

IEMSIG

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Papua New Guinea:

Vincent Atua MMedEM, a PNG emergency physician, describes developments in Madang. This is one of the loveliest places in our neighborhood, with prospects.

India:

Kavita Varshney describes a 3 week teaching visit to Tamil Nadu. This is a way that many emergency doctors could readily make a contribution to EM development in South Asia.

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Editor Chris Curry, chris@chriscurry.com.au

South East Asia

Trauma Reception and Resuscitation Training in South Asia

**Gerard O'Reilly, Director International Operations,
The Alfred, Melbourne**
oreillygerard@hotmail.com

No continent bears a greater burden from road trauma than Asia. India ranks number one in the world in terms of the absolute number of persons killed in road collisions, where more than one million are injured each year. Similarly in Sri Lanka injury is the leading cause of hospitalisation and road trauma is the greatest cause of injuries.

Since 2004 there has developed a close relationship between the Christian Medical College (CMC) in Ludhiana, the Punjab, India and The Alfred, Melbourne. Exchanges have ranged from short visits by key stakeholders to the near completion of ACEM fellowship training by several CMC alumni.

The Emergency and Trauma Centre (E&TC) at CMC has shown considerable initiative in the domain of trauma reception through the training and equipping of motorcycle paramedics, particularly suited to the congested streets of this large industrial city, in a country where pre-hospital care remains rudimentary.

In Galle, Sri Lanka, AusAID has supported programs conducted by The Alfred E&TC since 2006 to provide capacity-building in trauma reception and resuscitation in advance of the 2010 completion of the Emergency Trauma Centre, funded by the Victorian Government.

A 'South Asia Trauma Reception and Resuscitation Program' (SATRRP) is founded on these well-established linkages. It is an AusAID-funded program allowing emergency physicians and trauma nurses to provide training in acute trauma care for staff in the Punjab and in Kandy and Galle in Sri Lanka.

The first phase of this program was conducted over 3 weeks in July 2009. Twelve staff from the Alfred E&TC provided informal and formal trauma care training in the Punjab. This occurred principally at CMC Ludhiana. It also included visits of support to government hospitals in the Punjabi cities of Ludhiana, Jalandar, Amritsar, Bhatinda and Hoshiapur.

In the second week a formal training program was provided for 26 participants, 12 doctors and 14 nurses. Ten were from CMC Ludhiana; 10 from government hospitals in the Punjab; 2 from Delhi; 2 from Kandy and 2 from Galle. The formal training program used a mixture of short lectures, small group tutorials and skill stations, and team-based scenarios. From the experience gleaned in the delivery of an extended program in Sri Lanka, there was an emphasis upon integrated team-based trauma resuscitation scenarios. Pre- and post course evaluations were completed and the participant feedback was very positive.

Eight trainers were selected from the participants, 4 from the Punjab and 4 from Sri Lanka. They were provided an extra half day focusing on educational principles and skills to facilitate the maintenance and propagation of the new learning. The next phase of the program will occur in Sri Lanka in December 2009, where the Alfred E&TC team will provide further on-the-ground support to the 4 trauma trainers in Kandy and Galle.

Papua New Guinea

Emergency Medicine in Madang, Papua New Guinea

**Vincent Atua MMedEM, Director of Emergency Medicine,
Modilon General Hospital, Madang**
vincent_atua@hotmail.com

Emergency Medicine in Madang

Madang is the provincial administrative and commercial centre for the Madang Province of Papua New Guinea. The province has about 300,000 people scattered mainly in rural villages. The urban population is about 30,000 people. The Modilon General Hospital is the main referral hospital for the entire province. It is a 200 bed hospital with an 8 bed emergency department. The hospital also serves as the teaching hospital for the Divine Word University Health Science faculty as well as the Lutheran School of Nursing.

The emergency department is led by myself, one of four local emergency physicians currently in PNG. The training of emergency physicians is the result of a lot of collaboration and support from ACEM and AusAID for a training program through the University of PNG since 2003.

Challenges for EM in PNG

As a new specialty we are striving to be recognized by the more established disciplines. With the support of a visiting professor Chris Curry we have slowly made our mark by our participation in various forums in PNG. The Primary Trauma Course (PTC) has been a conduit for the promotion of emergency medicine as a specialty in this country. A recent PTC tour to 3 highlands provinces provided a trigger for further discussions on local hospital ED design plans and staff recruiting and education needs.

The PTC program has been owned and propagated by the emergency medicine community in PNG. Whilst multidisciplinary involvement is welcomed, in particular from anaesthetists and surgeons, the majority of instructors are emergency physicians and registrars. Emergency physicians have taken on the responsibility for planning and coordinating courses. As emergency specialists visit a new environment for teaching purposes, they also have the opportunity

to inspect local EDs, talk to clinicians, meet with hospital leaders and discuss future plans. The content of the PTC course naturally highlights the importance of a functional ED. The 'local trauma perspective' component at the start of the course also emphasises the impact of trauma on PNG EDs and hospitals from a cost-analysis and human impact viewpoint. A logical consequence of this is to invest in EM skills and knowledge training for staff, as well as to improve ED systems so that patients are seen in a timely and safe manner. The 'disaster session' on the final afternoon of the course focuses attention on the role of triage as a vital EM system.

Unique Challenges in Madang

We have a small but enthusiastic group of medical staff and nurses who continue to strive to do their best under the circumstances. Being both staff and resource constrained we are often stretched to provide a reasonable level of care to our patients. Our problems are not unique in regards to waiting times, access block and funding shortages –just on a different scale.



