**Twin theatres in the sights of Dental School**

The UWA School of Dentistry is seeking to build desperately-needed twin operating theatres in the Oral Health Centre of WA.

It has asked the Federal government for $10 million in funding to enable it to at least double the amount of dental surgery it can provide each week to public patients.

Winthrop Professor Andrew Smith, Head of the School of Dentistry and Director of the Oral Health Centre of WA, said he had been trying to get funds since he took up his position in August last year.

“We are the only dental hospital in Australia that doesn’t have our own operating theatres,” he said.

Dental patients needing surgery are sent to Sir Charles Gairdner Hospital, King Edward Memorial Hospital or Princess Margaret Hospital for Children.

**Focusing on the eye health of young adults**

Up to 2,000 Generation Y-ers in WA will undergo a comprehensive four-hour eye examination to help provide an insight into important genetic and environmental factors in eye disease in young adults.

Already more than 400 people aged 20 and 21 years have taken part in the novel Raine Eye Health Study, which is drawing from the cohort of the renowned WA Raine Study.

The Raine Study has a wealth of data collected since 1989, when 2900 pregnant women were recruited and extensively assessed. There have since been further assessments of their children every two or three years.

Winthrop Professor David Mackey, Chair of Ophthalmology and Managing Director of the Lions Eye Institute, said the Raine Eye Health Study was among the first of its kind because there was very little information about the status of eye health in young adults.

“Because more eye pathology is observed in people over the age of 40 years and in young children, previous studies have concentrated on these age groups,” he said.

In the Raine Eye Health Study, many tests are run and scans and photos of the optic nerve and macula are taken.

“We are taking a large number of measurements, more than any routine patient or complicated patient would ever get if they came in for an eye test,” Professor Mackey said.

All participants are given copies of their scans, plus a summary of their vision and whether they need glasses.

The study will describe the prevalence of various eye conditions, including refractive error, amblyopia and strabismus, in this age group.

The researchers also aim to determine genetic and early environmental factors that predispose to eye disease and investigate the interaction of early life, familial, lifestyle, demographic and genetic risk factors with these conditions.

Continued page 6
Cutting edge dental research collaborations plus staff and student exchanges between the Faculty School of Dentistry and Nanjing University in China came a step closer with a recent visit to the Faculty by three Chinese dental academics.

The School hosted the academics from Nanjing University School of Stomatology (an alternative name for School of Dentistry) at the Oral Health Centre of WA (OHCWA) for three months this year. They were Professor Wenmei Wang, Deputy Dean of the School of Stomatology, Dr Wei-Dong Yang and Dr Xiang Wang.

Winthrop Professor Andrew Smith, School Head and OHCWA Director, said the visitors had been keen to see the School’s teaching, research and facilities.

The advantage of a collaboration with Nanjing University included the fact that it had superb facilities in the School of Stomatology for both research and patients, he said.

It has a 15-storey dedicated dental hospital fully equipped with 200 inpatient beds and is in the throes of building an additional 22-storey building next door.

Another advantage is that the Chinese research interests are along the same lines as those of Assistant Professor Tony Phan, who is conducting research for the School into ways of regenerating periodontal tissue damaged by physical trauma or disease.

The studies include the use of stem cells from periodontal and pulp areas of teeth that are often discarded.

Professor Smith said similar research was also being conducted at the University of Leeds in England.

Staff and student exchanges between the School and Nanjing University were on the horizon but some language issues had to be ironed out before they could take place, he said.

“They can cope here but it is very difficult for us to cope there unless we have got somebody who speaks good Mandarin,” he said.

“They have got interpreters there but for you to be of practical use in a clinical circumstance, you really need to have a smattering of Mandarin.

“Fortunately, we have got a couple of Mandarin speakers on the staff at OHCWA who were able to help us out.”

Another plan is to set up a program to enable Nanjing students to come to the School to undertake short research-based courses for about three months.

“We could help them by giving them some language teaching while they are here,” Professor Smith said.

Faculty Dean Winthrop Professor Ian Puddey and Professor Smith have already visited Nanjing University as part of a UWA Bridges to China program.

Professor Puddey said it was hoped the recent visit by the three dental academics would be the beginning of an ongoing collaboration with the Nanjing University School of Stomatolog.

And Professor Smith said the aim in time was a Memorandum of Understanding between the two universities which would parallel the current MOU between the Faculty and the Nanjing University School of Medicine.

UWA and Nanjing University are members of the Worldwide Universities Network (WUN), of which UWA Vice-Chancellor Alan Robson is incoming Chair.

“The spin-off is that there is a WUN international conference on oral health care to be held in Leeds in July 2011, to which we will be sending a deputation of academics,” Professor Smith said.

The School will put in a bid to host the conference in 2013.
In 1957, the year our Medical School began, Mary Raine signed a Deed of Trust donating £1m to the University of Western Australia for medical research. The deed stated that “The net income of the Fund shall be applied towards seeking, diagnosing and investigating the nature, origin and causes of diseases in human beings, with the initial emphasis on arteriosclerosis and allied diseases, and the prevention, cure, alleviation and combating of such diseases”. Mary originally came to Australia from London with her sister Daisy in 1900, with £100 between them. They worked as barmaids in Queensland, Sydney and outback New South Wales before finally settling in Perth, where Mary built her fortune buying real estate and managing hotels. This single gift remains the largest given to the University of Western Australia for health and medical research and has underpinned a host of internationally significant research initiatives over more than 50 years, ensuring that the Medical School teaches its students in a research intensive and research informed environment.

