Doctors and medical students with a penchant for research stand to gain from the generosity of the Women and Infants Research Foundation (WIRF), which will fund four new scholarships.

The name linked with three key scholarships is Professor Gordon King, the inaugural Dean of the UWA Medical School and Foundation Professor of Obstetrics and Gynaecology.

The WIRF BMedSc scholarship in honour of Professor Gordon King will be awarded to up to two Bachelor of Medical Science students each year on the basis of their research projects. The value of each is $6000.

WIRF will also provide funds for a King Doctor of Philosophy Scholarship, a prestigious award comparable to the Hackett Scholarship, which is UWAs highest.

It will be given according to the same conditions as the Hackett Scholarship for three years of study in obstetrics, gynaecology and newborn medicine and is worth $30,000 a year.

A pilot scheme, in which rural medical students set up primary health care projects such as dance or lung health programs, was such a success last year with the local country communities that it has been entrenched in the Rural Clinical School curriculum.

Last year 68 students organised projects at the RCS’s 12 sites that are spread throughout the state. This year 76 students are participating.

Dr Carmen Quadros, project coordinator, said students who got involved in such projects felt it added to their experience in the country. “It really made them members of the community,” she said.

The students are asked to develop a program that is tailored to their patient population, in a bid to ensure they receive appropriate care.

One of the aims is community empowerment, recognising the great expertise that people have with regard to their own lives and the issues that affect them.
A travel scholarship to remember the late Dr Indran Chelvanayagam has been established, thanks to the determination and generosity of a group of his close medical friends, family and colleagues.

Donations were sought from February and soon after the target was achieved that will enable a scholarship to be set up in perpetuity in his name. Dr Chelva was a WA ophthalmologist who passed away in May last year at the age of 36.

The Indran Chelva Memorial Travel Scholarship of $3,000 annually will enable a UWA student enrolled in the MBBS degree undertaking their General Practice rotation in Year 5 to accompany an ophthalmologist and registrar-in-training for one week, to observe clinical conditions and the provision of ophthalmic care in rural and remote communities.

WA anaesthetist Dr Andrew Lovegrove said the idea was first mooted about 12 months ago by a group of close friends aged in their 30s who had gone through medical school together with Dr Chelva. According to the Faculty, Dr Lovegrove took the initiative and approached them with the idea of establishing the scholarship. “We finally achieved our goal,” he said. “Some class-mates and I sat down the night after Indran died and came up with the idea. It was a group of five or six of us who spent pretty much all day every day hanging out together for the six years of Medical School.”

Dr Chelva graduated from the Medical School and went on to obtain a Fellowship of the College of Ophthalmologists. His primary practice was in Bunbury but he also visited many of the South-West towns, was involved in fly-in, fly-out specialist care for the North-West and took part in rural eye clinics in India.

Dr Lovegrove said Dr Chelva was the first from his year to complete his specialty training. “He really loved ophthalmology, starting training very early on and finished his Fellowship. Then he actually went to live in the country, unlike most of our specialists in training who have stayed in Perth.

“He provided a lot of specialist services to the country which is still significantly under-serviced. We are trying to assist in improving that and I would like think that is what the scholarship is going to help achieve.”

Another aim of the scholarship is to make it possible for a medical student to see first hand the eye disease in WA and how it is dealt with.

“The ophthalmologists as a group in WA provide excellent rural coverage and have multiple clinics where they visit different parts of the Kimberley and Pilbara during the year,” Dr Lovegrove said. “This presents a large clinical load of material that they see in a short period of time, which is potentially beneficial to students.”

The travel scholarship will be awarded each year to a student who intends to pursue a career in rural and remote medicine and displays an interest in rural ophthalmology.

The first scholarship will be awarded this year.

CTEC opens doors to Podiatric Medicine students

Undergraduate Podiatric Medicine students have undertaken the first practical suturing and podiatry workshop at CTEC in what is believed to be a unique offering in Australia.

The inaugural workshop, led by Professor Alan Bryant, Head of Podiatric Medicine in the School of Surgery, provided the students with the chance to perform podiatric procedures on cadaveric tissue before attending clinic-based sessions.

“Students will be expected to attend the UWA clinic, tertiary and secondary hospitals whenever surgical cases are scheduled,” Professor Bryant said. “However, by attending the CTEC workshops, … students will have the opportunity to develop practical knowledge and confidence in podiatric medicine skills before being exposed to clinical presentations.”

It is believed that integrating the practical skills training component into the Bachelor of Podiatric Medicine degree is a unique feature for the School of Surgery course compared to other similar courses offered in Australia for undergraduate students.

Winthrop Professor Jeffrey Hamdorf is working with Heads of Schools in the Faculty to integrate CTEC skills training into other appropriate undergraduate and post graduate surgical courses in the future. To help this integration, CTEC will soon become a Centre of the School of Surgery and will focus its course development activities on this area.

Already CTEC has had a large increase in its surgical and procedural skills courses through a new series of skills training in general practice and core skills for surgical trainee and junior consultants.

CTEC has enhanced its range of orthopaedic offerings as well as ongoing presentations in cardiothoracic, gynaecological, craniomaxillofacial, ear, nose and throat, vascular, plastic and general surgery and aims to meet the simulation training needs of the Faculty.
Last week I sat on the banks of a small creek trickling down from the stunning rock formations that characterise the Burrup Peninsula just outside Karratha. Not only was the area itself like a scene out of a painting, the longer you sat there the more you appreciated how many of the rocks arching up on each side of the stream had themselves constituted an art gallery for millennia where local indigenous people had decorated the rocks with images from their history and culture. Being embedded in that environment, albeit for a short period while filling in a gap in my timetable while awaiting a return flight back home to Perth, was a timely reminder of the often unmeasured benefits for our medical and dental students of being embedded in rural communities during their clinical clerkships. Many of them will leave with a deep affiliation with the communities and the environments in which they have been privileged to train. That affiliation is very much in evidence in the outline in this issue of the primary care health projects that medical students within the Rural Clinical School have been able to organise and coordinate within their local communities. Whether it’s involvement in a men’s health forum, a diabetes workshop, interaction with students in local high schools as mentors or in alcohol and drugs workshops, Kids’ Health days, or promotion of healthy eating and lifestyle in indigenous communities and schools, the students have been able to make solid contributions to these communities which have reciprocally provided them with such rich clinical training experiences.

