# IEMSIG





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### The Netherlands

### **Emergency Medicine in The Netherlands** John L Holmes, Director of Emergency Medicine Medicine, Mater Adult Hospital, Brisbane

John.Holmes@mater.org.au

In 2007 and 2008 I spent 15 months in the Netherlands as visiting emergency medicine consultant at the Academisch Medisch Centrum (AMC), a large tertiary hospital associated with the University of Amsterdam and also at the Onze Lieve Vrouw Gasthius (OLVG), a general hospital located in inner Amsterdam.

### The Dutch Healthcare System

The Netherlands is a small country in northwestern Europe with a population of approximately 16.5 million people. It is one of the most densely populated countries in the world. The Dutch health care system consumes 12.4% of gross domestic product compared to 9.4% in Australia and almost 16% in the USA. In 2008 the Euro Health Consumer Index deemed the Dutch health care system to be the best in Europe. Despite this, there are still major problems in the delivery of Dutch health care, in particular in emergency medicine.

Contrary to popular belief, the Netherlands does not have a socialised health system. Health insurance is compulsory for all citizens other than children and those on social security benefits. Premiums are income related and employers pay part of this. Tax relief is available for low income earners and those on higher incomes may elect to insure for higher benefits.

There are eight major tertiary hospitals associated with universities around the country. These are the only hospitals fully subsidised by the government. All other hospitals are independent self governed entities and negotiate their income through complicated arrangements with health insurance companies. As a result of these arrangements, there are financial incentives to admitting patients to hospital as funding follows from each patient admission, both to the hospital and to the admitting specialty unit. Access block to inpatient beds is virtually unknown in the Netherlands.

An important part of the Dutch health care system is the pivotal role played by huisartsen (literally



Academisch Medisch Centrum (AMC), Amsterdam

"house doctors" or general practitioners). Dutch residents must register with one GP in their vicinity and once registered with that GP it is very difficult to change. General practitioners rooms are normally open only in office hours and after hours patients are directed to a local huisartsenpost which is a free standing acute care clinic manned by GPs. Some of these are located within or close to hospitals. For severe emergencies a patient may call an emergency ambulance. Ambulances are manned by registered nurses and occasionally by trainee doctors. Compared to Australasia, relatively few patients present directly to hospitals for acute or urgent care and self-referral is not always covered by health insurance without prior consultation with a GP.

GPs jealously guard their role as gatekeepers to the health care system and directly refer their patients, sometimes erroneously, to particular specialists. The Spoedeisende Hulp, SEH (literally Urgent Help), or Emergency Department receives a large proportion of attendances as the result of such referrals and they are by seen junior doctors of the specialty to which they have been referred.

### **Spoedeisende Hulp (SEH) - Emergency Medicine in the Netherlands**

History

In many respects the situation in Holland today mirrors that in Australasia 20 or 30 years ago. In the 1990s several Dutch senior specialists, mainly trauma surgeons, recognised the short-comings of acute care in The Netherlands, a view which was corroborated in 1995 when a Governmental Health Inspectorate identified ED as the weakest link in the Dutch health care system. As a result they and other dedicated individuals decided to create the specialty of emergency medicine (*spoedeisende geneeskunde*) similar to models that had evolved in USA, Canada, UK and Australasia.

In 1999, the NVSHA - Nederlandse Vereniging van Spoedeisende Hulp Artsen (Dutch Association of Emergency Physicians) was formed. Membership is open to all doctors with an interest in emergency medicine and has no actual power or regulatory authority.

The first experimental 3 year training programs commenced in four hospitals in 2000. There is no College or specialty Board for emergency medicine in the Netherlands, however, in 2004 the SOSG - Stichting Opleiding Spoedeisende Geneeskunde (Council for Emergency Medicine Training) was established by the founding specialists to oversee training and curriculum development in emergency medicine. This organisation now acts as a de facto credentialling body for individuals who have completed an emergency medicine training program and it also accredits individual hospital training programs.

Official government specialists credentialling resides with the *Medisch Specialiste Registratie Commissie*. This organisation determines which craft groups are deemed to be specialists. At the time of writing there are indications that emergency medicine is about to be recognised by this body and this should prove to be an important stimulus for the further development of the specialty in the country.

### Spoedeisende Hulp Afdelingen (Emergency Departments)

The SEH (Urgent Help) has historically not been a major department in most Dutch hospitals. Even large university hospitals still have emergency departments that are old, small, poorly designed and severely under resourced.

