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Contents

April 1994

1 Editorial ........................................... Prof David Penington

Vale

2 Professor Emeritus Sir Sydney Sunderland Kt CMG .... Prof Graeme Ryan

Dean's Lecture Series

4 • Seminar: The Dead Do Tell Tales – Declining Autopsy Rates and the Quality of Health Care

Convener Prof Richard Smallwood

Dr Penny McKelvie, Prof Stephen Cordner, Mr Robert Nelson

Mr Terry Laidler, Dr Norman Swan, Mrs Loane Skene

17 • Brain Tumour Surgery in the Next Decade ......... Prof Andrew Kaye

20 • The Changing Status of Anaesthesia. Does Better Science Improve Outcome? A Personal View .... Prof Duncan Blake

Faculty of Medicine, Dentistry & Health Sciences

22 • From the Dean ................................... Prof Graeme Ryan

26 • 1993 Higher Degrees and Diplomas in the School of Medicine

28 • Clinical Schools

Austin Hospital & Heidelberg Repatriation Hospital ................................ Assoc Prof Bernard Sweet

The Royal Melbourne Hospital & Western Hospital ................................ Assoc Prof Robert Moulds

St Vincent’s Hospital

& The Geelong Hospital ................................ Assoc Prof Wilma Beswick

31 • Final Year MBBS 1993 – Top Student. Prizes & Awards 1993

32 • MBBS Graduates 1993

33 • Dean’s Honours 1993

34 • Department of Ophthalmology ................. Prof Hugh Taylor

36 • Department of Otolaryngology .................. Prof Graeme Clark

38 • UMMS Elective Essay

Eight Weeks in Tanzania .............................. Georgina Phillips

University of Melbourne Medical Society

42 • School Album

43 • Notice of Annual General Meeting 1994

49 • Minutes of Annual General Meeting 1993

50 • UMMS 1993 Elective Essay Prizes

51 • UMMS 1992 BMedSc Prizes

52 • 1993 Reunions

53 • Reunion Announcements

54 • UMMS Congratulations . .

55 • Obituaries

Magazine

58 • Rare Book Collection ................................. Dorothea Rouse

59 • A Good Life, A Country Practice .................. Bill Lawrence

62 • Not Just Doctors!

Musical Medicos or Medical Musicians? ................. Liz Brentnall

The Chocolate Psychiatrist ............................. Peter Morgan

64 • A Journey from Gynaecology to Music Therapy . Lorna Lloyd-Green

65 • Books

71 Medical History Unit ................................. Prof Emer Harold Attwood

Front cover: The Australian Doctors Orchestra

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CHIRON THE CENTAUR, TEACHER OF MUSIC, MEDICINE AND HUNTING
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.

One of the greatest quandaries in our profession at this time is how to respond appropriately to the initiatives stemming from government attempts 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 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 operation. 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 ‘externals’. 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
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, a member 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, 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 take 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, over 1000 pages, was first published in 1968 with a second edition in 1978.
Repair: A Critical Appraisal was
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
twenty countries, including China, Japan,
Singapore and Hong Kong.

When he became Dean, Sydney
Sunderland made it his business to
study and clinical management of nerve
education should be lighting a lamp and
the result that, under his direction and
conferences. He lectured in more than
twenty countries, including China, Japan,
Singapore and Hong Kong.

Two of his favourite sayings were,
‘not filling a bucket, and ‘the central
objective of medical education should be
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-
four 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
given only on stone which covers their
carved in the stuff of
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 but 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 philosophical 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

THE PUBLIC VIEW

A funeral director’s view
Mr Robert Nelson
General Manager
Nelson Bros Funeral Services

How people feel about it
Mr Terry Laidler
Presenter
ABC Radio 3LO

DISCUSSION

IMPLICATIONS AND SOLUTIONS

What are the implications for health care?
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

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 Mel-
bourne, 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 endo-
scopic 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 thrombo-
emboli in patients with severe underlying disorders. Unsuspected
cancer was found in 4.5 per cent of autopsies at St Vincent's Hospital

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, providing 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
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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

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 major use for the VIFP is in research, 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 required 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

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 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 wide range of issues relating to the death, which may include information relating to grief and bereavement as well as 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 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.

