

Chapter 6

The clinical schools, the hospitals and the Faculty

David Tiller

Teaching in the hospital

Teaching and learning clinical medicine is akin to an apprenticeship, some would say a lifelong apprenticeship. Since the formation of the Faculty, there has been a requirement for the University and the Faculty to form relationships with the medical profession working in the community.

Australia had the beginnings of an excellent public health and hospital system when the Faculty was formed. It followed the Scottish university tradition of learning and teaching around patients and their illnesses in public hospitals, following a scientific introduction.

The first formal liaison between the Faculty and the health system occurred in 1882 when the Prince Alfred Hospital became the first teaching hospital of the University and Sir Alfred Roberts its unelected chief executive officer before such a term was in use.

Then, as now, tensions were noted amongst the institutions, with some jealousy between hospitals, notable especially in the early years between Sydney Hospital, the state's first and then largest hospital, and the more recent Prince Alfred Hospital (Royal was appended later – RPAH). That hospital had been built adjacent to the University (on part of the University's land grant). It allowed easy access for the students and the academic staff to clinical activities near at hand. In addition RPAH was strongly supported by Anderson Stuart who later, after Roberts' death,



The original Prince Alfred Hospital

became Chairman of the Board, very much directing the course taken by the hospital.

Sydney Hospital felt that it had been unjustly ignored and it was not until 1909 that it commenced a formal relationship with the Faculty. As a response, Roberts had tried to enlarge Sydney Hospital with money from the Prince Alfred Fund but had been thwarted by the government who

would not make extra land available. Being a teaching hospital of the University carried prestige for the institution and for those practitioners who worked in it. Consequently, there was a 'town and gown' division between the hospitals, which remained up until the last quarter of the 20th century.

The rapid increase in medical knowledge and tight University budgets then meant that there were practitioners working in the hospital system with experience and expertise who were not represented on the Faculty. At that time, the generalist was the norm in clinical practice. With the explosion of medical knowledge, sub-specialty teachers began to dominate and the generalist is now in decline, at least in the teaching hospital settings.

Clinical teaching was initially carried out by Faculty members. As the number of students increased while Faculty numbers remained relatively static, an increasing number of practitioners who had no formal University affiliation were asked to teach students. There are no written records of people refusing. It is known, however, that some were less willing than others. There were complaints, as early as 1888, that Honorary staff at RPAH were not pulling their weight. Through their Medical Association, they sought payment, but there was no funding available from the University.

The hospital practitioners continued to teach as Honoraries, although there was a brief period in the 1960s to the 1970s when the University paid an hourly rate for lectures and tutorials with money from the Australian Universities Commission. The University, always under pressure for funds, thought that there were more productive uses for the money than paying the clinical teachers. The teachers, on the other hand, believed that while the amount of money was small, it represented a recognition from the University of their efforts. When payments ceased there was much grumbling, and some declined to continue clinical teaching. The introduction of Medicare, the disappearance of the Honorary Medical Officer, and a change in attitude among many in practice contributed to heightened tensions.

The importance of those clinical teachers who were not members of the academic staff was well recognised by the Faculty. In August 1974, during David Maddison's deanship, Tom Taylor moved at a Faculty meeting that clinical titles be created, noting that it was 'time the matter was reopened'. There was general support for the proposal and a committee was established to examine the matter more closely.

Although there had been a general statement from the Faculty that all clinicians who taught medical students would be known as Clinical Tutors or Clinical Lecturers, many senior clinicians thought that such a title was beneath them. They sought a designation that would be better recognised by the public at large, rather than just by the University.



The front hall of RPAH, drawn by Richard Gye

A more formal relationship between the Faculty and its teachers arose as clinical appointments were made; since the clinical appointees were now members of the Faculty they were expected to teach. Clinical academic titles were created: Clinical Associate Professors and Clinical Professors were appointed using benchmarks and processes similar to those applying to university employees. Many clinicians immediately dropped the 'Clinical' from their title, upsetting senior staff on campus. Further tensions resulted as the positions with clinical titles were regarded by some as less prestigious than academic staff appointments.

Subsequently, the Faculty recognised the situation and increasingly established a closer relationship not only with a larger number of practitioners but also an increasing number of hospitals as the numbers of students grew, length of stay shortened, and the availability of patients diminished.

From 1972 through to 1974 there was an increasing need for teachers and hospitals where students could be taught. There was an increasing demand for clinical science to be an important part of the curriculum and the teaching load was progressively greater on both Faculty and hospital teachers. The Health Commission recognised that there was increasing pressure on the traditional teaching hospitals and in 1974 a proposal to use smaller regional hospitals was introduced.

Maddison moved to Newcastle at the end of 1974 and Richard Gye became the first full-time dean in 1975 (see Chapter 1). How the Faculty had survived so long with part-time deans says much for the dedication of both the academic and clinical staff who were engaged in the teaching of the students.

In March 1975 a committee was charged with looking at ways to 'improve the status' of the clinical teachers. It later reported that "while it appreciated their important contribution", it was "unable to recommend any means by which their status could be improved." The Faculty accepted that recommendation. At the same time, Ruthven Blackburn and Rod Shearman reminded Faculty that there was a shortage of teachers and beds in the hospitals, and that the NSW Health Commission was changing the distribution of beds without consulting the University. A new committee was formed to examine those issues. In May 1975 it was resolved that all clinical teachers should be called 'Clinical Lecturer'. The Faculty approved, but no discussion is recorded regarding any payment for them.

Wardens and Associate Deans

For many years the clinical school activities had been overseen, first by a Student Supervisor, and then by a teaching Warden. The position of Warden was formalised by the Australian Universities Commission which also provided funding to support the position. Geoffrey McDonald was the first Warden at RPAH. He resigned in 1974 and was then followed by John Burgess for almost 20 years. Burgess was paid \$5000 per annum in 1974 rising to \$18,000 in 1994, hardly a princely sum for a half-time role with responsibility for about 400 students.

The Wardens, who held a part-time University appointment, had no academic title. They were usually supported by a full-time secretary who ran the clinical rotations, bullied teachers and students alike to turn up for clinical teaching sessions, organised the audiovisual equipment and arranged clinical examinations. With the Warden, the secretary created the complicated timetable for clinical rotations and attachments, and listened to student complaints. The Warden was often a junior academic (or a retired one) or a visiting medical officer with an interest in teaching and in students. They dealt with most matters, only occasionally referring them to the Dean. Wardens and their secretaries often became well known and liked by the students; they were often invited to end of year parties or given gifts from grateful groups. Pastoral care was an important part of a Warden's tasks. As now, there were students who were short of money, had complicated personal problems or became unwell. The Wardens served as sounding boards for those issues and, because of their position in the hospital, were able to organise medical care when necessary.

Clinical schools usually saw that staff interviewed or spoke in some formal fashion to all the students when they arrived in the hospital. The undergraduate clinical teaching programs were

flexible; students and teachers usually arranged meeting times to suit the clinical responsibilities of the tutor.

By the end of the 1970s it was apparent that teaching resources were inadequate, both physical and in terms of personnel. In November 1975 a committee under the chairmanship of Ross Sheil suggested that the University and the Health Commission together examine a number of matters including outpatient services and having staff geographically full-time. They also recommended that the number of teachers be increased, that students' tutorial groups be limited to five and that total student numbers be decreased. These recommendations, supported widely across the Faculty, were indeed prescient but fell on deaf or at least unresponsive ears. The Faculty noted that the effect of Medicare could not yet be determined.

