catch up with one another to complete a most successful weekend. A biography was compiled of our graduating year for which we were thrilled to receive contributions from 130 of our number.

Attending the reunion were: *Michael Ackland, Peter Ashton, Angela Atkin, Chris Atkin, Stephen Baddeley, Janice Baker, Viv Beckett, Philip Bekhor, Nigel Berry, Virginia Billson, Yael Bodian, Les Bolitho, Ian Bonwick, Mary Buchanan, Ray Buttigieg, Ian Carlisle, Stephen Chester, Stephen Clifforth, Brian Costello, Geoff Courtis, Adrian Dabscheck, Marie Dalziel, Joe Di Stefano, Charles Domaingue, Nick Downes, Danny Doyle, Brian Dunn, Greg Dynon, Norm Eizenberg, Don Esmore, Hamish Ewing, Bernie Fensling, Brett Forge, Charlie Fream, Lou Giaprakis, Alan Gijsbers, Roger Glass, Sandra Glass, Cheh Goh, Jack Gutman, Geoff Hadwen, David Heine, Linda Hoffman, Roly Hunt, Alastair Jackson, Stephen James, Richard Johnson, Libby Jones, Stephen Kay, Andrew Kaye, Paul Kelly, Alison Killoh, Josette Kissane, Michael Kozminsky, John Lambert, Simon Laurie, John Leslie, Gail Littlejohn, Liz Livingston-Moller, Peter Lynch, Peter McDougall, Jamie McKew, Many Manolas, Alex Marshall, David Merenstein, Peter Moran, Stewart Moroney, John Mullett, Ian Nixon, Sue Oliver, George Owen, Ross Pagano, Mike Pemberton, Sue Piper, Jock Plenderleith, Joe Proietto, Ken Pyman, Peter Quaterman, Andrew Ramsay, Peter Rennie, Sue Richardson, Penny Roberts-Thompson, David Rose, Jeff Rowlands, Noel Saines, Isaac Schweitzer, James Scurry, Peter Shaw, Paul Shekleton, Bill Sloss, Rick Stawell, Nigel Strauss, Rick Stuckey, Colin Styles, Ian Sunderland, Beatrice Susil, Joan Sutherland, Ross Terry, Ron Tomkins, Ian Torode, Tony Trovato, Cathie Urie, Fred Van-De-Velde, Henry Voselis, Rita Voselis, Faye Walker, Michael Westmore, Jill Whitney, Rob Williams, Barry Williamson, Michael Wilmott, Henry Winfield, Peter Wong, David Young.* □

Reunion Announcements

1994 Reunions

11th Year of 1983

Contact: Dr Sandra Radovini
bh: (03) 397 2111

15th Year of 1979

Contact: Dr Lorraine Baker
bh: (03) 857 4091

20th Year of 1974

Date: 19 & 20 November
Venue: Sheraton Towers, Southgate
Contact: Dr David Tuxen
ah: (03) 276 3050

30th Year of 1964

Contacts: Mr Ian Cunningham bh: (03) 509 5592
Mr Bruce Davis bh: (03) 576 0039
Professor Ian Gust bh: (03) 389 1604
Mr Frank Incani bh: (03) 654 3581
Mr Campbell Penfold bh: (03) 429 1181

35th Year of 1959

Date: 18, 19 & 20 November 1994
Venue: Peninsula Country Golf Club
Hilton on the Park
Dromana Estate
Contact: Dr Clive Bennetts
ah: (059) 74 1545

40th Year of 1954

Contact: Professor Norman Beischer
bh: (03) 270 2556

45th Year of 1949

Date: 28 October 1994
Venue: Lyceum Club
Contact: Dr Valda Horton
(03) 380 4057

50th Year of 1944

Date: 25 March 1994
Venue: The Melbourne Club
Contact: Dr Allan M Beech
bh: (03) 650 1010
ah: (03) 592 4448

1995 Reunions

20th Year of 1975

Contact: Dr Tony J Dunin
bh: (03) 887 1488

Think Ahead

When did you graduate? Is next year your fifth or fifty-fifth since graduation? Reunions are best planned well ahead of time. Some of your classmates will be living overseas or interstate. Overseas and interstate graduates do travel to Melbourne for reunions if they have enough advance notice. Venues also need to be booked well beforehand.

Please let the UMMS office know of your plans – we like to include information about reunions in *Chiron*. We can obtain, on your behalf, a list of graduates from your year and a set of address labels from the Alumni Office. We can also advise you on alternatives you may wish to explore and give any assistance we can regarding venues and speakers.

Many reunion organisers produce a booklet containing details of class members' activities since graduation. A small curriculum vitae needs to be requested from graduates early in the planning stages, and these, sometimes together with recent and old photographs, are compiled into a booklet. Those who attend the reunion take home something to remind them of the event, and those unable to attend enjoy reading about their old friends. We have quite a stock of reunion booklets at the UMMS office and would be interested and grateful to receive one from your reunion.

MBBS Graduate Anniversaries in 1995

5th Year Class of '90	30th Year Class of '65
10th Year Class of '85	35th Year Class of '60
15th Year Class of '80	40th Year Class of '55
20th Year Class of '75	45th Year Class of '50
25th Year Class of '70	50th Year Class of '45

UMMS Office

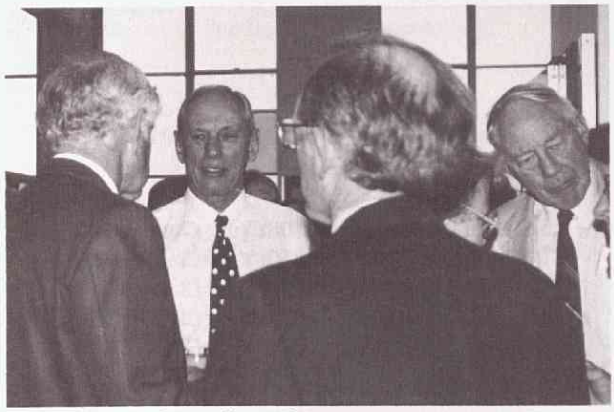
Ms Liz Brentnall
School of Medicine
The University of Melbourne
Parkville 3052

Telephone (+61 3) 344 5888
Facsimile (+61 3) 347 7084

UMMS Congratulates...

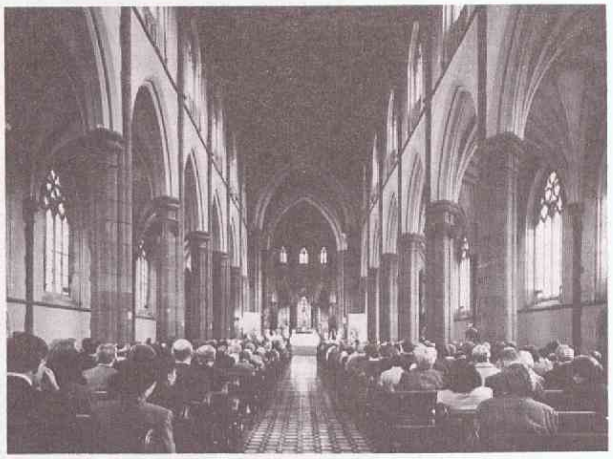
Professor Emeritus Priscilla Kincaid-Smith AC.
(Photo courtesy of *The Age*.)

PROFESSOR EMERITUS Priscilla Kincaid-Smith AC, who in October 1993 became the first woman to be voted president of the World Medical Association and the third Australian to head the international organisation, which represents the medical profession in more than fifty countries. The Melbourne *Age* reported her as saying that, during her three years with the World Medical Association, she hoped to raise for international debate contentious issues such as the unavailability of contraception in many Third World countries. She said she was delighted and surprised to be elected – 'I just decided I would stand. I thought it was time they had a woman . . . women have a slightly different perspective on issues in medical ethics, so I guess I'll bring some differences to the association'.



Dr Nigel Gray meeting members and guests.

Members and guests at the pre-lecture party.



Celebratory mass, St Vincent's Hospital Centenary, St Patrick's Cathedral, November 1993.

ST VINCENT'S HOSPITAL on their centenary – 1893-1993, which was celebrated with a year of special events involving graduates, medical staff, and past and present nursing and administrative staff. Graduate Week, *From Laboratory to the Bedside – Health Care in the Future,* included many overseas guest speakers – all St Vincent's graduates. A postmark was produced and memorabilia included T-shirts and crested wine glasses. St Vincent's Day was marked with music and a procession of the hospital community in Brenan Hall. The grand Centenary Ball was held at Fitzroy Town Hall and the commemoration culminated in a final celebratory mass at St Patrick's Cathedral. Bryan Egan's book, *Ways of a Hospital – St Vincent's Melbourne 1890s-1990s,* is reviewed in the Books section of this edition.

How To Win Friends and Influence People
The Annual UMMS Lecture and Party

Tuesday 30 November 1993

UMMS thanks and congratulates Dr Nigel Gray and all who attended his UMMS 1993 Lecture, *How to win friends and influence people – Forty years in Public Health.* The lecture was preceded by a light buffet in the flower-decorated pathology museum where members, guests and friends enjoyed *Mary & Steve's* famous finger food and appropriate 'refreshments', followed by cheese and fruit and *Paterson's* amazing 'iced fancies' with tea and coffee.

Some three hundred people packed the Sunderland Theatre where in previous years speakers such as the late Sir Sydney Sunderland, Professor Emeritus Priscilla Kincaid-Smith and Professor Emeritus Harold Attwood have presented the annual UMMS Lecture. Dr Gray, who trained in the management of infectious disease and paediatrics before taking up his present position as Director of the Anti-Cancer Council of Victoria in 1968, presented a personal perspective of his odyssey through the fields of health promotion and disease prevention. His work has been integral to the development of the Anti-Cancer Council's unique position in the community and he is a key figure in the Victorian Health Promotion Foundation and the Quit campaign.

The 1994 UMMS Lecture will be announced later in the year and members will be cordially invited to join the Executive and meet the speaker prior to the Lecture.

OBITUARIES

RICHARD RODERICK ANDREW AO, MBBS 1935
1911-1994

FACULTY records with sadness the death of Emeritus Professor Rod Andrew, MD(Melb), Hon.MD (Monash), FRCP (Lon), FRACP, distinguished and loyal Honorary Member of UMMS, founding Dean of the School of Medicine, Monash University. During his remarkable career he undertook many responsible roles, in practice, teaching, research and administration; he wrote prolifically, publishing more than 160 articles in medical journals since 1945, and with wit as Editor of the *Baker Medical Research Institute News*, and as a contributor to other publications. A full obituary will appear in the next issue of *Chiron*. (MM)

OWEN RUSSELL COLE, MBBS 1961
1937-1993

OWEN COLE graduated MBBS from The University of Melbourne in 1961, and became a resident and registrar at The Royal Melbourne Hospital and the Victorian Plastic Surgical Unit. He obtained his FRACS in 1966 before taking up an appointment at the Cleveland Clinic and passing his American Board examinations in plastic surgery. He returned with his family in 1969 and commenced private practice with appointments at Royal Children's, Prince Henry's and Footscray Hospitals. He concentrated on the RCH, where he served with high distinction for twenty-four years.

Professionally Owen excelled in operative, teaching and organisational skills. It was largely due to his efforts that the Plastic Surgery Training Course for registrars was set up in Melbourne in 1972. The Course continues in high regard to this day. He was a member of the Board of Plastic Surgery, it's Chairman for several years.

As President of the Australian Cleft Palate Association he was intensely involved in the organisation of the International Congress of Cleft Palate and Cranio-Facial Anomalies, which was held in November 1993. The fact that he had organised four other international meetings neither dimmed his enthusiasm nor lessened the workload.

It would be an understatement to say that Owen Cole was highly regarded in his field. His application, his integrity, his capacity for original thinking, added to his considerable operative skills, would never allow him to finish an operation which was not anything but first class, be it a repair of a cleft palate or a cosmetic procedure. Some would have said he was obsessed with perfection, which made working with him, theatre staff or anaesthetist, not an easy task – there would be many a 'Gahd dammit' uttered in a long afternoon! His obsession with perfection made him a unique person in an age where compromise and expediency are only too often the order of the day. Compromise and expediency – Owen Cole did not know the meaning of those words.

My friendship with Owen goes back some thirty years. We shared common interests from medical student days, revolving around an active professional and social life. As we grew older, our paths often crossed, we developed an interest in photography, we went bush walking in Victoria and Tasmania. We would meet at concerts – I am not sure how willing a participant he was, but he went just the same. And, of course, our families spent some time together at Mt Martha where sailing and tennis were the order of the day. Most of all I would see him at the gym where he would train for the triathlon with all the enthusiasm that was his hallmark.

Old age plagued by illness and infirmity would not have suited Owen Cole – he put more effort into ensuring health and fitness than anyone I know. He died like the way he dealt with life – he decided to ride on the crest of a wave rather than duck underneath it. He died in August 1993 in a surfing accident whilst on holiday.

The medical profession can be justly proud of one of it's sons and mourn his passing.

Joe Marich

NOEL HENRY MAXWELL COLYER, MBBS 1946
1916-1993

NOEL Colyer, MBE, KStJ, ED, born in Sydney and educated at Melbourne Grammar, graduated with a half blue in boxing, despite a pronounced limp from a congenital dislocation of the hip. It was perhaps because of his own problems that he developed an interest in arthritis, that in 1950 he was appointed as Honorary Rheumatologist Royal Perth Hospital, and furthered the development of rheumatology as a viable specialty in 1966. By 1969 he was elected an Honorary Foundation Fellow of the *Société Française de Rheumatologie*, after a hip arthroplasty in England in 1954.

His interest and involvement with the Australian Army continued throughout his life – as Lt-Col and ADMS in 1968, Brigade Commissioner of St John's, promoted Knight of Grace of the Most Venerable Order of St John of Jerusalem in 1985.

Noel Colyer never complained of his own disability, and had a long career as a much loved and highly regarded general practitioner in Jarrahdale and Armadale in Western Australia.

Peter G Jones

SIR ERNEST EDWARD DUNLOP
AC, Kt, CMG, OBE, KSJ, KCSJ
MBBS(1934), MS(Melb), Hon.DSc(Punjab), Hon.LLD(Melb), FRCS, FRACS, Hon.FAMA, Hon.FPS, FACS, Hon.FRCS(Edin)
1907-1993

He was cast in the mould of a great man . . . a full-blooded, large-brained, self-educated Titan . . . whose resources of character and intellect enabled him in his later years to overshadow all his contemporaries.

Alfred Deakin – of another.

ACCORDED a State Funeral with full military honours on what would have been his eighty-sixth birthday, Sir Edward led a remarkable life, and many obituaries have already dealt with numerous facets of his versatile career. For this publication, it seems appropriate to concentrate on what may be deemed his University connections.

Paternally, he was descended from ecclesiastical and practical stock. He inherited the copper-plate hand of his father. His grandmother, to whom there was a strong facial resemblance, was a Walpole, related to Sir Robert Walpole, the first British Prime Minister.

His physical strength and stoicism were recognised at an early age. At seven years he rode a horse to school and uttered not a whimper when his foot, mangled under a sledge drawn by Clydesdales, had to be repaired. He was singled out to run the family farm.

The credit for recognising his intellect and steering him into secondary education belongs to Miss Hilliear[1], his primary teacher, who prevailed upon his parents to send him to Benalla High School. He had the capacity to memorise poetry and passages of literature, and rapidly caught up with his elder brother. He was influenced by the message on the back of the legendary Furphy watercarts:

Good, better, best
Never let it rest
Till your good is best.

Gaining his leaving certificate at the age of sixteen years, he trained at the Victorian College of Pharmacy where he won the

Gold Medal. Transferring to medicine, it was necessary for him to have Intermediate Latin, which he acquired in six months.

SIR EDWARD DUNLOP,
KNIGHT GRAND CROSS OF THE ORDER OF
THE ROYAL CROWN OF THAILAND, APRIL 1993

University life was a whirl of academic prowess, sporting success, and social activity. At school he had been known as 'Ernie'. He preferred Edward, his second name – after Edward VII. At Ormond College, in which he resided, he acquired the sobriquet 'Weary' – a logical connection in the undergraduate mind with Dunlop Tyres. It's been Weary ever since.

On the social side, Weary was 'in everything', being 'a popular figure no longer showing any evidence of his former shyness'. One of many student rags of the early thirties was a tribute to 'Fallen Girls of the Night' headed by three figures dressed as fairies, all of whom subsequently became Knights of the Realm – Sir Edward Dunlop, Sir George Lush, Sir Benjamin Rank. In his third year in College and in the fourth year of his medical course, Weary was president of the Ormond College Students' Club. In later years he served on the Ormond College Council until he was seventy-five years of age.