Vincent Atua demonstrates (centre)

Teaching & Learning

Students rotate through the ED and participate in various ED activities on the wards as well as some formal lectures. Unfortunately clinical responsibilities often take precedence over formal teaching but we still try. This year we had a FACEM, Georgina Phillips, who took a lot of teaching relieving me immensely. We are currently collaborating on a joint project looking at assessing mental health emergencies, and an asthma spacer project.

Diploma in Emergency Medicine for Nurses and HEOs

Since 2005, with the major input of Sandra Rennie from Fremantle, we have been able to start and maintain a diploma in EM for nurses and HEOs (health extension officers) wanting to up-skill in ED management. The course is run at Divine Word University by flexible mode over two years. There is a large demand for places on the course that exceeds the spaces available. I hope to eventually take more leadership in the running of the course and involve more EPs locally.

ED Redevelopment

Georgina Phillips and I have worked on a new plan for our ED that will greatly improve patient flow and be more patient friendly without undertaking major structural changes. This is in the pipeline for funding consideration and I have to advocate strongly at higher levels to make it happen.

Conclusion

EM in Madang has come a long way since it started in 2005 but there is still a long way to go. There is a great opportunity to collaborate with overseas colleagues from other countries to our mutual benefit.

Acknowledgments

Chris Curry, Georgina Phillips, Sandra Rennie, Chris Kruk, Chris Hall, Naren Gunja, David Symmons, Paul Hui, Niall Small

India

Emergency Medicine at CMC Vellore in India

Kavita Varshney

Westmead and Nepean Hospitals, Sydney

Kavita_Varshney@wsahs.nsw.gov.au

I was very fortunate to have the opportunity to spend three weeks at the Christian Medical College (CMC) in Vellore, Tamil Nadu, India in February 2009.

CMC is located in the city of Vellore, which is approximately 100km from Chennai. It is two and a half hours by car and also accessible by train. CMC was founded in 1900 by Dr. Ida Scudder, who was a female missionary doctor. By 1902 it was a forty bed hospital and it is currently an eighteen hundred bed hospital, with outpatient departments serving four thousand five hundred patients a day. It has eighty operating theatres and performs over one thousand requests for imaging in its radiology department per day. There is also an on site orthotic and prosthetic department. It is one of the leading medical schools in India and people come from all over the country and overseas for treatment.

The Emergency Department at CMC has a structure and layout similar to that used in Australia. The annual patient census is about 45,000. There is a waiting room, triage area, clerical registration area, and separate resuscitation areas for category one and category two patients in addition to a consultation area for the walking patients. There is a short stay "ED admission area" of twenty-five beds that is also used for patients awaiting a bed in the ward. There is also a dedicated chest pain evaluation clinic situated separately from the ED.

The department is staffed with three consultants, all of whom have spent three or more years of their training in Australia. There are six trainees in each year who are enrolled in the two-year ED fellowship that is offered by CMC. House officers doing their ED time and interns also staff the department. There are numerous medical students both local and international. The nursing education is of a very high standard.

While I visited there I was not directly involved with patient care but I was involved with on the floor teaching, formalised morning tutorials and practical teaching in the ED. The trainees, junior medical officers, and students were extremely keen to learn and gain valuable experience from senior colleagues.





5 Although I was there to teach I can honestly say that I learnt as much as I taught. The pathology that patients presented with was amazing, predominantly because they present very late in the disease process. In one morning alone we saw a phenobarbitone overdose, a subdural haematoma secondary to a four metre fall, a hypoxic brain injury secondary to hanging with a sari sash, a fracture dislocation of an ankle following a motorcycle crash, a hypertensive crisis, and a young woman with a fever, rash and meningitis, and who turned out to have scrub typhus and an AMI.

6 Patient education and primary health issues are gaining a higher profile and ambulance services are available. Posters are being displayed in and around the town to raise community awareness. Helmets are being introduced but their generalised use still has a long way to go. The majority of injuries that presented to the ED were from "two wheeler" or motorcycle crashes.

7 Accommodation is at the main CMC campus at Bagayam, approximately seven kilometres from the hospital. It is a beautiful area where faculty, students, and international visitors reside. Friendships are made, networking started and ideas exchanged over dinner.

If anyone is interested in experiencing the culture of India, teaching and contributing in a small way to the development of emergency medicine in India then I would encourage you to contact Prof. Suresh David and try to visit the wonderful doctors, nurses and patients at CMC Vellore.

8 If you would like any further information please feel free to contact me on Kavita_Varshney@wsahs.nsw.gov.au.

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1. CMC College campus
 2. CMC Hospital
 3. Emergency Department entrance
 4. Pre-hospital signage
 5. ED triage
 6. EM training
 7. EM trainees
 8. Chest Pain Unit
 9. Orthotics Department

China

A Short Tour in China

Bryan Walpole
University of Tasmania
 bwalpole@iinet.net.au

Between the 16th and 25th of September 2009 five emergency physicians together with four staff from the Queensland University of Technology (QUT) visited China as a joint development initiative between the QUT School of Public Health and the Ministry of Health, Peoples Republic of China.

The delegation was led by Professor Gerry Fitzgerald and visited four centres. A seminar on emergency management and disaster preparedness in Beijing had to be cancelled days prior to our departure as the government had decreed that there were to be no meetings prior to the 60th anniversary celebrations, particularly with such subversives as us!

Consequently we had a cross-table discussion at the Beijing Municipal Centre for Disease Prevention and Control where we were apprised of the local provinces (25 million people) survey system for infectious disease. The major problems in Beijing are respiratory disease (currently H1N1), enteric disease, parasites and viral hepatitis. They receive daily reports from hospitals in the province and correlate on a live screen so any outbreaks are immediately evident. The centre also coordinates a comprehensive immunisation programme, and tests for toxins. It employs over 100 doctors.