There had been discussion during the 1970s regarding the selection of students (see Chapter 2) in the teaching hospitals as well as on campus. English language competence in the hospital setting became a major and growing issue of concern into the 1980s and 1990s. In addition, the medical curriculum itself was increasingly being questioned. The six-year course had been compressed into five years in 1975 and was soon afterwards regarded as unsatisfactory. When later extended to six years in 1985, many of the concerns about communication and the educational processes still remained. The introduction of the graduate-entry medical course in 1997 allowed a different selection process to be established.



The Schlink Education Centre

Introducing the Graduate Medical Program, later the University of Sydney Medical Program (USydMP)

In contrast to changes in curricula introduced in previous years, hospital-based clinicians and administrators were involved early, both in the planning and implementation of, the USydMP. There is little doubt that this reflected the Dean, John Young's, understanding of the relationship between the University and the hospitals and health service. He was clear about the Faculty's aims and objectives in clinical settings.

In the graduate-entry program, students were to have early clinical experience; from their first week in their medical course, they would spend each Thursday

in their clinical school. This was an exciting move, and, whilst there were some hospital staff who had not supported the idea of a graduate program, most were strongly in favour of that early clinical experience.

With the commencement of the new program, clinical contact from the beginning of the program, and the early involvement of clinical school staff in planning the curriculum, a more formal structure for the clinical teaching was developed and introduced. Associate Deans were appointed at all the clinical schools to manage the new responsibilities.

In parallel with these developments at the Faculty, the NSW health system had assigned hospitals into designated groups within areas. It was logical and relatively easy to divide the clinical schools into a Central School, with Royal Prince Alfred as its centre, a Western School with Westmead as the headquarters, a Northern School with the Royal North Shore at its centre, a School in Canberra (that later became the clinical school for the new Faculty of Medicine at the Australian National University) and, a little later, a Rural School based in Dubbo.

John Stewart was appointed to the Western School, Kerry Goulston to the Northern, John Turtle accepted a temporary role at Central until Ben Freedman was appointed as Acting Associate Dean at Central (until the appointment of David Tiller). Paul Gatenby was appointed to the Canberra School and Rick McLean to the Rural School.

One consequence of the centralised curriculum structure and the designated 'hospital day' was that there was now less flexibility in the clinical teaching program in the hospitals. Staff from all clinical schools contributed, some substantially, to develop progressive and coherent clinical experiences for the students, to start from the first week. In Years 1 and 2, they learn in the clinical environment one day each week, and spend five weeks (Block 4 in Year 1, Block 9 in Year 2) entirely in the clinical setting for all their learning.



Clinical skills: resuscitation

It soon became clear, and John Young realised this, that the new course would demand more from the clinical teachers; staff development was planned and provided in the different teaching sites. As enrolments increased, the presence in the hospital of first-year students only on a Thursday and second-year students only on Tuesdays created pressures on the clinical schools. Busy clinical teachers often had limited opportunities to alter clinical responsibilities, operating theatre times, or to change scheduled activities outside the hospital. This relative rigidity has been eased recently by allocating two clinical days each week, splitting students in each year between the two allocated days.

Historical teaching hospitals of the University

The first of the hospitals to have formal associations or memoranda of understanding were:

- Royal Prince Alfred (1882)
- Sydney Hospital (1909)
- St Vincent's Hospital (1923) (later University of NSW)
- Royal North Shore (1948)
- Prince Henry Hospital (known as the Coast Hospital or the Coast Fever Hospital) served as a quarantine hospital from the 1880s onwards. (It later became a teaching hospital for the University of NSW)

These hospitals were complemented by the specialty institutions:

- The Royal Alexandra Hospital for Children (later replaced with the Children's Hospital at Westmead).
- The Royal Hospital for Women
- The Women's Hospital Crown Street
- King George V, for Obstetrics and Gynaecology
- Rozelle Hospital for Psychiatry
- Sydney Eye Hospital for Ophthalmology

From the introduction of the University of NSW medical course, St Vincent's Hospital, Prince Henry Hospital and St George Hospital became teaching hospitals for that medical Faculty.

Westmead opened in 1978 and shortly afterwards, in 1980, Nepean Hospital underwent a substantial upgrading. Academic appointments were made, funded from NSW Health, to some extent filling some of the gap left by the loss of access to St Vincent's, Prince Henry and Prince of Wales.

At this time there was an increase in the formal relationship between more of the smaller public hospitals and the University, and an increasing number of private hospitals became affiliated with the University.

Clinical Schools of the University of Sydney

Central Clinical School

Associate Dean: Craig Mellis

The Central Clinical School consists of the Royal Prince Alfred Hospital and the Repatriation General Hospital at Concord.

Royal Prince Alfred Hospital

The Central School's main campus is the Royal Prince Alfred Hospital (RPAH) adjacent to the University. With an association extending back to the formation of the Faculty, it was always strongly influenced by the close association with many of the Faculty's academic leaders. Such a strong association created some tensions between the schools. Many felt that Central, especially RPAH, by chance and geography, had an advantage. However, it needs to be remembered that the institution through its administration, with Sir Herbert Schlink as Chairman of the Board of the hospital – had considerable political power. Schlink cemented the relationship between the hospital and the University from before World War II until he relinquished his position in 1963. RPAH also taught the majority of the students.

An education centre at RPAH had been completed in 1963 with funds provided from the Commonwealth; it was aptly named after Schlink. It included a 250 seat auditorium and numerous teaching and tutorial rooms. Because the Schlink Centre was physically connected to the hospital's 'C Block', patients could be transported directly into the Centre for tutorials and examinations: another example of the hospital's commitment to teaching.

This dedication to advancing medical education has continued. With the building of new wards, the Schlink Centre had to go. A new clinical school was established in the previous emergency department with the cost largely borne by the hospital. A new 50 seat meeting and tutorial room was created with a gift of \$60,000 from the hospital's Department of Endocrinology, headed by John Turtle. It was named the John Greenaway Room, honouring an endocrinologist, physician and Honorary Medical Officer who had been a clinical teacher in the hospital for more than 35 years. A new computer facility, needed for the new medical program, was created with a gift from the department of Radiology of \$30,000 and named the Ken Sherbon Room, for a previous director of radiology who was famous for his radiological tutorials to students and graduates alike. Finally, a clinical skills area was equipped and furnished with a gift of \$15,000 from the Department of Cardiothoracic Surgery, at that time run by Brian McCaughan. It was named in memory of Douglas Baird who had been chair of the hospital board and had died suddenly of cholangiocarcinoma.



Clinical skills: resuscitation of baby

Despite the refurbishment by the hospital, the School remained short of space. As a new ward block, including 16 operating theatres, was being built, it was decided to refurbish and rebuild the old nurses' home and residents' quarters to include a new library, the Susman Library, Problem-Based Learning (PBL) rooms, and a new 220 seat auditorium. There would be new students' quarters, and a courtyard. The fountain, the centrepiece for many gatherings, would be rebuilt in the original porcelain. There was, however, a shortage of funds until the late Kerry Packer and his family donated \$10m to the project. It is of some interest that Packer, when discussing his gift with the Area's Chief Executive Officer Diana Horvath, said that the centre should be for 'all the hospital staff, not just the doctors'. This very attractive, well-equipped modern facility is now the educational centrepiece at the hospital for its entire staff.