On the sporting side, he was very athletic, shining at rugby and boxing. (One ponders what new records may have been set had he concentrated on rowing.) He was introduced to rugby by his College 'wife', Charles Hopkins from Townsville, Queensland, whose obituary also appears in these columns. In his sixteenth game, he represented Australia, he played against the Maoris, All Blacks and Springboks, and was the first Victorian to captain an Australian rugby union team. In boxing, his first recorded bout resulted in a draw over twenty 2-minute rounds against the captain of football at Benalla High School. At university, he proved more successful, becoming the Melbourne University Heavyweight Champion (16st 7lbs) on four occasions, and winning the Australian Inter-varsity Championship. In subsequent days, his contests were not always under strict Marquis of Queensberry rules.

Academically, he won many honours, and graduated MBBS in 1934 with the Exhibition in Obstetrics and Gynaecology. That year spawned a surgical trio – Dunlop, Eddey and Rank – scarcely less notable than the triumvirate of thirty years earlier, Hurley, Newton and Upjohn, who were their teachers.

After the war, he tutored in anatomy, pathology and surgery at Ormond College and The University of Melbourne Medical School. It was not long before numerous other surgical commitments consumed the time available for this activity.

An account of his surgical career, and his sterling service to The Royal Melbourne Hospital, The Royal Victorian Eye and Ear Hospital and the Peter MacCallum Clinic has been given elsewhere,[2] and will not be repeated here. But it was not as a surgeon that Weary Dunlop stood head and shoulders above his contemporaries. It was as a supporter of good causes, a diplomat and statesman in fields including but extending far beyond surgery, and of course as a Prisoner of War Camp Commander of unexcelled courage and renown.

In the hyperbole accompanying his later years and death, which when it came, came fortunately quickly, some were left with the impression that Weary was the only medical prisoner of war to serve with valour. Although Weary received and enjoyed full recognition, he would not have wanted this to detract from the heroism of others, many of whom were fellow alumni and many of whom paid the supreme sacrifice.

Sir Edward may well have been the most decorated Australian and received numerous lofty awards at home and abroad, but perhaps the most colourful was his last – the Knight Grand Cross of the Order of the Royal Crown of Thailand. Be that as it may, Weary loved life, fought a good fight, finished the course, never gave in, never harboured a grudge, and died covered with honours and with a multitude of friends. The claim that he became a legend in his lifetime is not putting it too strongly.

D G 'Scotty' Macleish

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DONALD CAMERON FORSTER, MBBS 1947
1924-1993

DONALD FORSTER

DONALD FORSTER died at the age of sixty-nine in June 1993. His father, Grafton Forster, was a dental surgeon in Perth, Western Australia and Don was born in that city. He was the third of four children, having one sister and two brothers. He was educated at Scotch College, Western Australia, attaining his Leaving Certificate in 1941. At that time Western Australia did not have a full medical school and hence, like so many of his fellow students, he elected to move to Melbourne after completing first year medicine at the University of Western Australia. From 1943 to 1947 he studied medicine at The University of Melbourne, graduating at the end of 1947.

In 1948 he was a Junior Resident Medical Officer at Prince Henry's Hospital and the following year he joined the staff of the Pathology Department there – a department in which he was to spend his whole professional life. He retired in 1988, having served that hospital for some forty years. During those forty years enormous technical advances were made within haematology as in all other disciplines of pathology. Don kept abreast of these many new developments and ensured that his department was always suitably staffed and equipped to deal with the demands of a major teaching hospital. He participated also in a number of outside activities, organizing, for example, the quality assurance programs in serology for the Royal College of Pathologists of Australasia. His conscientious and methodical approach to this task ensured its success at an early stage in the development of such programs.

In 1950, Don married Patricia Mardi Hallam and subsequently they had three children, Sally, Jennifer and Matthew. These

three children were a source of great pleasure and pride to Don, a pride and pleasure later expanded to encompass his six grandsons. Sadly, Patricia died in 1989, bringing to an end a marriage of almost forty years duration, during which time Don and Patricia shared their love of art, music, reading, gardening and travel. Don pursued these activities with characteristic enthusiasm and thoroughness. He collected books, particularly first editions, and in order to maximise his pleasure in this hobby, studied and subsequently practised the art of book binding.

He enjoyed his travels in France so much that he studied the French language and also became proficient in French cooking. His love of collecting extended also to Middle Eastern rugs, whilst his gardening included a special interest in rose growing. For some years the family maintained a weekend and holiday home in the Dandenongs, where Don was able to pursue his love of gardening, enlivened by episodes such as when his new 'slasher' got out of control and demolished a significant part of his garden! Later, Don and Patricia bought a small miner's cottage in Paynesville, Gippsland, enjoying the area so much that they subsequently purchased land at Newlands Arm, Gippsland, where they designed and had built a large family home. Their mutual pride in this home was considerable and hence it was particularly sad that Patricia should die so soon after Don's retirement.

It was during his forty years of service at Prince Henry's that Don formed some of his closest friendships. Headed by Dr John Funder, the Pathology Department of the Hospital enjoyed considerable staff stability and several of Don's colleagues were associated with him for thirty years or more. Over this long period of time professional relationships were allied with true and close friendships. His professional skills were admired greatly and respected by his colleagues, and his advice was sought frequently on those aspects of pathology within his chosen discipline of haematology. He particularly endeared himself to new staff members. John Funder spoke frequently of the support he received from Don when John was appointed to direct the Department of Pathology and staff members, both scientific and clerical, recall with affection the way Don welcomed them to the department and helped them become established in their new working environment.

Donald Cameron Forster was a quiet, unassuming person, unfailingly courteous and unfailingly kind. He had a delightful sense of humour. He will be very sadly missed by all his friends and colleagues, who extend their deepest sympathy to his three children and their families.

Michael Drake

Raymond Valentine Hennessy, MBBS 1918
1893-1993

RAYMOND HENNESSY, LDS (Vic), DDSc (Melb), FRCS (Edin), FRCS (Eng), FRACS, died in his hundredth year on 26 July 1993, after a long and distinguished career as an otorhinolaryngologist, a superb operating surgeon, a friendly man and a gifted teacher with a stimulating effect on all who worked with him. A memory many of us have of Ray is a cheerful encounter, in Collins Street at lunchtime on a sunny day, hat always in hand, a fresh pink rosebud in the lapel of a light-grey suit, and a witty always encouraging remark for a junior.

Dr Hennessy pioneered bronchoscopy and oesophogoscopy at Royal Children's Hospital, and was one of a distinguished group of Melbourne otorhinolaryngologists whose lives will be commemorated in a subsequent issue of *Chiron*.

Peter G Jones

Charles McTaggert Hopkins MC, MBBS 1934
1910-1992

Our thanks to the Frankston Standard *and to the author, Dina Monks, for their kind permission to reproduce this article, which was first published in January 1993, under the title 'Mornington loses a courageous social pioneer'.*

CHARLES HOPKINS

FAMED SURGEON Sir Edward Dunlop called him a 'modest man whose life has set a pattern of honour, courage, loyalty, strenuous endeavour, compassion, affection and invariable usefulness'. To another eminent man, Dr Andrew Hope, he was a man so special he enriched the lives of all who met him.

But ten years ago, two attackers knew nothing of the man, Dr Charles Hopkins, when they bashed him and left him bleeding in the gutter outside his clinic next to Mornington Bush Nursing Hospital. He had disturbed them ransacking his surgery looking for drugs. 'That's when he really died', Dr Hopkins's widow, Hester, said last week at his memorial service at St Mark's Uniting Church in Mornington.

Dr Hopkins, almost 83, died on 15 December 1992 in the Andrew Kerr Home in Mornington – the same old house where, for many years, he had looked after orphans and homeless children taken in by the Church of England. (The house is now a retirement home run by the Mornington Bush Nursing Hospital.) As a friend at his memorial service remarked, 'He probably delivered half the staff there and indeed half the people here today'.

Although a highly qualified surgeon and specialist in obstetrics and gynaecology, Dr Hopkins chose to be a GP to be closer to people. After distinguished war service, for which he was awarded the Military Cross, he came to Mornington to join his old friend, Dr Andrew Taylor, in a practice that covered most of the peninsula. As Dr Hope, former minister at St Mark's, told mourners, 'Charles was unique . . . at one time there was only one other doctor in Australia qualified (like Charles) with four fellowships . . . He enjoyed calling at the Bush Nursing Hospital at night to see that his patients were all right. I wonder if there is a record of the number of times when sitting beside a patient he would say, "Oh dear! Oh dear!"'.

Together Dr Hopkins and Dr Taylor built Mornington's first medical clinic – the Main Street Clinic within the Bush Nursing Hospital grounds. Wrote Dr Hopkins in his book *How You Take It:*

> We settled into practice and I was never so happy . . . when it came to patients we used to play their illnesses down, believing that the cure was not complete until their maladies had ceased to occupy a significant place in their minds – until in fact they had forgotten that they had been sick – and only then were they free to get on with life and enjoy it.

As the Australian Medical Association representative on the central council of the Bush Nursing Association, he was a staunch believer in small hospitals:

> Morale was very high, the staff were happy, and in this relaxed atmosphere patients recovered rapidly. They practically never required long periods of rehabilitation for they never left their communities.

A Rotary Club member (a Past President and Paul Harris Fellow for his work), Dr Hopkins took up a project with Rotary to establish the first preschool centre in Mornington. His pioneer community work led to the founding of the Mornington Social Welfare Group and the appointment of welfare workers in the 1960s. He was instrumental in arranging research that led to a change in adoption laws, a direct result of the many years he spent with orphaned or homeless children at the Andrew Kerr Home.

Like Sir Edward Dunlop, who was his room-mate [the 'wife' who introduced Weary to rugby] at Ormond College during their student days, Dr Hopkins was renowned for his work in war zones during the Second World War. Said Sir Edward:

> His work in hygiene and preventative medicine over the wide fascinating panorama of the Middle East, described (in his book) so modestly, was of immense importance in regions where disease casualties far outnumbered those suffered in battle . . . I discern a remarkable quality revealed in the writings of this youthful companion turned soldier, turned beloved doctor, cool, humorous and often self-deprecatory

Dr Hopkins entitled his book *How You Take It* after a conversation with the husband of a woman who died in the hospital soon after he came to Mornington.

> I went around to his home to tell him. It wasn't a nice job to have to do. But he realised this and he finished by trying to comfort me instead of the other way around . . . And I have often repeated to patients one of the things he said, 'All sorts of things happen to you in life, doctor, but they don't matter. It's how you take it that matters'.

That was Dr Charles McTaggart Hopkins. He is survived by his wife, Hester, and daughters Iona, Giorsal and Catriona and their families.

JOHN HORAN, MBBS 1930
1907-1993

JOHN HORAN

WITH THE PASSING of John Horan after a short illness, Melbourne mourned the loss of a most distinguished physician and classical scholar.

John Patrick Horan, KCSG, MD, FRCP, FRACP, was one of seven children born to John and Ann Horan at Mount Malcolm in Western Australia. He was educated at the Marist College, New Norcia and proceeded to do first year science at the University of Western Australia. There being no medical faculty in the west at that time, he enrolled at The University of Melbourne where he completed his medical course with many honours in 1930. He held intern posts at the Brisbane General and Royal Melbourne Hospitals and from 1934-35 was Medical Superintendent of St Vincent's. During his residencies he came under the notice of Sir Sydney Sewell and Sir Hugh Devine, and their influence played a major part in moulding him into a consultant physician of the first order.

At St Vincent's Hospital, as an Out-patient Physician and later Senior Physician and Dean of the Clinical School, he excelled at bedside teaching, particularly stressing the importance of the history and physical signs – above all he was a caring, compassionate physician who treated all in the same manner.

John had a special interest in gastroenterology and in 1937 was one of the first to introduce gastroscopy to Australia, having studied under Schindler in Chicago. He wrote the chapter on gastroscopy in Devine's *Surgery of the Alimentary Tract*, published in 1940.

In 1940 John married Margaret Cleland, a daughter of Sir John and Lady Cleland of Adelaide (Sir John was a Professor of Pathology and a great naturalist). It was a very happy marriage that lasted fifty-two years and they had four children – Peter, Anne, Mary and Katharine. Margaret, as well as being a devoted wife and mother, continued practice as a paediatric physician.

John's career was interrupted by war service from 1940-1944. He was Specialist Physician to the 4th Australian General Hospital, serving in North Africa, Palestine and in Tobruk during the siege. He was later Officer Commander Medical to 121 Australian General Hospital in the Northern Territory.

As previously recorded in *Chiron*, John was a Latin scholar. His love for the language, in particular for Horace's *Odes*, commenced in Tobruk and continued for the rest of his life. On retirement he pursued his Latin studies at The University of Melbourne. His very young fellow students were amazed to hear that he matriculated in 1924! Initially, he was deeply shocked by the modern translation of Horace but with true resilience he became accustomed to these idiosyncrasies, and even to appreciate the mini skirts and tattered jeans of his fellow students – he himself refused to be modernised, still wearing the inevitable waistcoat and hat. His well-thumbed copy of Horace was always on the seat of his car or projecting from his pocket; in his final illness it was on his bedside table.

He was a man of great faith and though I doubt some of the changes in the Church appealed to him, with reservations he accepted them. In 1962 Pope Paul VI conferred on him the honour of Knight Commander of St Gregory, an ancient order, rightfully I believe in recognition of his care of at least two Archbishops of Melbourne, innumerable priests, nuns and of course laity.

John Patrick Horan was a great and kind man and a truly beloved physician.

John T Cahill

NORMAN PRATT LONG, MBBS 1936
1908-1993

NORMAN LONG, ED, DDR, MCRA, died at the age of eighty-five in his home 'Denbigh Castle', Toorak, where he had lived for over forty years.

Norman was born on 29 May 1908 in Warracknabeal, a small country town on the banks of the Yarriambiack in North Victoria. He was educated at the local high school and at Scotch College.

From 1941-46 he served in the AIF as a Major and Army Hospital Radiologist in Charge in New Guinea, New Britain and Australia. In 1946 he became Radiologist in Charge at Prince Henry's Hospital, a position he held until 1962, continuing as Visiting Radiologist there until 1973. For many years he was the Honorary Consulting Radiologist to the Williamstown & District General Hospital.

To most of his medical colleagues he would have been regarded as a competent radiologist, but he was much more. Having never married Norman developed a consuming interest in community affairs, which continued until his death.

At The University of Melbourne he gained a double blue in sports (swimming and rifle shooting). A Councillor with the City of Prahran for many years he was also an active member of many clubs and committees. A member of the Medical Committee to the Olympic Games in Melbourne (1956) he had been Inaugural Secretary and a foundation member of the Australian Sports Medical Association in 1955.

Tall, quiet and dignified, he was a good raconteur and a reliable source of advice to his godson, Justin Long. His quietness and good manners did not leave him even when young Justin poured a small, but damaging amount of sand into his car's petrol tank.

A little-known achievement was the radiological assistance he readily gave to Crawford Mollison and Keith Bowden in identifying bullets or shot in decomposed bodies. This must have require composure and a good deal of clandestine manoeuvring. In 1962 Norman read a paper on this work at the International Congress on Radiology in Montreal.

Norman Long was a quiet achiever who enjoyed a long and busy life.

Harold Attwood, from family documents and the eulogy by Justin Long.

ANDREW JOHN MURPHY, MBBS 1952
1925-1992


ANDREW MURPHY

JOHN MURPHY died suddenly towards the end of 1992. He had retired as Director of Pathology at Preston & Northcote Community Hospital in 1989.

John was the son of the editor of the *Weekly Times* and was educated by the Jesuits at St Patrick's College, East Melbourne. A former school friend recalled that he was the only rebel to become a prefect! He did first year dentistry at The University of Melbourne, but then enlisted in the Royal Australian Navy, in which he served until the end of the war. He graduated MBBS in 1952 and showing an interest in pathology, joined the distinguished ranks of a Beaney Scholar in Pathology.

The College of Pathologists of Australia was established in 1956 and John Murphy bravely took on a Traineeship in Pathology with a view to sitting the exams of that College. After working at St Vincent's, Royal Women's and Royal Children's Hospitals, and with Dr Keith Bowden in coronial work, in 1959 he became the first person to be admitted to the College of Pathologists by examination.