On the right path

The Course Structure Review document that outlined the options for future large scale reform of the undergraduate student experience at UWA noted “Engagement with communities is integral to higher education, and is often characterised as forming part of leadership or citizenship skills.” The subsequent final report stated that “by implementing the course structure review the University would ensure that all its graduates will be recognised as linked strongly to local national and international communities in a spirit of ethical participation, social service and responsible leadership.” Clearly this Faculty is already on the right path in this regard. Further stories in this issue especially highlight the ongoing international engagement of our students, whether at a tuberculosis hospital in Tajikistan or a remote village on a Philippines island. Broad-based community involvement and leadership has been the hallmark of our graduates for more than 50 years and it is pleasing to see that when our students are immersed in a community setting, whether it is local or international, their subsequent engagement reveals a UWA stamp on their professional identity as very much contributors to, rather than takers from, our society. A short trip to the Western Australian Medical Students Society website (http://2009.wamss.org.au/) will surprise you by the sheer breadth of the community-linked activities, whether it be a nutrition project for AIDS orphans in South Africa, a workshop to assemble birthing kits which are sent to Asia, Pacific and Africa in order to provide basic equipment for a clean birth, the Teddy Bear Hospital aimed at reducing fear of doctors and hospitals among early-learning aged children or the global health short course about to be rolled out in July to engage students and the Western Australian public alike in key issues in relation to international health (just to list a few!).

Community support

On the other side of the coin, providing opportunity for community members to be more fully engaged in our medical and dental schools, we generally have done less well. However, the Rural Clinical School is again showing us the way in this regard. My journey to Karratha was, at least in part, undertaken in order to chair the annual Community Advisory Board meeting of the RCS. That board is constituted by representatives of local community advisory groups from each of the 12 nodes of the RCS throughout WA together with staff and students from both UWA and the University of Notre Dame. It was a great opportunity to hear of the often unmeasured outcomes and benefits that the staff and students of the RCS are bringing to rural and remote Western Australia. The overwhelming sentiment was of strong support and advocacy for the RCS by the WA rural community, with the students providing tangible evidence of the current commitment of universities, governments and health departments to meet the challenges of the inequities of health and disease outcomes for rural and remote Western Australians, particularly those in indigenous communities. This community interaction has been of substantial benefit in identifying opportunities for students to truly make the most of their training in a community setting. Encouraging broader community engagement as we plan large scale course restructuring of our medical and dental schools into the future can only serve to add value to the quality of the education our students will receive and to give our community a greater sense of ownership in helping shape the qualities of those health professionals who will be serving us tomorrow.
In a major coup for the Faculty, all of the WA recipients of the recent Heart Foundation research awards are affiliated researchers.

Their topics of investigation range from the patterns of care in patients with heart failure to the effects of fish oil on fat metabolism in obese people.

Now in its 50th year, the Heart Foundation has provided more than $200 million in funding nationally for research into cardiovascular disease, which is Australia’s biggest killer.

In WA, $1.15 million has been granted this year to support a total of 18 new or continuing research projects.

The six WA recipients of new awards are Winthrop Professor Judith Finn, of the School of Population Health, Dr Katie Suriano, Adjunct Lecturer in the Telethon Institute for Child Health Research, Dr Pamela McCaskie, Lecturer in the Centre for Genetic Epidemiology and Biostatistics, and Research Assistant Professor Dick Chan, Research Assistant Professor Anne Barden and Research Associate Jason Wu, all of the School of Medicine and Pharmacology.

Professor Finn’s research topic is monitoring trends in patterns of care and outcomes in patients with heart failure. Although heart failure is acknowledged as a major public health problem in Australia, there is a lack of information about its incidence and prevalence.

Professor Finn’s research draws on the WA linked health data and will describe and analyse a whole-of-state pattern of hospitalisation, and outcomes (survival and rehospitalisation) for patients with heart failure over a 19 year time period from 1989 to 2007.

She will also determine the effect of other coexisting diseases such as anaemia and kidney disease on patient outcomes and potentially highlight the need for more aggressive medical management of such conditions. The will help estimate the current and projected cost of care for those with heart failure.

Dr Suriano is looking at whether exercise can improve metabolic and vascular function in young high risk subjects with type 2 diabetes. Until now, no other research has examined the impact of exercise on cardiovascular risk factors in young obese people with this form of diabetes.

Dr Suriano hopes this research will provide a better rationale for the promotion of exercise in these adolescent patients.

Dr McCaskie is searching for genes associated with cardiovascular disease and depression indicators in children. Scientific evidence suggests that people with CVD often have symptoms of depression. Some genes have been found that change the risk of either of these two conditions and Dr McCaskie’s project will look at the involvement of genes in the two conditions together. The findings hopefully will lead to treatment and prevention strategies.

Dr Chan is studying the effects of fish oil and a statin on fat metabolism in obesity, which is strongly linked with dyslipidaemia. Dyslipidaemia may account for the increased risk of atherosclerosis in obese people, which can result in heart attack. Dr Chan’s research will help determine how to best treat the abnormal transporting of blood fats in the body.

Dr Barden is investigating cardiovascular risk in women with gestational diabetes, which is a rapidly growing problem in Australia, partly because of the dramatic increase in rates of obesity in young women. Her project focuses on a group of women who had gestational diabetes while pregnant. She plans to identify those factors in pregnancy which best predict the women likely to develop diabetes, high blood pressure or other increased risk of heart disease over a 10 year period. She will compare findings with a group who had normal glucose levels.