When one reads the early history of RPAH, it is clear that research by the academic staff had always been encouraged by the hospital. It was, however, Ruthven Blackburn who accelerated the development of clinical research when he established a Clinical Research Ward in the 1950s. He received well-deserved recognition in 2006, at the age of 92, with the award of Companion in the Order of Australia. The development of the controlled trial, the rapid growth of the international pharmaceutical industry, and the development of sub-specialties in medicine, surgery and related

disciplines – accompanied by the appointment of full-time salaried staff – came together to foster a research environment.

The development of the Institutes is dealt with elsewhere (see Chapter 5), but research at the hospital has accelerated in recent years. Many have contributed to significant medical and basic research, including Tony Basten (Centenary Institute of Cancer Medicine and Cell Biology), John Turtle (Diabetes and Endocrinology). Paul Korner in Cardiology and the Heart Research Institute now directed by Philip Barter. Jim McLeod and John Pollard in Neurosciences, Pierre Beaumont in Eating Disorders, Rodney Shearman in Reproductive Endocrinology, Neil Gallagher in Gastroenterology, Martin Tattersall in the Ludwig Institute for Cancer Research and later Jim Bishop in Cancer Medicine. Ann Woolcock and her internationally recognised asthma research was seminal; the tradition is being maintained by Norbert Berend. Ross Barnetson's was the only academic Dermatology department in the country. Gerry Milton, Bill McCarthy and more recently John Thompson led the Melanoma Foundation (one of only two such specialised research units world-wide). John Harris and James May in Vascular Surgery and Ross Sheil in transplantation surgery have also contributed significant research. These activities made RPAH an exciting place in which to teach, learn and research.

Many of the departments and specialties at RPAH were intimately involved in research: John York and John Hassell in rheumatology; Douglas Joshua and John Gibson in myeloma; David Tiller, John Horvath and Geoffrey Duggin in pregnancy-related high blood pressure and analgesic-related kidney disease.



Balmain Hospital



Canterbury Hospital

More recently, the growth of research at the hospital has accelerated with the formation of new affiliated research institutes in addition to those mentioned, including the the Brain and Mind Research Institute with Max Bennett and Ian Hickie as Co-Directors. The Clinical Trials Centre, headed by John Simes and Anthony Keech, is now an internationally recognised centre for the planning and conduct of sophisticated clinical trials. The George Institute, with Robyn Norton and Stephen McMahon,

originally located at Royal North Shore Hospital, moved to the old King George V Hospital site at RPAH, and now extends the international reach of the Faculty through public health studies and clinical trials in South Asia and China.

General Superintendents, later to be called CEOs, included Edgar Thomson, who succeeded Hal Selle in 1958, Don Child, and more recently Diana Horvath. They saw an advantage to the hospital in terms of patient care and research by fostering strong links with the University. Continuing discussions with the NSW Health Department was also necessary over many years.

Early in the school's development it was decided that, as much of the Faculty's administrative support had previously been located only on the Camperdown Campus, it should be distributed across all the schools. Vigorous debate ensued. Many students wished to attend RPAH; it was close to the University's Camperdown Campus and to the residential colleges. Slowly, however, the funds were redistributed. As the other clinical schools grew and each developed its own character, students opted for them. The Central School, however, remains the largest and its association with neighbouring campus activities continues to be strong and productive.

Concord Repatriation General Hospital (CRGH) (1963)

Jim Lawrence

Sub-Dean: Bob Lusby

When the Commonwealth Department of Health passed the responsibility for the repatriation hospitals over to the states in 1992 there was some anxiety amongst all the staff at the CRGH. It was compounded when it was decided that the hospital would fall under the general direction of the Central Area Health Service that had its headquarters at RPAH.

Concord Hospital was built as an army hospital by the Australian Commonwealth Government in 1941–1942 during World War II. In 1946, after the war, it became a Repatriation General Hospital and a similar change occurred in the other Commonwealth-funded service hospitals in all the major states. Between 1948 and 1951, medical students were taught at Concord to alleviate the demands on teaching beds for the post-war influx of medical students. Subsequently, whilst students were taken to these institutions for clinical instruction by their tutors, it was not until 1963 that a formal relationship between CRGH and the University of Sydney was established. Owen Curteis as the General Superintendent encouraged this association. Murray Pheils was appointed head of the surgical professorial sub-unit in 1966, and Neil Gallagher established a professorial medical service.

During the 1960s the Department of Veterans Affairs decided to enhance the clinical facilities for managing designated veteran patients by upgrading the academic teaching hospital status of Repatriation Hospitals (by analogy with the American Veterans Affairs Hospitals). In conjunction with university medical schools, senior academic positions were created and supported financially. Teaching facilities were improved by upgrading existing buildings and clinical schools were built where necessary. Research facilities were provided and an active Veterans Affairs Research Committee distributed funding. A Clinical Sciences Building at Concord was opened in 1973, considerably expanded not only in 1978 but again twice before 1992. Two important facilitating decisions were to open a Casualty and Emergency Department and to admit community patients where there was 'spare' clinical capacity. Thus CRGH was integrated into the local community, expanding the range of patients available for student teaching.

Two professorial appointments were made: Murray Pheils in Surgery (1973) and Jim Lawrence in Medicine (1976). Beverley Raphael established a unit in Psychiatry. Additional academic support came from the appointments of Lesley Bokey, John Payne and Pierre Chapuis in Surgery,



Concord Hospital



Practising suturing

along with Ronald Walls, Norbert Berend and then Michael Field in Medicine. Bokey and Field subsequently made significant contributions to the evolution of the school.

Tony Broe, as head of Aged Care Services, established active clinical and research units, providing national leadership in this area. Other major academic staff contributors included Peter Thursby (Surgery), Christopher Tennant and Gordon Johnston (Psychiatry) and Garth Nicholson (Neurogenetics).

The clinical and teaching momentum generated was enhanced by collaboration with enthusiastic Staff Specialists and some appointed Voluntary Medical Officers. During the late 1970s and the 1980s Concord developed a very strong reputation for teaching both undergraduates and vocational postgraduates, attributable to the cooperative enthusiasm of the staff and administrators in the clinical school and hospital. For a period it was the most popular undergraduate teaching school, as shown by selection preferences, and academic results reflected the students' enthusiasm. The hospital also became firmly entrenched in local patterns of medical practice. Active continuing vocational education programs were run for local practitioners by hospital consultants, utilising the modern educational resources and expertise available.

In parallel with the clinical evolution, the research potential of Concord grew steadily. Outstanding areas included a series of landmark studies in bowel cancer, ageing, aged care and dementia, survival factors in veterans, renal physiology, neurogenetics, the care of burns, calcium metabolism and bone disease, immunology, psychological response to disasters, and drug therapy in psychiatry (see the ANZAC Institute, Chapter 5).



Clinical skills: venepuncture

In 1992 the Commonwealth negotiated transfer of responsibility for CRGH to the NSW Health Department and the hospital was incorporated into the Central Area Health Service administered from Royal Prince Alfred Hospital. John Turtle, who had been acting as Associate Dean (Central), was succeeded by Ben Freedman in 1996 with David Tiller as Associate Dean (RPAH) 1997–1999, later becoming Associate Dean (Central). In 2000, while Freedman was away on sabbatical leave, Bob Lusby was appointed Sub-Dean (Concord) and has continued in that position with distinction. During this period of restructuring the curriculum, together with administrative and functional reorganisation, CRGH and RPAH students shared programs and facilities, but were primarily allocated to one of the two hospitals.