The building houses a 24 hr call centre that provides health information to the public and reports any suspected communicable diseases to the centre. All 12 call centre staff were female, and when I enquired why: "We had a man once, but he didn't like it!"

The visit was followed by the first of many multi-dish gourmet meals accompanied by copious quantities of Chinese whisky and beer with multiple toasts to hosted visitors that generally left us lethargic, garrulous and striving to concentrate during the afternoon emergency department visit. This was followed by another glorious 30 dish banquet, washed down with litres of "Great Wall" Chinese Cab. Sav. Amongst other delicacies consumed were pigs ears, ducks feet, jellyfish, coelacanth, boiled

whole frogs and fried scorpions, all delicious if you had a Chinese childhood!

We visited four emergency departments in each of Beijing, Shenyang, Tianjin, and Xi-an, and discovered a nascent emergency medicine service suffering under much the same problems as Australia:- poor funding, huge demand, and subsequent chronic access block. There did however seem to be plenty of staff. A major issue in China is that health care must be paid for, and as many people are unable to afford a hospital bed they thus remain in the emergency department ad infinitum. We encountered a patient with COPD who had been ventilated for one month in the ED. The attending physician declared the patient 'public' (no fee) on medical grounds but they still could not access ICU or a bed. In one hospital over 40 sick patients were corralled in an open area, with IVs and bedside monitors, and with multiple relatives around the bed. Most nursing is done by the family.

At a fee paying ED in Shenyang ambulances drive inside, right to the resuscitation room doorway. It was equipped to the best Australian standard and had a CT, hyperbaric chamber (CO poisoning, sepsis), pathology laboratory and an exquisite ICU attached. It was accredited by SOS International so was heavily patronised by the expat. community.

There are approximately 100,000 emergency physicians in China. The salary of a specialist is about \$30,000, while an RMO gets \$5,000 annually. The training varies around the country but is generally five years post internship with an exit exam. Tony Brown thinks if his book is translated to Chinese, a fortune awaits.

Undergraduate courses tend to contain only one year of clinical work and there is a heavy emphasis on basic science and pathology. I asked one of the residents how much traditional Chinese medicine was in the course: "about four hours" she replied derisively, and when I asked about acupuncture: "an hour", both mentioned only to be dismissed.

There are traditional Chinese hospitals in most towns but they operate completely separate from western medicine, rather a paradox considering the rise in alternative medicine in the Western world. They know the evidence.

The China Medical University (so-called because Mao Ze Dong decreed it the first university after the revolution) in Shenyang has about 10,000 medical undergraduates and accepts students from all over the world. Much of their medicine is in English, making it a useful place in China for an Australian student elective.

Particularly impressive were the three ambulance pre-hospital and emergency management centres visited. Most ambulances carry a crew of four, with two drivers who are also stretcher bearers, and a doctor and nurse in the rear. No paramedics, as doctors are cheap.

Dispatch centres were beautifully designed, well staffed, with excellent IT. All that we saw had GPS with on screen in real time location at the dispatch centre. A front mounted video showed street level views. One centre (Tiajin) had a scene command vehicle with a 5m stalk atop on which sat a 500m dual light beam and camera. The rear of the vehicle contained a board room table for six, all with PC capacity, and the ability to transmit voice and images to base. They had sent this vehicle, together with 20 ambulances and attendant staff, by train to the recent Sichuan earthquake and had received many national awards for their work there.

Creative use of the foyer of the centre as a badminton court saw the Chief (a surgeon) beat most of his staff. Upstairs the seminar room had become a table tennis centre where we were no match for the Chinese employees. All pre-hospital centres were run by senior doctors, some having retired from a clinical career.

China has no general practitioners but an extensive network of community and health practitioners (the old barefoot doctors), who generally refer to hospital where there is an extensive range of Western style specialists in the major centres.

I gave two presentations on the Victorian bushfires, showing them as a serious failure of government policy whereby police and CFA had been at cross purposes in allowing people to defend their houses from an unsurvivable fire, and discussed the issues of urban fringes and living in the bush. The audience had difficulty comprehending the lack of direction from police as China is a communist run (do as you are told) state.

The over-all impression was of a country on the move with rapidly rising levels of wealth, first world medicine available to those who can afford it and a good basic subsidised level paid for by the middle classes. The remainder throw themselves at the teaching hospitals, relying on charity much as in the United States.

Looking around it is hard to recognise a communist country, except that it is run by a clique of unelected old men, as rampant capitalism is evident on the streets and corruption is a big issue. Censorship is still pervasive and history is politically correct when reading the "China Daily" or watching Channel 9 (the English language channel). Everything is lovely.

Tien-an-Min Square was closed for the 60th anniversary celebrations. We watched the preparations in awe and observed the crowd control vehicles in attendance. Dissent will not be seen, nor any resurgence of 1989 riots. The Han Chinese (90% of the nation) have dominated the 20 ethnic minorities whose local cultures are quaintly tolerated only while they behave.

China is on the verge of global domination and, with 25% of the world's population, it will have an enormous impact on the world of medicine. They probably have more emergency physicians than the rest of the world and I look forward to their contributions within the International Federation and in research and practice.

My thanks to the team, especially Janet Hou (who put it together with Gerry), Wei Wei Du (Gerry's PhD candidate at QUT), our fearless interpreter and guide, and Prof. Gerry Fitzgerald, who made all the speeches.