A couple of hospitals have built new SEH facilities – in particular OLVG in Amsterdam is rightly proud



AMC ED Doctors' Work Area



AMC ED Consulting Room



AMC Trauma Room

of its new SEH which is large, well lit and purpose designed though unfortunately with some major design flaws. In particular there is no procedure room and the two small enclosed "shock rooms" (resuscitation rooms) are separated from the main body of the department by a 30 metre corridor lined with offices. As is the case throughout the country there is no Observation Unit.

At the AMC which is one of the most prestigious hospitals in the Netherlands, the trauma rooms are state of the art with a mobile CT scanner mounted

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on tracks that enable full body scanning to take place without the patient having to be moved from the resuscitation bed. There is also a well equipped freestanding medical resuscitation room located apart from the SEH. Unfortunately the SEH itself is very small and primitive.

Permanent SEH medical staff typically comprise poortartsen (literally gate doctors) who are analogous to long serving career medical officers but without any specific training and ANIOs – assistenten niet in opleiding (assistants not in training) who are junior doctors marking time whilst awaiting placement in an established specialty's training program. These doctors have rarely received any training in emergency medicine and work unsupervised. They act as little more than triage officers, referring all but the simplest cases directly to inpatient specialist colleagues.

In recent times these relatively untrained doctors have been supplemented by locally trained emergency physicians and emergency medicine trainees, though understandably, Dutch EPs are generally not as knowledgeable, experienced or as skilled as those from countries where EM is already an established specialty.

In general the SEH doctors are restricted to seeing only those patients who self refer to the hospital. Patients who are referred by GPs are seen by junior doctors from the specialty units. This normally involves being seen by an assistent in opleiding (literally assistant doctor in training) who is equivalent in status to an Australasian junior registrar but in reality may be grossly inexperienced. Unless special

in-house arrangements are in place, none of these patients will be seen by emergency physicians or emergency trainees and this remains one of the great deficiencies in Dutch medicine.

As in other parts of the world, Dutch specialist trainees are often inadequately knowledgeable or skilled in recognizing and dealing with emergencies, even within their own specialty. This is compounded in Holland as medical graduates go directly from university into specialty training or mark time in a non-training position in unpopular specialties such as psychiatry without the benefit of obligatory intern or junior RMO years. As a result Dutch specialty residents often have little if any general medical or surgical experience. They are further hampered by undergraduate medical course curricula that are seriously deficient in teaching emergency medicine and important fundamentals such as pharmacology.

Because there is little concept of the principles of emergency medicine many acutely ill and injured patients are inadequately assessed and treated. Clinical management tends to be process driven and not necessarily patient oriented. Treatment is formulaic and protocol driven with little independent thought encouraged or permitted at this level. Important issues such as timely and adequate analgesia are seldom addressed and outmoded procedures still take place – for example haematoma blocks are routinely used for fracture reduction and major joint relocations are still attempted under diazepam sedation.

In contradistinction major trauma is usually well managed at the designated trauma centres and in

Table 1: comparison between Australasian and Netherlands training

ANZ weeks	STAGE (ROTATION)	NL weeks
121	Emergency Medicine	32
26	Anaesthesiology	6
26	Paediatrics	6
26	Intensive care	16
0	General practice	10
26	Other rotations : (Medical specialties, Surgical specialties, Ambulance, Helicopter, Forensics, Psychiatry)	73
	Research	3
5	Conference	5
30	Vacation	15
230	TOTAL	141

the bigger hospitals major resuscitation is also well handled. However, emergency physicians are often marginalised as consultants or senior registrars from several disciplines will immediately attend every patient admitted to resuscitation rooms. It is usual for an intensivist to assume team leadership rather than emergency physicians in these circumstances, even if the patient does not eventually go to the ICU.

There is a fundamental difference in the perception of the role of the ED between Australasia and the Netherlands. In Australasia the emergency department is the province of emergency physicians whereas in the Netherlands there is no ownership of the department, least of all by emergency physicians. Even in hospitals in which emergency medicine is more established the emergency department is considered the province of all the hospital's medicine staff, and even within the SEH emergency physicians and residents are often relegated subsidiary roles.

SEH nurses are generally well trained and of a high standard. Because doctors in SEH until recent times have been untrained and unskilled, SEH nurses have played a relatively more important role in patient management compared to Australasia and Dutch SEH nurses routinely place IV cannulae, apply plaster casts, perform sutures and wound care and otherwise initiate therapy.