When the new graduate-entry teaching program was established, Concord was also given some shared responsibility for Canterbury Hospital. Of the roughly 400 medical students in the four years of the new program at the Central Clinical School, some 40% to 45% were primarily allocated to Concord. The teaching staff at Concord responded effectively and with enthusiasm to the new graduate program.

No discussion of the Concord Clinical School would be appropriate without reference to the devoted and respected staff who have been responsible for organising and implementing the teaching. Val Peters, who was appointed in 1989, and her team of assistants, have been outstanding in their support for both students and staff. They are highly regarded for their devoted and

profoundly stabilising pastoral care and leadership. Supporting them among the clinical and academic staff have been numerous others over the years, but in particular Stan Koorey and Oliver Peiris ('Stan and Ollie') as Wardens and Supervisors. More recently Emily Hibbert and Pierre Chapuis have been crucial figures. They have had strong support from Lusby, Field, Freedman, Lawrence, Bokey and Johnston.

Concord, like the other clinical schools, has also been very popular for clinical assignments among a steady stream of international medical students, whose fees contribute significantly to the support of our ongoing educational facilities.

It was widely perceived that Jim Lawrence and his collaborators had firmly established the credentials of Concord as a teaching hospital. Ben Freedman was appointed in 1995. Jim Lawrence was replaced by Michael Field in 1997 who was, in turn, replaced by Stephen Clarke in 2005.

In addition there has been an impressive active rebuilding program, upgrading and modernising the whole hospital, which has included greatly improved facilities for student teaching. Thus, in 2005, Concord is a significant component of the Central Clinical School of the Faculty of Medicine at the University of Sydney, strategically placed to serve both its local community and the Central Clinical School.

Northern Clinical School

Michael Field

Associate Dean: Michael Field

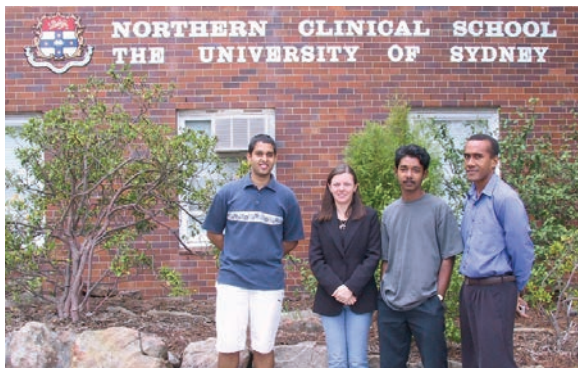
Royal North Shore Hospital (RNSH) was officially launched as a teaching hospital of the University of Sydney in 1948. Under the overall direction of General Medical Superintendent Wallace Freeborn, the clinical school developed in parallel with the expansion of the hospital, with the appointment of registrars and a range of talented young specialists. The first Student Supervisor was R G Epps, and he was followed by a sequence of enthusiastic and capable Wardens, notably Gaston Bauer and Richard O'Reilly in the 1980s and early 1990s. Strong academic departments were established in Medicine, Surgery, Orthopaedic and Traumatic Surgery, Obstetrics and Gynaecology, and Psychiatry, under such distinguished Chairs as Douglas Piper, Thomas Reeve, Tom Taylor, Douglas Saunders and Chris Tennant.

While always a popular and successful site for student placement, a new era in the development of the teaching role of RNSH and associated hospitals came in 1993. The Dean, John Young, appointed Kerry Goulston as Associate Dean and head of the newly formed Northern Clinical School.

Goulston expanded the sites used for teaching to include all of the district and private hospitals in the Northern Sydney Area Health Service. Not only did this step provide new opportunities for student learning, but it also enabled the University to embrace teachers in these hospitals, particularly Hornsby and Manly Hospitals, where students in all years of the course were regularly tutored. A strong relationship was also developed with the North Shore Private Hospital and Ramsay Health Care when that hospital was built in the RNSH grounds. All of these hospitals were granted full teaching hospital status by the University of Sydney, a move which greatly facilitated the implementation of the new Graduate Medical Program at Northern.

The Northern Clinical School also led the way in the development of specialised skills teaching facilities, with the creation of the Northern Clinical Skills Centre and the Sydney Medical Simulation Centre, the latter in conjunction with the Department of Anaesthetics and Pain Management. A unique initiative was the engagement of actors to help students and junior doctors learn communication skills, an activity that became formalised as the Pam McLean Cancer Communication Centre, under the directorship of Stewart Dunn (see Chapter 3). All of these facilities were greatly appreciated by students, and were to some extent emulated in the other schools.

Research also flourished during this period. The appointment of Rob Baxter as the Director of the Kolling Institute, and the subsequent reinvigoration of the Kolling Institute, provided a focus around which many other research groups flourished, (see Chapters 4 and 5). The Raymond Purves Laboratory and the Sutton Arthritis Laboratory joined under the Institute for Bone and Joint Research, while the Pain Management and Research Centre (later Institute) expanded its clinical, education and research profile under the leadership of Michael Cousins. At the Royal Rehabilitation Centre Sydney in Ryde, the Rehabilitation Studies Unit under Ian Cameron, and the Centre for Developmental Disability Studies under Trevor Parmenter, further expanded the range of clinical education and research activities located within the Northern Clinical School. A professional approach to commercialisation of research was initiated with the formation of BioMedNorth, under the leadership of Carol Pollock, who was also appointed as Research Chair



Fijian visitors outside the Northern Clinical School

for Northern Sydney Area Health Service. The number of postgraduate research students increased dramatically, with over 90 PhD and master's students currently enrolled for degrees on the site.

The Northern Clinical School was also the focus for the development of strong international links in clinical education and training. In particular, ties between the Northern Clinical

School and Hanoi Medical University were initiated and subsequently expanded to include other hospitals and universities in Hue, Danang and Ho Chi Minh City. Bruce Robinson formed Hoc Mai, the Australia Vietnam Medical Foundation of the University of Sydney, which is administered at RNSH.

The Northern Clinical School has provided a mechanism for close working relationships to develop between the Faculty of Medicine and the NSW Health Service, particularly following the appointment of several University academics as heads of the Clinical Divisions within Royal North Shore Hospital in the 1990s. Leigh Delbridge led the Division of Surgery, Bruce Robinson, the Division of Medicine and Greg Knoblanche, the Division of Critical Care. These appointments further strengthened the development of RNSH as an academic institution of the University of Sydney, and have assisted in the recruitment of key academics to many clinical disciplines within each of the divisions.

In 2006 the Northern Clinical School looks forward to contributing to the next phase in the evolution of the University presence in the health facilities of the North Shore, particularly with the plans for the extensive redevelopment of RNSH and other hospitals in the Northern Sydney Area Health Service. It is clear that high quality education and research are well established in the ethos of medical care in this part of Sydney.

Western Clinical School

Peter Castaldi, Michael Peek, John Uther
Associate Dean: John Uther

Westmead Campus

Westmead was first projected in 1968 as a health care centre to serve the expanding western suburbs of Sydney and to meet the clinical teaching and research needs of the University of Sydney. Westmead was the first facility in New South Wales built as a teaching hospital since the Royal Prince Alfred Hospital. The late John Read and John Lowenthal provided the major impetus for this development of the campus which led to its opening in 1978. When completed it was planned to have 1100 beds, but the cost pressures in health prevented these final numbers being achieved.