Malawi

Emergency Medicine in Malawi

Jeremy Furyk

The Townsville Hospital

Jeremy_Furyk@health.qld.gov.au or jsfuryk@hotmail.com

Experiences in a Paediatric Emergency Department, and future directions for a planned Adult Emergency and Trauma Centre

Malawi is a small (surface area of 120,000 sq km) landlocked country in Southern Africa with a population of nearly 14 million people. It is one of the most densely populated countries in the world, and one of the poorest with a GDP per capita of about US\$325. As with much of Africa, population growth, increasing pressure on agricultural land, corruption and HIV/AIDS are all ongoing challenges. Life expectancy at birth is about 41 years. Mortality of children under five is a shocking 120 per 1000 live births and maternal mortality is over 980 per 100,000 live births. HIV prevalence is estimated at approximately 13%. The median age is 16, with 47% of the population under 15. The annual total health expenditure per capita is US\$70, compared to Australia's US\$3,122. This expenditure is 12.3% of Malawi's GDP, compared to 8.7% in Australia.

In 2008/09 I had the opportunity to travel to Malawi in Southern Africa to work as a volunteer in the Children's Accident and Emergency Department (A&E) of Queen Elizabeth Central Hospital (QECH) for six months. Although challenging, it was an amazing experience and worlds apart from my usual job and relative comfort as an emergency physician in a mixed emergency department in Townsville, North Queensland.

The Queen Elizabeth Central Hospital (QECH), built in 1959, is an 1120 bed government teaching and referral hospital located in Blantyre, Southern Malawi. It is one of two national referral hospitals and functions as the district general hospital for a local population of over a million people. It also functions as the teaching hospital for the country's only medical school, the College of Medicine of the University of Malawi.

The Paediatric Accident and Emergency Unit was constructed in 2001 and has had a significant

impact on the care of critically ill children in Malawi. Hospital data on admissions, discharges and mortality have shown that following the establishment of the Children's A&E inpatient mortality has decreased by about 50% and the proportion of deaths occurring within 24 hours of admission has decreased from 36% to 12.6%. There is currently no equivalent structure or function for critically ill adults attending QECH and the numbers of such patients have increased dramatically in recent years, exacerbated by urbanisation and the HIV epidemic. The current "Outpatient" department attends to as many as 1000 patients per day, with no process of triage, inadequate room for on-site care, procedures or emergency resuscitation. Bed occupancy at QECH is commonly over 100%.

QECH is also a major centre for research with strong links with the Malawi-Liverpool-Wellcome Trust Clinical Research Programme (MLW), the University of Liverpool, the London School of Tropical Medicine, Birmingham Children's Hospital, and Johns Hopkins University, amongst others. A symbiotic relationship that seems to benefit both parties has resulted, and extremely limited government resources are at times supplemented by resources provided through research organisations, improving the health care of all Malawians. For example, to my surprise Computed Tomography and Magnetic Resonance Imaging were available on site.

The hospital is staffed with a combination of locally trained and expatriate doctors of all specialties. There is a medical school training predominately local undergraduate students in close proximity to the hospital. Lecturers from the College of Medicine provide clinical roles as well as undertaking teaching. An often repeated joke that is unfortunately true is that there are more Malawian doctors working in Manchester than in all of Malawi. This seems to



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- 1. QE Hospital
- 2. Outpatients Department
- 3. Triage
- 4. Jeremy Furyk and nursing staff
- 5. Liz Molyneux at work
- 6, 7 & 8. Patients

6



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Photos by Mark Jones and Jeremy Furyk

8



be a problem faced by many African countries as poor working conditions and the attraction of better pay lure doctors overseas. The hospital clinical responsibilities are shared with clinical officers, who undergo a separate course of three years of undergraduate training.

I worked only in the Children's Accident and Emergency Department. I had arranged this through Professor Elizabeth Molyneux, who was the Director of the Paediatric Department at the time. Prof Molyneux and her husband Professor Malcolm Molyneux have been working in Malawi over the last 30 years. She is a wonderful clinician, teacher and researcher and has been a mentor and inspiration to countless doctors over the years.

The Children's A&E encompasses a central waiting area, clinical rooms off the sides, a resuscitation room, procedure room, an oral re-hydration room and a co-located short stay unit. Patients are seen and triaged by an experienced nurse into three categories according to priority according to the Emergency Triage Assessment and Treatment (ETAT) principles. There is an ETAT course, developed by WHO for resource poor environments and derived from the Advanced Paediatric Life Support course. The resuscitation room consists of three trolleys, each with access to an oxygen concentrator. A central monitor provides pulse oximetry, non invasive blood pressure and cardiac monitoring if required.

Each day in August, which is in the dry season, there were approximately 200 attendances in the nine hours for which the department was open. Managing these children, most of whom were significantly unwell, with limited resources was quite a challenge. Few locals spoke English, mostly speaking Chichewa. I was therefore quite reliant on local medical students, clinical officer students and other staff to assist with translation. I also received invaluable advice and guidance from the team of enthusiastic and experienced paediatricians who were always available for assistance.

The case-mix was extremely varied and the entire spectrum of Paediatrics was represented, however the overwhelming majority of presentations and mortality was due to preventable and treatable conditions such as malaria, respiratory disease and gastroenteritis. As alluded to previously, AIDS and related diseases were also prevalent. Approximately 20% of admitted patients were HIV positive.