Families' fears tend to be what will happen in an autopsy, and a funeral director fears telling them.
What do funeral directors understand by the term autopsy?

When the Coroner is involved, a funeral director's understanding of it can be very simplistic. 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 funer al 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 such 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 autopsies 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 director 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 resutured. 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 microorganisms, 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 dealing with 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 mainstream 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

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 on line 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 50 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 education 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-mortem's on my parents. As a student I attended whatever the requisite number of post-mortem's 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 . . .

Dean's Lecture Series / Chinon 1994 / 9
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.

PMcK: Well, that's the reason, the medical privacy and consent issue, and that's why we have to respect that. The reason was that the family had refused to allow an autopsy and they had also refused to allow the tissue samples to be taken from her for research purposes.

TL: 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: Do 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: 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: 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. Well, I think that... I think the patients themselves are aware of the donor situation with corneas, where the patient has a bit more foresight 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.'

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 disfigurement and even mutilation is very much in people's minds.

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

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

Christine: I 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.

PMcK: I think 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 disfigurement and even mutilation is very much in people's minds.

TL: 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 disfigurement and even mutilation is very much in people's minds.

TL: It must be an impossible task, Tim.

Tim: Well, I think some people do find it difficult, but often I find it 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 died 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

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 morgue 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, bloodletting 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 Benvenisti 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 gonorrhea 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.

Dean's Lecture Series / Chiron 1994 / 11
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 clinicopathological 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 his 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.

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. The legislation is similar in each jurisdiction, having been derived from the Australian Law Reform Commission's Report No 7, Human Tissue Transplants. 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:

1. Who may authorise the removal of tissue after death?
2. In what circumstances may that authority be exercised?
3. For what purposes does the Act envisage that the tissue be used?
4. Are there restrictions on the use of tissue taken after death for therapeutic and other purposes?
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?

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, 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 28 (1)).

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 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)).

12 / Chiron 1994 / Dean's Lecture Series
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 consented to, the removal after his death of tissue from his body for such a purpose or use' (section 26(1)(c); section 26(2)(c); 28 (1); 28 (2)).

2.2 The second is where 'the senior available next of kin' 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)).

2.3 The third is 'where the designated officer or the medical practitioner ... 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 ... 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, 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').

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 25(1)(c); 20(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 R9, which was the leading case on this subject for some years in Australia, and a decade before the High Court decision in Rogers v Whitaker10 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 life11 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...
4.3 Consent is effective only in the terms in which it is given — only or as a relative, about whether to allow tissue removed after death • that they may limit their consent, for example the consent might • that they may take time to decide • that they may ask questions if they wish This leads to a consideration of the information that people need What information must be given to the deceased before tissue covered by the consent can be used (para 7). In order to exercise their right to decide, they need to a post-mortem examination’ is ‘for the purpose of determining have appropriate information. 

— 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.

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, emphasizing 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. 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.

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 attitude towards 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. 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


3. This means 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.


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 for tissue is 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 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.


12. F v R at 153; Rogers v Whakiter at 531.

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 rates 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 sophistication 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.

Dean's Lecture Series / Chron 1994 / 15
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 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 emblamming 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.

- 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 the 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.
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 Archipelago to bore holes in the skull. Hippocrates, born on the island of Cos in 460 BC, described trepanation and advised its 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 sanctioned so that any adverse opinion was regarded as heresy.

• Andreas Vesalius (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. Vesalius was Harvey Cushing’s ‘patron saint’, and Cushing suffered his fatal anginal attack after lifting a heavy Vesalius portfolio.

• Thomas Willis (1621-75), described as the ‘Harvey of the nervous system’, coined the word ‘neurologic’. Cerebri Anatomie, published in 1664 with many illustrations by Christopher Wren, refined the anatomy as described by Vesalius. 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-Séquard.
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 Cincinnati 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.

Suffocation, 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. The latter 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 *Lancer* 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.