The staff of the University were extensively involved in the planning. The compilation of the primary brief was completed by John Read in October 1970. Bruce Williams, Vice-Chancellor of the University at that time, chaired the Westmead Hospital Project Committee. John Loewenthal was also a member, working tirelessly behind the scenes on the University's behalf. David Maddison, Charles Kerr and later Richard Gye, Dean of the Faculty of Medicine, represented the University on the Planning and Development Committee and guided early recruitment, ensuring talented academic leadership in all the clinical departments. Fourteen professors and



Clinical skills

numerous other Faculty members were involved in planning committees. The administrative head was Bernie Amos, General Superintendent, who strongly supported the development of the School.

From the outset, the planners projected extensive research and teaching requirements. The Institute of Clinical Pathology and Medical Research was redeveloped at the site. It became a state-wide pathology service, providing facilities for the training of medical, scientific, dental and paramedical students. The Australian Medical Association's medical library was moved to

the site, and lecture theatres and tutorial rooms were incorporated. Accommodation was provided for 60 students on clinical attachment to the hospital. The Australian Universities Commission provided a capital grant of \$6.7m during the 1976–78 and 1979–81 triennial funding for these facilities, and a further grant later supported the Westmead Dental School.

The hospital officially opened and admitted its first patient on 10 November 1978. There were nominally 925 beds when commissioning was completed. The first students from the Faculty of Medicine at the University of Sydney in Years 3, 4 and 5 of the five-year curriculum first arrived in small numbers in 1979, attached initially to Community Medicine, Paediatrics, and Obstetrics and Gynaecology. About 35 students graduated yearly for the next four years. With the re-institution of the six-year curriculum, the number graduating from Westmead rose to about 50 students per year.

Elizabeth Linley was the first student administrator in 1983. Jeanie Hansen was appointed in February 1987 and was a great 'mother' to the students until she retired in December 2003 from her Clinical School Executive Officer position. She was ably supported in the earlier years by Lettie Wilson. Karen Garlan (Education Support Officer in the Clinical School since 2001) is the current Executive Officer, appointed in 2004.

Miles Little was the first appointed Sub-Dean in 1980, followed by Ernest Finckh (Pathology, Director of the Institute of Clinical Pathological Medical Research) in 1986, Roger Houghton (Obstetrics and Gynaecology) in 1989, Peter Castaldi (Medicine) in 1992 and Nick Manolios (Rheumatology) from 1995 to 2001. James Gibson (Obstetrics and Gynaecology) was appointed the first and only Warden of the Clinical School from 1986 to 1991.

In 1992, with the planned introduction of the four-year Graduate Medical Program, John Stewart, the Director of Renal Medicine at Westmead since 1979, was appointed to the new position of Associate Dean of the Western Clinical School. The Nepean Hospital (see below) was being upgraded to a university teaching hospital, and he was to be based at Nepean Hospital



Clinical skills

to facilitate the development of teaching and research in the Nepean Hospital and to lead the conversion of Nepean from a community hospital to a fully-fledged university teaching hospital. He was primarily responsible for academic development at both Nepean and Westmead hospitals, changing the teaching culture of both hospitals from the traditional to the new problem-based learning. He trained and encouraged the clinical staff in the techniques of this educational philosophy. With his main presence at Nepean and his high personal profile at Westmead, he was very successful in achieving both these objectives at both the Nepean and Westmead campuses of the clinical school.

John Stewart resigned at the end of 1996 and there was difficulty finding a replacement. John Fletcher (Vascular Surgery) and Peter Castaldi acted until July 1998, when Sirus Naraqı was appointed. He was a deeply religious man and a great teacher who saw the importance of helping people in less well off communities, a philosophy that had taken him and his family to New Guinea. His new role represented no simple task, and he filled it with distinction. He encouraged the students in the clinical school to consider taking their required eight-week elective term in third-world communities in Oceania, Asia and Africa, and arranged scholarships to assist them to travel to these communities. He also provided travel scholarships, which continue, for medical students from Papua-New Guinea to attend the Western Clinical School.

Behind all these activities was a strong academic Faculty. Peter Castaldi in Medicine, later to become Chair of the Board of the Hospital and the Area Health Service, as well as Miles Little in Surgery, gathered around them strong academic teams. Clinical care, teaching, and research (through the Millennium Institute) flourished.



Clinical skills

With the growth of research at both Nepean and Westmead, and the increasing size and organisational complexity of the four-year Medical Program as the students advanced through it, the Faculty decided in 2001 that the Western Clinical School should be divided into two campuses. Sirus Naraqı would continue to head Nepean Campus and a second Associate Dean was to be appointed at the Westmead Campus. John Uther (Chair of the Hospital's Division of Medicine 1990–1998) was appointed in September 2001.

Sirus Naraqi was forced to retire due to incapacity following cardiac surgery in 2003; he died in 2004. He was followed at the Nepean Campus by Michael Peek (Obstetrics and Gynaecology, Nepean).

Nepean Hospital at Penrith

Associate Dean: Michael Peek

In response to the rapid growth in the western areas of the Sydney Basin, considerable state funds were made available for the development of this large community hospital. Nepean Hospital was announced as a teaching hospital of the University of Sydney in April 1990. Roger Houghton (Obstetrics) was involved in the development both of Westmead and the new Nepean school. Two academic chairs were quickly established with the appointments of David Ellwood in Obstetrics and Gynaecology, and Phillip Boyce in Psychiatry.

The Australian Government's commitment of \$100m to the rebuilding program over the next decade provided new wards, lecture theatre, and other student teaching facilities.

When appointed as Associate Dean, John Stewart based himself at the Nepean Campus and travelled regularly to Westmead Hospital. As there was no University funding available for further appointments, subsequent positions were funded by the Wentworth Area Health Service: Chris Martin in Surgery, Nick Talley in Medicine, Jim Wiley in Haematology, Tony McLean in Critical Care and Drew Fitzpatrick in Cardiology. Other services followed: a Cancer Centre, and Drug and Alcohol Services. Soon after his appointment John Stewart established the Western Area Health Service Ethics Committee and a Scientific Advisory Panel to encourage research. The first Sub-Dean of Research (Jim Wiley) was also appointed.

A further innovative idea was to appoint in 1997 a Sub-Dean of Education and coordinators for each year of the program, to help distribute the growing workload and demands. The undergraduate and graduate programs overlapped for three years proving a considerable challenge for the Nepean Campus. The first intake numbered only 16 students. Nepean was the first campus to employ a clinical nurse instructor to tutor students in procedural medicine, a very successful initiative. The campus has been a popular destination for both local and international medical students as it offers a high patient-student ratio and a popular 'jumping-off' point for students attending the rural clinical schools. The friendly, smaller and informal atmosphere of Nepean Campus has proved very popular with students who bond closely with their peers, tutors and staff.

Following the resignation of John Stewart in 1996, Peter Castaldi returned from retirement and stepped in as Acting Associate Dean for the next 18 months until the appointment in 1998 of Sirus Naraqi to the Westmead position. Later, in acknowledgement of the demands of the program and

needs of each campus, the University agreed to the appointment of John Uther as Associate Dean at Westmead in 2001, while Sirius Naraqı filled the position at Nepean.