As Regional Pathologist to the Mallee he helped to establish and design a Department of Pathology at Mildura Base Hospital, with a much-needed Blood Bank. Despite the load of coronial work, serving an area of 800 square kilometres, he also became Medical Director of the Hospital.

He left Mildura after five years to become Director of Pathology at PANCH, where he remained until his retirement in 1989. Under him the Department of Pathology steadily grew in size and quality. For some time it was John who successfully sought permission for autopsies from which he developed a museum. He also discussed the findings with the relatives. Before his retirement he again took up coronial work.

John Murphy was a dedicated teacher throughout all his professional life in Melbourne and was a tutor in the campus department, Austin Hospital Clinical School and at Newman College. He was also a member of Convocation of The University of Melbourne.

He was a quiet man who was content with family life with his wife, Mary, their two sons (one a medical graduate), a daughter (literally) in law, and nine grandchildren. Although not a keen party goer he could become the centre of attention at any social function as his wry humour was relished by old colleagues and new acquaintances. John Murphy will be fondly remembered by all who knew him.

Harold Attwood

LAURENCE J MURTON, MBBS 1968
1945-1993

IT is a difficult task to do justice in commemorating the life of one who has influenced so many. Laurie himself would deny that he had such wide influence, he was that sort of man – quiet and retiring, gentle and affable, never one for promoting self-importance.

Laurence Jamieson Murton was born the elder of two brothers and brought up in Melbourne and Ballarat, matriculating from Coburg High School in 1962. He studied medicine at The University of Melbourne, graduating in 1968 with honours in every year. After two years at The Royal Melbourne Hospital, followed by paediatric training at Royal Children's Hospital from 1971-73, he obtained his FRACP in 1973. His lifelong association with neonatal medicine started in 1972 as a paediatric registrar at The Royal Women's Hospital; he returned in 1974 as the University Second Assistant under the mentorship of Dr Bill Kitchen. With Bill's encouragement, he undertook further neonatal training in Denver with Professor Joe Butterfield. Upon his return in 1976 he took up his post as the inaugural full-time director of the Neonatal Intensive Care Unit at The Royal Women's Hospital, a post that he held for sixteen and a half years until his untimely death.

Laurie Murton's influence on The Royal Women's Hospital, its Neonatal Intensive Care Unit (NICU), and all who passed through in his time, was immeasurable. However, it is possible to put some measures on his influence. For instance from 1 January 1977 to 31 December 1992 there were 5,735 admissions to The Royal Women's Hospital NICU. All were meticulously recorded in annual admissions books, and latterly on the computer data files that he created with equal precision. His influence on patient care is shown by a couple of simple statistics. In the year before his arrival at The Royal Women's Hospital, the survival rate for ventilated babies was 60 per cent, compared with 80 per cent for those ventilated in his first year. In 1975, babies born three months early had a survival rate of 22 per cent, compared with 86 per cent in 1991. The number of babies offered assisted ventilation tripled in the time of his stewardship, the number of NICU beds more than doubled, and of course the complexity of care increased dramatically.


LAURIE MURTON WITH A TINY SUCCESS STORY

One of his great attributes was his attitude to change. By nature a conservative man, he would not necessarily embrace every suggested new idea. He was always happy to be a little behind some of the changes introduced overseas – he found it useful to let others make the mistakes, only picking up proven good ideas. Yet he could spy a very good idea and implement it promptly. The Royal Women's Hospital was the first in Australia to widely implement the use of exogenous surfactant. He had a great love of tinkering with new intensive care technology; he would spend hours playing with the latest 'toy', which bore fruit because of his ability to select the best equipment and use it appropriately.

His natural conservatism brought great benefit to his patients. He believed in natural processes, and thus would wean a patient as quickly as possible from assisted ventilation and introduce feeding with mother's milk as early as possible. Perhaps his greatest legacy has become the unit's motto 'wean and feed', a motto which has been familiar to his trainees for many years. The value of his policies has been borne out by the excellent results at follow-up of the graduate babies.

Many paediatric trainees have benefited from his teaching; they number in the vicinity of two hundred and are to be found throughout the state of Victoria, in every state in Australia and in many corners of the globe. Literally hundreds of nurses have taken part in the neonatal intensive care postgraduate diploma courses to which he was lecturer and examiner throughout his time at The Royal Women's Hospital. As with his paediatric trainees, his nursing graduates are scattered all over Australia and internationally.

Laurie Murton was indeed a quiet and conservative man. He enjoyed quiet pursuits, including cryptic crosswords and reading and he had an encyclopaedic knowledge of the Sherlock Holmes books. Another great love was of trains and he was a member of

the Australian Railways Historical Society for many years. His other major social pursuit was an intense interest in the Hawthorn Football Club – in the winter months one had to know how his beloved Hawthorn had performed on the weekend, in order to understand the mood on the Monday morning ward-round.

He excelled, and took enormous responsibility, in helping parents of chronically ill or dying babies. Although there are thousands of families grateful for babies saved miraculously, there are dozens of families grateful for his compassion and honesty in dealing with their losses. When Laurie himself was facing his own illness, he faced up to the same issues with the same honesty that he had with those families, and one could never see a braver attitude, in any man, holding true to his principles to the last.

Neil Roy and Charles Murton

BERNARD McCARTHY O'BRIEN AC, CMG

BSc, MBBS 1950, MD, MS(Melb), FRCS, FRACS
Hon.FACS, Hon.FRCSEd, Hon.FRCSI, Hon.FRS(SA)
1924-1993

BERNARD O'BRIEN

BERNARD O'BRIEN was born on Christmas Day 1924 – prophetically, this event presaged a messianic career of effort and achievement. He was the second of five boys and with the exception of one brother who died at the age of nine, all went on to outstanding careers in medicine, music and science. Bernard was a schoolboy athletic champion. At The University of Melbourne, typically opportunist and covetous of victory, he realised that he would be competing against the Australian sprint champion so he selected the relatively new sport of pole vaulting and thus gained his blue in university athletics. This ability to achieve by seeing around the problem and pursuing it with relentless tenacity typified Bernard's whole career and earned him the nickname of 'Champ'.

He graduated in science and medicine in 1950 and became a resident medical officer at St Vincent's Hospital for two years, followed by a period of training in general surgery. At the same time he had an association with the plastic surgery unit at The Royal Melbourne Hospital as Clinical Assistant under Rank and Wakefield. Overseas training in plastic surgery took him to Oxford as the Nuffield Clinical Assistant in Plastic Surgery in 1956, to Odstock, Salisbury, England with John Barron in 1957 and 1958, and to New York with Bill Littler as Hand Resident in 1959. Astutely mindful of the value of travel and of making contacts he visited units in Europe, including Russia, before he returned to Melbourne. Already he had a clear vision of the great potential of microsurgery to reconstructive plastic surgery, but opportunities were limited – his bumptious and ambitious style unnerved hospital authorities and threatened some of his medical peers cocooned in the darkness of their limited horizons. While lobbying for appointments he wasted no time in amassing a huge referral base for his private practice from country and suburban Victoria. He was a master of organisation and efficient use of his time, and to this end employed a chauffeur to enable him to work and dictate while travelling, a scrub nurse to organise and assist his operating, and a research nurse as well as a secretary – all before he had the security of a fixed hospital appointment. Such was the conviction and confidence of his vision.

With an appointment at St Vincent's and the support of Professor of Surgery, Dick Bennett, he gained access to a disused mortuary where he immediately set about animal research into microvascular repair techniques, histological evaluation of repair and injury, and the development of instrumentation which led to some of the earliest publications in this field. Using his own money initially, he soon gained NHMRC research funding and this support continued almost uninterrupted until his death.

Again showing his entrepreneurial skills he convinced prominent businessmen of his mission and thus the Microsurgery Foundation was formed in 1970 which led to the establishment of the Microsurgery Research Centre. He recruited a team which included surgical colleagues, scientists and scientific advisers. Soon research fellowships were established which attracted high quality trainees from around the world, many of whom would return to their own country and establish themselves as international leaders in the field of microsurgery. Over one hundred candidates from more than twenty different countries completed Fellowships of one year or longer. Research output became prodigious leading to more than 300 publications, innumerable chapters and two books, the first of which was translated into many languages.

Bernard was appointed Hunterian Professor in 1974 and as his reputation grew he was awarded innumerable lectureships and visiting professorships. He presented his work at every available national and international forum and was one of the first to visit China in 1971 and witness first-hand the extraordinary microsurgical endeavours that were in progress during the silent years of the cultural revolution. He gained the coveted Leriche Prize (the only Australian to do so), the Colles Medal, the Pirogov Medal from the National Society of Surgery of the Soviet Union (the first occasion that a foreign surgeon had received the award), the Dragon Award from the Chinese Society of Plastic Surgery, and the Sir Hugh Devine Medal of the Royal Australasian College of Surgeons, the highest honour that the College can bestow.

His energies included committee participation in many surgical societies so as to promote the cause of microsurgery. He was President of the International Society of Reconstructive Microsurgery, the International Federation of Societies for Surgery of the Hand, the Australian Hand Surgery Society, President of the International Federation of Surgical Colleges and Vice-President of the International Society of Surgery. He served for many years on the Royal Australasian College of Surgeons Council and became its Senior Vice-President. He was made an Honorary Fellow of the American College of Surgeons and of at least four other international surgical colleges.

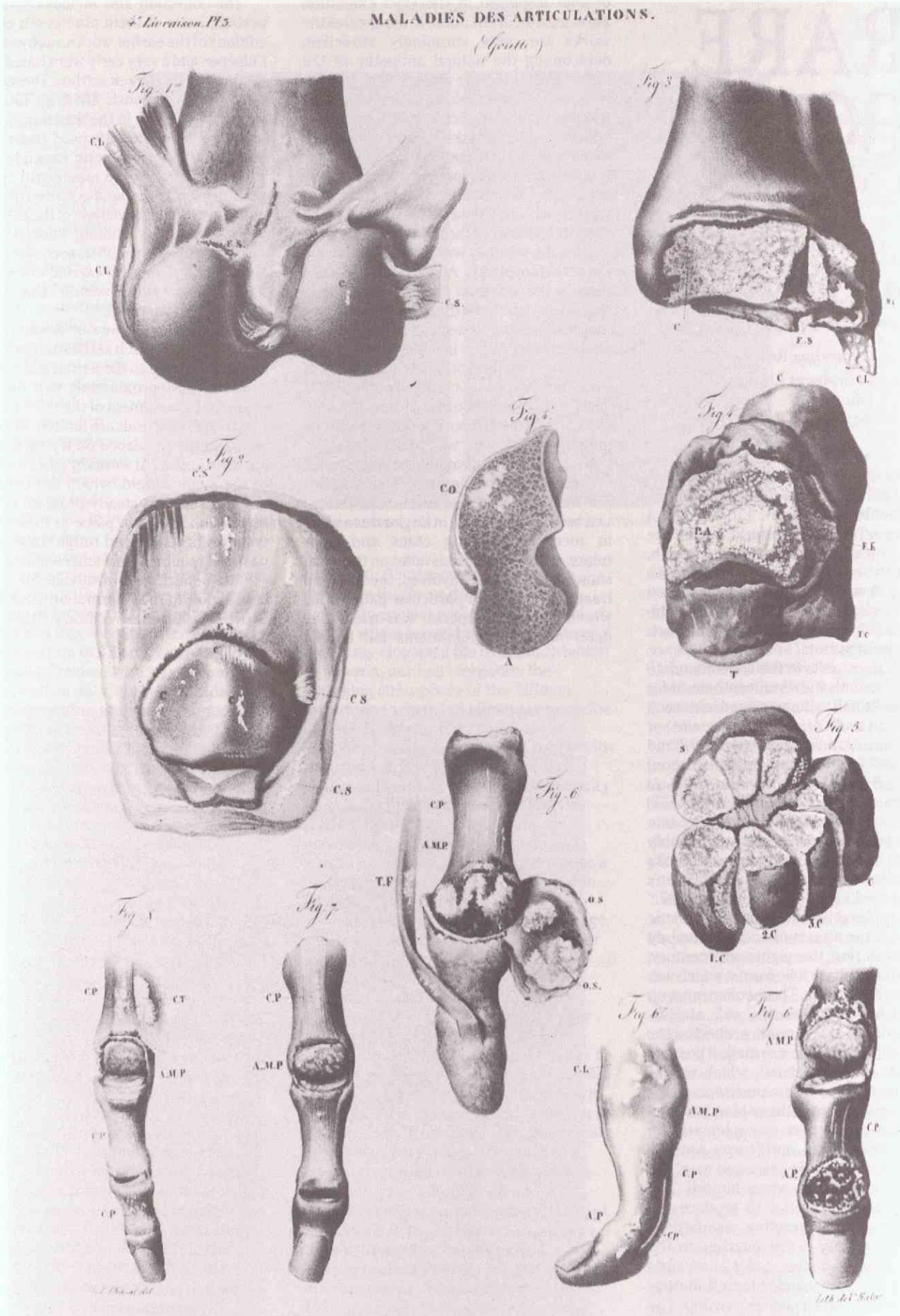
Civil honours were to come: he was made Companion of the Most Distinguished Order of St Michael and St George (CMG), Knight of Malta, and Honorary Citizen of Dublin, a Companion of the Order of Australia (AC) and in 1992, Victorian of the Year.

Bernard greatly enjoyed the company of others, a good drink and a joke. He was a great raconteur and soon after the diagnosis of his terminal illness, when asked what he was going to do, he replied that he would adopt the motto of the London pickpockets' society and 'Just take things quietly'. Needless to say, he did not and was stung to even further endeavour, particularly to expand and consolidate the funding of his beloved Research Centre in Melbourne.

Throughout his productive life Bernard was desperately busy but he always found the time to shower his family with love and to show his pride in their achievements. Bernard will be remembered for his dogged tenacity, his ability to see the grand vision of microsurgery during its infancy and to develop it. He was a grand leader with great entrepreneurial and organisational skills who inspired and encouraged others and was generous in his praise of them. He had an abiding belief that Australians owed a debt to surgery as a result of their one way traffic overseas for training and that this should be repaid. He reversed the tide and established a mecca for clinical training and basic research in microsurgery which has few peers.

Bernard's premature death was a great loss to all who knew him; he was a great friend and a truly great Australian.

Wayne Morrison



Jean Cruvelhier, *Maladies des Articulations (Goulte)* in *Anatomie, Pathologique du Corps Humain.* Paris, J B Bailliere, 1829-35. Book size 2'6" x 2'.

RARE BOOK COLLECTION IN THE BROWNLESS MEDICAL LIBRARY

Dorothea Rowse,
Life Sciences Librarian

ONE OF THE TREASURES housed in the Brownless Medical Library is a collection of rare and historic books, the majority of which date from the seventeenth, eighteenth and and early nineteenth centuries. A selection was displayed in the Baillieu Library during 1993 and the exhibition attracted considerable interest from a wide range of visitors.

The earliest texts in the collection date from the sixteenth and seventeenth centuries and include small vellum-covered texts such as Duncan's *Explication nouvelle et mechaniques des actions animates* (1678) and the beautifully engraved, vellum-covered volume *Tractatus de Homine et de formatione foetus* by Renati Des-Cartes (1677) with its two-colour title page, delicate engravings and beautifully set type. Probably one of the most beautifully produced books in the collection is a volume of Galen's collected works printed in Venice in 1597.

Of considerably more general aesthetic interest are the atlases of anatomy, mainly published during the eighteenth century, often in the elephant folio format which was so popular at that time. These volumes are up to a metre high by half a metre wide, and life-size engravings of organs are printed on the finest quality paper. The size made it possible to provide immense detail, which was of crucial importance when announcing new discoveries in nerve paths or blood circulation. Some of the best examples are the books by Haller, Swan, and Scarpa. Antonio Scarpa, the original 'Renaissance man', did the finely detailed drawings himself, and then trained an engraver to produce the illustrations to his exacting standards – although some are rather puzzling to the modern medical viewer. Later anatomists provided exquisite hand-coloured illustrations, based on copperplate engravings. The volumes in the collection by Charles Bell and Jean Cruvelhier are excellent examples of the art. The two-volume work by Cruvelhier, *Anatomie, Pathologique du Corps Humain* (1829-1835), contains engravings which are quite lifelike in their detail. The illustrations of gout displayed in the 1993 exhibition attracted a lot of attention. In many cases the works are quite stunningly attractive, overcoming the natural antipathy of the viewer to the macabre aspects of the subject.