Every day brought new diagnostic challenges and a myriad of clinical signs. Unusual neurological presentations had me reaching for textbooks almost on a

daily basis. There were ample cases of organophosphate toxicity, mushroom poisoning and exotic snake envenomations to satisfy most toxicology/toxinology enthusiasts. There were children with Burkitt's lymphomas, schistosomiasis, massive splenomegaly, rheumatic fever with Sydenham's chorea amongst others that could have been straight from tropical medicine textbooks. Trauma and common surgical conditions such as intussusceptions, bowel obstructions and perforations were also part of the case mix. A spectrum of neonatal and developmental problems was also frequently encountered. Unfortunately dealing with victims of sexual abuse was also quite common and cases of severe malnutrition always seemed so heartbreaking.

With the rains in November and December the number of presentations skyrocketed to over 600 children per day with over 100 admissions. The resuscitation room in the A&E was often over capacity. When there were more than two patients on each of the three beds it became difficult to manage. Recipients of oxygen had to be prioritised as there were only three oxygen concentrators. Patients were transferred to the overcrowded and under-resourced wards as soon as they were stabilised and an opportunity occurred.

Limited resources obviously meant we could not treat all the conditions that were admitted to the hospital. An invaluable resource available at QECH paediatric department was the palliative care service provided. In an environment when we are not able to attempt to "cure" all children who come to us for help, it is important to remember that much can be offered by ensuring the children and families are cared for in a compassionate and respectful manner.

Cultural factors at times also influenced patient care. Parents often identified hospitals as places where children died, and were somewhat reluctant to present or allow children to be admitted. Similar views were held with regard to oxygen therapy and nasogastric tubes. Only the sickest children received these interventions and these children often died thus reinforcing the parents' misconceptions. Poverty was also an issue that influenced all areas of life but particularly access to health care. Parents often faced hours of transport by minibus or walking long distances to get to medical attention. At night transport was often not possible at all. All too often children were presented to the hospital who had apparently died on the way.

The impact of the Children's Accident and Emergency Unit has been significant on a number of fronts. In

In addition to documented improvement in mortality of admitted patients, the department has also had significant impacts in the fields of medical research on acute conditions such as meningitis and malaria, the department has contributed significantly in medical education of both junior doctors and medical students and has generally improved staff morale. This has influenced hospital and health administrators to develop a similar system for the care of adult patients at QECH. With funding predominately from the MLW Clinical Research Programme, construction is due to commence soon on a new US\$1.6 million Adult Emergency and Trauma Centre (AETC). With an anticipated workload of 500-1000 medical and surgical attendances per day the AETC taskforce is committed to systems of care that include prompt registration and triage, optimising flow to minor and major emergencies as well as resuscitation, prompt investigation as required and expedient treatment, as well as improved medical records and data collection.

The development of the AETC is obviously a huge step forward and an exciting development for QECH, however a number of significant challenges remain. Government resources are obviously extremely limited in Malawi, and exact models of care and staffing are yet to be determined. Locally trained

doctors in Malawi have little or no experience in emergency medicine, and even concepts such as triage may seem foreign to them. Currently emergency medicine is not a recognised specialty in Malawi, and not taught in the medical school curriculum. It is difficult to imagine who will provide oversight and guidance to staff working in the new department. In my opinion for the system to be successful significant external assistance will be required in the establishment of this new department in all areas including direct supervision, medical education, staff training and management.

From a personal point of view I found my time in Malawi immensely rewarding. The country is beautiful and diverse, with magical attractions like Lake Malawi and Mount Mulanji. The local people are known for their warmth and generosity. The work was challenging, at times frustrating and often heartbreaking. However working with the local doctors and nurses providing the best care possible in difficult circumstances was always extremely satisfying. There is much more that can be achieved with emergency medicine in Malawi and in the region, and I would be happy to be contacted by anyone who might be interested in getting involved with emergency medicine in Malawi.

Primary Trauma Care – breaking new ground

Courses in Myanmar and the Pacific as conduits for Emergency Medicine

Georgina Phillips

St Vincents Hospital, Melbourne

Georgina.PHILLIPS@svhm.org.au

Background

Trauma is a leading cause of death and disability in the world. In resource deplete environments that lack the systems and expertise to deal with an overwhelming and complex patient load, the health consequences of traumatic injury are emerging as an under-recognised issue. As a result, medical education programs that focus on teaching good trauma management skills are receiving increasing attention.

The Primary Trauma Care (PTC) course was designed with the support of the World Federation of Societies of Anaesthetists to train health care providers to prioritise and treat severely injured patients quickly and systematically, thereby reducing death and disability. Overseen by a not-for-profit Foundation, the PTC course is run at no charge and is designed specifically for resource-poor environments; emphasising flexibility and quality early trauma care within local limitations. With the emphasis on a basic systematic approach that can be applied by all health clinicians, and the longer term aim of devolving responsibility for coordinating and teaching courses to local clinicians, the PTC program has been enthusiastically adopted in many developing nations. It has been endorsed by the World Health Organisation (WHO).

The PTC course is short (2 days for participants and 1 day for instructors) and requires little complex equipment, preferring to utilise the tools that are available to practitioners in the field rather than relying on expensive or scarce teaching aids. There is an emphasis on flexibility, practical skills, team-work and collaboration. For these reasons PTC programs are popular amongst funders, who can see good outcomes delivered at low cost. In many regions PTC courses that began as fully externally funded programs have become completely locally supported and incorporated into government health budgets, as a result of the popularity and success of the PTC model.

The following article describes two programs at either end of the PTC spectrum. The inaugural PTC program was run in Burma (Myanmar) in March 2009 with an international team of instructors, whilst in the Pacific a team of experienced local PTC instructors met to share expertise and improve the course for their own environments. An emerging theme of PTC becoming a conduit for the development of emergency medicine (EM) is discussed as a common thread connecting these two regions.