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, Schleiden 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.

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 tumour cells 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 sphereoid. 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 sphereoid, 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 sphereoid 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 heterogeneous 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
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. 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.

References
THE CHANGING STATUS OF ANAESTHESIA

DOES BETTER SCIENCE IMPROVE OUTCOME? A PERSONAL VIEW

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

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. 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). 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 century 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 thymicolympheatic'. 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 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. 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. 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.

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 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. 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 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 surprising 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 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. Anaesthesia itself appeared safe with no deaths occurring 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 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 cooperation 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.

References

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Acknowledgement

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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 Dr. Lorraine Dennerstein.
- The Joint Centre for Epidemiology and Public Health Medicine, under the Directorship of Dr. Barrie Davidson, Department of Public Health and Community Medicine, Ballarat Base Hospital, under the Co-Directorship 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 a new Professorial Fellow or Associate Professor position, was also recommended in 1993.
- The University's International Conflict Resolution Centre, School of Behavioural Science, under the Directorship of Dr. Diane Bretherton.
- 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 Dr. Lorraine Dennerstein.
- 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.

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 1995 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 fellowships 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, and the Neuromuscular Research Centre, St Vincent's, Hospital, were 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).

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 Watson, 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 Colley AM, Dr John M Court AM, Mr Harry M Hearn AM, Mrs Patricia Heath AM, Dr W H Kitchen AM, Ms Delys 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
• 1983 Salmon 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.
Community Relations

The Faculty continues to place a very high priority on promoting 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. The UMMS journal Chirom, was again of the highest standard given to the Faculty by the staff of the Faculty Administration under the Dean, and other academic and administrative staff visited several schools in South-East Asia, particularly to promote increased numbers in the Faculty's student intake.

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 (Unlife) 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 Brennan, 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**

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:

**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 cooperation 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.

**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.

**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 Malaya, Malaysian postgraduate courses - MMed, MD, PhD, MDSc. In addition, the pathways through which Malaysian students may gain entry to undergraduate programs were clarified.

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.

The University of Melbourne

University of Indonesia

Gadjah Mada University

National University of Malaysia

University of Malaya

University of Brunei Darussalam

University of Indonesia
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 Bacej, 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
Joy Elnatan, BSc - Pharmacology
Jennifer Margaret Favaloro, MSc - Medical Biology
John Lawrence Fitzgerald, BSc - Pharmacology
Doris Leonard Flett, BSc (LaTrobe), MSc (ANU) - Physiology
Claire 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
Ygol Haup, BSc (ANU) - Medical Biology
Mathias Wilhelm Hoffmann, MD (Hamburg) - 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
Lyne Rosanne McMartin, BA, BSc (Monash) - Pharmacology
Jennifer Percival Messenger, BSc (ANU & Flinders) - Anatomy
Kathleen Anne Moore, BA (Deakin), DipPsych (CIT), MSc - Medicine
Dame Marian Myers, MAppSc (RMIT) - Medicine
Sandra Eilleen Neil, BEd (LaTrobe), MA - Psychiatry
Foorinma Rajasekhariah, MSc - Pathology
Maryanne Skeljo, BSc (Monash) - Medicine
Melissa Caroline Southey, BSc - Medicine
Larry John Suva, BAppSc (SIT) - Medicine
Nopparat Tippayatorn, MSc (Mahidol) - Anatomy
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
Dow Woy Goh, MBBS (Malaysia)
Xin-Hua Gu, BMed (China), MSc
Alicia Josephine Jenkins, MBBS
Peter Kebba, MBBS (Indonesia), PhD
Cheok Soon Lee, MBBS
David Anthony Mackey, MBBS
Andreas Marangou, MBBS, UK
Jane Helen McKendrick MBBS, DPM
Frank Oberklaaid, DipChildHealth (London), MBBS
Richard Francis Peppard, MBBS
David Charles Reutens, MBBS (Western Australia)
Morry Silberstein, MBBS (Monash)
Dominic Subbiah Thyagarajan, MBBS
David Valdeman Tuxen, MBBS
Martin Christopher Wright, MBBS (Monash)
Junichi Yamanaka, MBBS