After Sirius Naraqı's untimely death in 2004, Michael Peek, Head of Women and Children's Health, was appointed as Associate Dean at Nepean in 2003. Further academic and clinical staff have since been appointed to meet the growing demands of the program with approximately 40 students scheduled to arrive in Year 1 in 2006. At present there is a University-funded Chair of Paediatrics, Ralph Nanan, a new Head of Medicine Jack Wall, and a new appointee in Psychological Medicine Vladan Starcevic. The year 2006 will see further growth, with four new senior lecturer positions funded by the University to be taken up and new laboratories to be built.

Children's Hospital at Westmead (previously the Royal Alexandra Hospital for Children)

Kathryn North and Kim Oates
Associate Dean: Kathryn North

The Children's Hospital at Westmead is Australia's leading paediatric hospital treating annually more than 25,000 inpatients and over 500,000 outpatients. The University of Sydney discipline of Paediatrics is an integral part of the Children's Hospital, resulting in joint research and teaching programs, and a unique ability to combine hi-tech, state-of-the-art medicine, with a compassionate, caring approach, individualised for each child and family.

The Children's Hospital at Westmead developed from the Sydney Hospital for Sick Children at Glebe, 125 years ago. In 1904 the hospital was redeveloped on a new site in Pyrmont Bridge Road, Camperdown, and was renamed the Royal Alexandra Hospital for Children, still its legal and official title. In 1995, the hospital moved to a new site at Westmead, adjacent to but separate from Westmead Hospital. The decision to move the hospital recognised the fact that the epicentre of the paediatric population had moved beyond Parramatta; the move to Westmead has located the hospital closest to 70% of the state's children.

The Children's Hospital celebrated its 125th anniversary in 2005

In 1880, the hospital employed 6 nurses and 4 doctors, compared with almost 600 nurses and 400 doctors today.

In 1925, there were 7578 admissions compared with nearly 26,000 in 2003

In 1925, the average stay for a child in hospital was 14 days and today it is just 3 days

In 1925, the ratio of deaths to discharges was 5.31%, and today it is less than 0.36%.

The first university Department of Paediatrics in Australia was established at the University of Sydney when the initial Chair of Paediatrics was based at the Royal Alexandra Hospital for Children in 1950.



The original Royal Alexandra Hospital for Children, Camperdown

In 1948 the Commonwealth Government funded an Institute of Child Health, enabling the appointment of a Professor of Child Health to teach paediatrics at the University and the Hospital. The first, Lorimer Dods, 1949–1960, was a legendary teacher, much loved and appreciated by the thousands of medical students during his time, when almost all undergraduate paediatric teaching was centred around the Children's Hospital at Camperdown – known as 'Kids'. Until the University of New South Wales Medical School opened in 1961, the Children's Hospital was the only place in the state for paediatric training.

Teaching

All medical students at the University of Sydney received their paediatric training at The Children's Hospital, until the period of 1980 to 1995 when a Chair of Paediatrics was established at Westmead Hospital. During that time, about 20% of students had their training at Westmead Hospital, although there was a common curriculum and examination process. When The Children's Hospital was relocated to Westmead, the paediatric unit at Westmead Hospital merged with The Children's Hospital so that once again all University of Sydney medical students receive their paediatric training at one place, in the new site.



With the introduction of the Graduate Medical Program and the Rural Clinical School, paediatric teaching for the University of Sydney is now carried out across a variety of sites, with the Children's Hospital at Westmead serving as a major resource to all clinical schools. Thousands of graduates of the University of Sydney recall with affection their 'Kid's term' at Camperdown, a much gentler, supportive, interactive and more pleasant environment than the 'adult' hospitals, and the

Children's Hospital at Westmead continues this tradition. Students felt (and continue to feel) that they were useful as they interacted with children and their parents.

Research

The University Department of Paediatrics and the Children's Hospital have a strong research record dating back to the initial description of cystic fibrosis by Margaret Harper in 1937 and Norman Gregg's identification of German measles as a cause of congenital deformities in 1941.

The commitment to research is enshrined in the vision of the hospital:

Better health for children

Excellence in child health care



There are now approximately 200 members of the research team at the hospital, with many national and international collaborators. The Children's Hospital at Westmead houses the National Centre for Immunisation Research, the Centre for Kidney Research and the Australian Paediatric Surveillance Unit, as well as major research groups in oncology, neurogenetics, orthopaedics, clinical and molecular genetics, endocrinology, gastroenterology, immunology and infectious disease, and obesity. Recent exciting initiatives include the establishment of a Gene Therapy Unit and the development of Australia's first Gene Vector Laboratory (a leading step in gene therapy), and the establishment of a tumour bank to facilitate cancer research.

As a direct result of past research, there have been significant advances by the hospital in the development of treatments, cures and the prevention of childhood diseases. In 2005, a new research facility was completed – effectively doubling available space for research and incorporating the Westfield Gene and Cell Medicine Facility (a gene therapy initiative) and a new transgenic animal facility for the study of animal models of disease.

The Canberra Clinical School

Paul Gatenby

Founding Clinical Associate Dean: Paul Gatenby

Current Clinical Associate Dean: David Ellwood

The establishment of a medical school in the Australian Capital Territory had been considered for some time. The first application from the Australian National University to run a medical school was knocked back in the 1970s when Newcastle was founded. In the 1980s, Bill Doe, a Queensland graduate, had encouraged students from the University of Queensland to spend some time at the Royal Canberra Hospital and this strategy later included Sydney students when the Commonwealth introduced compulsory rural rotations. Students would spend four weeks at the then Woden Valley Hospital and four weeks in a practice in one of the small towns in surrounding NSW. In the early 1990s, a number of people raised once again the possibility of there being a full medical school in Canberra associated with the Australian National University. There was both resistance to, and enthusiasm for, developing a new medical school. The Commonwealth was not supportive and suggested a clinical school in association with an existing medical school.

It is not clear how the idea of the University of Sydney's development of a Canberra Clinical School arose; it may reflect a productive association between Bill Doe and John Young, both University of Queensland graduates. It was supported by the ACT Government. At this time there was also increasing enthusiasm for more students to be trained away from the city campuses and, in addition, the graduate-entry program was being developed. Whatever the final motivation, the Canberra Clinical School became a reality and Paul Gatenby became the first Associate Dean in March 1994.

Prior to that, a memorandum of understanding was drawn up between the ACT Government and the University of Sydney. Funds were provided by the ACT Government. It appears that Kate Carnell, Minister for Health in the ACT, and Michael Wooldridge, Minister for Health and Ageing for the Commonwealth, were active supporters of the proposal and it went ahead with enthusiasm.

There was some discussion: would students who had enrolled in the University of Sydney degree be happy to go to Canberra for substantial periods of their third and fourth years? The medical staff



The Canberra Clinical School, now a teaching hospital for the Australian National University's medical program, photographed by a Sydney student

were enthusiastic and with Gatenby's drive the school prospered. Indeed the clinical school has always been very highly rated by the students – many of whom, now as graduates, live and work in Canberra and the region.

Particularly popular were the relatively small numbers, good facilities, the opportunity to live in, with access to emergencies at all hours and the ready access to the rural areas nearby. The school is now ending its association with the University of Sydney and a new Faculty of Medicine at the Australian National University has been established with Paul Gatenby as its first Dean. The last of the Sydney program graduates will complete their course in 2006.

Rural outreach

Over many years, graduates from the University of Sydney have served rural communities with dedication and skill. Now with its rural campuses, the Faculty has an impact well outside of metropolitan Sydney. Students are exposed to rural life, and the delivery of health care outside of urban environments.