Myanmar inaugural PTC course

Trauma is emerging as a key cause of mortality and morbidity in Myanmar, heightened by the overwhelming human casualties resulting from Cyclone Nargis in 2008. The Myanmar Medical Association (MMA) provides continuing medical education for all doctors and has been instrumental in highlighting the need for a comprehensive trauma system including widespread education for first responders and clinicians in Myanmar. At the request of the MMA and Myanmar Orthopaedic Society, the PTC Foundation was invited to introduce the PTC program to Myanmar, with an expectation that the MMA would take responsibility for the promulgation of PTC courses throughout the country.

From 28th March to 1st April, an international team of 8 instructors supervised and taught a 5-day PTC program in Yangon, beginning with a 2-day Participant Course, a 1-day Instructor Course, and second Participant Course. The second course was facilitated with the aid of newly trained local instructors who had participated in the initial Participant and Instructor Courses. The aim of these courses was to teach PTC concepts and refresh skills for clinicians, showcase the PTC course with a view to future local ownership, and equip local



PTC in Myanmar

clinicians with the knowledge and skills to run PTC courses in the future. The program was funded by the Royal Australasian College of Surgeons (RACS), whose representative also accompanied the visiting Faculty.

Interdisciplinary collaboration is a strength of the PTC program, which manifested in both the instructor and participant make-up. Two Australian emergency physicians (Georgina Phillips – Visiting Course Director, and Antony Chenhall) joined an anaesthetist based in East Timor (Eric Vreede) and an eminent group from Hong Kong, which included a ‘founding father’ of emergency medicine in that region (Tai-Wai Wong) as well as a constellation of senior anaesthetists (Tsun-Woon Lee and Anthony Ho) and surgeons (James Kong, Prof Sydney Chung). The collective experience and enthusiasm within the instructing team ensured a lively and dynamic course delivered at an extremely high standard.

Participants had also been carefully selected to represent a variety of disciplines. In the absence of a recognised emergency medicine craft, orthopaedic surgeons take responsibility for trauma care in Burmese hospitals, and so took a leadership role in this inaugural PTC program. In recognition of the future promulgation of PTC courses, however, general surgeons, anaesthetists, obstetricians, paediatricians and general practitioners all participated as both subjects and newly trained instructors over the 5-day program. These highly educated and discerning participants were able to provide overwhelmingly positive feedback about the course, but also some instructive suggestions to improve future courses. Language was highlighted as a key issue, with a current combination of written English and spoken Burmese working most effectively in teaching.

A full and stimulating social program accompanied the intense week of PTC preparation and teaching, which allowed for professional and personal networks between the international facilitators, RACS and the Burmese clinicians and MMA hosts to flourish. Formal dinners were hosted by the MMA and Orthopaedic Society, and on the final evening, by the Australian Ambassador to Myanmar. The value of sustaining professional liaison between clinicians in Myanmar and those in the region was highlighted as a means of ensuring ongoing support and preventing isolation in an otherwise closed and insular environment.

Recognising that ongoing support is required to ensure the local sustainability and longevity of the PTC program, plans for future courses with a mix of local and international facilitators have been made. Whilst in Myanmar PTC and RACS representatives met with AusAID officials in an attempt to secure funding until 2011, when it was anticipated that the MMA would be able to continue the PTC model without relying on

international support. In November, as this newsletter goes to print, the second Myanmar PTC program will have been run in Yangon with a core of the original Hong Kong facilitators, some new international members (including a New Zealand anaesthetist) and the Burmese instructors trained in the earlier program. Two more courses are anticipated in 2010, with the aim to bring the program to other centres of Myanmar, including Mandalay. With the determination and enthusiasm of the local clinicians, the wide reach and organisation of the MMA and the professional support of the international 'PTC community', the future of PTC in Myanmar appears promising.

PTC in the Pacific Islands

A Fiji Regional Meeting

The Pacific Islands region was one of the first to embrace PTC and has a long history of local ownership. In some countries, such as Fiji, the PTC course has become so embedded in the local medical education that it forms part of the undergraduate medical degree. Sustained enthusiasm and uptake in Papua New Guinea (PNG) has ensured that a strong core of local facilitators have been trained to run courses throughout the year so that the many different regions of PNG receive this essential trauma training. More recently local ownership in Solomon Islands has seen courses run in provincial areas that have been fully internally funded by the Ministry of Health.

Whilst the core of the PTC message remains unchanged, experienced Pacific Island facilitators have adapted teaching techniques to suit the local environment and cultural strengths. Until this inaugural meeting in Fiji there has never been an opportunity for the sharing of resources and ideas between Pacific Island clinicians, nor even for professionals in the region to meet and offer peer support and liaison. In this context, the Pacific Regional PTC meeting held in Lautoka, Fiji in March this year was a unique and exciting event, bringing together for the first time clinicians from PNG, Solomon Islands, Fiji, Kiribati, Tonga, Samoa, Vanuatu, Cook Islands, New Zealand and Australia. Again, AusAID, which has a long history of PTC support, provided the funding through the Pacific Islands Project managed by the RACS.

For two days participants refreshed their facilitator skills, heard evidence-based updates on trauma issues as well as learning about PTC development and propagation throughout the region. Techniques for accessing funding were discussed and plans for future courses with the sharing of resources and facilitators between countries were made. Some aspects of the PTC course teaching materials were collaboratively adapted, such

PTC in Fiji



as the notorious 'head injury' topic, which has proved most difficult to teach in a meaningful way in the Pacific Islands context, which has extremely limited access to neurosurgical investigation and treatment. It was at this meeting that the plans for the Samoan PTC course in August 2009, using an experienced PNG emergency physician, were confirmed. The timing for this course was in anticipation of the 'road-side switch' (Samoa changed from right to left sided driving in September), however the relevance of the PTC in the aftermath of the Samoan tsunami is even more heightened.