MASTER OF MEDICINE

Sita Ram Choudhary, MBBS (Lucknow)
Nicholas John Ferris, MBBS (Monash)
Jillian Elizabeth Grogan, MBBS, Dip Women's Health
Miyoko Kosashii, MBBS (Jakarta)
Leopoldo Lanuza, BSc, MD (Philippines)
Kian Ju-Budi Liiem, MD (Indonesia)
Gina Panuncialman, MD (Philippines)
Shigihiro 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 Warldaw Brown, BSc
Vivienne Buratto, BA
Patricia Chetcut, BSc (LaTrobe), MBBS (Monash)
Voula Paraskevi Dorkos, BSc (Monash)
Nehama Epstein, BA (Monash)
Lyne Rosanne McMartin, BA, BSc (Monash) - Pharmacology
Jennifer Percival Messenger, BSc (ANU & Flinders) - Anatomy
Kathleen Anne Moore, BA (Deakin), DipPsych (CIT), MSc - Medicine
Dame Marian Myers, MAppSc (RMIT) - Medicine
Sandra Eilleen Neil, BEd (LaTrobe), MA - Psychiatry
Foorinma Rajasekhariah, MSc - Pathology
Maryanne Skeljo, BSc (Monash) - Medicine
Melissa Caroline Southey, BSc - Medicine
Larry John Suva, BAppSc (SIT) - Medicine
Noppapat Tippayatorn, MSc (Mahidol) - Anatomy
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

GRADUATE DIPLOMA IN WOMEN'S HEALTH

Heidi Johanne Andersen-Dalheim, MBBS
Lorraine Baker, DipOhs (RACOG), MBBS
Tatiana Borisow, BSWM (UAM)
Robyn Ann Gardner, BPharm (Victoria College of Pharmacy)
Ruth Goldwasser, DipEd (LaTrobe), BSc
Jennifer Anne Jobst, MBBS
Danielle Mazza, MBBS (Monash), DipOhs (RACOG)
Kim Grace Robinson, BA, BSWM (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 UPTO-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 sun down beyond which place the woman lay skull thumped flat to Ramingining dirt. She'd scratched the sand and drifts away: our eyes fell away: airship, 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 adrenaline 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, thumbing 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 - 3 gallon drums of kerosene defining a runway. A crescento of noise. Rubber scuffing dust. An unearthly silence. A corridor of flame. A body breathing, sometimes:

A reverse of noise. Rubber scuffing dust. An unearthly silence. A corridor of flame. A body breathing, sometimes:

Flickering yellow lights appearing. A plane beginning to fall. Flickering yellow lights appearing. A plane beginning to fall.

Cacophonous battle: land-rover versus potholes and boxes.

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. Scarping feet. Some words. Some minutes passing.

Then briefly the lights on. Off. The doctor standing saying leave now or stay to die. The woman unskadd 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 stood 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


Fifth row L-R: David Lim, Sandy Zalstein, Askin Gunes, Alex Papasaleras, Martin Tzylinski, 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 Hailer.


The Royal Melbourne Hospital & Western Hospital

Final Year Clinical School 1993


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 Pentfold (Clinical Sub-Dean), Soek Meng Lee, Sina Malik, Younong Xing, Louis Lui, Frances Wong, Shomile Senggupta, Nina Kilkele, Front row seated L-R: Craig Barnett, Peter Cha, Lena Chan, Sarah Larkins, Belinda Greenwood-Smith, Deila Tomy, Huey Min Tan, Flora Wong, Titi Tang, Lynette Wong, Nicholas Sopon, Julie Thomas, Vasiliios Nimonakiotakis. Absent: Theresa Chui-Wah Chung, Suzanne Cochrane, Dharsh Fernando, Chris Fiddes, Vivian Mathews, Helen Mitropoulos, 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 special. 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 Sneath
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, Wanganaratta 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 musculoskeletal 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 Wanganaratta 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 oral or 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


Absent: Naveen Singh, Quoc Tiet, Siobhan Dobell, Fiona Lee.
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 McLechlan (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.