The Raine Study
In this issue of MeDeFacts, the continuing legacy from this wonderful act of generosity is very much evident from the ongoing research being conducted by the Raine Study, a study that was heavily reliant on Raine Foundation funds for its genesis. The study was initiated by Professor John Newnham, Professor Con Michael, Professor Fiona Stanley and Professor Lou Landau in 1989 with the stated aim of “developing a large cohort of Western Australian children studied from 18 weeks’ gestation to ascertain the relative contributions of familial risk factors, fetal growth, placental development and environmental insults to outcome in infancy and to the precursors of adult morbidity”. Over the 20 years since, the Raine Study has generated more than $7m in externally obtained research grants, more than 80 publications and 300 conference presentations and now has collaborators from USA, Canada, UK, Japan, Germany, Netherlands, China, Malaysia, New Zealand and Eastern Australia. The outcomes of the Raine Study have been very tangible in terms of the information they have provided on what are the major determinants of health and disease in the children of Western Australia. An excellent example of this is provided on page 13 of this issue where medical student Claire Meyerkort has used the Raine Study data to implicate early childhood nutrition in the developmental origins of obesity.

The “Raine Kids” are now 20 years of age and are returning for another extensive battery of testing which for the first time includes a detailed eye examination – the Raine Eye Health Study being carried out by the new Director of the Lion’s Eye Institute, Winthrop Professor David Mackey (see pages 1 and 6). The information being gathered will inform our understanding of the genetic and environmental determinants of eye disease for many years to come and will be yet another major outcome from Mary Raine’s original gift, truly a gift that keeps on giving.

Enduring contributions
Many of the readers of MeDeFacts have similarly been able to make enduring contributions to the medical research initiatives of the Medical School, especially over the past three years through their response to our ongoing campaign to establish Bachelor of Medical Science scholarships. These scholarships are being named in honour of each of our 12 Foundation Professors. Medical student Natalie Akl was a recipient of a Gordon King scholarship (named in honour of our inaugural Dean and Foundation Professor of Obstetrics and Gynaecology) last year and the results of her research are outlined on page 12. She was one of four students who presented their research at a showcase held at CTEC last month (see page 16). It was a truly gratifying event not just to see excellent presentations of the very high quality research conducted by our students, but also to hear the students share how pivotal and transforming were the experiences that had been permitted by the scholarship support they had received during the year spent in medical research. Some of these students have already made decisions to go on and complete a PhD and like many of their predecessors who have completed a B Med Sci at UWA, they are clearly destined to become some of our leaders in health and medical research into the future.

Personal thanks
Can I thank you all personally for the many donations that have made the Foundation Professors scholarships a reality. I look forward during this season of gifts and giving to many more “gifts that keep on giving” to the health and medical research efforts at UWA. I wish you all a time of rich joy and blessing this Christmas and a very happy New Year.

The University of Western Australia
MeDeFacts December 2010
The largest number of medical students recruited from rural areas has graduated this year, with 27 successfully completing their degree.

Faculty Dean Winthrop Professor Ian Puddey told the Faculty Dedication Ceremony for medical graduates that the Medical School had sought to train substantial numbers of students in rural areas and had actively recruited students from rural and remote WA.

Moreover, the Rural Clinical School would expand to its 13th site next year when it sets up a campus in Kununurra and was likely to be followed by Northam as the 14th site, increasing the presence of the successful School in the wheatbelt.

More than 200 medical students graduated this year, bringing the total number to more than 4,220 since the inception of the Medical School 53 years ago.

For the first time in the history of the Medical School, a third generation from the same family has graduated, with the successful completion of the degree by Elizabeth Lissiman.

Dr Lissiman is the daughter of Dr Fiona Campbell, who graduated in 1983 and practises at the Claremont Medical Centre, and granddaughter of Dr Andrew Campbell, who graduated in 1961 and was an ENT surgeon in Perth for many years.

Professor Puddey said this year’s medical graduates also included the School’s 21st Aboriginal medical student.

Among the guests was the 92-year-old grandmother of another graduate, Philippe Giguere-Simmonds, who is the grandson of Foundation Professor in Physiology Wilf Simmonds.

The prize winners were announced (see opposite page), with the prestigious Australian Medical Association (WA) Medal and Bust prize going to Brittany Knezevic. It is awarded to the student who obtains the highest aggregate mark for all core units over the six years of the course.

Winthrop Professor Catherine Cole, inaugural Professor of Paediatric Haematology and Oncology and consultant paediatrician at Princess Margaret Hospital, told the new graduates that they should have the courage of their convictions and stand by their principles, even if they sometimes isolated them from their colleagues.

Giving the Occasional Address, she said although as an oncologist she used some of the most expensive and toxic drugs in the hospital, and had a great interest in the development of new drugs with greater efficacy and less toxicity, she did not deal with pharmaceutical sales people and did not get her drug information or medical education from sponsored sources.

“I take part in clinical trials run by independent co-operative groups and I keep up with the enormous medical literature by reading only those articles whose authors have no conflict of interest to declare,” she said.

Professor Cole admitted that she had been an “abject failure” in achieving a work-life balance and urged the new doctors to take their jobs, but not themselves, seriously.

“When you leave work each day, hang your white coat on the back of the door and go home to your family and friends as yourself,” she said.
MBBS YEAR 6 PRIZES for 2010:

ALAN CHARTERS ELECTIVE PRIZE – to the student who gives the best presentation on their elective attachment.
Emmanuel Anthony and Sarah Newman

ALFRED NAIDOR JACOBS MEMORIAL PRIZE - to the student who has shown outstanding ability and promise in Rural General Practice.
Kim Moiler

AUSTRALASIAN FACULTY OF PUBLIC HEALTH MEDICINE (WA BRANCH) PRIZE – to the student who has shown the most outstanding performance in Public Health.
Shona Hendry

AUSTRALIAN AND NEW ZEALAND COLLEGE OF ANAESTHETISTS / AUSTRALIAN SOCIETY OF ANAESTHETISTS GILBERT TROUP PRIZE – to the student who obtains the highest mark for Anaesthesia.
Archana Shrivathsaa

ARCH ELLIS MEMORIAL PRIZE IN PSYCHIATRY - to the student who obtains the highest mark in level 6 Psychiatry.
Courtney Majda