Perhaps the most important outcome of this stimulating event was the beginning of a real Pacific Islands professional network. Clinicians who would otherwise have never met were able to learn from each other and establish an ongoing professional and peer relationship. PTC acted as a trigger and conduit for a wider regional conversation on skills training and education as well as issues of resource availability and professional development opportunities.

PNG Highlands

In June – July this year PTC courses were delivered in the PNG highlands region at the provincial hospitals of Mt Hagen, Mendi and Wabag. Two PNG emergency physicians, Drs Yongoe Kambue and Sam Yockopua, led the facilitator team of four, including a senior emergency registrar, Dr John Tsiperau and a visiting Australian emergency physician, Dr Georgina Phillips. Participants ranged from senior doctors through to community health workers. Efforts were made to incorporate learning opportunities for all participants, regardless of their level of experience, and the positive feedback received reflected that this had been successful.

As there has been great difficulty securing sustainable funding for PTC from the PNG Ministry of Health (indeed, many health workers go unpaid due to finance and funding problems in PNG), the funding for the highlands PTC tour came from the AusAID Health Education and Clinical Services (HECS) program, administered by RACS. However, all initiation, planning and organisation for the courses were done internally by the local providers and it was a testament to their work that the entire program ran extremely smoothly.

This PTC tour was the first opportunity to receive relevant clinical skills and knowledge training for many of the participants. Some had worked in their provincial hospital emergency department for years, yet had never received teaching in trauma or EM care. Most participants were so overwhelmed by their busy jobs that time and opportunity for professional development was not available. That the PTC was brought to them in their own work environments was of critical importance in the relevance and success of the course. The level of interest and support from hospital leaders, such as CEOs and Directors was particularly noteworthy. Their presence at the open and close of courses and overt expression of support for future courses was a powerful endorsement of the PTC and gives hope for the future sustainability of this program.

PTC as a conduit for developing Emergency Medicine

In each of these forums the link between PTC and emergency medicine has been an interesting and increasingly relevant theme. Through both the prominence of emergency physicians as facilitators and the content and flexible style of the course, participants are stimulated to consider the importance of EM to good trauma care. The content of the PTC course naturally highlights the importance of a functional ED. The 'local trauma perspective' component at the start of the course also emphasises the impact of trauma on EDs and hospitals from a cost-analysis and human impact viewpoint. A logical consequence of this is to invest in EM skills and knowledge training for staff, as well as improve ED systems so that patients are seen in a timely and safe manner. The 'disaster session' on the final afternoon of the course focuses attention on the role of triage as a vital EM system.

Both the PTC program and the concept of EM as a medical specialty are new to Myanmar, although clinical leaders in the MMA have been keen to develop trauma care and EDs throughout Myanmar for some time. Thus the presence of international emergency physicians provided a unique and much desired opportunity to discuss how to proceed with EM training in their country, and what opportunities are available to expand in this area. As PTC training propagates throughout Myanmar, the parallel need to establish high functioning EDs that are staffed with motivated and well-trained clinicians will become increasingly important.

In PNG the PTC program has been owned and propagated by the emergency medicine community. Whilst multidisciplinary facilitation is welcomed, in particular from anaesthetists and surgeons, the majority of instructors are emergency physicians and registrars, who also take responsibility for planning and equipping courses.

A natural result of this is the role of PTC as a conduit for EM and ED development throughout PNG. As emergency specialists visit a new environment for teaching purposes they also have the opportunity to inspect local EDs, talk to clinicians, meet with hospital leaders and discuss future plans. During the highlands PTC tour the visiting EM facilitators used every opportunity to highlight the importance of EM and work towards the ED development in this region of PNG. Techniques and opportunities used by the visiting specialists included site visits to EDs, propagation of ED development guidelines, professional and peer support for ED clinicians and lobbying at a management level for increased educational and structural resourcing of the provincial EDs visited.

This highlands PTC tour was particularly noteworthy for the interest and support for ED development already existing in the provincial hospital leadership at each of the three centres visited. Medical Directors and CEOs knew that the ED was a key site as the interface between the hospital and the community. They also knew that their own departments were functioning poorly and required investment in staff and infrastructure, although were unsure of how best to achieve this. The PTC tour, facilitated by experts in ED care and systems, was a unique opportunity for these provincial hospital leaders to access essential information, establish networks for future collaboration and provide their staff with vital clinical EM skills. A direct consequence of this has been the subsequent visit of a PNG and an Australian emergency physician, Drs Sam Yockopua and Colin Banks, to the Mt Hagen hospital at the invitation of the Medical Director and CEO to review their ED renovation plans.

This model of PTC teaching as a conduit for developing EDs in provincial centres as well as passing on important clinical skills and knowledge is one that can be replicated throughout PNG.

Conclusion

PTC has been referred to as a “gospel message” by grateful health workers in remote regions who had not previously had the skills and knowledge to perform work expected of them when caring for the traumatically injured. There is certainly some truth to this analogy, especially when considering the simplicity and principles emphasised in the content which can be taught with great flexibility and with limited resources by local clinicians who are mandated to “spread the message” as widely as possible.

There is great promise that PTC will propagate and flourish under the leadership of experienced clinicians in Myanmar, and evidence of sustainability and longevity of PTC with a ‘local flavour’ in the Pacific Islands region. Both these programs are enhanced by interdisciplinary and international collaboration and support. Utilising PTC as a trigger and conduit for developing EM in all of these countries is an exciting opportunity for emergency physicians and will benefit all people who require acute medical care. Australasian emergency physicians have enormous professional capacity to engage with this process and take an EM leadership role within their region.