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 Beswich
Clinical Dean

**Final Year MBBS 1993**

**Top Student**

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 Krawczysyn SVH/GH

**The Robert Gartly Healy Prize in Medicine**
Mark Krawczysyn SVH/GH

**Jamieson Prize in Clinical Medicine**
Peter Salama AH/HRH

**Upjohn Award in Clinical Pharmacology & Therapeutics**
Mark Krawczysyn 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

Faculty / Chiron 1994 / 31
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 Neonatal Paediatrics
Richard Brouwer SVH/GH
Jillian Sass SVH/GH

The Max Kohane Prize
Joanne Said AH/HRH

The Vernon Collins Prize
Giuliana Antokovich 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
Gyu Bylmsa

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 Shioi 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

General Clinical

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

Royal Australian College of Ophthalmologists Prize
Mathew 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

MBBS Graduates 1993

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Two Dames
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Women Enter Medicine
The Speculum
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1994

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I N 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 1997. 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, and for vitreal and corneal surgery. The Units of Bio-Engineering, 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 aetiological 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 an on-going 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 McNe1 from Monash University to assess the
effectiveness of both aspirin and vitamin supplements against cataract.

The Low Vision Unit is headed by Dr. Jill Kefee. 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 Kefee 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 extend 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 Kefee 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.

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 (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
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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 irreversible 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 in the
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 depart-
ment, 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
poorer-privileged regions of the world. It is important for us all to be
aware of these problems and do what we can about 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 the need for many corneal transplantations. Flexible
intraocular lenses or replacements for the cataractous lens may be
perfected in the not-too-distant future; these would allow the eye
to continue focusing on small things, even after cataract surgery. Much
work is being done in the aetioloogy 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
effectiveness of both aspirin and vitamin supplements against cataract.

Hugh R Taylor
Ringland Anderson Professor
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 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
Also required to determine when the auditory brain is plastic, how and how this can be transmitted by direct electrical stimulation of the hearing nerve. To know how best to help children, basic studies are normally and understand environmental sounds. To achieve this goal it will be necessary to learn more about how the brain codes sounds and language.

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 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 Otologyngology 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 countries and more than 30 languages.

A binodal 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, Taralay, 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.

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 while 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 condoms 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 specialist 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, only now followed by a more 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.

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.

Sharing food - patient, family and staff.
A key element in the financial situation of the hospital is bribe-money. The unwillingness and inability of the hospital to get this bribe 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 also result in 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 my own 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 there is no sterilisation (in one ancient autoclave), nor are mattresses 'on call' or not - the majority being caesarean sections. I accompanied the doctors on any community health-related outing.

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 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, 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 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 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


Fifth Year 1898
From the Medical History Museum Archives

### 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?’

### 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 convenor.
- 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.


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 neuron 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 neuron disease called Kennedy’s disease or X-linked spinal and bulbar muscular atrophy. Motor neuron disease affects an estimated 1,100 people in Australia. This disease causes degeneration of motor neurons 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.

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, SP2/0 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
1993 Reunions

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 percutaneous 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, Barry Bennett, Max Brett, Peter Brett, Bell Brodrick, Rona Charters, John Cloke, Percy Couen, David Couling, Ron Cameron, Ron Davies, Effie De Ravin, Steve Dimant, Gwen Donald, Tom Early, Stuart Enouf, Maurice Etheridge, Sandy Ferguson, Peter Fox, Des Hoban, Kon Housam, Bill Hughes, John Jones, Russell Jones, Keith Lipshut, Oliver Logan, Bob Manser, Warwick Macky, Bernhardi (Karl) Ostberg, Hayden Martin, John Perry, Peter Read, Winston Rickards, Alan Rosenhain, Dulcie Rayment, Bob Sellwood, Michael Shaw, Keith Sisson, Mike Stavin, Betty Spinks, Bill Spring, Bruce Stafford, Bill Suzanen, Marie Suzanen, 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.