C B KIDD MEMORIAL PRIZE IN PSYCHIATRY – to the student who obtains the highest aggregate mark in Psychiatry in the course.
Courtney Majda

FRED JOHNSTON MEMORIAL PRIZE – to the student who has achieved the highest aggregate result in all sixth year units.
Jacinta Dawson and Timothy Whitmore

HELEN JANE LAMARD PRIZE IN MEDICINE - to the student who is the most outstanding in Medicine in the sixth year.
Archana Shrivathsaa

HELEN JANE LAMARD PRIZE IN SURGERY - to the student who is the most outstanding in Surgery in the sixth year.
Eliza Cole

HING-HANG LEUNG PRIZE IN PALLIATIVE CARE – to the student with the highest mark in the Palliative Care essay.
Vanessa Che and Maureen Lipa

PETER ANDERTON MEMORIAL PRIZE IN GENERAL PRACTICE – to the student with the highest average mark in the clinical components of Foundations of Clinical Practice and General Practice during the course.
Krischelle McCallum

WESTERN AUSTRALIAN FACULTY OF THE AUSTRALASIAN COLLEGE FOR EMERGENCY MEDICINE PRIZE – to the student who receives the highest mark for the year incorporating the attachment rating and the emergency medicine elements of the end-year examinations.
David Chieng

Professor David Kandiah, Professor of Medical Education (Curriculum Development), said exposure to patients would be from the first year of the course. This would be limited to 1-2 sessions per week initially but would proceed to fuller immersion in clinical settings by second year.

Professor Kandiah’s key task is to coordinate the development of the medical curriculum for the new Graduate Medical Program, which will start in 2014. Students will be required to have completed a generic undergraduate degree to qualify for entry to the four-year medical degree.

“We can pitch it at a level where our students will have the flexibility of competing academically with the best in the world at any level,” Professor Kandiah said.

The new medical degree will differ from the existing Graduate Entry Medical Program (GEMP), which involves students with a prior degree undertaking a seven month bridging course in basic medical sciences before joining Year 3 of the undergraduate medical course. There were 63 GEMP students this year. In contrast, there are expected to be 240 students in the first year of the Graduate Medical Program to be implemented in 2014.

Professor Kandiah said it would be possible to condense the new degree down to four years by streamlining the content. “Currently much of the initial six-year undergraduate curriculum takes into consideration that most students are direct school leavers so the course tends to ease the students gently into the clinical medical program with more introductory courses providing the basis for their future learning,” he said.

Graduate medical courses have been available in Australia since 1996. The practical successes and mistakes made by other institutions would form the basis of the learning process in the new curriculum development, Professor Kandiah said.

“The whole current curriculum will not be thrown out and the new one started from scratch because the present curriculum has many strengths,” he said.

No key subjects will be dropped but they will all be better integrated, according to a model proposed by Professor Kandiah.

“Students will still learn the basic sciences of anatomy, physiology, biochemistry which they currently do along with the applied sciences like pathology, microbiology, immunology and pharmacology, which they learn from third year,” he said.

“But they will also learn about clinical sciences like medicine, surgery, psychiatry, obstetrics and gynaecology, paediatrics and emergency medicine from the first year, so it will be truly integrated.”

For example in cardiology, instead of learning about the heart structure first, then later finding out what can go wrong with the heart and later still what the clinical manifestations of patients with heart problems are, they will learn it all at the same time to improve the relevance.

“This is very important because many medical courses around the world have a consistent complaint from students that they are accumulating all this information during their course without understanding the relevance in their future professional lives,” Professor Kandiah said. “In this way, the students can correlate the basic sciences with actual patient problems.”

Professor Kandiah said he would like the students to have a balanced experience with clinical placements in the community and in hospitals.

The fourth year of the degree is likely to be a fully clinical year with transition to practice as interns. “In most situations now we try to minimise the amount of formal teaching in the clinical years so they are not distracted from learning at the coalface,” Professor Kandiah said.

“There will be consolidation of their learning with electronic resources, a huge advantage we have in the 21st century. As currently happens, students will go for rural clinical placements in their third and fourth years but will have access to online learning and video-conference tutorials and discussion groups.”

Professor Kandiah who was Director of Rheumatology at the Royal Brisbane and Women’s Hospital, has had 14 years’ experience in developing and enhancing graduate medical programs, including those of the University of Sydney, University of Queensland and Griffith University in Brisbane.

Professor Kandiah
“We are looking at things such as whether we can correlate how much time people have spent outdoors or reading with whether they are short-sighted or not,” Professor Mackey said.

The researchers will also examine a possible link between turned eye and scoliosis, using DEXA scans.

“We have got two different disorders, not very common, which we can actually correlate,” Professor Mackey said. “The nerve fibres that cross in the spine and lead to the imbalance there are probably also unbalanced in the eyes crossing over as well.”

Another aim is to extend the existing research regarding the association of maternal smoking during pregnancy with the development of strabismus and poor stereo vision.

“Further support of this finding will allow public health messages that ‘smoking harms your baby’s eyes’, similar to the AMD (age-related macular degeneration) warnings on cigarette packets,” Professor Mackey said.

The researchers are re-using DNA samples taken from the Raine cohort two years ago for their genetic studies.

They will look at which genes are associated with the focus of the eye, size of the optic nerve and thickness of the cornea.

“The other really important thing is that these people are coming in every two years, probably for the rest of their lives, and if we have done all these measurements at age 20 we would like to check them again probably around the age of 40, just as they are starting to develop some of these older age diseases like glaucoma and see how many of them actually are changing over time,” Professor Mackey said.

Professor Mackey said about 1% of the population had keratoconus but it had never been properly measured in young adults. If very mild, it could be corrected with spectacles or contact lenses but severe cases sometimes required a corneal graft.

The latest treatment to prevent progression of the disorder involved applying a vitamin to the eye and then dosing it with ultraviolet light to strengthen the collagen.