### **Emergency Medicine Training**

Dutch postgraduate training in all specialties follows an apprenticeship model and training programs are hospital rather than nationally based. As with all continental European countries there are no entry or exit examinations or other standardised objective assessments. Most specialties require a 5 year post graduate training program. There was considerable opposition from existing specialties when a similar requirement was proposed for emergency physicians. A compromise was made by SOSG and a three year training program was mandated. This is universally recognised as being far too short and only serves to diminish the specialty in comparison with the established specialties.

Thirteen hospitals are currently accredited for training and a further 11 hospitals are in the process of obtaining accreditation. This is for a total trainee population of around 120. Many hospitals with training programs have only one or two locally trained emergency physicians providing both the clinical service and educational needs of the trainees. A couple of hospitals notably in Rotterdam and The Hague (and recently until my departure Amsterdam) have an overseas emergency physician on staff, but overall the numbers of

emergency physicians available to supervise trainees is extremely small. In fact the majority of directors of EM training in the Netherlands are still not emergency physicians and most are surgeons. Once trainees commence training at one institution they stay there for the full three years and there may be only a handful of trainees at that hospital. All these factors limit exposure to adequate emergency medicine experience and supervision.

To further compound this problem, Dutch training is heavily dependent and reliant on stages (rotations) to different specialties. A valid criticism is that there is too much emphasis on training at the hands of specialists who have little or no understanding of the particular needs of emergency physicians and who may be incapable of providing training commensurate for an emergency physician. There is relatively little time spent learning emergency medicine in the ED as can be seen by Table 1, which gives a comparison between a typical Netherlands training program (over 3 years) and an Australasian program (over 5 years). Dutch training programs place much greater emphasis on specialty rotations and far less on exposure to the ED and other critical care areas. In Holland there is also emphasis on rotations to general practice but Dutch trainees universally question the usefulness of this.

Quarantined time for attendance at conferences and to perform research projects is built into the Dutch training programs

In order to standardise emergency medicine training, a unifying national curriculum was introduced in 2007 which defines the core knowledge, competencies and skills that should be achieved before a trainee is granted recognition by SOSG.

There is a very great emphasis placed on evidence based medicine though paradoxically trainees are loathe to deviate from protocols that may be idiosyncratic and not evidence based. There is little intellectual climate of independent thought – many times when a trainee is asked why they did something they are often unable to give a reasoned clinical or scientific response but will say that the protocol required it. In fact I had to ban trainees from referring to protocols when discussing patient management.

My observation was that most EM trainees were much stronger in surgical topics, especially orthopedics, compared to internal medicine.

Clearly, despite the introduction of a national curriculum, the current training programs and arrangements are inadequate. It is fair to say that graduates of the programs are only comparable to Australasian registrars midway through advanced training and would not be considered ready to practise as emergency physicians in Australasia. To their credit, Dutch emergency physicians and trainees recognise these shortfalls and many try to gain additional experience and expertise overseas. Further, many are working towards some sort of objective assessment process, though the infrastructure required for a postgraduate system of theoretical and clinical qualifying examinations is a long way off. A positive step also is a proposed short fellowship program for newly qualified Dutch emergency physicians being instigated by an American emergency physician in Rotterdam.

### **Problems Confronting Emergency Medicine**

The main issues that are currently a challenge for the advancement of emergency medicine in the Netherlands can be summarised as:

- Opposition of established specialties turf wars, suspicion
- Lack of understanding of what EM is all about no traditional role for EM in the Netherlands
- Lack of corporate vision and perceived role for emergency medicine by hospitals
- Small EDs, low patient numbers and restricted access to high acuity patients ("ownership")
- Resistance to change even amongst "old time"
   SEH doctors and some nurses
- Lack of understanding of the benefits EM can achieve
- Outdated and dangerous physical environment, poor monitoring and equipment
- Staffing shortages doctors, nurses
- Unsatisfactory and unfulfilling professional environment for trained emergency physicians
- Patchy & variable implementation of EM across the Netherlands
- Triage not universal and differs between institutions
- Referral process direct to specialist units by GPs
- Undeveloped culture of urgency
- Process driven patient welfare not always the primary focus
- Lack of ED autonomy

  all important decisions must be referred to a specialty
- Subordinate (if any) role in resuscitation, trauma.
- Inadequate and fragmented 3 year postgraduate hospital training programs
- Nationwide lack of experienced EM and other specialist supervision of trainees
- Dependence on other specialties for training and too few certified emergency physicians available to teach new trainees