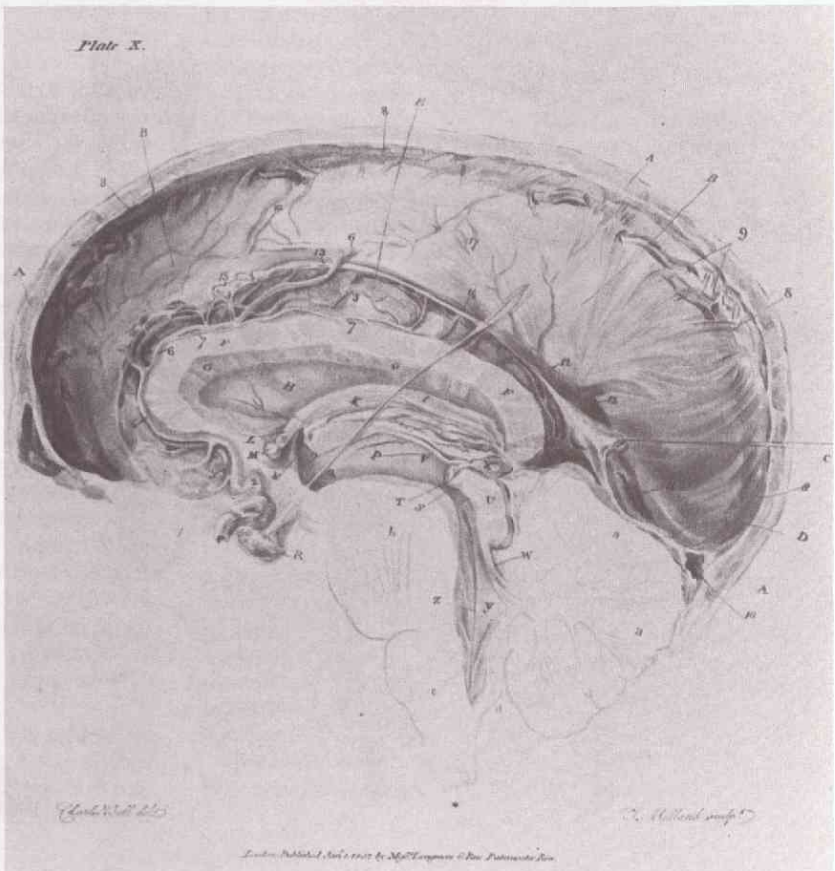
Some of the volumes provide vivid insights into the difficult conditions under which research was done. Hunter's *Atlas of the Gravid Uterus* includes an account of how his research work on pregnancy was greatly assisted by his obtaining some corpses of women who had died just before or at the start of childbirth, at the right time of the year – when the weather was cold and decay did not set in too quickly. A charming study of a baby in the womb at full term is the consequence of the baby dying as a result of the mother bleeding to death. A much smaller publication by Aitken includes his dissection of a man 'who died on his Wedding-day of surfeit and intoxication'. Aitken regretted the shortness of time allowed him by grieving friends and neighbours who 'were much prejudiced, and very watchful'!

Some of the publications are notably idiosyncratic. An example is a copy of Cowper's *The Anatomy of Human Bodies* (1698) which was used by a physician in England as a place to record interesting cases and their treatment. Each plate has notes on the verso showing the disease involved, the standard treatment used and particular patients for whom something special was tried. The dates for the appointments fall largely between 1725 and 1735, and a comparison of the names shows several members of a family coming for treatment.

The collection also includes some fine herbals, some of them nineteenth century editions of the earlier works, such as that by Culpeper, and a very early work based on the writings of the Greek author, Dioscorides, *Codex Vindobonensis Medicus Graecus I*, after a manuscript in the Austrian National Library. Woodville's *Medical Botany* in a multi-volume set is a good example of the scientific works of the nineteenth century with their exquisite hand-coloured plates. Of particular interest to viewers of the exhibition were some fairly chilling illustrations of surgical instruments, often accompanied by an account of surgery carried out without anaesthetic, from which the victim miraculously survived.

There is a multitude of works ranging from the bizarre, such as the strange ideas of Sir Kenelm Digby, to the serious and scientific – a total of approximately two thousand volumes. Development of the collection proceeds slowly as funds are limited. Emphasis will in future be placed on trying to locate copies of important works by past luminaries of the medical field, which the collection lacks. A slow but steady program of book restoration is also in place as many of the volumes have enjoyed rough usage in the past and require repair and cleaning.

The collection is available for use on application to the Information Desk in the Brownless Medical Library (telephone 344 5718).

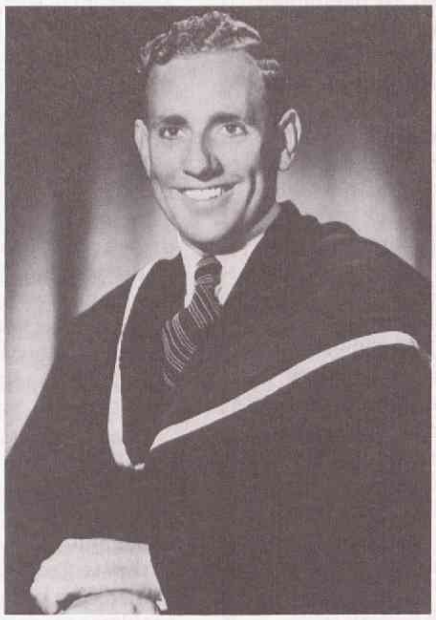


Charles Bell, Plate X, Full section of the brain, in *The anatomy of the brain, explained in a series of engravings.* London, Longman & Rees, 1802. Book size 12" x 8".

A Good Life, A Country Practice

Believe in what you do and do what you believe in.

Bill Lawrence



DR WILLIAM C LAWRENCE, MBBS 1953

CAPTAIN BETTY I CROCKER

BETTY AND I came to Red Cliffs in 1955 after our Adelaide wedding. Was it fate or chance – why the choice of a country practice?

In 1954, during my residency at the Alfred Hospital, I undertook a one-month stint as Regimental Medical Officer at Puckapunyal Military Camp. A very serious accident occurred, caused by an exploding mortar bomb, and involving eight National Service trainees – they had been ordered not to be in the area of the mortar range, but had found an unexploded mortar and returned with it to camp. Their injuries were beyond the range of services at the Regimental Aid Post and they were transferred to the casualty section of 3 Camp Hospital. To Sister Betty Crocker, who was the only nursing staff on duty, mortar wounds were very much routine as she had recently returned from active service in Korea, but to the newly-graduated Dr William Lawrence, the only medical officer in the camp, such injuries were a testing experience. We worked together and all eight casualties were stabilised and transferred to Heidelberg Military Hospital, with one episode where the voice of experience prevented a potential disaster. The scenario: an unconscious trainee with a severe scalp laceration. The young medico voices his opinion, 'I'll suture this wound up after we've cleaned it up – before he is conscious again'. A tactful comment from Sister, 'Don't you think that's a little unwise in view of the exposed grey matter?' In the officers' mess several hours later I became acutely aware of the Sister's true position (in the theatre her rank had been covered by an operating gown) when as Orderly Officer for the day, Betty Crocker appeared in all the trappings – full dress uniform, medals and red sash – and my surprise was, to say the least, overwhelming. Her cautionary voice of practical experience was the beginning of forty years of 'Dr Bill' and 'Sister Betty' serving the people of Red Cliffs in the Sunraysia area of north-west Victoria.

At the time it seemed to me that we both could achieve personal and professional satisfaction in a rural area boasting the largest soldier settlement in the British Commonwealth. During service in the Second World War I had come into contact with a wide range of people whom I would not normally have met in my cloistered life in urban Brighton in Victoria, nor had I forgotten the enriching atmosphere of the 'Mildura experience' where I did first year medicine in 1947. Betty was fully aware of the lifestyle of a rural area and was happy with the prospect. She had lived in an area similar to Red Cliffs until the advent of city schooling at the age of twelve. She also realised that her nursing training in general, midwifery, infant welfare and infectious diseases, plus Army service as a nursing sister (including service with the United Nations Forces in Korea), would serve us both well – and, to my advantage, she could interpret the language peculiar to the dried fruit, wheat and wool industries, for her city-bred husband. Initially, I served as an associate to an aging, experienced general practitioner and I was very fortunate to have such a caring and experienced mentor – it was a true apprenticeship, something that could well be introduced again into medicine in Australia. After a short period I began solo practice with Betty as my staff, performing all the necessary duties of managing a busy and growing rural general practice.

One may well wonder about the practice of medicine in this day and age of multiple choices – at the last count there were at least thirty items on the Pharmaceutical Benefits Scheme for the management of hypertensive therapy! In 1955, the stock medications were limited to digitalis preparations and a mercurial diuretic which in the present era would probably not be available because of toxicity. But there was another therapeutic agent which I soon met – slimy, slippery and in a bottle in the sterilising room at the surgery – my medical introduction to the humble leech! Some were up to five or six inches long before being put to work. I had encountered them under different circumstances during Army service in Papua New Guinea and Borneo – never expecting to use these scavengers in my practice. They were used for mini-venesection occasionally: sterilise the skin using methylated spirits, allow to dry, attach the leech on dorsum of the hand or the cubital fossa area on a cuffed arm and some 20-30 minutes later return the leech, bloated with 300-500 mls of venous blood to the shelf bottle. (The Red Cross Blood Bank never collected this blood – it was food for the bloated creatures.)

X-rays taken with a small, simple portable machine, were very effective for limb investigations. Films were taken, developed and interpreted by the doctor, and diagnosis of possible fracture could be made in a very short time. If necessary, a plaster was applied, checked the next day, and then removed at the appropriate time. Today, a possible fracture patient has to have a referral to a radiological practice, frequently wait for an appointment and for a radiological report, then – even for the simplest fracture – make an appointment with an orthopaedic surgeon, and, after all that, perhaps return to the GP for follow-up management. Medical litigation and government regulations concerning X-ray machines have made the simplest procedures incredibly expensive and disruptive for all.

We did our own challenging and interesting blood films using a blood counting chamber, doing grouping and Rh testing, and urine microscopy (I recall diagnosing a malarial patient who had recently returned from New Guinea). Now these items of equipment are museum pieces and no general practitioner today would attempt such tests.

General anaesthesia was a real challenge – it was about twelve years

before we were joined by qualified anaesthetists in my practice area – thiopentone induction, barely taught adequately for isolated rural practice, associated with ethyl chloride and ether or nitrous oxide. This was just prior to the general use of relaxant anaesthesia. Tubocurarine was available and we used it with self-taught intubation, and for general anaesthetics in the dental surgery, using either ethyl chloride, ether or chloroform, without oxygen or suction – we must have been mad!

The suture for deep wounds was catgut stored in glass ampoules. The ampoules were broken with a metallic 'ampoule breaker' and the suture threaded on to the appropriate re-used needle taken from a 'sterilisation' bath of methylated spirits. Skin sutures were 'horse hair' kept in a flat dish, lying on cotton lint covered with methylated spirits and a lid on the dish. Syringes (non-disposable) were soaked in methylated spirits and kept in small stainless steel cases lined with cotton lint; rinsed with boiled water from the household kettle before use, the needles were re-used until they were blunt or barbed or the patient complained. One wonders now about hepatitis, HIV, and all the more modern problems. Where were they then?

In those years, home visits were very common – most rural patients did not have cars and sometimes I drove up to fifty miles in a day. Frequently, the sick and injured were brought to the surgery on a tractor, the same machines that were sometimes the cause of horrendous injuries.

I recall another memorable learning experience. One of the most frustrating and often disappointing conditions to treat is the common wart. Still common, frequently in children, it is due to a viral infection – often self-limiting if given time and probably has more 'myth' treatments than any other condition. (Whatever treatment is used, the patient should be forewarned of likely recurrence.) I had watched the technique several times: preparation by skin sterilisation with the all-purpose methylated spirits, followed by local anaesthesia, then electrocautery with the diathermy machine. I finally had a patient present his large hairy arm with a viral wart which he requested be removed. So I went ahead. As I commenced the diathermy the whole arm from elbow to wrist erupted into a blue flame like the brandy sauce on a Christmas pudding! My horror was matched by the patient's. Fortunately, it was all over in a few seconds without permanent harm apart from hair removal.

My elderly mentor commented later, 'Haven't you noticed that before I use the diathermy I go away to see a couple of other patients whilst the methylated spirits evaporates? Do that and you won't have a bloody inferno!'

WHAT MAKES makes rural practice different from any other sphere of medicine? The patients. The outstanding feature of the majority is their stoicism – serious accidents and illnesses are mostly borne with a degree of very simple dignity. By today's standards, when academic achievements are paramount, they may seem like simpletons, but in truth, because of their close association with the land, they are people of character and strength with the ability to respect the truth and decry anything less; from their doctor and nurse they expect the absolute truth, presented in a clear, non-scientific manner. They are very quick to discern any departure from the bare facts, thus challenging both the doctor and nurse to keep abreast of modern medicine, even though some rural practices ares still medically educationally isolated. Expressions of thanks come in many forms – sudden appearances on the home verandah of produce of various sorts, a cheerful wave with an affectionate smile and 'Hello Dr Bill' or 'Sister Betty' (titles conferred in the last thirty years); and invitations to attend 'the baby's wedding' or 'our 50th wedding anniversary'.

Ever since doctors went out to rural areas, the role of the spouse has been most critical – in making the decision to 'go bush', on the length of stay, how long they can 'stand the life', especially during the years when almost all rural general practitioners were male. Even more so today, the needs of a spouse will be the main determinant as to whether a young medical graduate takes up the rural challenge now offered in many areas of beautiful Australia.

Generally, the image of the general practitioner is changing rapidly. In a rural area how the married male doctor is seen is extremely dependent on how his wife is seen. Because country medicine is really family medicine, the role of the spouse is multi-faceted – on-call demands, sole parenting, chronic tiredness, random interruptions to any real family life, and often sacrificing a personal career – and after all that, managing the household on a very average income for the long hours worked. No other professional group in Australia faces such long hours without relief. The shortage and cost of suitable locums is an ongoing problem: no medico wanders about today with obstetric, anaesthetic and emergency medicine experience, all the things a rural GP coped with in the past and still does in certain isolated circumstances. Lack of employment oppportunities often means that rural doctors' families are single income in practical terms, and it is a struggle to send children to boarding school for the sort of education perhaps not available in the immediate area. A female spouse is often lonely – her husband works long hours and their children are only at home for the school holidays. Life in a small country town can be complicated for her because it is assumed that she knows all about her husband's patients, and maintaining confidentiality can cause some disheartening misunderstandings to arise.

It would seem that many believe general practitioners are those of us who have failed to make it in another discipline of medicine. This attitude seems to apply especially to rural general practice. Let it be said, loud and clear, that many of us chose to be family medical specialists. All the training through FMP or RACGP cannot fully prepare a doctor for general practice. General practice is a 'hands on' experience, it is an art, not a science. Art is defined in one dictionary as 'the exercise of human skill'. It is not related to degrees after one's name or scrolls in the waiting or consulting room. And in a rural community, we have to live amongst our patients, their families and friends, we see our failures forever, we cannot walk away from them like specialists in a big public hospital.

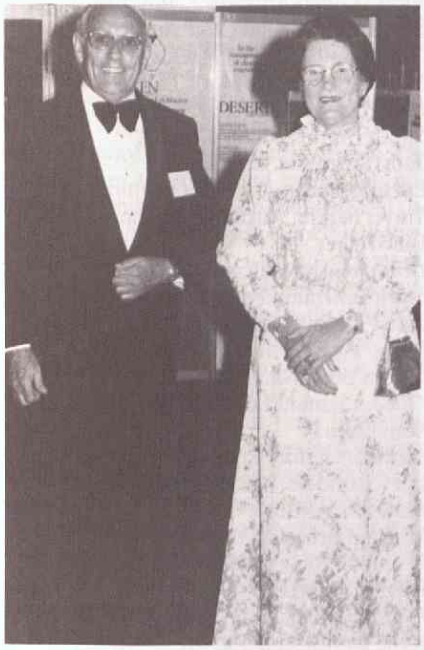
Many patients, of course, have more than just medical worries, and given the opportunity they will frequently present them – financial, family, social and community ones – and if you have earned it, they will respect your opinion. The art of medicine is to recall a patient's 'other' problems as you participate in their continuing family care. Don't discard their non-medical concerns – they are frequently part of the reason for a consultation. More often than not patients look for our understanding or seek support from fringe medicine areas (paying cash without Medicare rebate) in the quest to find someone who will listen to them.