The aim is to test a total of 1,500 to 2,000 20- and 21-year-olds for the study.

“But they are a challenge to get to come in on time on Sundays when they have had a good Saturday night,” Professor Mackey said.

The legacy of the Raine Study for Perth and WA is a research cohort that will be followed for the next 70 years. “Upcoming researchers will be able to re-examine the cohort in the coming decades to show change over time and help prove some important eye disease associations,” Professor Mackey said.

By Cathy Saunders

Research priorities

Research into the genetics of eye diseases and indigenous eye health are among the directions mapped out for the Lions Eye Institute by Winthrop Professor David Mackey.

Professor Mackey took up his positions as Chair of Ophthalmology and Managing Director of the Lions Eye Institute last year on the retirement of Professor Ian Constable, who established the Lions Eye Institute in 1983 and transformed it into one of the largest eye research institutes in the southern hemisphere.

Professor Mackey said his personal research interests included the genetics of eye diseases.

“We are looking at the genes and environment affecting the eyes of participants in the Western Australian (Raine) Birth cohort and The Busselton Healthy Ageing Study as population studies but we are also looking at families with specific eye disorders,” he said.
Surgeons learn cutting edge surgery for hard of hearing

The inaugural Perth Auditory Implant workshop was hosted by the School of Surgery in October and attracted participants and speakers from around the globe.

The Otolaryngology, Head & Neck Surgery Unit, a multidisciplinary unit within the School, ran the three-day workshop in which distinguished international and national speakers discussed the current state of the art and future developments in auditory implants.

The workshop, held at the University Club and then CTEC, used the latest videoconferencing technology to bring various pioneers in the field from the United States "virtually" into the auditorium, allowing for clear interaction between the participants and presenting overseas speakers. Basic science and clinical research findings in the evolving field of auditory implants were presented to the group which included clinicians and other allied hearing health professionals in the field.

On days 2 and 3, participants were able to familiarise themselves with the latest indications, surgical techniques and implant designs.

Under the close supervision of the speakers, they were then able to practise the various implant surgeries ranging from middle ear implants to the auditory brainstem and midbrain implant surgery on fresh frozen cadaver heads using the state of the art surgical skills laboratory at CTEC.

It was the first time fresh frozen cadaver heads had been used in Australia for training of auditory implant surgery.

Professor Gunesh Rajan, head of the Otolaryngology, Head & Neck Surgery Unit and convenor of the workshop, said the feedback from the participants was overwhelmingly positive and the School looked forward to hosting further auditory implant workshops in Perth in the future.

The Otolaryngology, Head and Neck Surgery unit has exceptional experience in hearing restoration and hearing implants such middle ear implants, electric acoustic stimulation and cochlear implants. As a result the Unit was recently elected into the Hearing-group, which unifies the leading hearing implant centres worldwide.

“The main eye area I am interested in is diseases of the optic nerve, which include glaucoma.”

He has conducted studies that followed families with glaucoma in Tasmania, collecting DNA from over 5,000 people, and is now setting up a new study looking at families with glaucoma in WA.

Professor Mackey will also oversee research into the genetics of strabismus, or turned eye, in children and recently received a Telethon grant of about $40,000.

Another area of interest is indigenous eye health. “Aboriginal people have brilliant vision,” he said. “The uncorrected visual acuity of a healthy Aboriginal person is much better than the average European – usually two lines better on a standard vision chart. The reason for that is a good question and a research area that we might take up in the future.

“But Aboriginal people do get other diseases such as diabetes which affects the eye, and trachoma, so we are looking at ways of delivering better health care to remote settings.”
“The aim of this study is to establish an evidence-based guideline for the treatment of vitamin D deficiency in children and adolescents,” Dr Siafarikas said.

“One problem that people get internationally is non-compliance with some supplementation.”

The study compared oral daily vitamin D treatment (1/2 millilitre of liquid/day) with an oral depot treatment that lasted six weeks. The depot doses of vitamin D varied and depended on the degree of deficiency in each individual. Some patients received a second depot.

The study focused on two groups at high risk of vitamin D deficiency and involved about 220 children and adolescents aged 0-16 years, of whom about half were refugees with dark skin and half were indigenous people. “Non-compliance is an issue in these populations,” Dr Siafarikas said.

Preliminary results were encouraging, he said. The treatment doses were kept low intentionally to prevent side effects, which could include kidney stones and increased calcium levels, he said.

Dr Siafarikas said depot therapy was used in the 1960s but fell out of favour because the high doses prescribed caused side effects. “They used 500,000 international units for a depot and we are using a maximum of 200,000,” he said.

The next plan was to extend the research from obvious risk populations to other patients with vitamin D deficiency in order to examine whether it would be a suitable general therapeutic option.

Dr Siafarikas said vitamin D levels below 25nmol/L could result in changes in the bones leading to an increased risk of rickets in children and fractures.

Between 25 and 75nmol/L, the immune system started being affected so the recommendation was that if a person’s level was below 75nmol/L, supplementation should be started.

Dr Siafarikas’s group is collaborating with five other research centres in Australia which form part of the Australian Paediatric Endocrine Group.

There is increasing evidence that certain groups of people are at risk of deficiency of vitamin D - which is produced in the skin under the influence of sunlight - even in Perth with its sunny climate.

Dr Aris Siafarikas, clinical senior lecturer in the School of Paediatrics and Child Health, said at risk patients included pregnant women, newborns, the elderly and people with dark skin.

“Supplementation with vitamin D needs to be considered to avoid problems related to vitamin D deficiency that include osteoporosis, rickets and increased risk of fractures as well as long term issues like increased risk of certain types of cancer - breast, prostate and colon cancer - and autoimmune disease, such as multiple sclerosis and type 1 diabetes,” he said.

Preliminary results from his latest research show patients were equally happy to receive a depot or an oral dose of vitamin D to treat deficiency and they responded equally well to both forms of therapy in terms of improvement and lack of side effects and complications. No side effects were seen in the study patients.