Dr Wu’s research is into the prevention of heart disease in people with type 2 diabetes. He aims to identify the genes implicated in heart disease and type 2 diabetes and how they work in the body, leading to improved risk assessment and new intervention strategies.

Heart Foundation Chief Executive Maurice Swanson said that while the charity’s 50-year commitment to research had resulted in significant improvements to the understanding, prevention and treatment of cardiovascular disease, ongoing research into the largely preventable disease had never been more important.

“We are still fighting a disease that kills 125 Australians each day and is responsible for 34 per cent of all Australian deaths,” he said.

Research is considered a good economic investment. For every $1 invested in cardiovascular research there was a proven $8 return in terms of health gains, Mr Swanson said.
A Faculty Associate Professor has won a prestigious award for his internationally-acclaimed research and publications in several areas, including Kawasaki disease, refugee health and infection in pre-term infants.

Associate Professor David Burgner, of the School of Paediatrics and Child Health, won the Frank Fenner Award for Advanced Research in Infectious Diseases. It is awarded by the Australasian Society for Infectious Diseases to members who have performed a substantial portfolio of original research in infectious diseases and who have been enrolled in or completed a research higher degree in the previous seven years. It is for $5,000.

Associate Professor Burgner said his group recently had a major study published which looked at the whole human genome and identified several new genes that had not been described before in the context of Kawasaki disease. It was conducted in collaboration with a big international genetics consortium that Associate Professor Burgner set up and co-chairs. “It is a global initiative to try to understand the genetic basis of Kawasaki disease,” he said. “That has been quite successful.”

He is part of a group that has also been investigating why pre-term infants are so susceptible to infection.

Using a large National Health and Medical Research Council grant, the researchers are embarking on a study of 150 pre-term infants at King Edward Memorial Hospital to try to answer the question and see if it is possible to predict which infants are likely to get infected.

“We will be looking at either their cord blood or their blood early in life,” Associate Professor Burgner said. “We will see if we can find some immunological markers of which infants will get infection so we can target them with prophylactic antibiotics and maybe novel therapies in future studies.”

His third major research area is refugee health. He was involved in setting up the refugee clinic at Princess Margaret Hospital for Children and has overseen clinically-based research based there.

Associate Professor Burgner said he had won the award at his fourth attempt.

“I don’t know what swung it for them,” he said with a laugh. “Probably the fact they didn’t want to see another application.”

It had been quite a few years since the award went to a paediatrician, he said.

“It is nice for me and for paediatric infectious diseases, especially as it is a small specialty in Australasia, and it is nice for UWA because most of this work has grown into fruition during my time here. I am lucky enough to work with some very good scientists and clinicians on these projects.”

Professor Frank Fenner is one of Australia’s most famous scientists and is the virologist renowned for overseeing the eradication of smallpox.

Associate Professor David Burgner (left) receives his award from ASID past president Associate Professor Philip Jones, of the University of New South Wales
Innovative treatment for depression

Patients with depression given ground-breaking interactive treatment that stimulates their brain have shown a reduction of up to 40 per cent in their symptoms.

Researchers Adjunct Senior Research Fellow Greg Price, senior scientist in electrophysiology at the Centre for Clinical Research in Neuropsychiatry (CCRN) and Clinical Associate Professor Joseph Lee, a psychiatrist at Graylands Hospital, trialled an advanced form of repetitive transcranial magnetic stimulation (rTMS) as a therapy for depression.

Transcranial magnetic stimulation is the most focally precise and least invasive of the newer neuropsychiatric treatments. It involves stimulation produced by applying a magnetic coil close to the head which causes the neurons to fire. It has been used as a treatment for a wide range of conditions, including tinnitus.

Dr Price said the treatment was minimally invasive. “It is a little bit uncomfortable, like tapping on the head,” he said.

Clinical trials using rTMS in other parts of the world have demonstrated a reduction in the symptoms of depression of 20 per cent to 40 per cent, with positive effects as prolonged as those of electro-convulsive therapy (ECT).

Researchers have found that using both alpha and theta frequencies produce good results, resulting in increased blood supply to the brain, enhanced hippocampal plasticity and increased dopamine release.

In the recent clinical trial carried out by Dr Price and Dr Lee, using the CCRN’s joint facilities at Graylands Hospital, the goal was to find the optimum parameters for depression treatment.

Forty-four volunteers with treatment-resistant major depression were administered rTMS, using two different sets of parameters.

One group was given interactive treatment, where the administered therapy automatically changed depending on the brain’s physiological response to it, using a simultaneous EEG to detect the changes.

As the brain responds to the treatment, the EEG records the change and transmits it to the treatment equipment. The timing and frequency of the signal then changes, and the process continues.

The other group was given standard treatment, which is the form of rTMS most commonly used in other trials.

The participants’ depression was rated before the testing, two weeks after they began receiving the treatment, and then again when the treatment was completed. The interactive group showed a reduction of 43 per cent in the severity of their depression while the standard group showed a reduction of 28 per cent.

The trial was featured on Channel 7’s Today Tonight program in January and sparked a great deal of patient and carer interest.

Dr Price said CCRN received numerous phone calls after the program from people wanting more information or asking to volunteer for future clinical trials for rTMS.

Dr Price said the research team could see encouraging directions for the use of rTMS therapy and some interesting new research prospects. “In our case, they would include schizophrenia, catatonia and extreme cases of obsessive compulsive disorder but internationally, the main ones are tinnitus, chronic pain and stroke,” he said.

CCRN’s research focus has principally been centred on schizophrenia so the project dovetails with existing projects and infrastructure. But it also represents an original direction as Dr Price plans to use the CCRN electrophysiological data, which has been exploring similar ERP (event-related potential) expressions of possible schizophrenia genes, to aid his trial of rTMS.