AND WHAT of the general practitioners of the future? I could start by discussing the selection of medical students, a subject much written about in recent years. Suffice it to say, it is my opinion that there must be additional factors other than academic year twelve results to be considered in the selection process – motivation, for example, for there will always be those who choose medicine for the wrong reasons. One thing is certain, general practice will never be what it was forty years ago. Technology has altered all that. Yes, it is still challenging, but very differently so and it is more of a science than ever. I wonder if understanding and compassion can be replaced by machines? The days of ante-natal care, delivery, childhood illnesses, and young adult problems have changed: few GPs do any obstetrics now, immunisation has caused replacement of childhood illnesses, single parents are the norm rather than the exception, and we have young adult unemployment problems; adult medicine has new facets – marriage breakups, alcoholism, new infectious diseases, unemployed breadwinners. Geriatric medicine is a huge problem as people 'live' longer, with elderly women and men, often deserted by their modern families, living alone and developing particular patterns of concern

– social, mental and physical. Perhaps we can learn something about this from our 'ethnic' families? Non-medical problems have not disappeared – it is more likely that they have increased in complexity and frequency. Technology has brought changes and costs, and it is debatable whether young general practitioners today understand patients as well as the general practitioners of the past – they may understand a patient's chemistry much better, but this is not the same as 'understanding' in the fullest sense. Patients still expect their doctors to listen to them and to help them.

Preventive medicine has not really solved the growing variety of problems, despite huge amounts of Government funding. If GPs were able to direct even a small amount of this resource towards the education of their patients about healthier lifestyles, on check-ups for cancer, heart disease, blood pressure and diabetes, as well as being a rewarding experience for both doctor and patient, this investment this would result in savings in health, hospital and pharmaceutical costs. However, general practitioners must also acknowledge their limitations and refer appropriately – 'never jump in the deep end of the pool unless you can swim'.

I REGARD being a country doctor as a fortunate choice of profession. Every day still brings new challenges, new knowledge, new relationships and friends across the entire spectrum of humanity – it's a good life. Forty years on, Betty and I have no regrets. Universities and teaching hospitals are beginning to provide realistic and practical training to give doctors the confidence to 'go bush'. The general practitioner today is only as far away as the fax or phone from a consultant. No longer is any doctor in Australia really isolated and 'all alone'. The same challenge is there – to believe in what you do, and do what you believe in.



'Doctor Bill' and 'Sister Betty' at The University of Melbourne's 140th Birthday Dinner, May 1993.

University of Melbourne Medical Society and University Alumni Association Membership

Ordinary Members

Reminder to Renew!

Membership year 1 April 1994–31 March 1995

If you are a member of UMMS your renewal form will be enclosed with this issue of *Chiron*. If you are not a current member of UMMS, you can obtain an application for membership from the UMMS office at the address below. Membership will ensure that you continue to receive *Chiron* and news of reunions, Medical School information and notices of UMMS and University events. Members' subscriptions also support undergraduate students through sponsorship of the annual UMMS BMedSc Prize and three UMMS Elective Essay Prizes.

Honorary Membership

Those who have been Melbourne MBBS graduates for fifty or more years are eligible to become Honorary Members of UMMS and may request such membership by contacting the UMMS Secretariat.

Membership Fees

Ordinary Members
Annual subscription – $40

Recent Graduates
1990 graduates – $30
1991 graduates – $20
1992 & 1993 graduates – $10

Honorary Membership
No cost

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Who is eligible to join UMMS?

Besides MBBS (Melb) graduates, those with a substantial association with the School or the University's affiliated institutions, for example past and present academic staff, may become members of UMMS. In addition, legally qualified medical practitioners registered or eligible to be registered in the State of Victoria, who do not qualify for automatic membership of UMMS, may be considered for membership on nomination by two members of the Society. Members are encouraged to propose membership of eligible people who are interested in being associated with the Society. All that is required is a joint letter together with the consenting signature of the nominated person.

UMMS Office
Ms Liz Brentnall
School of Medicine
The University of Melbourne
Parkville 3052

Telephone (+61 3) 344 5888
Facsimile (+61 3) 347 7084

from Liz Brentnall

Not Just Doctors!

Apollo was the father of Aesculapius, the god of healing, and had as his companions Terpsichore, the muse of choral dance and song; Polyhymnia, the muse of hymns; and Euterpe, the muse of lyric poetry. Legend has it that Aesculapius was reared by Chiron, famed for both his surgical skill and for his musical accomplishments.[1]

SHIRLEY ROBERTS (MBBS 1950), biographer, was Director of Radiology at Prince Henry's Hospital from 1963 until her retirement in 1987. She finds her new career absorbing, each project involving extensive research and travel and the challenge of bringing the subject to life. In 1985 MUP published her first book, a biography of Charles Hotham, the unfairly maligned Governor of Victoria at the time of the Eureka uprising. Her second book, *Sir James Paget – The Rise of Clinical Surgery,* was published by the Royal Society of Medicine in 1989. In 1993 Routledge of London published her third book, a life of Sophia Jex-Blake, the leader of the campaign that won for British women the right to enter the medical profession. Shirley Roberts comments that Sophia's achievements are often overlooked by medical and feminist historians, and she hopes this book will help to establish Dr Jex-Blake's rightful place in history.

In August 1993 the Australian Doctors Orchestra made its public debut with a concert in The University of Melbourne's Melba Hall. The orchestra is made up of eighty doctors from a wide range of disciplines across Australia, brought together by Tasmanian violinist and plastic surgeon Dr Miklos Pohl (pictured above). Although medical orchestras already exist in Hong Kong, Singapore, Los Angeles, Italy, Germany and Austria, this is the first such orchestra in Australia.

Among a number of Melbourne medical graduates who play in the orchestra, solo pianist for the performance was Melbourne general practitioner, Dr William Kimber. The orchestra was conducted by internationally renowned violist, violinist and conductor, Christopher Martin, senior lecturer in strings and conducting in The University of Melbourne Faculty of Music.

With the musicians coming from all over Australia there was only time for a little socialising then three rehearsals before the performance. Members had been practising, however, for three months prior to the concert, with the aid of sheet music and tapes of the compositions they would be performing. The program included the Overture to Mozart's opera *Il Seraglio,* Beethoven's Piano Concerto No 3 in C Minor and Hayden's Symphony No 99.

The ADO played to an enthusiastic packed house and the event declared 'good medicine' for all concerned. All members travelled to Melbourne at their own cost and the proceeds of the concert were donated to the National Multiple Sclerosis Society of Australia, in memory of the international cellist and victim of MS, Jacqueline du Pre. The Australian Doctors Orchestra hopes to perform in capital cities across Australia to raise funds for other medical charities.

1 Desmond O'Shaughnessy (MBBS 1952), *Music and Medicine,* privately printed, 1984, p.1.

AUSTRALIAN DOCTORS ORCHESTRA 1993
Conductor: Christopher Martin

Concert Master: Rowan Thomas.
Violin: Rowan Thomas, Solomon Bard, Andrew Bisits, Emma Duncan, Ben Freedman, Phillip Hazell, Igor Jakubowicz, Anna Knoop, Andrea Kranz, Janine Manwaring, Julie Panetta, Miklos Pohl, Anna Ralph, Janine Richardson, Daniel Stefanski*, Charles Su, Kai-Kai Toh.
2nd Violin: Adam Bystrzycki**, David Backstrom, Tim Bennett, Sue Chang, Fiona Chos, Bronwyn Francis, Tania Gilmour, Anna Hennessy, David Maynard, Jani Nanavati, Louise Prentice, Kerwin Shannon, Joyce Webster, Maurie Wenig.
Viola: Phillip Antippa**, Tudor Bostock, Rex Bretnall, Alan Cass, Anne Cornford, John Gault, Carolyn Hackworthy, Elizabeth Sinclair, Mark Thieben.
Cello: Brendon Conroy**, Lauren Arnold, Sarah Hilmer, Victor Karaffa, Judy Kermode, Julie Lokan, Lachlan McGregor, Beth Pennington, Travis Perera, Anthony Prochazka, Bill Walker.
Double Bass: Malcolm Grenness**, Mark Bowman, Peter Isbister, Anne McQueen-Thomson, Felicity Nolle.
Flute/Piccolo: M James Fortune**, Nicola Beamish, Cathy Fraser.
Oboe: Clement Loy**, Roger Briggs, Stan Chen.
Clarinet: Jeffrey Rosenfeld**, Ian Chambers, Linda Mileshkin.
Bassoon: Andrew Court**, Michael Grounds, Patricia Taylor.
Trumpet: Rick McQueen-Thomson**, David Hunter-Smith.
Percussion: Malcolm Johnston-Leek**, Kylie Johnston-Leek.
(*Deputy Leader, **Section Leader)

THE CHOCOLATE PSYCHIATRIST

Victor Syrmis, by his friend Peter Morgan

Truly, it is insane to think you can create a business and a new professional identity by casting your wife's face in chocolate.

Blessed with a restless intellect and a delightful imagination, Victor Syrmis was led from psychiatry to the chocolate business, a seemingly unusual shift, but one that on further examination, makes sense. What sort of person would make this kind of career change?

Syrmis is first and foremost an Australian. A son of emigrant parents, he graduated MBBS twenty-six years ago from The University of Melbourne, and although living overseas for many years, has remained a loyal and active member of UMMS. He left Australia to do an internship in Canada, where he stayed, working for some years in general practice before embarking on the search that fostered an interest in psychiatry. He moved to the USA to become a psychiatric resident at New York Hospital/Cornell, later transferring to the child psychiatry program at Columbia University, also in New York City.

For five years Victor worked in New York City as a child and adolescent psychiatrist, in private practice and on the staff of a number of hospitals. A stroll down Madison Avenue changed the direction of his life forever – inspiration struck while hunting for a birthday present for his wife, the actress, Pamela Shaw: 'I walked into a store that did photo-moulding of people's heads in marble, wood, bronze – or gold if you were extremely wealthy – by means of a three-dimensional camera. Casually, as my mind raced, I asked whether they might be able to mould my wife's face in chocolate. They couldn't and had a huge laugh at my expense! But I became convinced I could, and started upon an obsessive quest to prove them wrong.'

After about a year of attending classes in chocolate making, art and photography, taking etching lessons, experimenting with foil, plastic and other metals, and, of course, studying people's faces in the New York subway, the process crystallised and Syrmis patented the idea of moulding a chocolate face from a photograph. This is how he did it: he asked friends for photographs of themselves, but not telling them his purpose. The photos were enlarged and made into line drawings which were then reduced and the names inscribed at the bottom. Negatives were made, photo-etched for polymer moulding, and finally embossed into gold foil. A local supplier of high-grade chocolate joined in the experiment, pouring chocolate on the back of the foil and making the foil, in essence, the mould. Presto!

Victor gave his friends their likenesses and when they saw themselves they laughed and they loved the idea. If it was such a hit for those in his personal circle, what about all those who wanted to eat the faces of their loved ones, their own faces and perhaps some they weren't so fond of? His spirits rose further. He set out to form a company to do just that, and named it 'Chocolate Photos' – he would manufacture whimsy, happiness and affirmation in milk or semi-sweet chocolate.

In the beginning, during many experimental nights, the smell of chocolate permeated the Syrmis's New York City apartment, and about that time he opened the first 'Chocolate Photos' office, adjacent to his psychiatric practice. Separating the two often became a hair-raising 'Marx brothers' experience, especially with the younger patients: some who came early caught him leaving one door and entering another, sometimes the doorman downstairs would send patients to the wrong room when they asked for Dr Victor Syrmis. Strange sounds were often heard – photographic equipment would whirr, foil stamping thudded, and air compressors would spontaneously start operating – during a patient's session. The straw that broke the camel's back was the week during which a concerned adolescent presented with a series of dreams about chocolate, and at that moment Victor Syrmis realised that for him clinical psychiatry was going to cease forever.

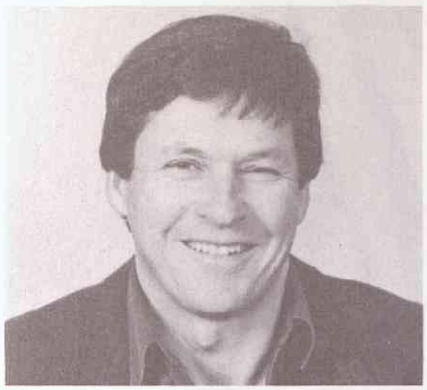
The business flourished rapidly and stopped being a 'mom and pop' operation. Moving to a new location 'Chocolate Photos' evolved into a modern plant with automatic machinery and regular full-time staff. Victor's status grew from Dr Chocolate to Willy Wonka.

From making likenesses of famous people such as Prince Charles and Lady Di, Jacki O, Mick Jagger, Frank Sinatra, and President and Mrs Reagan, to name just a few, the firm expanded to manufacturing company 'faces', logos of hundreds of corporations, including IBM, American Express, and Hyatt Hotel. CDs, audio and video cassettes, computer chips, beepers and even small cardiac pacemakers were moulded into chocolate. Over ten thousand different chocolate moulds were manufactured, all usually one-of-a-kind. Unsolicited publicity fell into Victor's lap: a Manhattan psychiatrist creating a company so you could 'eat your face' became a human interest story and propelled him onto national TV and radio shows, and into many publications – even the front cover of *Entrepreneur* magazine. Incidentally, chocolate 'wedding favours', one of the lines, have been exported to all the continents even gracing some wedding tables in Australia.

'Chocolate Photos' was successfully sold in Autumn 1993 (Victor had spent almost as many years in chocolate as in medicine) to a larger chocolate company and to his great pleasure his brainchild will continue under the same name. He comments: 'This experience has taught me that one can find a forum for any insane idea. I can completely change whatever it is I want to be. I've been on both sides of the couch, and now have a deep appreciation of following through creative ideas in the so-called real world.'

Late last year Victor Syrmis was dividing his time between residences in New York and Los Angeles. Among other things, he is involved with a film distribution group. And after that? He does not know, 'only to remain open to all ideas'.

CLIFF JUDGE (MBBS 1955), psychiatrist, researcher, author, publisher, painter, philosophy student, has spent a lifetime attempting to change popular attitudes towards the mentally retarded. Before taking early retirement he worked for the Victorian Health Department at Kew Cottages and at Janefield, where he lived with his family. His first book, *Retarded Australians* (MUP 1975), provided new insights into ethical, personal and social problems and was hailed both here and overseas – research into the 'fragile X chromosome' has been a particular interest. He was editor of the *Australian Journal of Mental Retardation* (now *The Australian and New Zealand Journal of Developmental Disabilities*). In 1988 he self-published *Civilization and Mental Retardation*, and as well has published articles in various journals on alcoholism, the history of children, the art of retarded people and genetics. A regular and successful exhibiting artist, Cliff Judge's work is admired for its sensitivity and for the delicacy of his oil paintings, particularly the landscapes and flower portraits. He was a founder member of Arts Project (Aust.).



PAUL KELLY (MBBS 1972), Medical Displan (State Medical Disaster Plan) co-ordinator, has an area of responsibility stretching from Corrong to Yarrawonga along the Murray River and down to Alexandria in the south. Medical Displan was set up after the Ash Wednesday bushfires in 1983 under the auspices of the Department of Health and Community Services (broadly, a disaster is defined as any event which overwhelms the local resources). The scheme went into action in 1993, for example, when two major disasters occurred – record floods in Benalla and a tragic bus crash in Wangaratta – and demonstrated that with years of preparation the system works. Paul Kelly has worked in a group practice in Benalla for seventeen years and is one of six general practitioners in regional towns who work closely with ambulance and other emergency services when Medical Displan responds to a local crisis. He comments that this is a stimulating and worthwhile community involvement.

LOUIS GLOWINSKI (MBBS 1970), author of the best-seller *The Complete Book of Fruit Growing in Australia* (Lothian Books 1991), works with a family medical practice in the western suburbs. The rejuvenation of a neglected backyard orchard in his Caulfield home sparked his obsession with growing fruits, nuts and berries, especially rare fruits. Written in a light, unpretentious style that belies a wealth of knowledge, his book offers sound, practical advice enhanced by snippets of folklore, history, quirky hints and culinary tips. He is a member of the Rare Fruit Council of Australia, the International Rare Fruit Council, the Exotic Fruit Growers, the West Australian Nut and Tree Crop Association, the California Rare Fruit Growers, the North American Fruit Explorers – and the AMA.

Dr Lloyd-Green at Bethlehem Hospital, with a patient who had requested her to play *Canoeing on the Lake* by Englemann – 'a lovely piece for relaxation'.