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 graduands 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 Schenker 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 Sue 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 Robinzon 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 bookends 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 this 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.

46 / Chiron 1994 / UMMS
Class of 1953 – 40 Years Reunion


Class of 58 – 35 Years Reunion

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


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 ‘Psychedelica tessens’.

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.


The University of Melbourne

Organising a Reunion Dinner?

University House, on the campus of The University of Melbourne, is the ideal venue.

The House is able to cater for reunion groups, ranging in size from 30 to 250 guests.

We offer a variety of competitively priced menu packages to suit any occasion.

Please contact Mr Ken French or Mr Philip Taylor-Bartels on 344 5254 for menus, costs, a tour of the facilities and further information.

Caring for the University

On behalf of staff and students I extend our sincere thanks to alumni and friends who have continued to support the University and the School of Medicine through the University Fund.

Over the years thoughtful bequests have also played a significant role in building the University and the School of Medicine we have today. You may wish to consider planning a personal contribution to support the Medical School’s research, teaching and students with the designation of a bequest to your alma mater. If you would like more information on a copy of our bequests booklet, please contact me at the School of Medicine, The University of Melbourne, Parkville, Victoria 3052. The telephone number is (03) 344 5898.

Graeme B Ryan AC
Dean, Faculty of Medicine
Dentistry and Health Sciences
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.
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.'

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, its 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 anaesthetists, not an easy task – there would be many a 'Ga'did 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 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 its sons and mourn his passing.

Joe March

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, KStJ, 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-hearted, 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 grandfather, 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 Hillier, 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.

Alfred Deakin - of another.

Gaining his leaving certificate at the age of sixteen years, he trained at the Victorian College of Pharmacy where he won the
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 year spawned a surgical trio – Dunlop, Eddey and Rank – scarcely 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 in boxing, his first recorded bout resulted in a draw over twenty 2-minute rounds against the Henry’s Hospital and the following year he joined the staff of the 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 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

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, 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.

References

DONALD CAMERON FORSTER, MBBS 1947
1924-1993

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 now ‘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 oesophagoscopy 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.’*

*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

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 lally.

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 was a quiet achiever who enjoyed a long and busy life. Harold Attwood, from family documents and the eulogy by Justin Long.

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 required 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.
ANDREW JOHN MURPHY, MBBS 1952
1925-1992

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 siting 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.

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 5,725 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.

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
BERNARD MCCARTHY O'BRIEN AC, CMG
BSc, MBBS 1950, MD, MS(Seattle), FRCS, FRACS
Hon. FACS, Hon. FRCS(Ed), Hon. FRCSI, Hon. FRSS(A)
1924-1993

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 opportunistic and covesotypic 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 instrumention 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 Collis 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

Magazine / Chiron 1994 / 57
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 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 foetui 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).

A GOOD LIFE, A COUNTRY PRACTICE

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

Bill Lawrence

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 medicos 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 sister) and 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 orthopaedic surgeon, and, after all that, perhaps return to the GP for follow-up management.

Today, a possible fracture patient has to be introduced again into medicine in Australia. After a short period I began solo practice with Betty as my staff, performing venesection occasionally: sterilise the skin using methylated spirits, allow to dry, attach the leech on dorsum of the hand or cubital fossa area on a cuffed arm and some 20-30 minutes later return the leech, bledated 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 bledated 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 are 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 general medicine really is 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 for 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 accommodation, delays in getting a job for the children, and long journey home for the working partner. This is 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 breakdowns, 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.
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 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.

University of Melbourne Medical Society
and
University Alumni Association Membership

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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.

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MUSICAL MEDICOS OR MEDICAL MUSICIANS?

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.

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
Flute/Piccolo: M James Fortune**, Nicola Beamish, Cathy Fraser.
Clarinet: Jeffrey Rosenfeld**, Ian Chambers, Linda Mileskhn.
Bassoon: Andrew Court**, Michael Grounds, Patricia Taylor.
Trumpet: Rick McQueen-Thomson**, David Hunter-Smith.