This impact of the Faculty of Medicine in rural NSW is at once both easy and difficult to measure. The presence of the University of Sydney facility provides some tangible outcomes to the rural communities. Some members of the Faculty of Medicine add to the provision of local health care, spending a number of days per week serving in the local hospital. Others concentrate on researching local health care issues, ensuring that the needs of rural and remote communities are on the national health agenda.

Rural placements are now mandatory (a minimum of four weeks for all students). Through those placements, our students are exposed to the specific needs of rural and remote communities. After a rural placement, sometimes for a few weeks but often longer, some students are deciding that rural practice is their primary choice, making a valuable contribution to the ranks of rural doctors. While on placement our students also contribute to the social, cultural and sporting life of the community. They encourage younger school students to contemplate a career in medicine, especially amongst the Indigenous population.

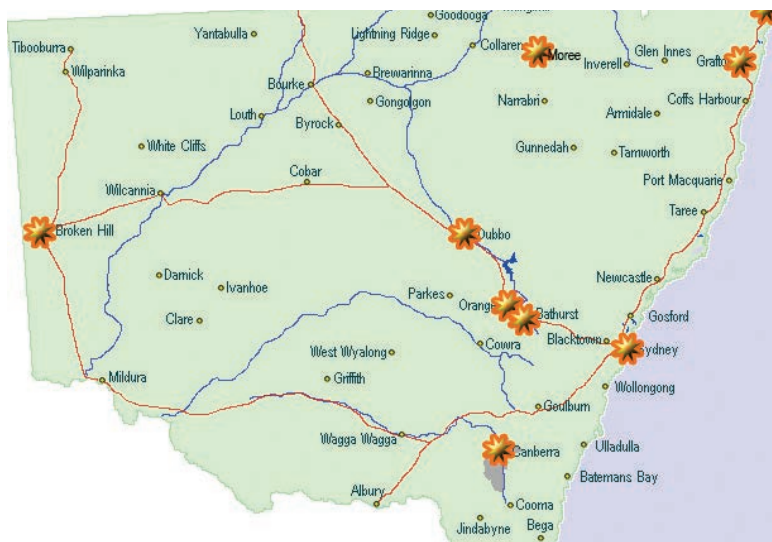
For rural and remote communities more familiar with farewelling businesses, educational institutions and other facilities, the presence of the University of Sydney provides a real physical, educational and social presence that cannot be underestimated. Local school children, who may otherwise find the notion of a university alienating and distant, begin to see universities and university professors as a normal part of the local community.

School of Rural Health

Rick McLean

Associate Dean: Joe Canalese

At the same time as there was an impetus to establish the Canberra School, Michael Wooldridge (Minister for Health) and the Commonwealth Health Department held discussions with universities and deans of medical schools. Concerned about the maldistribution of the medical workforce, Wooldridge decided to embark on a program to encourage more doctors to undertake practice in the rural and remote areas of Australia.



Map of NSW showing the locations of the School of Rural Health in Dubbo and the University Departments of Rural Health



School of Rural Health, Orange

The program was established and expressions of interest were sought from all the faculties of medicine in Australia – to establish rural schools that would expose medical students to life and practice in a rural setting. There were some data to indicate that current rural doctors had a rural background or association; they had been to school or had families in the bush and so it was thought that training for substantial periods in rural settings would encourage graduates to pursue a career away from the large cities.

The Faculty embraced the idea and a rural school was envisaged. There was considerable discussion. At first it was thought that Broken Hill would be an appropriate site for the headquarters of such a school, but its remoteness and the small local medical community militated against this proposition. There was a push for the school to be established around Lismore where the Northern Clinical School had established a strong association. The Commonwealth, however, considered that it was not sufficiently rural, and would not support a full school.

Finally it was decided that Dubbo would be the centre of the Rural Clinical School. Geographically it made sense, being 400km from Sydney. With at least three commercial flights to and from Sydney each day, a rail and road hub, a growing population of about 35,000 people, a good base hospital and a strong medical community, it served an area extending to Bourke and beyond; all the smaller local towns used Dubbo as a referral hospital.



Clinical skills lab, Orange

Links were made to Orange, 160km south east, which had an even stronger medical community and a population of about 30,000. A new base hospital was being planned, the Bloomfield Psychiatric Facility was nearby (6km out of town) and served most of rural NSW. When the school was founded the University had a substantial presence in Orange, with courses in pharmacy, agriculture and nursing. These faculties became a part of the Charles Sturt University in 2004. Bathurst, 50km from Orange and of a similar size, with a strong doctor base, was included and there were also plans to redevelop the hospital. There had also been a traditional medical link with many



A tutorial in Dubbo; note the videoconferencing facilities

of the large Sydney hospitals and with Dubbo as well as the other towns.

Sydney's bid was successful; Rick McLean was appointed as Associate Dean with the task of developing the physical facilities and establishing the medical curriculum. He was aided by Bob North, a long time resident surgeon in Dubbo who became the sub-dean. Bruce Harris, who had been in general practice for some years in western NSW, and an increasing and willing group of part-

time and visiting medical staff, were also included. A new building program was commenced to house administration, a teaching block and accommodation for 25 students. A similar program was commenced in Orange with demountable buildings as a new base hospital was planned. In Bathurst, the old nurses' home was refurbished to provide accommodation for students. These initiatives required an expenditure of about \$7m over 18 months.

Whilst the development was going on, the students kept coming. Because of the enthusiasm of the staff, the pleasant surroundings and the interesting social life combined with sound teaching, students were seeking to return.

These developments in rural areas continue: the Commonwealth's requirement that 25% of all medical students must spend at least one year of their clinical training and learning time in a rural setting seems to be working, fuelled by the enthusiasm on the part of the students and the staff.

University Departments of Rural Health (UDRH)

Northern Rivers University Department of Rural Health – Lismore

John Beard

The Northern Rivers University Department of Rural Health (NRUDRH) has a considerable impact upon its local communities through the provision of intellectual, human and material resources. When these resources are applied in partnerships with local health professionals, more stimulating rigorous and sustainable health services are supported translating ultimately into improved community health outcomes.

Since its inception, the NRUDRH has doubled the numbers of students undertaking placements in the region. Supporting local clinicians as student preceptors, the coordination of placement programs and accommodation have all been important strategies to achieve this end. The impacts

have been both immediate and longer-term. For instance, an immediate impact has been health science student participation in high school career days to encourage local youth into health careers, while a longer-term impact has been the return of some students as junior clinicians. These impacts add to the current and future capacity of local health services. In workforce planning the NRUDRH is collaborating with senior staff in the North Coast Area Health Service on the modelling of demographic and workforce patterns. This work will ensure that longer term recruitment and retention strategies can be targeted to those areas where there will be future demand.

For the current health workforce, the NRUDRH provides important infrastructure and an accessible academic network. This leads to job enrichment and an evidence base to practice. The regular 'open house' seminar series has both clinical and academic participants across a range of primary health care topics, and these are videoconferenced across the Northern Rivers region as well as to Moree and Broken Hill. These videoconference facilities are also used regularly to link the Grand Rounds of the Royal North Shore Hospital to clinicians in medium size health units, such as at Murwillumbah. This year the NRUDRH has facilitated three conferences that have dealt with issues of local and wider importance: these were on gerontology, the future health workforce and also the practices and challenges of health partnerships. The impact of these conferences has been to raise the profile of the skills of regional staff, as they have engaged – as local experts – in dialogue with expertise that has been brought in from outside the region.