A JOURNEY FROM GYNAECOLOGY TO MUSIC THERAPY

Lorna Lloyd-Green, CBE, OBE
Music Therapist, Bethlehem Hospital

THE REQUEST to write an article on one's experience in the music therapy profession is a daunting privilege and responsibility. It is always difficult to express innermost feelings and there are so many intangibles. The responsibility is heightened by the knowledge that the path taken from medical practice to music therapy is unique in Australia.

Music has been part of my entire life with both active and passive participation in the home, at school and at university – I was better equipped to enter a music faculty than a medical school. My choice to undertake a medical course was always linked with a consciousness of a retirement involving music in some way. This culminated in the resumption of regular music lessons, including examinations, five years before actual retirement and ultimately the music therapy course which consisted of lectures at The University of Melbourne Faculty of Music and varied clinical placements. For the past five years my second career has involved work as a part-time music therapist in the palliative care unit at Bethlehem Hospital working with terminally ill patients who mainly suffer from cancer. The philosophy of the facility equates with that of music therapy as part of a multidisciplinary team and my personal values of life. Each patient is treated as a unique human being who has particular bio-psycho-social and spiritual needs which must be addressed in order to alleviate dis-ease. This contrasts markedly with work in the acute medical field where curing a 'disease' aims at rehabilitation.

The definition of music therapy most suited to one's experiences in the current facility is 'The planned use of music to address the particular needs of a person by capitalising on their potential to effect therapeutic results which enhance the quality of their remaining life'. In music therapy the marriage of music and medicine/healing is a complementary relationship with common attributes relating to rhythm and harmony. Any interventional modality involves three components – the music, the therapist and the patient. The music is the facilitator, the catalyst, with a wide scope and tremendous power to affect the total person. It can stimulate the mind as evidenced by the effects of recall and reminiscence on patients with cerebral malignancy. Relaxation of the body as well as the mind frequently results from slow, quiet melodies; the spirit, also, may be comforted in this way with sacred music. Music of the patient's choice is the most therapeutic and live music is more energising than taped music. It is usually played on a portable piano and allows the opportunity for expression of feelings without being intrusive. This is of great value in the enhancement of communication between spouses. Taped music can be used when such genre as opera is requested, or between sessions for relaxation or for sheer pleasure. The second component is the therapist who is the resource person, the bridge between music and patient, who is a good listener and who uses musical and counselling skills to interact with the patient. Also one who supports, encourages and enables each person to express their feelings in vocal or body language, and then interprets their responses.

The third component is the patient who is the self healer, who needs to be an active participant and who works at their own pace according to individual potential. Life 'reviews' using music of a particular period of life can stimulate reminiscence relating to the past associated with happier days. Many patients feel unworthy and these reviews can raise their self-esteem and by a process of personal integration give meaning to their lives. This can lead to an inner tranquility which results in a peaceful death.

Music therapists have a tremendous responsibility as agents of change – they are involved in an endeavour to attain true health for their patients as defined by Moltmann, 'having the strength to live, the strength to suffer and the strength to die'. It is a privilege to be a member of such a profession and to have enjoyed manifold learning, emotional and exhilarating experiences by sharing and caring in the lives of others. □

CLINICAL SKILLS.
THE MEDICAL INTERVIEW, PHYSICAL EXAMINATION AND ASSESSMENT OF THE PATIENT'S PROBLEMS

by Richard Larkins & Richard Smallwood
Melbourne University Press 1993
Sbk pp 272, illustrated
rrp A$39.95

This gem of a book is an essential text for all clinical students. It is written with great clarity by two outstanding clinicians, and provides a refreshing alternative to what has been available to students in this area. Most importantly, the book emphasises the variety of clinical patterns presented to us by patients, and underscores the need for flexibility in our approach.

The first eleven chapters are devoted to the process of eliciting the history using a 'problem-solving' method. This approach to information gathering has been used in our medical school for a number of years, and it is pleasing that it has finally been documented in a textbook for undergraduate students. This aspect alone makes the book quite novel, for although there are many introductory texts for clinical medicine available, these, in general, adopt an inflexible and 'stereotyped approach' to the clinical process. Using the problem-solving approach, Larkins and Smallwood present the various components of the history in a refreshingly clear and readable format. A pleasing feature of the book is the emphasis on the importance of good communication as an essential component of good clinical practice. One whole chapter is devoted to understanding and dealing with the 'difficult' patient, and here the clinical expertise of the authors is evident.

The physical examination is dealt with systematically, with one chapter being devoted to each major system. The pathogenesis of major findings is generally indicated rather than described in detail. This section is, however, well set out and easy for commencing clinical students to follow. It will also provide a valuable reference for senior and postgraduate students.

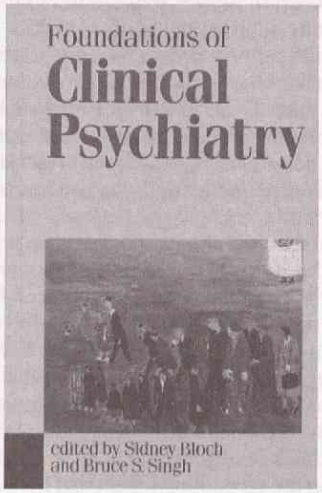
The use of simple line drawings rather than photographs to highlight points is a good choice in a book of this nature. The drawings are clear and not over burdened with detail, making it easy for the reader to appreciate 'the point to be emphasised'. The illustrations are well chosen to highlight aspects of the clinical examination which students often have difficulty in grasping, (for example, jugular venous pressure). There are also some excellent simple drawings to revise the important neuro-anatomical pathways.

Another unique feature of this book is the inclusion of some real-life case histories with brief commentaries that students will enjoy reading and which will help them to make sense of it all.

The final chapter describes the process of 'putting it all together' which is an important component of clinical medicine, often ignored in introductory texts. The discussion about presentation of the findings and the delineation of the important issues will appeal especially to senior students.

We have waited a long time for a good textbook on clinical method and here it is at last! *Clinical Skills* is a splendid text, which will undoubtedly prove to be an invaluable addition to the library of the student of clinical medicine.

Wilma Beswick



FOUNDATIONS OF CLINICAL PSYCHIATRY

Sidney Bloch & Bruce S Singh, Eds
Melbourne University Press 1994
Sbk pp 472, appendices, index
rrp $49.95

This book, which is the outcome of a collaborative effort between the Department of Psychiatry of The University of Melbourne and the Department of Psychological Medicine of Monash University, is the successor to *A Clinical Introduction to Psychiatry* by Professor Brian Davies who was the Foundation Professor of Psychiatry at The University of Melbourne (1964-90). Brian Davies, I am sure, will be very pleased, not only because of the excellence of the publication, but also because most of the authors, having been his students or members of his department, bear testimony to his great contribution to the University and to psychiatry in Australia. It includes chapters from a large number of Melbourne based psychiatrists, and attests to the high quality of the state of the art and science of psychiatry in Victoria.

Foundations of Clinical Psychiatry is primarily designed for medical students entering clinical clerkship in psychiatry and for students in other health sciences. While it does not avoid some of the major complexities of the field (such as dual classification systems) it does focus on simplifying the basic concepts and clarifying the main issues through a powerful and consistent biopsychosocial approach. The chapter by George Szmukler (The Biopsychosocial Approach), in which he brings together the subjectivity and science of the field through the concepts of understanding and explaining, will be particularly helpful. The development of the book has a subtle programmed learning approach which should easily take a student from one chapter to the next. The format of the chapters has been well coordinated, is simple in style, and provides the reader with a sense of familiarity which should make learning easier.

With so many excellent contributions it is difficult in a short review to highlight the different elements of the book. Special mention might be made of the chapter on The Psychiatric Interview and Evaluation of the Mental State (Nicholas Keks) and the following chapter, Making Sense of the Psychiatric Patient, on diagnois and formulation (Jennifer Dakis and Bruce Singh). Both will be useful to a medical student approaching any discipline in medicine and requiring to make appropriate diagnoses and formulations about their patients. The chapters on The Biological Therapies (David Copolov) and The Psychotherapies (Sidney Bloch and Edwin Harari) contain a great deal of information in a most readily assimilable manner clarifying the main conceptual frameworks without becoming lost in confusing detail.

One minor criticism is that the chapter on Anxiety Disorders (Graham Burrows and Ruth Vine) might have been improved by adding a psychodynamic perspective to the biological perspective described.

Overall this is an important book for undergraduate teaching. It meets its stated objective in an attractive way and will, as well, be helpful to those with an interest in the field but who perhaps have not kept up with some of the latest developments.

George Lipton

CHURCHILL'S DOCTOR
A BIOGRAPHY OF LORD MORAN

by Richard Lovell
MUP 1993
Hbk pp 457, illustrated
rrp A$59.95

Richard Lovell's book was launched on 15 March 1993 with an address by Dr Davis McCaughey, which we have great pleasure in reproducing in these columns. The printed words have only one defect – they lack the sound of the lilt and the lift of the voice that spoke them. Ed.

It is a great pleasure as well as a considerable honour to be asked to launch Professor Lovell's biography of Lord Moran. The pleasure is on two grounds, personal because like many here I have valued Dick Lovell's friendship over many years, public because it gives us all an opportunity to acknowledge how much this community and the University and profession to which he belongs owes to Professor Lovell. At the time of retirement from his Chair in the University appropriate

tribute was paid to his remarkable contribution as the foundation Professor of Medicine at The Royal Melbourne Hospital. In retirement, continuing interests which began within his professional career, Professor Lovell has made significant contributions in three directions with which I am acquainted – as Chairman of the NHMRC's Medical Research Ethics Committee, in his service of the Anti-Cancer Council, and now in the publication of this book.

I suppose that most of us approach a biography as though it is a window through which we may see something of the life of a significant person, as in the clerihew,

> The art of biography
> is quite different from geography.
> Geography is about maps;
> biography is about chaps.

Many of the really good biographies have been less like windows, however, than like mirrors or a series of mirrors in which we see reflected people, issues, worlds different from our own, but yet within which we see disclosed or suggested some of our own concerns, known or unknown, recognised or not yet recognised. So it is with this book which we launch today.

The constant theme, the figure whom we see in each of the mirrors is Charles McMoran Wilson, *Lord Moran, Churchill's Doctor,* as the title has it; and that of course is one important reflection in one mirror, but it is only one, and within that one is disclosed a number of important issues, ethical and others. If the book had only been about Moran and Churchill it would have been in danger of being just another contribution to what someone has called 'the sensation-mad antics of world journalism'.

No! There is light reflected from this story on a number of fascinating issues. For instance, how do you build up an important medical school, including the question of how medical students are to be selected? One of the very puzzling images reflected in a number of those mirrors is of young men, medical students to a man (it is a bit chauvinistic) playing Rugby football. Why was that particular game deemed to be fit sport for future doctors, at any rate in the society of the inter-war years?

St Mary's Hospital, London, is but one institution whose life is reflected in our mirrors: a changing life, changing partly 'with the times' as they say, but also under the influence of this remarkable man, Dr Charles Wilson. Interesting questions – important for Australia – are raised about how a relatively smaller institution (in this case St Mary's Hospital) makes its way in a world apparently dominated by larger bodies. On the way we receive illuminating insight into medical and academic politics, great principles and personal jealousies intertwined, sometimes one masquerading as the other.

If this had been the only story to be told, that of Charles Wilson and St Mary's Hospital, it would have been worthwhile. Another series of pictures is reflected in the mirror which show Wilson as President of the Royal College of Physicians. Again, institutional histories are frequently a bore, but nothing which Moran touched would be dull, and nothing that Dick Lovell writes about fails to capture our imagination. Questions of professional responsibility are raised by enquiring rather disturbingly what a college of learned physicians should be and should do. 'They have made it a club', Moran said when he took over, 'not a college'. Also questions about who speaks for the profession in matters where the health of the nation is at stake.

Moran's contribution to the fashioning of the National Health Service is enormously illuminating – another important institution whose origins are seen in a fresh light – suggestive for further thought. Once more the mirror suggests just something about ourselves. Again, this would have been worth writing about in itself.

There is, however, more: another institution, one of the most influential in mid-twentieth century Britain, Winston Churchill. It is perhaps the institutional side of Churchill which made treatment of him as a patient fall outside some of the normal canons of professional behaviour. It was Moran's fate, and he conceived it to be his duty, to stay close to that remarkable man who believed that his personal survival was inextricably tied up with the survival of the nation, or perhaps better put it that the survival and well-being of the nation depended upon his survival. It was a belief that Moran shared. He believed it to such an extent that he saw it as his duty, his lonely duty, to lie to his patient as well as to the nation about the true state of Churchill's health. There is new light cast here on the oft quoted dictum that truth is the first casualty in war.

Not only on that, however (for this occurred not only in wartime), but also on the more far-reaching issue: how much is a doctor required to tell his or her patient if (a) the patient's possibility of recovery is likely to be diminished by anxiety through that greater knowledge, and (b) if the patient's contribution to society is likely to be diminished by his own or the public's knowledge of the patient's true state of health? One way or another the doctor has to play God. There is (or was) no escape from the awful decision, the lonely decision. This mirror is one from which most of us would rather turn away.

One last thought. Charles Wilson as a young man wanted to be a writer. His father told him that the family could not support him in such an occupation – he'd better become a doctor. It is quite clear that he had the gifts of a writer – a polemical writer in some of his letters and memoranda, a reflective writer in *The Anatomy of Courage.* He finished his life with a controversial writing, his book on Churchill. Professor Lovell tells that story with sympathy and fair-mindedness. It is a little difficult to know on what side he comes down in that controversy. But perhaps that is a merit of the whole book. It leaves you asking questions.

It also leaves you grateful for a book so well written. Like the subject of his biography, Dick Lovell might have been a writer. The clarity of his English is a joy to read. Those of us who have served under his chairmanship when a committee had to provide a report have been grateful for that clarity of expression which betokens a clarity of thought. I hope many will read this remarkable story, and re-read it for the issues which it raises.

I have much pleasure in launching it on what will unquestionably be a successful voyage.

SIR JOHN MEDLEY: A MEMOIR
by Geoffrey Serle
Illustrated
Together With a Selection of His Verse
Edited by Ray Marginson
Wood engravings by Helen Ogilvie
Melbourne University Press, 1993
Hbk pp 151, rrp $29.95

GRACE BEFORE BOARD

Almighty Father, by whose hands
The thyroid and adrenal glands
Do or do not as each one ought,
Conduce to clarity of thought.

Bestow Thy blessing, gracious Lord,
Upon this meeting of the Board
That each gland working as it should
May keep the members kind and good.

And very specially today
We ask that A.B.[1] stays away.
In this, O Lord, make no mistake
For my, the wretched Chairman's, sake.
AMEN

[1][A.B.] Thomas H Laby (1880-1946),
Professor of Natural Philosophy.

Here is a slim, elegant book to delight those with a penchant for nostalgia. It invokes a by-gone Melbourne University when during a period of empty coffers and restraints due to the Second World War, the incumbent Vice-Chancellor viewed the burdens and the pleasures of his role with an elegant wit, which he transformed into light verse and accomplished doggerel. Sir John Medley was Vice-Chancellor of The University of Melbourne from 1938 to 1951, presiding over interminable academic meetings and the politics of a basic shift in authority from Council to professoriate. The memoir, the work of the distinguished historian Geoffrey Serle, recalls the man and his work (p59):

An honorary doctorate of laws was conferred on him in April 1951. Part of the citation reads: 'Through thirteen years he has guided this institution with statesmanship, with dexterity, with style and distinction, with high ideals (but without illusions), with a rare friendliness and accessibility, and with a quite exceptional diplomatic skill.'

In the introduction to the 'Selection' Ray Marginson, former Vice-Principal of The University of Melbourne, comments: 'During Medley's period as Vice-Chancellor versifying was clearly an avenue for release. It probably helped him survive without ulcers the frustrations of interminable academic meetings'. It includes much from *Stolne & Surreptitious Verses*, printed by Melbourne University Press and issued by subscription in a limited edition of two hundred copies for private circulation in 1952. The verses are illustrated with beautiful wood engravings by the late Helen Ogilvie, which both match and complement the wit of the author (sadly, their reproduction in the *Memoir* lacks the marvellous intensity and crispness of the original blocks).