The possibility of introducing rTMS as a clinical service at Graylands is being considered.
randomised controlled trial comparing intraoperative to conventional radiotherapy in women with early breast cancer. It uses the Intrabeam device to deliver radiation directly to the tissues at the site of the primary tumour in a single session either at the time of definitive local surgery or shortly afterwards. The radiation delivered by the Intrabeam device consists of soft X-rays where the radiation beam is rapidly attenuated and this reduces the dose to more distant tissue within the breast. Its use for breast cancer has been successfully tested for safety and feasibility by several international hospitals including the University College London Hospital in the UK and SCGH.

The main objective of the TARGIT trial is to demonstrate that, for some women with breast cancer, a single dose of radiotherapy delivered intraoperatively over about 30 minutes offers the same local control rate as standard external beam radiotherapy. The trial is also looking at radiotherapy side effects, costs and which treatment patients prefer. These studies are the focus of UWA PhD student Tammy Corica who has been coordinating the main study in Australia for several years. Associate Professor Rachael Moorin, of the School of Population Health, and Professor Anna Nowak, of the School of Medicine and Pharmacology, are involved in supervising Tammy’s PhD work.

If the trial finds that IORT alone after breast conserving surgery is as effective in achieving local control as standard external beam radiotherapy, a major benefit to patients would be shorter treatment duration by avoiding the 6-7 weeks of standard daily radiotherapy. This would prove a huge boon for the many country patients who have to come to Perth for up to two months for treatment and often choose mastectomy simply to avoid the need to have radiotherapy. Having the once-off treatment is likely to reduce the risk of radiation-related toxicities as well, particularly to the skin. A reduction in the number of early breast cancer patients requiring access to standard radiotherapy would also benefit other cancer patients and the health system by reducing the waiting times for radiotherapy.

The Australian investigators, including the Peter MacCallum Cancer Institute in Victoria and Professor Max Bulsara, of the University of Notre Dame, were granted a five-year National Health and Medical Research Council project grant to complete the trial. The international recruitment target is 2232. WA is the highest recruiter in the world out of 24 sites, having recruited over 240 patients to date. Recruitment is likely to end early next year and preliminary outcome data will be reported within the next two years.

Delivering radiotherapy intraoperatively with the Intrabeam device.
Aiming for healthy hearts – tracking risk factors

Routine clinical system for monitoring cardiovascular disease (CVD) risk factors in mental health patients is being developed with a view to reducing their high risk.

The life expectancy of people with schizophrenia is considerably shorter than that of the general population, in large part due to a much increased risk of CVD.

Statistically, people with schizophrenia are more likely to smoke, have an unhealthy diet, be physically inactive and have higher body mass indices.

There is also evidence that the use of some antipsychotic medications is associated with weight gain, glucose dysregulation and lipid (fat) abnormalities, all of which are associated with an increased risk of CVD.

Since factors such as illness, lifestyle and medication are all involved in increased risk for CVD, it is possible for people to reduce their individual risk.

The first step in developing risk reduction programs is the availability of high-quality, clinically relevant data. The Clinical Applications Unit (CAU) and the Graylands Pharmacy-led Study of the Antipsychotic Effects on Metabolic Syndrome (SAEMS) are collaborating to develop a routine, clinically feasible system for monitoring CVD risk factors in all North Metropolitan Area Health Service mental health patients treated with antipsychotic medications.

Ms Carole Harrison, who joined CAU in February will run the project. CAU anticipates at this stage that it will take about 12 months to develop a working register of information.

Evidence of the increased risk of CVD was backed up by the findings of researchers from UWA's Centre for Clinical Research in Neuropsychiatry and a co-author who carried out the first Australian study to measure the prevalence of metabolic syndrome among people with a range of psychiatric disorders.

Their study of 203 adults who attended the Armadale Mental Health Service, almost half of whom had schizophrenia, found the incidence of metabolic syndrome was more than double that of the rest of the population (estimated to be around 25 percent). People with bipolar disorder ranked highest with rates of nearly 67 percent.

Metabolic syndrome, also known as “MetS” or “insulin resistance syndrome,” is associated with obesity, high blood pressure and high cholesterol.

Lead author Alexander John said the increased prevalence of MetS may be due to factors such as poor diet and lack of exercise as well as a possible link to some atypical antipsychotic drugs.

“Prevention, monitoring and treatment of cardiovascular disease risk factors should be considered a priority by those involved in the care of the people with major psychiatric disorders,” he said.

The study was published in the Medical Journal of Australia.
Another valuable RCS project

Broome-based student Joel Earley, who is gifted in IT, recommended an overhaul of the retinal screening database of the Kimberley Population Health Unit.

The unit is seriously looking into his suggestions and considering how to implement some, if not all, of them. The database attempts to keep records of patients who have been screened through the Aboriginal Medical Services, smaller clinics and communities, and the KPHU.

Mr Earley’s report detailed the shortcomings of the current system and suggested the minimum amount of data to be collected. He also devised an electronic recall system that includes useful geodemographic data, such as “last photo taken at Bidyadanga, but lives in Broome and is from Fitzroy”, as a more useful way of patient follow up.

He recommended a fully digital system, including the transfer of photos to the Lions Eye Institute and reports back from it. He concluded that the current database was not worth salvaging.

INGENUITY SHINES IN BUSH HEALTH PROGRAMS

continued from page 1

First place among the projects went to three Kalgoorlie-based students who organised an Aboriginal dance group.

The students taught dance to a group of 20 Indigenous children aged 5-15 years, using their own skills which they had developed in part-time jobs teaching swimming, gymnastics and dance. Classes were held weekly for 1.5 hours and the children worked towards participating in Vibe Alive in November - a youth festival that travels around the country.

“The project contributed broadly to the health of the community by promoting skill development, physical activity, positive self esteem and role modelling,” Dr Quadros said.

Second place was won by nine Albany students who participated in many health-related activities being conducted by local health services for Indigenous people.