But giving a depot is more convenient for the patient and is expected to increase adherence.

Dr Siafarikas said if depot vitamin D became an accepted form of treatment, patients could self-administer it at home every six weeks.

Depot vitamin D may increase compliance in at-risk patients

Does your grey matter need a kick start each day? Emeritus Professor Bernard Catchpole has posed a series of points to ponder that he suggests readers may like to contemplate as they clean their teeth in the morning. “They intrigue me,” he said.

We will feature one in each issue of MeDeFacts. If you have any bright solutions you would like to share, please send them in to the editor at cathy.saunders1@bigpond.com

The first one to tickle the brain is:

What is the purpose of the 90 minute periodicity of the rapid eye movement component of human sleep?
The first group of students to undertake the Master of Nursing Science (entry-to-practice) degree, which began in July last year, have all been scooped up by hospitals.

Of the 16 students in the first cohort who continued with the degree, 13 gained placements in graduate nursing programs in various hospitals in the first round of offers and the remaining three students were accepted in the second round of offers.

The two-year full-time Masters degree, run by the School of Population Health and Sir Charles Gairdner Hospital, consists of just under 900 hours of clinical practice and includes clinical placements in the university breaks.

On completion of the course, graduates can apply for registration as a Registered Nurse.

More than 700 guests turned up to celebrate the WA Nursing and Midwifery Excellence Awards held in the Grand Ballroom at the Burswood Entertainment Complex in October.

The School of Population Health, which was a gold sponsor, also sponsored the Aboriginal and Torres Strait Islander Health Award. The winner was Melanie Robinson (pictured third from left, above) from the Marr Mooditj Aboriginal Health Training College.

Health Minister Dr Kim Hames was one of the guests.
Have twitter, Facebook, blogging or even online job seeking sites left you in their wake?

If they have – or even if you are a dab hand at them – a new free web-based networking and work hunting platform that has been set up exclusively for UWA graduates is likely to be of interest.

In fact, the appeal of alumniConnect has been so strong that in the first month of its launch in June, it had 6500 hits.

As a result of those online visits, more than 2000 people, including doctors, dentists and other health professionals, created a personal profile to get connected.

By the end of November, there were just under 2700 people who had registered and joined the web-based community.

However, the university has 60,000 graduates so there is a vast potential pool of people who could log on and start networking with former co-students, staff and other alumni.

Health Sciences graduates were among the first to get involved as they were one of three groups asked to take part in the pilot of the new program, along with alumni in Victoria, and also in Europe and the UK.

Milka Bukilic, of Alumni Relations, said contrary to what might be expected, the online community was being favoured by graduates aged 30 or more.

“I think it is because it is more of a professional service rather than a social media service,” she said. “People are using it daily.”

Graduates are using it to access the one-stop alumni directory in order to get in touch with others and build up their university networks.

The platform is similar to Facebook in some respects, because users can update their profiles, choose their “friends”, upload photos, create groups, activate blogs and chat online.

They can also choose their RSS (Really Simple Syndication) feeds, which can be used to access timely updates from favourite websites.

Ms Bukilic said this could be particularly useful for health professionals who wanted updates from sites with medical, health and fitness, sport, science and technology, business and finance, and other information.

There was also a huge amount of content that could be added to their profile from other online platforms, such as MySpace, Flickr, LinkedIn, YouTube, various Google gadgets and so on, she said.

Users could post their resumes, offer to be mentors to new graduates or seek a mentor, and request the posting of useful links such as to professional organisations.

Although Alumni Relations had details for 60,000 graduates on their data base, they had current emails for only 25,000 so they were hoping to hear from many alumni with updated information, Ms Bukilic said.

The university had set up the system because it had become apparent that many people wanted to reconnect with their university and former classmates and staff.

The secure online site was being used also to provide information about news and events within the university, including alumni research, scholarships, awards, and networking events, she said.

And from early next year there will be a reader’s corner - a page dedicated to all things literary.

“Alumni will be able to have their books promoted there and link up to news and information from the world of publishing,” Ms Bukilic said.

In another service provided by alumniConnect, users can find a list of alumni groups created by university staff based on location, academic discipline or another common interest. Ms Bukilic said alumni were encouraged to set up their own groups as well.

“This is the fun bit,” she said. Group members could upload photos of classmates, “hatch, match and dispatch” notes, events and even newsletters.

The section is proving so popular that more than 20 formal and informal groups have been created so far.

Another section titled careerConnect is a gateway to resources and tools to help alumni plan their career and access job listings, advice on marketing themselves to employers and tips on how to write a good job application.

“Graduates will be able to search for jobs that we put into careerConnect,” Ms Bukilic said. “Graduates can also submit jobs. So if you are a doctor looking for interns, you can go into the site and submit it.”

All postings are vetted to ensure they are bona fide.

By Cathy Saunders
In mid January this year, we travelled to Nagpur in India to complete two weeks of clinical placement in a diabetes and metabolism clinic. Before we started we had no idea what to expect of the conditions we would be in or the types of cases we would see.

We were privileged enough to complete our placement with distinguished diabetes specialist, Dr Sharad Pendsey, and his team of doctors, nurses, nutritionists and administration staff. While the conditions of the clinic were well below Australian health standards, we were assured that for India, they were quite high. We had to quite quickly adapt to considerably lower standards of infection control and standard precautions, including equipment sterilisation being conducted on a small portable camp stove, and reusing of obviously soiled dressings and bandages.

One of the most difficult challenges we faced while working at the clinic was the difficulty in communicating with patients when interviewing and examining them. However, the nursing staff helped translate as best they could, with their limited English knowledge.

We saw many patients over the two weeks we were there, including many cases of diabetic foot ulcerations and Charcot’s neuroarthropathy. While the wounds themselves were similar to what we have experienced in the hospitals in Perth, they often had very different causes, including rat bites, motorcycle exhaust burns and maceration between the toes.