The Medical School did not escape Sir John's pen and there are verses devoted to Sir Macfarlane Burnet – 'On Hearing That Sir Macfarlane Burnet Will Open a Mannequin Parade', and 'To Professor Burnet, On reading the Report of the Walter and Eliza Hall' – also asides about 'old Jim Barrett', Wilfred Agar, William Young, Harold Woodruff, Sydney Rubbo, Leslie Latham, Henry Maudsley, Ivan Maxwell and Sir Albert Coates, as well as references to other well-known university and public figures who sat on Professorial Boards and Councils.

TO THE CHANCELLOR
June 30 1950

Ten years of Vice, by you inspired
With you to lead the way:
At last, half-dreaded, half-desired,
Has dawned the final day.

I go to seek some other Love:
You to sip other flowers,
But may your future Vices be
As virtuous as ours.

This book is a delight to read, a pleasure to hold and turn the pages. I hope it finds its way into the hands and minds of younger generations of students and teachers.

Maggie Mackie

Sir John Medley

TO PROFESSOR BURNET

On reading the report of the Walter and Eliza Hall Institute

Of old the virus and his wives
Lived drab and unexciting lives
As no-one's special pet:
Unseen, unsung, unloved by all
Save Walter and Eliza Hall
And Dr F. Burnet.

The virus, whether plain or purled,
Inhabited an underworld
With little go or come.
His kind adorned from year to year
A socially filtrated sphere
In equilibrium.

But nowadays how changed the scene!
The virus figures on the screen
And even on the stage,
Protected from the rude embrace
Of everyone about the place
By nought but verbiage.

Behind a barricade of guff
The virus perpetrates his stuff
And leaves the world to guess,
Though periodically prone
To form an ovomucid clone
And leap into the press.

Alas! Publicity takes toll:
It anti-complements the soul
And buffers up its lining.
And in the virus we can see
The gradient of decency
Is rapidly declining.

E.G. The virus calls his bride
'My pretty Polly Saccharide'
Whilst hoping that he suits her.
But after one ecstatic night
He gives his girl the Spinnbarkeit
And savagely elutes her.

How such procedure would appal
Old Walter and Eliza Hall
Could they its baseness savour.
But ah! their hearts are long since dust:
Betwixt the unjust and the just
The virus shows no favour.

GALLIPOLI: THE MEDICAL WAR

by Michael Tyquin
The Modern History Series
New South Wales University Press, 1993
Hbk pp 277, illustrated, rrp $39.95

This book is subtitled 'The Australian Army Medical Services in the Dardanelles Campaign of 1915', and is based on Tyquin's successful PhD thesis. The history of this campaign is a tragic story of huge casualties, disease and medical maladministration due to lack of preparation, tortuous lines of communication and a complete blindness to the likely number of casualties in relationship to the siting of medical officers. The information on the dust jacket tells the reader that this is 'an area of Australian military and social history long neglected'.

It is an intrepid author who, when not medically qualified, publishes a work such as this. During his postgraduate studies, Tyquin researched official histories, diaries, private papers and letters, which are cited in copious notes; and oral history is added through interviews – including some with Dr Cyril Checchi, our oldest graduate and a rare survivor from that campaign. He did consult a medically qualified historian, but it is unfortunate that he did not seek more advice before handing his book to the publisher – from whom, we should add, he deserved better typographical and design treatment.

The confusion on the beaches and the problems of everyday existence are graphically recorded. The book corrects the false, but often held belief, that the Australians were all perfect physical specimens; Tyquin also rightly points out that the Australians were not stoics, just ordinary men and women caught in a tragic, brutal conflict. However, there are a number of historical and medical errors: in one example, concerning the recall of medical students, Tyquin states (p80):

> Matters were made worse for the NZAMC when all medical students serving in its field ambulances were recalled to their universities at the end of July. Australia did not follow suit until after the December evacuation, when all fourth year medical students were returned to Australia to complete their course.

This is not the case. In The University of Melbourne's *Record of Service 1914-1918* five medical students are listed as returning before December, one as early as in July of that year. Another historical error occurs in Appendix V (p218), 'Vessels Used for the Reception, Treatment and Movement of Casualties During the Gallipoli Campaign', which lists the *Grantala* (Australian Navy) as a participating vessel: the *Grantala* was decommissioned in March 1915 and took no part in the campaign (though listed in the Appendix, its name does not appear in the Index).

Incorrect medical information can be found in a number of chapters, for example in Chapter Three, 'Treatment of Sick and Wounded – Fractures', Tyquin implies that most fractures of the femur were treated in Thomas splints and cites a nurse's experience aboard a hospital ship (p70). In fact, Thomas

splints were restricted to base hospitals and the situation on the field was very different. In his *Official History of the Australian Medical Services*, AG Butler comments (p468):

> No problem in first aid was more difficult than that presented by fractures of the femur and no surgical treatment was more futile than that in use. Comparatively few of these cases reached the base hospital alive on the deadly 'long Liston' splint then in vogue.

Personal papers and diaries are historically important, but both may lack perspective or include exaggerations requiring informed interpretation. As an explanation of why medical supplies were low, in this instance castor oil, Tyquin quotes, without comment:

> An idea of how such quantities were so rapidly used may be gauged by this diary entry by Private A. Taylor: '. . . most of the time I was bad with dysentery but the Doctor fixed me up he gave me half a pint of Castor Oil in one dose . . .' (p143).

Diarrhoea and dysentery were common, potentially dangerous and debilitating problems, at that time treated with the purgatives Epsom salts and castor oil, but the dose of castor oil mentioned is almost certainly exaggerated, a common turn of phrase – and may have seemed like half a pint to Private Taylor – but it is ten times the recommended measure and the mind boggles at the possible outcome.

A comment about the Glossary of Medical Terms Used and the Index is also necessary, though the reviewers do not wish to appear unduly negative. Nearly all the medical terms listed are given in the *Concise Oxford Dictionary*, which is free from such howlers as 'Perineum – groin area', 'Rigours – A shivering fit'; and 'Hyoscine' is incorrectly spelt as 'Hyosine'. An index may be created by someone other than the author, but it is the author's responsibility to check that the entries are correct and consistent with the text, for example, the formidable 'Jimmy' Barrett, later Chancellor of The University of Melbourne, and at Gallipoli Lieutenant Colonel JW Barrett, is given his correct initials in the Notes and Bibliography, but in Appendix II(b), 'Medical and Military "Who's Who"' (p203) and in the Index (p266) he is listed as 'Barrett, Lt Col G.I.'

Dr Tyquin's research adds to the body of evidence revealing appalling mismanagement and the loss of thousands of Australian lives in the Dardanelles campaign of 1915. However, his book should be read with caution, for it is flawed both medically and historically.

Harold Attwood & John Trinca

SPECULUM

1992 Summer Edition
109th Year, Edition 187
Eds Malachy Tarpey & David Topchian

As can be seen from the title, this is one of the oldest Australian journals in continuous if erratic production. Publication of this edition was delayed for good reasons. The results are well worth the wait.

The 1992 edition is expensively produced in the modern manner, but includes a reprint of portion of the first editorial of July 1884:

> After much discussion and deliberation the name "Speculum" in it's widest sense has been chosen, as it is intended that this journal shall reflect the ideas of the Melbourne Medical student among his fellows, and some light be thrown on the mind of the outside public, which we fear has remained hitherto in total darkness as to his social [sic] and sort of education he has the opportunity of obtaining.

The number of students is now much greater and the ethnic diversity broader. Chien Boon Lye in 'Why don't you interact' writes of concern about '. . . the lack of interaction between local and overseas students'. The subject is important and the article well written, but to me it fell a bit flat. If it had been written with more anger or more humour it might have more influence. To interact there has to be a mutual exchange. Having had a Presbyterian upbringing I well remember St Matthew's 'seek and ye shall find'. Perhaps Chien Boon Lye should make the first move or MMSS should hear the plea and help.

Two new items are featured on the cover – a 'Sealed Section' and a 'Free pull-out poster'. The 'Sealed Section' has a warning that one should not 'turn the page without a terrible sense of humour'. To do so is to see some excellent photographs of sinuous forms which, strangely enough, do not inflame. The 'Free pull-out poster' is appropriately of Alex (Sapozhnikov) Pitman in a stance that well portrays how his article 'My Summer Vacation' bestrides this journal 'like a Colossus' – eight pages of well-written, useful information about medical systems and internships in USA, Canada, England and Australia. His last paragraph is prophetic: These are trends yet, but they are remarkably the same all over: the era of the doctor as an autonomous professional, guided by his or her conscience and professional commonsense, seems to be coming to an end.

This *Speculum* is superficially brash, but there is much humanity in many of the articles: 'Are there any humans?' 'Gesundheit! Thank God for caring physicians', 'Can we help?', 'Hypnosis', 'Touch: the neglected tool of healing' and even in 'Silicon or bust'. All are well written.

Two articles about country GPs, 'The Country GP' and 'Tennis with the Hospital Cook', contrast sharply with 'My life as a dogsbody', expressing the frustrations of internship. Roslyn Bayliss, MBBS (NSW), manages a single-handed practice with the help of her husband, a teacher, who is also her practice manager. Roslyn recently has coped with breast feeding her baby and night calls from sick people. Dr EM Law in 'The art of studying medicine' is critical of 'the almost totally irrelevant course', but writes with humour: he merits fellowship of a better college than he currently boasts. David Topchian's 'Cyberia' is an informative article on 'virtual reality', a term I had heard, but having had it explained I am glad I am old.

Speculum has always contained a mixture of the profound and the profane. The report on the 1992 AMSA convention describes a glorious binge, the parameters of which, regretfully, are well beyond my experience as a medical student. 'Dietary guidelines' is eminently practical: 'Diet. The principle here is to eat so that you can drink more'.

'Spicula' has reappeared and is dedicated to one who is more than a wee bit gruntled at this gesture. It was fascinating to see that the Charge Nurse still rates well above the Consultant for formidability.

A serious design fault is that because of 'artistic' over-adornment – the use of blue text on a black background (p16) and text superimposed on a cartoon (p67) – the text in my copy is illegible.

This *Speculum* contains much good reading and occasional beneficial kicks for the staid. I tips me lid to the editors, to contributors, photographers and the long list of production assistants, and even to the 'Security Guard, Toby the Wonder Dog'. Such a publication is definitely cheap at Y806* – *Recommended & minimum black market price only.'

Harold Attwood

ALTERNATIVE 1993

Overseas Medical Students' Society
Eds Nezor Houlie & Selene Liew

Now in its fourth year of publication, this is, not surprisingly, a very different journal to *Speculum*. It has to be because it is designed for a different purpose – genuine assistance for students, with more than half the pages given over to 'Academic Reviews' of subjects and the way they are taught, together with comments on teaching in hospitals. The journal enhances the work of OMSS in helping new overseas students to adjust to Australia, and in promoting friendship between overseas and local students.

The difficult problem of doing internships in Australia before returning home is discussed clearly and fairly by the Overseas Medical Student Internship Committee, who are conducting a survey of all overseas medical students in Australia with the aim of presenting a submission to Canberra. The present batch of students is not permitted such internships, and this is a change in policy. It does seem anomalous to sell a course to students and yet deny them the essential final component.

All is not serious, however, for there are many good cartoons and even a 'You Gotta Be Joking' section.

This is an interesting publication with a strong sense of purpose and genuine desire to be helpful: 'Be a TOP student! (T = Trust, O = Organise, P = Persist).' Many overseas students do in fact become top students in the final listing. The editorial committee is also to be congratulated on the advertising pages with a goodly number of tempting Asian eating houses supporting the journal.

Initially I was sorry that a separate journal was deemed to be necessary. Now I am sure that two publications – *Speculum* and *Alternative* – are appropriate and both enrich the School. Personally, I regard them as twin placenta – biamnionic but monochorionic. Now there's a puzzle for you.

Harold Attwood

CHANGE AND TRADITION.
A PORTRAIT OF
THE UNIVERSITY OF MELBOURNE

ERRATA

Published by The University of Melbourne in 1993, early purchasers of this book should note the following ERRATA in the chapter 'Let us now praise the famous':

p.91, col.3, line 35 –
for 'Kincaid-Smith' read 'Campbell'

p.92, line 1 –
for 'Kincaid-Smith' read 'Campbell'.

E.V. KEOGH, DCM, MM, MMBS, FRACP
SOLDIER, SCIENTIST AND
ADMINISTRATOR
by Lyndsay Gardiner
Hyland House, Melbourne, 1990
Hbk pp 176, rrp $25.00.

This is the well-told tale of an unusual man who deserved to be remembered. Lyndsay Gardiner deserves praise for writing so evocatively about 'Bill' Keogh as she had never met him, indeed 'had never heard of him' – and there are no diaries, no journals and few private papers. There are many colleagues still alive who remembered him well and gave willingly of their memories. As the author very properly emphasises in her introduction, such memories had to be treated with care: 'oral or written testimony often tells as much about the informant as about the subject'.

The kaleidoscope of this life certainly held many contrasting facets. Christened Esmond Verner and known as 'Es' by his family, he was generally called 'Bill' by colleagues and friends. A stretcher-bearer at Gallipoli he became a machine-gunner in France and as such was awarded the MM and DCM (the soldier's Victoria Cross). A fervid and often successful punter nearly all his life, he also had a deep appreciation of art and gained much joy from music. Brought up a Catholic, he lost his faith during his teens, and though an atheist throughout the rest of his life, his behaviour was always truly Christian.

After the First World War, not surprisingly, Bill lost his sense of direction for a time, but at the age of twenty-six entered Medicine at The University of Melbourne, graduating MBBS when he was thirty-one. In that same year his beloved sister, Lesbia, died. Bill lived for many years with his mother and never married.

Following residency at the Alfred Hospital, Bill joined the Commonwealth Serum Laboratory in 1928 and it was in research, laboratory work and increasingly in epidemiology, that he was to make his contributions; latterly he was the skilled administrator.

A Captain in the RAAMC in 1939, he was a Colonel by 1943 and Director of Hygiene and Pathology for the Australian Army. With Ted Ford he did important work establishing Atabrine as an anti-malarial and, immediately appreciating the value of penicillin, had Dr 'Val' Bazely brought back to Melbourne to set up its production. In the fifties he it was who master-minded the production by Bazely and double-testing by Allan Ferris of the Salk vaccine against poliomyelitis. It was also Bill who changed the Anti-Cancer Council of Victoria from a small voluntary organisation to the large scientific organisation it is now by choosing WJ (later Sir William) Kilpatrick to head a public appeal for funds – the aim 500,000 pounds, the result 1,350,000 pounds!

Bill Keogh wielded great power and influence but always led from behind. Despite his enormous contributions he was never honoured. He was the supreme initiator and enabler in choosing people for jobs and setting them on the right road. Appropriately, the book is dedicated to another great Australian initiator – Sir Douglas Wright.

This book is easy to read and should be read by all interested in good biographies or the history of medicine.

Harold Attwood

WAYS OF A HOSPITAL
ST VINCENT'S MELBOURNE 1890s-1990s
by Bryan Egan
Allen & Unwin Pty Ltd, Melbourne 1993
Hbk pp 377. rrp $34.95, illustrated.

This history is written by a doctor who was a student at St Vincent's and worked in Medical Administration there for a number of years. Curiously enough, his own name does not appear in the index. Bryan Egan (MBBS 1949) is also a historian with an MA(Melb) and a PhD(Monash). He's not just a doctor.

As in most hospital histories the major themes cover a small beginning – from terrace houses and 'the cottage' to a sprawling complex of new and older buildings. Throughout the century of its existence there were constant charity functions, battles for funds, worries about overdrafts and the determination to do as well as finances permitted. The medical scenes unfold: rivalries, increasing diversification and specialisation, and numerous photographs record the medical heroes of their day. The paramedical staff, nurses, dietitians, almoners, pharmacists, radiographers, engineers, telephonists etc. all get a mention, as well they should. All the stories are well told and documented with copious Notes to the text and a Bibliography – over fifty pages in all. Bryan Egan is a proper historian.

The major difference from other hospitals has been the driving force behind St Vincent's – the Sisters of Charity, in the beginning led by the formidable Mother Rectress, Sister Mary Berchmans Daly. Mother Berchmans was only five feet tall, had had no training as a nurse, but was a determined 'religious-teacher-administrator'. Harry Allen wrote (1911), 'a request from the Mother Rectress is a command not to be disobeyed. A command and also an encouragement, for in all my relations as Dean of the Faculty of Medicine with the Mother Rectress, I have found her a very fountain of wisdom and strength and kindness'.