“They promoted good relationships with the community by moving outside the traditional medical model and moving into the field and homes,” Dr Quadros said.

The third place-getters were four Esperance students who devised a project called “Esperance Easy Breathers”, coordinating with the local allied health team to broaden an existing pulmonary rehabilitation program.

“This project is sustainable and has been well received by the Esperance community who are enthusiastic about expanding the role of future RCS students in empowering patients with chronic lung disease in the area,” Dr Quadros said.

Other projects involved mentoring Indigenous children using a buddy system, improving Indigenous child health by educating children about hand washing and hygiene and diet, and a soup patrol. One group coached primary and high school students with a range of disabilities including autism, intellectual disability and cerebral palsy. The students focused on swimming stroke technique, general fitness games and individual and group activities.

“Ingenuity and a good relationship between students and a real connection to the community seemed to be common themes last year,” Dr Quadros said. “A small budget was made available to help with some projects, such as a tennis ball or healthy show bags for kids including toothbrushes and paste.

“Most sites managed without any formal assistance, using ingenuity to obtain funding from local businesses, for example.”

Dr Quadros said it was preferable for a project to continue over several months and be sustainable rather than being just a pit stop.

The community groups in Kalgoorlie, Albany and Esperance, who were involved last year, asked for the projects to continue this year.

The RCS students from UWA spend the whole of fifth year in the country and take the first steps towards practising as young doctors.

“They use the patients when they do the clinics in a way, learning how to deliver babies and doing paediatrics for the first time,” Dr Quadros said. “We felt it was important for them to give something back to the community that is giving them so much.

“We hope the program will help foster a spirit of community service and entrench it now so it is not a foreign concept to them.”

In the swing: Indigenous children have fun at a weekly dance group organised by three Kalgoorlie-based medical students as part of a primary health care project.
The wife of Faculty dental graduate Dr Gary Hewett, who was honoured with an OAM this year for his work with the charity Awareness Cambodia, occasionally reminds him of a couple of things.

"Honey, I married a dentist, not a humanitarian," she says wryly.

Dr Hewett founded the not for profit, Australian overseas aid organisation in 1996 after volunteering the previous year to work in Cambodia with his brother Neil, a doctor now working alongside WA bariatric surgeons.

"He did the medical, I did the dental, up the Mekong River," Dr Gary Hewett says. "It was really raw. The Khmer Rouge was still active and six Westerners had been abducted and killed in the previous 12 months, two of them Aussies.

"The north was a prison without walls because it was so heavily mined."

Dr Hewett says his desire to provide ongoing help to the country that was ravaged during the terror years of the Pol Pot regime was cemented when a mother brought her four-year-old son to the makeshift clinic in the middle of nowhere, indicating he was in pain.

"He had two remaining lower incisors and the rest were down to gum level, he had two draining abscesses on the left-hand side and one draining abscess on the right side," Dr Hewett says. He numbed the boy's mouth and extracted four teeth.

"He did not blink once," Dr Hewett says. "It was almost as though he was thinking, ‘Is that the best you have got, mate, because my life up here is hell?’"

Dr Hewett returned to Perth and set up the charity.

He now practises as a dentist in Perth only half a day a week, devoting the rest of his time and resources to Awareness Cambodia.

He was awarded the Medal of the Order of Australia in this year’s Australia Day honours list for his services in “developing cross cultural educational exchanges between WA and Cambodia and the establishment of services for children orphaned by HIV/AIDS.”

His wife, Kim, sometimes reminisces with a sigh and reminds him, “We have gone from a Porsche to a Kia.” The irony is that she has given up her job as a school administrator to help run Awareness Cambodia.

Dr Hewett returned last month from another trip, which involved shepherding Australian school students who had volunteered to help in Cambodia. And his last medically-oriented visit was in September, when he headed a team of 10 Australian doctors and nursing staff and a maintenance team of 20 people, all of whom gave up two weeks to work in clinics and on various projects.

Volunteers pay their own way, which amounts to about $2500 for maintenance workers. The cost is $3000 for medical team members, who pay extra so that medical supplies can be bought.

Although medics are already lining up to join the next annual trip in September, and one senior nurse at Royal Perth Hospital gives up her holidays every year to go to Cambodia, the humanitarian group is always in need of volunteer doctors.

The next team includes a traumatologist and a paediatrician because the local hospital has asked Awareness Cambodia to help train its doctors in these two disciplines.

The maintenance workers, who join teams that head to Cambodia twice a year, are often professionals lacking medical training but keen to help in any way they can.

One Perth lawyer recounting his trip on his return to Perth described how he had spent days on his knees tiling. “This is why I have got four degrees?” he said. “But it was one of the most amazing, rewarding experiences of my life.” He has since offered to do Awareness Cambodia’s legal work and sit on its Board.

The annual medical team provides GP expertise at the Operation Nightingale medical clinics, which Dr Hewett established in 2006 in...
Kompong Speu because there were only three Khmer-trained doctors to service the Public Health Department’s 22 health centres.

The clinics service the six villages of Kompong Speu Province.

The main clinical presentations are HIV and AIDS, which are rife, goitres, scabies, dengue fever, malaria, and cataracts. Patients with problems that require surgery or other specialist treatment, such as removal of cataracts, need to seek treatment in Phnom Penh or at periodic clinics visiting the province.

But the main people who benefit are mothers and their children, according to Dr Hewett, who notes that the infant mortality rate in Cambodia is about 1 in 10.

“The birth rate is about 460,000 each year and of those, 43,000 won’t make it to their first birthday and more than 60,000 will not make it to their fifth birthday,” he says.

On the last visit, the medical team took up brand-new wheelchairs in boxes and one was assembled and given to a patient. Word got around and a boy who looked 14 arrived on his father’s back. It turned out he was, in fact, 24 years old and had contracted encephalitis at the age of six. For the past 19 years he had been carried everywhere by his father.