Overall, our experience in India was eye-opening and extremely enjoyable. This clinical placement gave us the opportunity to experience a Third World country health system and really showed us how lucky we are in Australia to have access to such amazing medical facilities and resources.

Thank you must also be said to Virginia Bower (Associate Professor of Podiatric Medicine) for all her help in organising and making possible this wonderful placement opportunity.

Two podiatric medicine students undertook a clinical placement in central India in a diabetes unit. Having spent time in a country where the discipline of podiatric medicine is largely unknown, they had an interesting story to relate.

By Jae Moffat and Margaret Coleiro

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We were privileged enough to complete our placement with distinguished diabetes specialist, Dr Sharad Pendsey, and his team of doctors, nurses, nutritionists and administration staff. While the conditions of the clinic were well below Australian health standards, we were assured that for India, they were quite high. We had to quite quickly adapt to considerably lower standards of infection control and standard precautions, including equipment sterilisation being conducted on a small portable camp stove, and reusing of obviously soiled dressings and bandages.

One of the most difficult challenges we faced while working at the clinic was the difficulty in communicating with patients when interviewing and examining them. However, the nursing staff helped translate as best they could, with their limited English knowledge.

We saw many patients over the two weeks we were there, including many cases of diabetic foot ulcerations and Charcot’s neuroarthropathy. While the wounds themselves were similar to what we have experienced in the hospitals in Perth, they often had very different causes, including rat bites, motorcycle exhaust burns and maceration between the toes.

Overall, our experience in India was eye-opening and extremely enjoyable. This clinical placement gave us the opportunity to experience a Third World country health system and really showed us how lucky we are in Australia to have access to such amazing medical facilities and resources.

Thank you must also be said to Virginia Bower (Associate Professor of Podiatric Medicine) for all her help in organising and making possible this wonderful placement opportunity.
Flying high may protect against preterm delivery

Flying at altitudes higher than 14,000 feet appears to help delay preterm labour in women being transferred from the country to Perth by the Royal Flying Doctor Service, according to research by a medical student.

The study found that the median time from landing to delivery was four days when altitudes higher than 14,000 feet were reached on any leg of the transfer compared with nine days when the altitudes reached were less than 14,000 feet.

The study also confirmed that aeromedical transfer within WA of women with established or threatened preterm labour is safe.

The results were from a study conducted by Natalie Akl, who was in her fifth year of medicine last year when she decided to devote this year to a Bachelor of Medical Science degree.

She undertook her research in the School of Women’s and Infants’ Health with the aid of a Professor Gordon King scholarship and presented her results at a Bachelor of Medical Science showcase event held at CTEC last month. (See story page 16.)

Ms Akl told the audience the physiological reasons for the results were not known.

She said the rate of preterm birth, defined as <37 weeks’ gestation, was rising in Australia and had reached 8.1% of all births by 2007.

“It is the single largest cause of the world’s annual four million neonatal deaths,” she said. “And preterm infants are susceptible to a wide range of complications, including cerebral palsy and behavioural problems.”

In the management of preterm birth outside tertiary centres in WA, the decision to transfer the pregnant woman via the Royal Flying Doctor Service must balance the risk of in-flight delivery with the risk of delivery in a less than optimal facility, Ms Akl said.

This took into account evidence suggesting neonatal mortality was lower in hospitals with higher level neonatal intensive care units and higher volume of patients, especially among very low birthweight infants.

For the study, 500 consecutive transfers from around the state were identified from the RFDS medical database. They included women in established or threatened preterm labour, with or without ruptured membranes.

In addition, medical records including pre-transfer, transfer and arrival data were obtained from King Edward Memorial Hospital for Women and flight data were obtained from the RFDS aviation database.

The study showed the median total flight time was 76 minutes, median flight distance was 393kms and 23% of transfers were from more than 1000kms away.

The median maximum ambient altitude for all transfer legs was 20,000 feet and the median maximum cabin altitude was 6,500 feet. The minimum oxygen saturation recorded was 92%.

There were no in-flight deliveries.

“The phenomenon whereby women in preterm labour do not deliver during transfer in small aircraft has been observed in WA for several decades and remains a total mystery,” Ms Akl said.

The results of her study provided further confirmation that future research in the field might shed light on new avenues for treatment of preterm labour, she said.
Although adolescent dietary patterns appear to be related to early dietary patterns, birth weight and infant growth are more important determinants of body mass index later in life.

These are among the key findings of research by Claire Meyerkort, a Bachelor of Medical Science student this year in the School of Women’s and Infants’ Health.

Her findings also suggest that dietary quality deteriorates over early childhood and is influenced by socio-demographic factors.

Ms Meyerkort presented her findings at a Bachelor of Medical Science showcase event held at CTEC last month.

Her study was prompted by the fact that despite the obesity epidemic - one in four Australian children is obese - there is limited longitudinal information on early childhood dietary quality and few studies exploring links to BMI later in life.

“Evidence is growing for the developmental origins of obesity and, in particular, early nutrition is implicated in its aetiology,” Ms Meyerkort said.

Working with nutrition researchers she developed a new dietary quality score, the Raine Eating Assessment in Toddlers (EAT) Score, which was used to determine whether early dietary quality was associated with diet and BMI later in childhood and adolescence.

For her study, she used dietary and socio-demographic data from the WA Raine Study, a prospective study of 2,900 children that was initiated when their mothers were pregnant. The Raine EAT Score was based on semi-quantitative dietary data collected at one, two and three year follow-up assessments of the children.

The score was constructed around seven food and beverage components (wholegrains, fruit, vegetables, meat, dairy, snack foods, soda and drinks) and higher scores represented better dietary quality.

A decrease in the total score was observed over the ages of 1-3 years, as a result of decreasing consumption of healthy foods and increasing intake of unhealthy foods.

The score was independently associated with the duration of breastfeeding, family income, family size, parental BMI and several maternal factors.