- Lack of an objective accreditation process (examinations)
- Minimal research
- Not a recognised specialty (though this may happen soon)
- Reliant on other specialties for recognition
- Fragmentation eerste harte hulp, trauma, eerste hersen hulp, paediatrics
- Nationwide GP availability and GP turf
- Minimal quality control lack of adverse outcome data & reporting for existing practices
- Limited benchmarking and quality indicators
- Poor data collection and poor record keeping
- Lack of medicolegal accountability for existing practices
- Financial base insecure insurance companies pay admitting specialty units
- EU standard of 48 hour work week for junior doctors – limits time available and opportunities for training

Emergency medicine is greatly neglected in Dutch undergraduate training, though increasing numbers of medical students now choose to spend their elective terms in SEH.

There is enormous resistance and obstruction to the concept of emergency medicine as a specialty by the established Dutch specialties. Many of the often heard criticisms of emergency medicine will be familiar to older emergency physicians in Australasia who addressed these issues many years ago. Typical criticisms include: EPs can't possibly know as much as real specialists; only cardiologists can possibly understand hearts, only anaesthesiologists can safely give sedating drugs, only paediatricians understand kids (pick your specialty!); the 3 year EM training program is inadequate; unnecessary duplication of work; emergency physicians deprive specialty residents of acute experience; and above all: why change a system that already works?

The challenge to emergency medicine is in demonstrating that the existing system is flawed and doesn't work and that there are many problems in having undertrained junior doctors dealing with acute illness and injury. Whereas the improvements to patient care brought by well trained emergency physicians appear to be self evident to those of us working in a mature emergency medicine system, unfortunately the accrued benefits are hard to quantify and in Holland there are few quality outcome data. This, together with a very low rate of medicolegal complaint (possibly due to a national Calvinistic stoicism), means that it is very difficult to make a

case for emergency medicine in the face of often intransigent opposition.

The opposition to emergency medicine manifests itself in tangible ways that impact both in emergency medicine training and for the professional job satisfaction for emergency physicians. In many hospitals emergency medicine practitioners are prevented from accessing advanced investigations such as CT scans unless they clear the case first with the relevant specialty unit. Thus obtaining a CT scan for a head injured patient has to be first cleared by neurology, a CTPA to exclude PE has to be cleared by respiratory medicine etc. This is extremely inefficient and time consuming. One of the advantages of being an overseas specialist is that many of these barriers to normal emergency medicine practice can be broken down - though I well remember the consternation that resulted when I first supervised an emergency trainee in performing a lumbar puncture.

The hostility towards emergency medicine seems to be greater in the Netherlands than it ever was in Australasia. This may be partially due to a culturally ingrained suspicion of change and fear of loss of clinical turf. But fiscal consideration may also be a factor given the dependence of hospital and departmental funding on insurance payments. Perhaps related to the above is the issue of fragmentation of emergency care. Many hospitals have separate "emergency units" for different problem based categories, most frequently Eerste Hart Hulp (Heart First Aid), Eerste Hersen Hulp (Brain First Aid) and Paediatrics.

Eerste Hart Hulp is a unit run by cardiologists for patients with any cardiac problem including possible acute coronary syndromes and acute dysrhythmias and for many patients with chest pain. This seriously compromises the exposure of emergency trainees to a major area of acute care. The differential diagnosis of chest pain and the recognition and management of acute cardiological problems is considered core business for Australasian emergency physicians. In Holland fragmentation of acute care leads to ridiculous situations such as where a young woman with hyperventilation syndrome can spend 24 hours in the Eerste Hart Hulp because she had chest tightness. Unfortunately such units are well established and ambulances deliver patients directly to them.

Fragmenting undifferentiated acute problems into presumed diagnostic streams prior to hospital undermines the whole principle and raison d'etre



Onze Lieve Vrouw Gasthius (OLVG), Amsterdam



OLVG new Emergency Department

of emergency medicine and represents one of the greatest threats to emergency medicine in the Netherlands.

There are other examples of fragmentation of acute care. One area where the system appears beneficial, however, is in the management of possible strokes. Patients with acute neurological disorders that may be a stroke are taken to the Eerste Hersen Hulp (Brain First Aid) where rapid assessment by a neurologist is followed by immediate CT scanning and has successfully led to the early use of thrombolytics within the 3 hour therapeutic window and the Dutch claim some significantly positive outcomes.

#### Achievements So Far

Despite the substantial impediments to the development of emergency medicine in the Netherlands, there have been many achievements and growth of emergency medicine in a relatively short period of time.