Close University and local health service partnership has led to the conduct of relevant applied research that is immediately improving health service design, such as through the evaluation of a drug treatment court diversion program, a shared care model of Aboriginal mental health and also Aboriginal diabetes prevention. Other projects are demonstrating how world class relevant research can be conducted from a rural location, such as the mapping of illness events to small areas using geographic information systems, the long-term outcomes of melanoma care, and the predictors of mental health and wellbeing in rural communities.

Broken Hill University Department of Rural Health – Broken Hill

David Lyle

The Faculty of Medicine manages an academic campus in Broken Hill – the Broken Hill University Department of Rural Health.

Broken Hill is a community of 20,000 people located in a remote semi-arid region of NSW, 1100 km west of Sydney. It is a self-reliant city, renowned for its mining, tourism and artistic community. Broken Hill has had to transform itself in recent times, drawing on its proud traditions, to deal with demographic and economic declines that have impacted on much of rural Australia since the 1970s.

The Broken Hill Department commenced operation in 1997, the first of 10 multidisciplinary academic departments to be established in rural Australia, as part of an Australian Government initiative to deal with the rural health workforce crisis.

The Department has made a significant contribution to the training of health professionals in Broken Hill and the region: Aboriginal people complete a Diploma of Indigenous Primary Health Care while working in their communities to become qualified primary health care workers; medical, nursing and allied health students undertake rural attachments in the region under the academic guidance of the Broken Hill Department; and existing health staff are offered access to University facilities including library and IT services to support their post-graduate study and ongoing professional development.

The Department works closely with local health service organisations, such as the Royal Flying Doctor Service, Greater Western Area Health Service, and Maari Ma Health Aboriginal Corporation to research, evaluate and develop effective health services that meet the specific needs of Aboriginal people in the region and of isolated communities.

The Broken Hill campus contributes substantially to the local economy. From the investment of several million dollars in infrastructure development, from fostering new jobs, to attracting students and professional staff on academic business to the city, the Department adds to the vitality of the community. The Department participates in community life in other ways too: contributing to peak community bodies focusing on social and economic development, as well as important



The University Department of Rural Health in Broken Hill



Sunset at the Sculptures in Broken Hill

community development work, such as sponsoring local clubs and taking a team of young people from two remote communities near Broken Hill to Sydney each year to participate in the Sun Herald City-to-Surf Fun Run.

In just under a decade the Faculty of Medicine has been able to establish itself as a productive and valued part of the local Broken Hill community and region, contributing through its teaching, research and service work.

The Australian Centre for Agricultural Health and Safety – Moree

On average, one child under 16 years is fatally injured on an Australian farm every 10 days and many more are hospitalised or treated by rural GPs. This grim statistic is worse for adults, with one person meeting death or injury every three days. The mission of the Australian Centre for Agricultural Health and Safety (ACAHS), Moree, is to make a positive impact on these statistics by identifying the health and safety needs of agricultural workers and developing programs to reduce the risk.

The Australian Centre for Agricultural Health and Safety has come a long way. It was created in the 1980s from the enthusiasm of the centre's current director, Lyn Fragar, and the Chief

Executive Officer of the local health service. ACAHS joined the University of Sydney in late 1999 as part of the School of Public Health, and with almost 20 years of work behind the team, the centre is nationally and internationally recognised for playing a leading role in research, translation and program development relevant to the health and safety of workers in agricultural production.

The driving force behind the work of ACAHS is the National Farm Injury Data Centre. Data collected here on agricultural accidents provide the foundation for all of the activities of the ACAHS, giving basis and evidence for ongoing and future research activities. An important grant in recent years has enabled the Centre to undertake the National Child Safety on Farms Project which aims to identify and address the causes of death and injury on farms of children from birth to 15 years.

Joint ventures have resulted in research being undertaken into the health and safety of specific populations, including Aboriginal and Torres Strait Islander fishing and farm workers, older farmers, and ongoing work with child safety. Additional research is also investigating the health and safety risks associated with the use of all-terrain vehicles, farm machinery, and activities conducted in farm workshops. Research and resource development has also been conducted to address the particular health and safety concerns of those working in cotton, horticulture, beef, sheep and wool, dairy, sugar cane, grains, poultry and wine production.

The Centre's unique relationship with industry and other relevant organisations provided the opportunity to secure funding from WorkCover NSW to administer the three-year Small Business Premium Discount Scheme for cotton growers in NSW. Participants in the scheme were provided with education and support to assist them in meeting occupational health and safety requirements thereby providing eligible growers a reduction in their worker's compensation premiums.



John Beard (Northern Rivers), Lyn Fragar (Moree) and David Lyle (Broken Hill)

Other programs funded by WorkCover NSW were the Rollover Protective Structure (ROPS) and Shear Safety Rebate schemes which saw the uptake of a \$200 rebate by over 10,000 eligible applicants for the installation of Australian Standards approved ROPS on tractors, and over 4000 applications granted for the \$60 Shear Safety rebate for fitting a safety mechanism in a shearing handpiece.

The Centre has also worked with various Australian universities; one of the highlights being the seminars presented to medical students and registrars on injury prevention, epidemiology of farm injury, rural demography and economy, social structures of rural communities and agricultural health and safety. The Centre also facilitates farm visits, introducing students to a local farm environment with the view of providing sensitisation to common farm hazards and risks. Significant progress has also been made towards providing this information online.

Postscript: Sydney Hospital

David Tiller

Many are sad that Sydney Hospital is now no longer a general teaching hospital; in its heyday it was highly regarded by students and Resident Medical Officers. Those who trained there still report a unique sense of commitment, excitement and support. The institution, however, has changed its role. It has become the home of the University's Department of Ophthalmology and the Eye Institute under the direction of Frank Billson. It continues to fulfill a key teaching role for students learning about eye health and disease, and is a centre for postgraduate training. The Institute maintains strong research from basic to clinical and applied. Staff also provide clinical, educational and postgraduate outreach activities in rural and remote Australia and particularly in Bangladesh. The Central Clinical School has been fortunate to have this association, although the resources of the Department of Ophthalmology are not always utilised to the maximum.

Sydney Hospital houses other medical services; they are, however, less relevant to basic medical education because of their more specialised orientation.

Conclusion

The creation and continuing development of the dispersed clinical schools has required the close cooperation of University, the Faculty and various health authorities ranging from Commonwealth government, state departments of health, hospitals and area health services. The experiment has been successful: the University of Sydney Medical Program is flourishing in teaching, research and in providing a wide range of high quality medical services. Its strength draws on the skills of a range of professionals in a wide range of different locations. The 120 hospitals and more than 1500 teachers involved have contributed their time and energy. It is expected that the quality of the medical graduates will repay these efforts. Early reviews of the graduates from the new program suggest that the changes in the program and the range of opportunities now available for students is making a difference in their choices of type of practice, location and contributions to research.

A particular challenge lies not only in identifying, but also supporting, the future clinician-scientists. Some, with strong undergraduate research experience and commitment, can readily be

identified at the time of enrolment in the Faculty. They can be and have been offered opportunities to enhance their research expertise while medical students, including undertaking intercalated research degrees. Others will develop a commitment to research as they progress through postgraduate hospital posts or later in specialist training. Those with an early commitment to combining clinical research and practice in particular need ongoing support, as well as time and specific opportunities to further their research skills. That crucial support is not currently readily available in the early postgraduate years.