The second stage of the research used nutritional, socio-demographic and anthropometric data from the Raine cohort, collected from the time of enrolment to the 17-year follow-up.

Higher EAT scores, denoting better dietary quality, were associated with healthier patterns of nutrition at the age of 14 years.

Limited associations were found between the EAT score and BMI at three, five, eight, 10, 14 or 17 years. In comparison, birth weight and weight gain in the first year of life were consistently associated with BMI at these ages.

Ms Meyerkort said obesity interventions should be targeted at early growth.

“And education about early nutrition is essential,” she said.

See story back page.
Winthrop Professor Ian Jacobs, of Emergency Medicine in the School of Primary, Aboriginal and Rural Health Care, is QAS compression-only cardiopulmonary resuscitation (COCPR) by untrained bystanders is not a panacea for out-of-hospital cardiac arrest but is better than nothing. Professor Jacobs said promoting the use of “hands only” CPR did not take into account the increasing number of cardiac arrests associated with lack of oxygen. He was commenting on a study in the Journal of the American Medical Association that found bystander COCPR was associated with increased survival compared with bystander traditional CPR and no CPR in out-of-hospital cardiac arrests. Professor Jacobs said the number of cardiac arrests due to trauma, drug overdose, asphyxia or drowning was increasing and responded better to traditional CPR with ventilation. Professor Jacobs said the Australian Resuscitation Council, Australia’s peak body responsible for developing resuscitation guidelines, would push for a campaign to promote COCPR by untrained bystanders who witness an out-of-hospital cardiac arrest. He said an educational program was “absolutely” needed to encourage people to do CPR without mouth-to-mouth rescue breathing.

Professor Daniel Fatovich, of Emergency Medicine in the School of Primary, Aboriginal and Rural Health Care, is QAS many emergency physicians still consider thrombolysis in acute stroke highly controversial. “There are a lot of emergency physicians around the world who still don’t accept it as a proven treatment and consider it as something that has been adopted without sufficient evidence,” Professor Fatovich said. “Even the Cochrane review last year says the data is unstable.” He was commenting on a study in the Medical Journal of Australia that showed clinical outcomes in Australia for stroke after treatment with recombinant tissue plasminogen activator (rt-PA) were similar to those worldwide. The observational study in the MJA reported for the first time the Australian results of rt-PA treatment for stroke from 2002–2008. The results were recorded in the Safe Implementation of Thrombolysis in Stroke International Stroke Thrombolysis Register (SITS-ISTR) and compared with data collected from 32 other countries. After adjusting for clinical and demographic characteristics, there were no statistically significant differences in any primary outcomes between the Australian cohort of 581 patients and 20,953 patients in the rest of the world. The 3-month intracerebral haemorrhage mortality rate was 2.2%.

Clinical Professor Peter Thompson, of the School of Medicine and Pharmacology, is QAS hospital resuscitation teams should reassess the positioning of automated external defibrillators (AEDs) in hospital. He was commenting on US research published in the Journal of the American Medical Association which showed their use in hospitals lowered survival rates. “Critical care areas with well trained staff do not need AEDs,” Clinical Professor Thompson said. “On the other hand, wards well away from the main part of the hospital and outpatient areas where the resuscitation team may not be able to get to them rapidly may still have a need for AEDs.” The study of 11,695 patients with cardiac arrests at 204 US hospitals found AED use was associated with a lower rate of survival compared with no AED use (16.3% vs 19.3%). Among cardiac arrests due to non-shockable rhythms, such as asystole or pulseless electrical activity, AED use was associated with lower survival (10.4% vs 15.4%). Such events accounted for more than four of five cardiac arrests in the hospital setting. The study also showed that for cardiac arrests due to shockable rhythms, such as pulseless ventricular tachycardia or ventricular fibrillation, AED use was not linked to survival (38.4% vs 39.8%). Clinical Professor Peter Thompson, said properly used, AEDs were very useful in the community and in parts of the hospital where there were fewer staff skilled in resuscitation than in critical care areas. "The JAMA study has shown that if AEDs are used for the wrong reasons, such as cardiac arrest not due to ventricular fibrillation, they are not helpful and they can delay the correct type of resuscitation," he said.

Assistant Professor Lisa Wood, Deputy Director of the Centre for the Built Environment and Health in the School of Population Health, is QAS fearful parents are stifling children’s physical activity such as walking or cycling to school and playing in parks. She was co-author of a report, commissioned by VicHealth, which warns that Australians are creating a generation of “cottonwool kids” because parents have distorted perceptions of stranger danger “The negative impacts of parental fear and the resulting ‘cottonwool’ kids are increasingly being recognised as having adverse impacts on children, including less active lifestyles and increasing obesity levels,” Assistant Professor Wood said. She said people had elevated concerns about the remote risk of children being abducted by strangers, but were not as concerned about risks from excessive computer use. She was concerned that parents could now buy global positioning system devices they could attach to their children so they would know their whereabouts at all times. “I find that a really disturbing trend,” she said. “That teaches children we don’t trust them, we don’t think they’re competent.”

Professor Daniel Fatovich, of Emergency Medicine in the School of Primary, Aboriginal and Rural Health Care, is QAS long-term users of amphetamines have structural brain abnormalities. He was an author of a study published in the Medical Journal of Australia, which found that scans reveal that young drug users have brain damage usually seen only in the elderly. MRI brain scans of Perthamphetamine users with an average age of 27 found that 20% had a brain lesion, an abnormality that increases the risk of stroke, dementia and cognitive decline in the elderly. Professor Fatovich said no long-term studies had been done to see whether young drug users developed the same problems. “Obviously we don’t know for sure if that happens in young people because this is an evolving problem…but it does seem to fit with the general notion that using amphetamines not only ages you on the outside but it probably ages you on the inside as well,” he said.
Third World disease on our back doorstep

Tessa Garside, a fifth year medical student who attended the Rural Clinical School in Kalgoorlie this year, recently went on a week-long trip through the Ngaanyatjarra Lands in WA, screening the children of the communities for trachoma.