“We made up another wheelchair for him,” Dr Hewett says. “The look on his parents’ face when he got our wheelchair, well, a million dollars could not buy it. It was like every birthday present had arrived at once.”

The medical clinics began with just one in 2006 and now there are four regular clinics run by well-trained Cambodian doctors and nursing staff, with a fifth clinic on the way. However, most clinics have no running water and no power and the hope is to set up solar-powered clinics in future.

Dr Hewett also plans to set up a training course for paramedics. The course is written but is awaiting final approval from the local authorities. Dr Hewett is also keen to eventually establish a Royal Flying Doctor Service for the area.

And a Perth bariatric surgeon in WA, Dr Leon Cohen, has agreed to participate in setting up a scholarship to fund the training of local doctors in Phnom Penh. Dr Cohen and his wife Caroline have also agreed to sponsor the first doctor.

Dr Hewett says although the training is eight years, the total cost of putting a student through medical school there is only US$15,000. A condition of the scholarship will be that on graduation, the doctors will work in the clinics.

“We’ll do the first scholarship and hope others will help out after that,” Dr Hewett says.

By Cathy Saunders

Awareness Cambodia also runs the Sunshine House for children orphaned by AIDS and the House of Progress, which is a pathway for the Sunshine House children who have turned 18 to make the transition into the community or continue their high school education.

The Eco Farm at Sunshine House provides food and a sustainable income and helps the children develop useful skills while the Internet Café on the ground floor of the House of Progress, one hour from Phnom Penh, aims to provide employment for the House’s young adults and be a communication hub for local residents and tourists.

Another of Awareness Cambodia’s developments, the Angkor project, is seeing Australian children helping to rebuild the schools of Cambodia through sister school relationships.

In partnership with WA Department of Education and Training, these are being developed with an increasing number of WA primary and high schools.

Other projects allow teams of students from Australian schools to raise funds for children in Cambodia and visit Cambodia to work at the Eco Farm and Sunshine House.
WIRF will also fund a WIRF Top-up Doctor of Philosophy scholarship, which is dependent on equivalent funding from another source such as a supervisor’s research grant. Together they are worth $25,000 each year for three years.

Winthrop Professor John Newnham, Professor of Obstetrics and Gynaecology in the School of Women’s and Infants’ Health and director of WIRF, was the main instigator in the establishment of the ongoing scholarships.

He said they were part of a long-standing commitment by WIRF and its predecessor, the King Edward Memorial Hospital Research Foundation, over the past 32 years to fund young investigators.

“Many people had their careers and their beginning as investigators underwritten by this organisation,” he said.

“Reproduction and women’s health is a very rapidly growing area with a very strong research base. We are now cultivating the next generation of researchers.

“It is a very research intensive School and this new initiative is part of that program.”

The inaugural recipient of the WIRF BMedSc scholarship in honour of Professor Gordon King is undertaking research into pre-term birth at King Edward Memorial Hospital for Women.

Owen McWilliam will study the genetic variations in a cohort of 100 women who have pre-term pre-labour rupture of membranes, and their infants. He will then compare them with the genetic make-up of 100 matched women and infant controls who have a term birth.

It is part of a wider study by Associate Professor Craig Pennell of the School of Women’s and Infants’ Health.

Pre-labour rupture of membranes is one of three pathways to pre-term delivery. The other two are iatrogenic causes such as induction for medical reasons, and spontaneous pre-term labour.

“The reason we think there is a genetic component is that some of the risk factors for having a pre-term birth are having had a pre-term birth before, being born pre-term, or having a sister who had a pre-term birth,” Mr McWilliam said.

“We have postulated that the onset of labour is due to both fetal and maternal factors.” Women are being recruited for the study now.

If a woman has had a previous pre-term birth, the risk of a subsequent one is increased by 15-50 per cent.

In Australia, 8.2 per cent of all live births are pre-term, a number that has risen from 7 per cent in 1994. The increased rate is of concern because of the adverse health outcomes and the cost associated with pre-term births.

The cost of raising a baby born before 37 weeks to the age of 18 years is an extra $50,000 and of a baby born extremely pre-term an extra $200,000.

The study will look at the DNA of both mother and infant, one of the few studies to do so.

As part of the study, data on pre-term births at KEMH between 2004 and 2008 will be analysed for information such as the mother’s ethnicity and the different factors in pre-labour rupture of membranes and spontaneous pre-term labour. The findings will be compared with data in a study published in 1988 by Winthrop Professor John Newnham, Head of the School of Women’s and Infants’ Health.

Mr McWilliam, who is undertaking his Bachelor of Medical Science degree between his fifth and sixth years of the medical degree, said he was honoured to receive the scholarship.

“The money will go towards paying for my life,” he said with a laugh, adding that it would be used for rent and food as he lives away from home.

“It will help me focus more of my time on the research. I have a job outside as well but I won’t have to have two or three jobs.”

He also finds time to fulfill his role as president of the WA Medical Students’ Society.
Life in the ex-Soviet health system

Painting a verbal picture of post-Soviet health care in Tajikistan has earned medical student John van Bockxmeer the Alan Charters Elective Prize for 2009.

The sixth year medical student said the collapse of the USSR and the recent war on terror had adversely impacted on health in Central Asia. He was awarded $1000.

The runners-up, who each received $250, were Priscille Ern Zhi Tan for “Holistic health in the remote villages of Palawan, Philippines” and Vinay Javaraian Menon for “Haraka haraka Africa! (Hurry, hurry Africa!): homegrown development in Tanzania”.

Mr van Bockxmeer said Tajikistan was a unique but little known nation. Life in the ex-Soviet health system meant erratic power supply, an incredible number of parasites and surgeons who did their own anaesthetics.

His time was spent in a tertiary surgical hospital in the capital, Dushanbe, the national TB hospital and a regional ophthalmological clinic.