OLVG in Amsterdam was one of the founding group of four hospitals to introduce emergency medicine training in 2000. A strong academic focus has been maintained with a full day set aside for education and training every fortnight and to which all emergency trainees in the region are invited. Part of my work at OLVG was to run and coordinate these education days and I designed and introduced a computer-based 3 year rotating academic program which was based on and incorporated the Dutch Emergency Medicine Curriculum which was introduced nationally in 2007.

The OLVG has been at the forefront of the development of emergency medicine in Holland and since 2000 has sequentially employed three overseas emergency physicians, two from the USA and latterly myself from Australia. The input of these foreign emergency physicians has been invaluable in creating a foundation for local emergency physicians to build on. In addition an infectious diseases physician works part time in the ED and is a useful liaison between the ED and Internal Medicine.

Apart from its educational program, the OLVG has also negotiated a so-called "Holy Tuesday". In principle on Tuesdays the emergency physicians and emergency medicine trainees have first access to most patients in the ED including those referred by GPs. Unfortunately some house specialties continue to refuse to cooperate and refuse permission for ED staff to see "their" patients.

Despite these problems, the OLVG had introduced some ED based practices including procedural sedation and we extended this to the use of ketamine for children. I also introduced regional intravenous anaesthesia for fractures and dislocations, the concept of titrated opiate analgesia and invasive procedures such as central venous line insertion.

At AMC there had previously been no emergency medicine training program and I as a half time consultant (my other half of the week being at OLVG) had to introduce the rudiments of a training program to six highly enthusiastic trainees. Clearly in Australasian terms this would have been highly unsatisfactory.

On a national level and despite the impediments discussed above, there has been rapid growth in emergency medicine in the Netherlands. To no little extent this is due to the enormous drive and belief of the founding specialists and the extraordinary enthusiasm and dedication of the young trainees who have embraced a career in emergency medicine, even when there is as yet no definitive specialty status to be achieved. Many of these Dutch emergency medicine trainees are amongst the brightest and most impressive young doctors I have encountered anywhere. Interestingly women comprise over 80% of Dutch emergency medicine trainees and this reflects to some extent the increasing preponderance of female doctors in the Netherlands.

Major national achievements have been the introduction of a National Curriculum and the inauguration of the Dutch North Sea Emergency Medicine Congress. This annual scientific meeting was first held in 2007 and has attracted both local and international speakers. Regional scientific meetings are regularly held around the country.

#### The Future

At present of 126 general hospitals across the Netherlands, 106 have some sort of an emergency department (SEH). Of these, 13 run accredited emergency medicine training programs and a further 11 are undergoing review by SOSG. None of these training facilities remotely approaches the standards of any Australasian ED which has been accredited for registrar training by ACEM. Nevertheless, there is a great deal of enthusiasm and will to succeed. There are approximately 100 locally trained emergency physicians in the Netherlands which equates to an average of less than 1 trained EP per emergency department and 6 EPs per million of population. Australasia has approximately 40 EPs per million of population. To achieve comparable emergency medicine staffing ratios to Australasia, a 6 fold increase in emergency physician numbers round the country is required.

Clearly the challenges to Dutch emergency medicine are very great. The model that eventually emerges will of necessity reflect the realities of the Dutch Healthcare System and may not necessarily parallel emergency medicine systems in Australasia, North America or the UK. Progress will come with evolution, not revolution. The future will heavily depend on the new generation of emergency physicians currently emerging in Holland. From what I have seen, the future is in good hands.

### Emergency Life Support Course in Papua New Guinea John Kennedy, Course Convenor ELS PNG

drjfk@bigpond.com



ELS instructors in Rabaul. Mark Miller, Michael Bastick, John Kennedy, Chris Trethewy, Andrew Bezzina, Chris Curry

Papua New Guinea is Australia's nearest neighbour - 150km across the Torres Strait - and we have a long shared biology, geography and history. But the divide between Australia and the least developed of the Pacific nations is vast. PNG's health status, in particular, is poor (see Table). A visit to a Papuan hospital leaves you with tangled feelings of sadness, horror, hopelessness......and the conviction that you'll never complain about your own ED again. The EDs in PNG are rich in opportunity for FACEMs to make a difference and in recent years there has been a developing interface with the fledgling PNG EM community.

While primary health interventions are most important, there is increasing recognition that acute illness and injury are simply not always preventable and that emergency care can reduce morbidity and mortality. Early treatment is useful in Melbourne and Detroit and London – and may be even more useful in a place with serious infectious diseases and where trauma's Golden Hour is spent in a canoe two days from the nearest Health Post.