Mother Berchmans could also joust with Archbishop Carr and towards the end of a lengthy correspondence overstepped herself by stating that she had 'a duty to perform and that is to express what I believe to be best in the interests of the Order to which I belong'. She was going against His Grace's advice. Bryan Egan's summary is masterly: 'Nevertheless Mother Berchmans is entitled to the credit due to those who dream dreams too brave to be told to those who will be frightened by them.'

Strange to say, the Sisters of Charity could on occasions be uncharitable. The Hospital's first Almoner, Norma Parker, who was very well qualified with an Arts degree from Western Australia and an MA degree in sociology from the Catholic University of America in Washington DC, met 'lack of understanding – even opposition and antipathy – from many of the sisters'. When she left after four years, only one sister attended the afternoon tea given for her by Mother Alphonsus. Perhaps they were frightened because they saw the Almoner's work as a threat to their simple religious

duties. Norma Parker was replaced by Sister Hedwige.

Over the years the power of the ten Mothers Rectress or two Sisters Administrator generally prevailed, working largely through an Advisory Committee or an Advisory Council who were 'purely advisory in character'. The Chief Executive Officer was not a member, and in 1953 when it was proposed that he become secretary of the Council the advice was not taken! I wonder if this precedence might be usefully revived.

St Vincent's is now a highly respected modern teaching hospital with an international reputation in several fields, including microsurgery and medical research. The historical documentation of these achievements is well done.

On the dust wrapper it is stated that *Ways of a Hospital* is 'a commemoration of the people who have contributed to the Hospital's enduring success, . . . and the patients who have borne testament to the care of those in whose hands their lives lay'.

Patients are mentioned, but perhaps most commonly as an unusual 'case' or one providing a good pathological specimen or the substance of a paper to a conference or journal. To me the most evocative photographs are those of patients: Male and Female Wards 1903, Outpatients 1915, 1920, probably 1940s, and the old casualty department in the 1950s. All are silent, but surely their silence could be 'wonderful to listen to'. A different history would be required to give them voice.

Bryan Egan's history of St Vincent's is an important contribution to hospital histories in general and to this medical school in particular.

Harold Attwood

A Very Amazing Life. The Biography of Dr Edna I Gault

by Bette McLaughlin
Published by John Gault & Louise Gault, 1993
Sbk pp 254, illustrated

Ted Gault, BSc, MBBS (1923), MS, FRACS, FRCPA, FRCPath, will be remembered by all who had met him because of his many achievements and disarming personality. He was a general practitioner, a medical missionary to Azamgarh, India, Professor of Pathology at the Vellore Christian Medical College, and Curator of the Pathology Museum at The Royal Australasian College of Surgeons. Throughout his life he was a well-beloved teacher. His biography *An Amazing Man. Edward Gault in Three Worlds (1987)* was written by Ronald Winton. 'Weary' Dunlop in his foreword asked, 'when shall we see his like again?'

We find a likeness in the recent biography of Ted's wife, Edna (who died in 1993), in Bette McLaughlin's *A Very Amazing Life,* marvellously portrayed on the front cover as Edna, then in her eighties, waves to her old friend 'Pansy' Wright. Edna Gault (nee Bayliss) was a Sydney medical graduate who also held a DTMH. When the Gaults went to Azamgarh, India got two medical missionaries for the salary of one. Yet Edna

worked every bit as hard as Ted. Edna's tireless championship of women and their needs was lifelong and never restricted by race, whether in India or Australia. Late in life her work with Aboriginals – adolescents and women – produced important scientific papers and many letters to government authorities.

Edna was Ted's sheet anchor in times of stress. Those who knew Ted should read this book as her story is every bit as wonderful as Ted's. Each biography complements the other. The inclusion of Edna's diaries of the turbulent time when India was achieving independence gives historical significance.

The book is available from: Mrs Louise Joy, 47 Brackenbury Street, Warrandyte, Vic 3113. The cost is a mere $25 (including postage). All writer's royalties will be donated to the care of people with eye problems, and will be distributed through the Friends of Vellore, Victoria. Ted's biography has just been reprinted and both books can be purchased from the same address for $45 (including postage). I do not believe you could buy two more worthwhile books so cheaply anywhere else! (The history of three generations of the Gault family was published in the 'Medical Genes' section of *Chiron,* Vol.2, No.1, 1988)

Harold Attwood

April Fool's Day

by Bryce Courtenay
William Heinemann, Australia, 1993
Hbk pp 449, illustrated, rrp $34.95

This book has, very correctly, the subtitle 'A Modern Tragedy' – a father tells the harrowing tale how his haemophiliac son becomes infected with HIV from the plasma products he had to use so regularly to live.

The writing is graphic and bitter, but eminently readable although distressing. Criticism of the medical profession is given many times and all seem justified and tragic.

It should be read by all health professionals not just because of AIDS – this was the final insult – but because of the moving descriptions of what a patient and the family endure to live and even rejoice despite haemophilia.

Harold Attwood

The Centenary History of The Wallaby Club

Landscape Publications, Melbourne, 1993
Sbk pp 144, illustrated, end papers

The Wallaby Club – a walking and talking club – was founded in 1893 by Dr Louis Henry, a physician with rooms in Collins Street, Melbourne. Over the century there have been about 430 members, of which some 12 per cent have been medical men and many of them graduates of this Medical School. Notable among these were Mac Burnet, FJ Glendinnen, Clive Fitts, CJ Martin, WA Osborne (a member for 64 years), Geoff Penington, George Simpson, Robert Southby, JW Springthorpe, Richard Stawell, George Syme and BT Zwar.

Anyone interested may purchase this very readable, well-illustrated book for $46 by writing to: Landscape Publications, 17 Carlyle Crescent, Mont Albert, Vic 3127.

Harold Attwood

Curator
Prof Emer H D Attwood
Enquiries: 344 5884

MEDICAL HISTORY UNIT

Open 9am-5pm Weekdays
Enquire at Information Desk
Brownless Medical Library

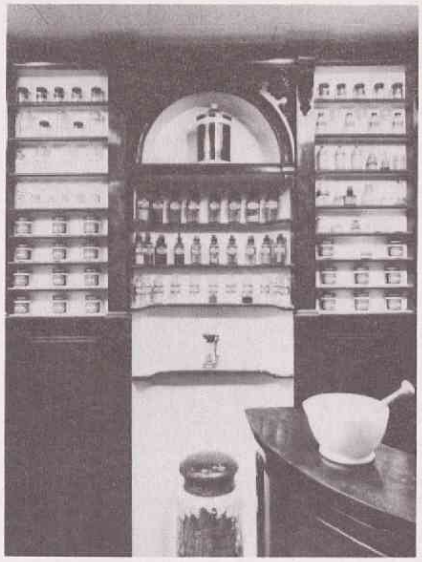
THE COLLECTION

THE STRENGTH and excitement of the Medical History Museum lies in its 3707 catalogued items. Amongst the most valuable and frequently displayed are the photographs. The earliest is the 1864 'Dissecting Class', but the astonishing run of graduate or fifth year class photographs from 1877 to 1926 is frequently referred to by relatives wanting images of their ancestors. The rich historical archives hold excellent portraits of faculty celebrities in suitably dignified postures or as caricatures, together with buildings, laboratories and lecture and operating theatres.

The instrument collection is large, often old and, in many cases, in astonishingly good repair. We hold fascinating early X-ray tubes, skiagraphs of injected anatomical specimens, a range of therapeutic devices for the treatment of tuberculosis and poliomyelitis, and a graphic illustration of the tragedy of retrolental fibroplasia with the work of Kate Campbell [see *Chiron*, Vol.1 No.5 1987, p49]. There are cupping glasses, scarificators, artifical leeches, medals galore, a lovely collection of netsukes and inros and even a bordeloue, but that's another story. Look out for it, though, it will be on display this year.

However, special attention should be drawn to the two largest, most attractive items – the Savory & Moore Pharmacy installation, from Chapel Street, London, and the three ornate exhibition cases made in 1880 by Charles Beecham (Maker), Post Office Place, Melbourne. The London pharmacy traded from about 1849 until 1968, when Savory & Moore presented the contents and fittings to the Wellcome Institute of the History of Medicine. The Wellcome Trust offered these to The University of Melbourne and financed the packing and shipping to Australia. Reconstructed by Professor Ken Russell (Personal Chair in Anatomy and Medical History, 1969-76), his family and a craftsman, the relocated pharmacy was officially opened on 1 June 1971 by the Chancellor, Sir Robert Menzies.

Shelves, drawers and cupboards are made from mahogany veneered on cedar or pine. The dispensing bench is a solid, 50 mm thick plank of Spanish mahogany. The most unusual case is a large serpentine-fronted cupboard with two, hand-moulded, double-curved glass doors. Some containers and poison bottles were shipped from London, but most of the bottles and jars displayed came from Palmer's Pharmacy in Ballarat in 1966. However, these are entirely contemporary with and duplicate many commonly displayed in London. The original ingredients are present in many of the bottles and the nest of drawers at the back of the dispensing bench contains Savory & Moore's printed labels. At the back of the shop is a long mirror lettered in gold 'Savory & Moore to the Queen, H.R.H. The Prince of Wales and the King of the Belgians and at 143 New Bond Street'.



Savory & Moore installation – mahogany veneer shelving with bottles and jars from London and Palmer's Pharmacy, Ballarat.

Robin Hodgson restoring the ornate display cases made by Charles Beecham for Edward Duckett & Sons, 1881.

For those interested in unusual products, it has to be stated that we no longer stock any 'Corn Cerv.' (Cornu cervi – stag's horn)!

In London, the shop was managed by Charles Hunt (1840-1911) from 1869 until 1910. In April 1993 two descendants of Charles Hunt's brother, William, visited the pharmacy in the Medical History Museum – Dr Margaret Hunt, a Consultant Anaesthetist from London was visiting her Australian cousin, Ian Hunt, a retired Melbourne architect who in the 1950s had been involved with the design, documentation and construction of the Baillieu Library. Both had visited the pharmacy in London and both were delighted by the accuracy of its reconstruction. Mr Hunt generously donated a colour photograph of the London pharmacy with the window decorated for the coronation of Queen Elizabeth (see overleaf), an 1811 Medical Dictionary which had come from the estate of his great great-uncle, and a photocopy of the presentation card signed by all members of staff marking Charles Hunt's retirement in 1910. The gift? A complete set of the works of Charles Dickens.

THE ornate display cases, acquired by the University through the foresight of Ken Russell and Frank Strahan (University Archivist), were made by Charles Beecham for Edward Duckett & Sons, Lonsdale Street, Melbourne, who used them in the 1881 Exhibition. Duckett's warehouse with Cobb & Co. coach house and stables at the rear, was a well-known landmark until it closed in 1963. In 1993, after more than a century of usage, the cases had to be repaired and restored. We were fortunate enough to get Robin Hodgson to do the work. His detailed account of the construction and repair is an historically important document:

Height 2.92 metres
Width 1.41 metres (2) and 1.73 metres
Depth 2.23 metres (2) and 3.415 metres.

The cases are made from American walnut, walnut burr veneer and with oil-gilded zinc corner mounts. Only two of the glass panels had been replaced with modern glass. The other 18 panels were all the original 5/16" thick plate glass in their linseed oil putty. The weight of these large glass panels readily explains some of the structural sagging which had made the cases almost unusable.

These display cases must be almost unique in Australia now. The items they house are also old and valuable – surgical instruments, some of which go back to the Napoleonic wars, microscopes including a replica of those made by Antonj van Leeuwenhoeck (1621-1723), the draper of Delft who first drew bacteria, and a fine collection of early microtomes including the one used by Crawford Henry Mollison for his frozen sections.

READERS and friends are invited to visit the 1994 exhibition, REMEMBRANCES OF THINGS PAST, to see for themselves. This exhibition illustrates the richness of our collection, and items on display range over the 130 years of this, the oldest Medical School in Australia. Please enquire at the Information Desk for entry – Monday to Friday, 9 a.m. to 5 p.m.


SAVORY & MOORE
2
SAVORY & MOORE CHEMISTS

DATES TO REMEMBER 1994
MEDICINE, DENTISTRY & HEALTH SCIENCES

CONTINUING MEDICAL EDUCATION

These continuing professional education courses are designed for medical practitioners. They may also be of interest to those working in associated health professions. The design of the courses complies with the requirements of the Training Guarantee Act. Enquiries should be directed to: Continuing Medical Education, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne, Parkville, Vic, 3052.

Telephone (+61 3) 344 5888, Facsimile (+61 3) 347 7084

Psychiatry for Non-Psychiatrists: Common Problems and Useful Therapies
Friday and Saturday 25-26 February, Austin Hospital
Directors: Associate Professor Fiona Judd and
Professor Graham Burrows

Radiography for General Practitioners
Wednesday to Friday 27-29 April and 9-11 November, Essendon and District Memorial Hospital
Director: Professor Emeritus Bill Hare

ENT Problems and Procedure for GPs
Friday and Saturday 6-7 May, Royal Victorian Eye and Ear Hospital
Directors: Associate Professor Brian Pyman and Dr Ann Cass

Keeping Up-To-Date with Medical Literature Using a PC or Mac and a Telephone Line on Your Desk
Saturday 14 May, Brownless Medical Library, The University of Melbourne
Director: Ms Dorothea Rowse

Refresher Course and Update in Ophthalmology
Friday and Saturday 20-21 May, Royal Victorian Eye and Ear Hospital
Director: Associate Professor Hector Maclean

An Update on Obstetrics and Gynaecology for General Practitioners
Friday and Saturday 24-25 June, Royal Women's Hospital
Directors: Associate Professor Doris Young and
Professor Roger Pepperell

Spot the Problems – Update in Dermatology for General Practitioners
Saturday 30 July, The Royal Melbourne Hospital
Director: Dr George Varigos

Paediatrics for General Practitioners
Wednesday and Thursday 10-11 August (Intensive Clinical Course)
Friday and Saturday 12-13 August (Lecture Program), The Royal Children's Hospital
Director: Professor Peter Phelan in association with
Dr Hubert van Doorn

The Conduct and Design of Clinical Trials
Thursday and Friday 25-26 August, The Royal Melbourne Hospital
Directors: Dr Michael Green and Dr Russell Basser

Practical Management of Wounds and Skin Ulcers
Friday 9 September, Heidelberg Repatriation Hospital
Director: Professor Donald MacLellan

Early Diagnosis and Prevention of Cancer for General Practitioners
Friday and Saturday 21-22 October, Heidelberg Repatriation Hospital
Director: Dr Allan Zimet

DEAN'S LECTURE SERIES

Tuesdays at 5.30 p.m.
Sunderland Theatre
Ground Floor, Medical Building
The University of Melbourne

The Dean's Lecture Series is designed to illustrate current research and topics of interest in the fields of Medicine, Dentistry and the Health Sciences. Interested students and graduates are invited to attend.

22 February
Screening for colorectal cancer – new strategies for an old problem
Professor Robert J S Thomas, Department of Surgery, Western Hospital

8 March
Renal failure – yesterday, today and tomorrow
Professor Gavin Becker, Director of Nephrology, The Royal Melbourne Hospital

22 March – 60th Beattie Smith Lecture
Mental illness: the public health crisis of our time
Professor Helen Herrman, Department of Psychiatry, St Vincent's Hospital

12 April
Respiratory control during sleep onset
Professor John Trinder, School of Behavioural Science

26 April
Oral and maxillo-facial surgery: evolution or revolution
Associate Professor Bruce Levant, School of Dental Science

10 May
Indicating the genetic culprits in lymphoma development
Professor Jerry Adams, The Walter and Eliza Hall Institute of Medical Research

24 May
Is there still a role for medical practitioners in the treatment of drug and alcohol problems?
Professor Greg Whelan, Director of Drug and Alcohol Studies, St Vincent's Hospital

This will be followed at 6.30 pm by the 1994 Annual General Meeting of the University of Melbourne Medical Society

7 June
When imprinting goes wrong: the roles of mutation and epigenetic phenomena in the development of childhood cancer
Professor Peter Smith, Director of Haematology and Oncology, Royal Children's Hospital

21 June
Acute stroke: a new era?
Professor Geoffrey Donnan, Director of Neurology, Austin Hospital

5 July – 34th Halford Oration **(1993 Oration cancelled)**
How enzymes dissolve clots and cure heart attacks: a blood-curdling story
Professor Joseph F Sambrook FRS, Director, Peter MacCallum Cancer Institute Research Laboratories

DEAN'S LECTURE SERIES SEMINAR
A BETTER DEATH
Convener – Professor Richard Smallwood
Friday 22 July 1994 – 2.00 pm to 5.00 pm