The International Diploma of Humanitarian Assistance (IDHA)

Mark Little

Royal Perth Hospital

mark.little@health.wa.gov.au

The International Diploma of Humanitarian Assistance (IDHA) is an intensive 4 weeks course run by the Centre for International Humanitarian Cooperation at Fordham University (USA) in cooperation with the UN System Staff College. The course is run three times a year, in Geneva, New York and a third location (it has been in Kenya for the last few years). The aim of the course is to enable humanitarian workers to have a better understanding of working in the humanitarian environment looking at the needs of refugees and internally displaced persons, working as a team, promoting cooperation and dialogue between international government and NGOs and examining interventions and how crises can be anticipated and prevented.

I attended the course in Geneva and it was held at the beautiful Bossey Chateau. The chateau has been modernised and is warm, with great rooms and food. The course is intensive (200 hrs in 4 weeks) and consists of lectures, tutorials, group work and debates. It is not a medical course (medical issues were considered for only 1.5 days) and focused on many issues such as security, logistics, international law, conflict resolution, civilian & military relations, the media and politics. There was a large focus on team work and participants worked in small groups, achieving tasks each week.

What was so impressive about the course was the calibre of the teaching staff. The course coordinator was Larry Hollingsworth who had been the Humanitarian coordinator for UN missions in Iraq, Palestine and Pakistan. Lord David Owen, the former

UK Foreign Minister (and a neurologist it transpires!), Peter Hansen (who was in charge of the UN in Gaza for 9 years), Major General Tim Cross (commander UK forces in Kosovo) were some of the presenters and tutors. Many were leaders in their fields - from the WHO, UN, ICRC and so forth. The team building work was great and I have taken ideas away with me for the ED. For me one of the highlights was the case studies, where presenters who had worked in various crises (Gaza, Lebanon, Pakistan, Haiti- it always has hurricanes-, North Korea, Sudan...) would discuss the political background and what happened. The Irish Ambassador to the UN (Geneva) spoke to us about the cluster bomb treaty (riveting).

There was a lot on how the UN deals with a humanitarian crisis, and as I have been involved with disaster response in Indonesia with the Ausmat teams it helped explain what was going on.

I found this an excellent course. Every day was different and I learnt lots. Fellow students were from many organisations such as the ICRC, UN, US military, academia, World Vision etc and came from all walks of life. It gave me a greater understanding of dealing with humanitarian crises (which could be something such as a cyclone in the north of Australia - we discussed Katrina!) and I found much of relevance to my emergency medicine practice.

The cost is \$US5,200 which includes all food and accommodation for the month.

More details can be obtained from me or the website www.cihc.org.

Conferences

Emergency Medicine Meeting

Hue, Vietnam

22 – 26 March 2010

Here's an opportunity to help establish Emergency Medicine as a new specialty in Vietnam, and to hear some well-traveled speakers in an interesting location.

The purpose: Emergency Medicine has just been approved as a specialty in Vietnam, and Hué University is establishing the first training programme. This meeting is expected to draw 200 practicing physicians from the various provinces who want to learn more about the specialty of emergency medicine.

The place: Hué University in Vietnam, the former imperial capital of the Nguyễn Dynasty and a world heritage site. Hué might be best known for its historic monuments, which have earned it a place in the UNESCO's World Heritage Sites. It is also known for great cuisine, and some of the best vegetarian cooking in the world.

The dates: 22–26 March 2010, Monday to Friday.

The sessions: Morning didactic sessions are in neurologic emergencies, cardiovascular emergencies, pulmonary emergencies, and orthopedic emergencies. Afternoon workshops are in EMS and trauma scenarios, ACLS scenarios, basic and advanced airway management, and ultrasound guided diagnostics and procedures.

The speakers: Along with a cadre of volunteers keen on helping emergency medicine become a specialty in Vietnam, you can hear speakers like Billy Mallon (California), David Crippen (Pennsylvania), Kris Arnold (Massachusetts), Bob Suter (Texas), Terry Mulligan (The Netherlands), Peter Cameron (Australia), Howard Blumstein (North Carolina) and Joe Lex (Pennsylvania).

The cost: We are asking a donation of US\$300 to attend this 5-day workshop. The donation will be used to cover the rental of simulators and ultrasound machines, and to support emergency medicine in Vietnam. All faculty are paying their own way and taking no money to take part in this activity.

We also extend an invitation for you to help us in the afternoon workshops. If you have special skills in ultrasound or using simulators, we will welcome your expertise. The more instructors we have, the more Vietnamese physicians we can instruct in essential life-saving skills.

This is an opportunity to contribute to the beginnings of a worthwhile project. Please consider joining the Meeting in Hué in March 2010.

For further information, contact

Vien Doan viendoan@yahoo.com or

Joe Lex Joseph.Lex@TUHS.Temple.edu

Newsclips

International Federation for Emergency Medicine (IFEM)



Peter Cameron is now President-elect of IFEM and will take over the Presidency at the conclusion of the International Conference on Emergency Medicine (ICEM) in Singapore in June 2010.

He has been Vice-President over the last 3 years, while Ian Knox has been Treasurer.

The IFEM Secretariat is in Melbourne

IFEM now has 38 members and through its affiliate organizations covers more than 60 countries worldwide. It is developing international curricula, educational material, and guidelines, and is involved in the development of EM as a specialty in many countries.



India and Vietnam

India and Vietnam have recognized emergency medicine as a specialty.