(*Deputy Leader, **Section Leader)
Blessed with a restless intellect and a delightfully imaginative, Victor Syrmis was led from psychiatry to the chocolate business. A seeming- ly 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 eminent 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 UMSMS. 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. He returned to 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 birth- day 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 foils, 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 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 handed a box of a three-dimensional 'face' became a human interest story and 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.'

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 Corring 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 tranquillity 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 Bestwick

FOUNDATIONS OF CLINICAL PSYCHIATRY
Sydney Bloch & Bruce S Singh, Eds
Melbourne University Press 1994
Sbk pp 472, appendices, index
rrp A$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 Szaszler (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 diagnosis 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

CURCHILL'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 McCaughney, 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 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 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 Moran, Lord Moran, Churchill's Doctor, as the title has it; and that of course is 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 became a doctor. It is quite clear that he had the gifts of a writer - a polemical writer in the work (p59):"...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 fairmindedness. 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. stays away.

In this, O Lord, make no mistake

For my, the wretched Chairman's, sake.

A.MEN.

[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 verifying was clearly an avenue for release. It probably helped him survive without ulcers the frustrations of interminable academic meetings. It includes much from Stolne & Surrupitious 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 aside 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 gulf
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 Spinbarkeit
And savagely elutes her.

How such procedure would appal
Old Walter and Eliza Hall
Could they their 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 Granata (Australian Navy) as a participating vessel: the Granata was commissioned 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 hospital ships (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* (p168):

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 list' 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 ... (p443).

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 'Hyosine' is incorrectly spelt as 'Hyosine: An index may be created shivering fit'; and 'Hyoscine' is incorrectly listed as 'Barrett, Lt Col G.I.' (p468): 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 ... (p443).

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**


Eds Malachy Tarpey & David Topchian

As can be seen from the title, this is one of the oldest Australian journals in continuous publication 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 Bong 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 Bong 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 common-sense, 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 grunting 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 'aristic' 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 stale. I tips me lid to the editors, producers, photographers and even to the 'Security Guard, Toby the Wonder Dog'. Such a publication is definitely cheap at $80*— '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 goofy number 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 — biaionic but monochorionic. Now there's a puzzle for you.

*Harold Attwood*
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 a 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 he never met him, indeed 'had never heard of him' — and there are no diaries, no journals and few private papers. 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.'

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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, marvelously 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 they found two medical missionaries for the salary of one. Yet Edna worked every bit as hard as Ted. Edna’s tireless championing 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 diary 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 Vellure, 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 haemophilic 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 Glendinning, Clive Fitts, CJ Martin, WA Osborne (a member for 64 years), Geoff Penington, George Simpson, Robert Southby, JW Sprinngthorpe, Richard Stawell, George Syme and BT Zwar.

Anyone interested may purchase this very readable, well-illustrated book for $45 by writing to: Landscape Publications, 17 Carlyle Crescent, Mont Albert, Vic 3127.

Harold Attwood

47 / Chiron 1994 / Magazine
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, skiagrams 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, artificial 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 both were donated a colour photograph of the presentation card signed by 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 replica of those made by Antonj van Leeuwenhoek (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.

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, 1881. A 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 2.52 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 oiled-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 Leeuwenhoek (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.
MDAV was founded in 1895 by Victorian doctors to provide medical indemnity for medical practitioners in Victoria. Now in its 99th year, it is one of the oldest and largest State indemnity organisations in Australia.

By arrangement with the Faculty of Medicine, Dentistry and Health Sciences of The University of Melbourne, MDAV extended indemnity to all medical students of the Faculty throughout their undergraduate years and while working outside a recognised teaching hospital, for example, in a general practice. It also extends to cover electives throughout Australia and overseas, with the exception of USA and Canada – in many cases, MDAV can negotiate cover in those two countries, given sufficient notice of a student's intentions.

Become a student member of MDAV (at no cost) and as well as other benefits, MDAV will mail you the Association's quarterly newsletter, Defence Update.

Contact
Therese Carroll (03) 347 3900
All enquiries (24 hours) (03) 347 3900
Facsimile (03) 347 3439
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
Directors: 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