“I was adopted by the surgical team and we would meet in the mornings where patients would file into the office to be examined,” he said. “I would assist with ordering tests and scrub into surgery when needed. I spent the majority of my time seeing surgical patients whose illnesses were directly related to the social and economic circumstances of the nation. In particular, removal of parasites (Echinococcus granulosus) from patients’ lungs or abdomen were a daily occurrence. There was also a great deal of trauma and farming accidents from the region bordering Afghanistan.”

Mr van Bockxmeer said during Soviet times there was mandatory immunisation and health screening for the entire population but following the dissolution of the USSR, infectious disease rates had escalated. “This was apparent with the high rates of hepatitis B and diphtheria,” he said. “Since the dissolution of the USSR, diphtheria has increased throughout the area by 54 times.”

He took with him pulse oximeters, IV cannulas and diathermy instruments donated from the LINCS program which are all used in the hospital.

Mr van Bockxmeer said he felt a little out of his depth as many Tajik students his age would be in charge of whole wards six months after graduation.

During his time in Dushanbe, he also volunteered at the languages centre, helping students with their English. “I made a number of friends here and one weekend I visited one of their home towns in the mountainous interior,” he said. At 3,700m, temperatures can drop below minus 10 rapidly. “The Tajiks have never had an outsider to the village before and I am completely humbled by their hospitality. There is no scheme power so over candle light my friends’ family treats me to a traditional meal.”

Mr van Bockxmeer said medical electives were an amazing opportunity for personal growth, discovery and cultural understanding.

The Alan Charters Award is in honour of Dr Alan Charters, who taught and practiced medicine in WA and East Africa and had an enduring interest in tropical medicine and parasitology.

The sponsor of the first prize was Dr Miles Beaman of Western Diagnostic Pathology and the sponsor of the runners-up was Olivia Watson of MDA National.

A King-size contribution to medicine

Professor Gordon King made significant medical and personal contributions in five major world arenas, namely the United Kingdom, China, Hong Kong, Australia and Africa.

He was born in London in 1900 and received his undergraduate medical training and specialisation in Obstetrics and Gynaecology at the University of London, after which he went to China to teach at the Peking Union Medical School. He was regarded as a medical pioneer in China.

He later took up an appointment as Professor of Obstetrics and Gynaecology at what was then known as the Cheeloo Medical School at Shantung University, which is one of the highest ranked academic and medical training programs in China. He taught, worked in the hospital, and prepared medical texts and curricula for the Medical School. His work there was legendary.

He then moved to Hong Kong University as Professor of Obstetrics and Gynaecology. His wartime training programs in western China for many of the Hong Kong medical students are considered remarkable.

After Hong Kong fell in 1941, he escaped the Japanese and went to Chung King in Free China, where he and other colleagues established a Medical School to enable the continuation of medical studies for Hong Kong University students who had also escaped into China. He ensured the degree was recognised in the United Kingdom.

In 1945 he returned to Hong Kong, where he became Dean of the Faculty of Medicine and Pro-Vice Chancellor of the University and from where he was recruited to become the Foundation Dean of the Faculty of Medicine at the UWA and also Foundation Professor of Obstetrics and Gynaecology. He was also an honorary consultant at Royal Perth Hospital.

He eventually retired in 1965 but was then called on to be the Foundation Dean of the Faculty of Medicine at University College, Nairobi, Kenya from 1966 to 1969.

He was married with three daughters, one of whom, Allison, was a lecturer in English at UWA and is married to Justice Geoffrey Kennedy, a former Chancellor of UWA. The other two, Margaret and Ellen, became doctors and practised interstate.

Tajikistan mountains
Winthrop Professor David Mackey, the new Managing Director of the Lions Eye Institute, is QAS both environmental and genetic factors appear to play a role in short and long sightedness. He was commenting on NSW research which found the amount of time spent outdoors protected people from becoming short-sighted. “So if someone is inside studying all the time then they won’t spend much time outdoors, so if we can identify children who might be at risk of that happening, we might be able to intervene and suggest that Johnny might need to be sent outside more often,” Professor Mackey said.

Michele Hansen, researcher in the Telethon Institute for Child Health Research, is QAS most babies born following assisted reproduction technology (ART) treatment are delivered healthy or with problems that can be easily treated but recent study findings support transferring only a single embryo at a time. A study headed by Ms Hansen found twins born as a result of IVF were more at risk of dying, being born preterm or having health problems in their first three years of life compared with naturally conceived twins.

Winthrop Professor Christobel Saunders, Deputy Head of the School of Surgery, is QAS that while the absolute benefit of mammograms to individual women is not great, the program has helped bring big improvements in the management of breast cancer. She was commenting on a US study which found fewer than 5 per cent of women with detectable breast cancers had their lives saved by regular mammograms. “Mammography is by no means the most accurate tool but we don’t have a lot better at the moment and it’s certainly far better than anything else available,” Professor Saunders said.

Mr Stan Wisniewski, Clinical Lecturer in the School of Surgery, is QAS the results of a new genetic test for prostate cancer, PCA3, should not be guiding treatment and there is a danger men might delay therapy because of the test. He was commenting on the fact the new test is being advertised directly to the public. “At the end of the day, the only scientific and validated way of knowing if you’ve got prostate cancer is to look at the histology, and if it’s there on the biopsy, you’ve got cancer,” he said.

Winthrop Professor of Gastroenterology John Olynyk, of the School of Medicine and Pharmacology, is QAS that diagnosing hereditary haemochromatosis has important implications for cancer screening as well as the prevention of iron overload. Speaking at the World Congress of Pathology and Laboratory Medicine in Sydney, he said the finding that patients who were homozygous for the C282Y genetic mutation had a threefold increased risk of colorectal cancer, and women with the mutation had a similarly raised risk of breast cancer, had implications for screening.