By Tessa Garside

In August, I was fortunate enough to join Dr Charles Douglas of Goldfields Population Health on week-long trip to screen all the children in the 12 communities of the Ngaanyatjarra Lands for trachoma, a potentially blinding infection that is easily treated with one dose of antibiotics. This disease is classified as a Third World disease, yet here it is in our own backyard.

There is a lot of space out in the Ngaanyatjarra Lands, which consists of 12 communities approximately 1300km north east of Kalgoorlie and 300km from Uluru. The closest town is Alice Springs, some 11 hours by car.

One can fly for an hour without a hint of civilisation until, wait, there it is, a small cluster of tin on the plain. The ground is covered in junk, the people are covered in red dust. The children smile as they clamber, always barefoot, over every tree, roof, and person nearby. This is the way that a childhood should be.

What's concerning is the visible decay. This is the way that a community were to go on and train as a nurse, an Aboriginal health worker, or a school teacher, then they could return and make a change. They could teach the next generation that there is something else out there, that they have the power to influence others, to better their health and extend their lives. This doesn't seem to happen.

There are school principals in some communities who take the initiative to make a change for the better, to promote health and hygiene. Unfortunately, they will eventually return to their other lives, in the city, leaving their good work to unravel.

Change needs to happen from within the community, not to be reliant on the one person willing to drive the 18-hour trip to retrieve medications, only to return to discover that the patient has gone walkabout and refuses to take their medication regardless.

This is the first year that the screening has been run in the Lands, due to the new sponsorship by the WA Health Department. We found the disease prevalence to be 22% among the children under 10 years of age in the Ngaanyatjarra Lands. By comparison, the prevalence in the Goldfields was 4% in 2007 and 8% in 2008.

During the week, it appeared to me that education, like healthcare, in each of these communities seems to depend more greatly on the efforts of a motivated individual than the community as a whole. I also came to realise that such a situation is not sustainable. The community as a whole must embrace improvement in education and healthcare, starting from the basics such as hygiene and nutrition, if it is to be sustained and manifest as an improvement in the health and quality of life of Aboriginal Australians.

The rural clinical year is a long year, but for me it has brought enlightenment in unexpected places. The Ngaanyatjarra Lands is one such place.

I believe that unless a student or health professional is given the opportunity to visit such remote communities and really see how far removed they are from all resources that we in the city take for granted, they will never fully understand exactly where their patients are coming from and as such will struggle to provide the appropriate holistic healthcare that is required.

However, the arrangement with SCGH is about to expire so the School is negotiating contracts with private hospitals to enable it to continue to provide services to public patients.

At least 15 dental operations are performed each week.

“We could do many, many more, it is just that we don’t have the facilities,” Professor Smith said. With its own operating theatres, the School and OHCWA could perform about 40 operations each week.

“But the main need for an operating theatre is that there is no facility for special needs patients in WA,” Professor Smith said.

This meant it was extremely difficult to organise treatment for handicapped patients or patients who for any reason could not sit in a dental chair.

“That is as important as the surgical aspect of oral surgery,” he said.

By Cathy Saunders

Answers to Quiz on page 13

1. The pituitary sits in the “sella turcica” (the Turk’s saddle) of the sphenoid bone.

2. No. The sinus of the maxilla has not been developed at birth.

3. The communication between smooth muscle cells – particularly noticeable in the gut wall.

4. The Haversian canals in bone which carry its blood vessels and nerves.

5. They are less able to carry the dengue fever virus, and have their life span halved.
The number of medical students undertaking a specific research degree, the Bachelor of Medical Science, during their undergraduate years has jumped at least fivefold in the past five years.

Faculty Dean Winthrop Professor Ian Puddey said the number of medical students putting their hands up to do a BMedSc degree each year had risen from one or two about 5-6 years ago to 10-12 now, following a suggestion in 2007 by Winthrop Professor Fiona Stanley, Director of the Telethon Institute for Child Health Research, to encourage more students to take up the degree.

The establishment by the Faculty of the Foundation Professors Bachelor of Medical Science Scholarship Program, which honours the 11 Medical Foundation Professors of the Medical School, has paved the way for more students to take a year off from their medical studies by providing them with a $6,000 scholarship.

“So it’s been a very successful suggestion by Fiona,” Professor Puddey said.

He was speaking at an evening last month when the research undertaken by some of this year’s Bachelor of Medical Science students was showcased.

Faculty Associate Dean (Research), Winthrop Professor George Yeoh, said the BMedSc degree was very important because it allowed medical students to put their feet in the water and try out research for a year.

“The students make a pretty tough call,” he said. “They have to withdraw from one year of their medical course to undertake research and work in a laboratory and also prepare a thesis.

“Many are trying before they buy and engage in full-time research.”

Another stream of BMedSc students completed the degree during their summer vacations over 3-4 years, in parallel with their undergraduate medical degree.

“We undertake to support them because many argue they could be out working as waiters in cafes, or going up north to work in the mines,” Professor Yeoh said.

“So to compensate them, we provide them with the equivalent of a vacation scholarship.”

The Faculty is able to support the students financially because of the generosity of donors.

Professor Yeoh said the degree included course work and skills courses such the use of radioisotopes, animal handling, dealing with biohazardous materials, library-based skills, or scientific writing.

“They have all benefited enormously from working in a team environment,” he said.

“Many of the students upon completion will publish their work and also go to conferences to present their work as well,” he said.

Professor Yeoh said the Faculty underpinned the University of WA in terms of research and it intended to continue to strengthen the BMedSc program, which would become a Bachelor of Science Honours degree under the new structuring of degrees.

The students who presented the findings of their research were Sandeep Buttar, Natalie Akl, James Gibbons and Claire Meyerkort.

We welcome contributions, photos, feedback and anecdotes. Please send contributions to cathy.saunders1@bigpond.com or mail to the Faculty address.