Adjunct Associate Professor Paul van Buynder, of the School of Population Health, is QAS GPs may be under-recognising the importance of influenza in children. He told a briefing convened by the Influenza Specialist Group in Sydney that in a trial of childhood flu vaccinations in WA last year, almost 20 per cent of children who were not immunised had seen their GP about having the jab but the doctor had not recommended it.

Clinical Associate Professor Ross Baker, of the School of Medicine and Pharmacology, is QAS while vitamin K is often not necessary, it still should be considered in patients where there is a real concern about bleeding. He was commenting on a study which suggested low-dose oral vitamin K was no better than placebo in reducing bleeding events in previously warfarinised patients with a high INR. “If someone has minor bleeding or bruising, they are on aspirin, have had previous gastrointestinal bleeding or their blood pressure is significantly [raised], that might trigger giving the vitamin K to reverse [the effects of warfarin],” Clinical Associate Professor Baker said.

Our medical quiz is kindly supplied by Emeritus Professor Bernard Catchpole, the second Professor of Surgery appointed to the Faculty.

Questions:
1. Caffeine is said to be absent from herbal tea. How much is there in a cup of percolated coffee?
2. Apart from heat and chemicals, what else may be used to sterilise medical equipment?
3. Radiologists talk about x- and beta-particles. What are beta-particles?
4. To what does Wallace’s “Rule of Nines” apply?
5. In what part of our brain do our sudden “insights” seem to arise?

Answers page 15
LINCS – bringing medical supplies to the developing world

As part of her 6th year medical elective, Priscilla Tan visited the remote and rural parts of Palawan, in the Philippines, with four other UWA medical students. They were taken under the wing of Dr Editha Miguel and her organisation, Agape Rural (Health) Project (ARP). Ms Tan recounts how the Local and International Needs Contribution Scheme (LINCS) greatly aided in supplying equipment, resources and support to the needy area.

We did medical missions in the hospital as well as in remote villages in several places in the Philippines, including one on the top of Mount Sambilagaw. The villages were poor and remote, as evidenced by the lack of electricity and only one communal water tap that was put in place by ARP two years ago on top of Mount Sambilagaw. We ran medical clinics for these people who desperately needed medical services, as there was none. We often saw diseases and infections that were easily treatable. Malaria, TB, malnutrition, wound infections and waterborne diseases were the most common presentations. One case of a three-month-old baby girl will always stay with me: her family was so poor that they could only afford to feed her water as her sole source of nutrition. I was very saddened by the lack of resources and how easily treatable and preventable these situations and diseases were.

Some situations where LINCS was able to aid these people:

- Lacerations to the anterior portion of leg from road accident – LINCS gloves, sterile packs, antiseptic solution and bandages used to clean and bandage wound.
- Palawan Hospital – LINCS provided a glucometer and a pulse oximeter as they did not have one. I have been told by Dr Miguel that these items have been used and have saved the lives of a few people already.
- A young boy who was small for his age, tired, short of breath, and looked pale – LINCS provided a stethoscope.
- General medical check up – LINCS provided a sphygmomanometer which was used many times.
- Infections – LINCS provided the Antibiotic Therapeutics Guidelines.
- Gingival tumour – LINCS gloves were used for examination.

These were just some of the LINCS medical supplies, generously supplied by sponsors, that were used in the Philippines. I believe that LINCS is a having a great impact in the developing world, having experienced firsthand the joy of seeing faces brighten, the gratitude of those who receive the supplies, and the essential help the medical supplies provide.

Answers to Quiz on page 14

1. 60-120mg.
3. High speed electrons or positrons.
4. Skin surface proportions: head and neck, 9 per cent; each upper limb, 9 per cent; anterior torso, 2 x 9 per cent; posterior torso, 2 x 9 per cent; each lower limb, 2 x 9 per cent; perineum/neck 1 per cent.
5. The right cerebral hemisphere.
The Oral Health Centre of Western Australia (OHCWA) is being asked by the Australian Dental Council to host an increasing number of exams for overseas trained dentists, due largely to their top facilities and staff.

Associate Professor Stephen Routley, Clinic Co-ordinator of OHCWA, said the Centre started four years ago by hosting one set of exams a year, which rose to two last year. This year they have been asked to fit in another round, which they will squeeze into the mid-semester break in September.

“There is quite a lot of pressure on the Dental Council to process all the applications they get from overseas trained dentists,” Associate Professor Routley said.

“Ten years ago they would have just been in Melbourne and Sydney but these days they are all over the country… in just about everywhere there is a suitable facility.

“We get very glowing praise from the ADC when they are here.”

The ADC exams for overseas trained dentists produce more dentists than any single dental school in the country. The total was about 120 graduates last year.

About 14 rounds of exams are held throughout Australia during the year. In WA, usually 20 to 22 candidates sit the exams each round. In all, about 65 candidates will be examined at OHCWA this year.

Most are from India while others are from the Philippines, Sri Lanka, Malaysia, South Africa and occasionally the US. Dentists from Great Britain, Ireland, Canada and New Zealand automatically have their qualifications recognised in Australia.

The candidates undergo an initial language assessment followed by a written assessment in their country of origin. They must then attend clinical exams in Australia, which include two days of written exams followed by four days of the practical component that includes treating patients.

“They get examined in general dentistry, have an operative technique assessment in a laboratory, and periodontal assessments seeing patients to do scaling and cleaning,” Associate Professor Routley said.

“They see oral surgery patients to potentially do a simple extraction, they do radiography and they do technique cases for endodontics in a laboratory as well as the written theory.”

Some of the OCHWA staff are involved as examiners, including Winthrop Professor Paul Abbott, Professor Raymond Williamson and Associate Professor Routley.

Successful candidates are not required to do a rural stint and are free to practise anywhere in Australia.

The exams qualify them to be general practice dentists. “However, there is a facility for specialist qualifications to be assessed and approved as well,” Associate Professor Routley said. “A couple of our staff have done that in the eastern states and had their qualifications recognised.”