One of the recent Australian forays into PNG has been the introduction of the Emergency Life Support (ELS) Course. Embarrassingly for EM, surgeons have long taught EMST off-shore and our paediatric colleagues took APLS to Vietnam and Cambodia several years ago. ELS, as many will know, is broader in scope than the specific trauma and paediatric courses and, following modification for the realities of PNG, is proving to be useful for doctors working in both rural and metropolitan New Guinea.

Establishing the PNG ELS course has taken considerable effort, goodwill and financial support from the Australian EM community. Funds to purchase a large pool of teaching equipment were donated by ACEM, ASEM, as well as the Hunter New England area Health service, NSW, and FACEM instructors have used study leave to pay for their travel and accommodation costs. Participants attend gratis... your tax dollars at work in PNG!

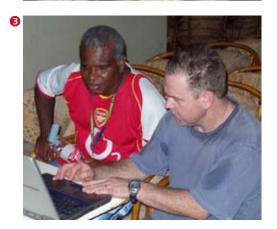
The first course was held in Port Moresby in August 2007 and the second in Rabaul in September 2008. Rabaul certainly took instructors out of their comfort zones - into the blast zone of the still active volcano. Each course had 24 Papuan doctors from all over the nation. Most estimates suggest there are about 500 doctors in PNG – so in just two years we believe we've reached nearly 10%. Having done the course

**Table** 

	Australia	PNG
Population (millions)	21	6
Physicians per 100,000	250	5
Health expenditure per capita per annum	\$4,226	\$29
Life expectancy (years) for males	78.9	55
Under 5 mortality rate (deaths per thousand live births)	6	93









in 2007, two Papuan instructors were successfully introduced in 2008 and we plan to devolve the course largely to our Papuan colleagues over the next few years. All of the equipment has been stored in PNG and is available for other teaching purposes.

For most of us the realities of a job, a family and the pressures of living life make it tricky to move to the Congo to do six months with MSF or disappear to a tsunami or earthquake or insert-favourite-disaster zone. Many find the ethics of armed forces humanitarianism too tricky. But providing educational resources and short training courses like ELS is doable, capacity building, blends a bit of altruism with a touch of tourism and provides significant benefit to the course participants......or so we think.

Whether training courses produce outcome benefits for patients has been little examined. The largest study, set in Trinidad and Tobago, used historical controls to test the benefit of ATLS instruction and found a significant mortality reduction (Ali J et al. J Trauma 1993; 34: 890-899). Formal feedback from the PNG courses has been overwhelmingly positive with participants indicating that they gained skills & knowledge, felt more comfortable with emergency presentations and that they understand the utility of the systematic approach that is the cornerstone of the course.

Perhaps its greatest value, however, is the collegiality and feeling of support it engenders. Seven FACEMs taught at ELS Moresby and it was commented that never before had so many Australian EPs been in PNG at one time and shown such an interest in their neighbours. The PNG doctors offered to slaughter a large pig in our honour (declined on parasitological grounds) but we were touched by their gratitude and by their efforts with a staggering burden of disease in a system that is broken. We have been delighted to help them just a little.

### *Pictures anti-clockwise from top:*

- 1. The Emergency Department, Port Moresby General Hospital
- 2. ELS participant and instructor: Desmond Aisi, Yongoe Kambue
- 3. Lucas Samof and John Kennedy prepare the Asthma session.
- 4. Julius Plinduo, Sam Yockopua, Vincent Atua
- 5. Clearing the ash fall



### **Timor Leste**

### Bold Steps for Emergency Medicine in Timor Leste Georgina Phillips

drgeorgina@gmail.com

The fledgling Democratic Republic of Timor Leste faces enormous challenges in addressing the health needs of its people. Whilst much morbidity and mortality is a result of poverty, malnutrition and preventable disease, the significant emerging issue of trauma also plays a role in death and disability. Development assistance from the Australian government (AusAID) for acute health care is focused on the sustainable training and development of the specialist medical workforce, and the Royal Australasian College of Surgeons (RACS) has managed this program since 2001 (Australian Timor Leste Assistance for Specialist Services: ATLASS).

As the national referral hospital, the Hospital Nacional Guido Valadares (HNGV) in Dili is under constant scrutiny, and the emergency department (ED) in particular had been perceived by many within the hospital and the Ministry of Health as functioning poorly. In response, the ATLASS team agreed to fund a 'scoping mission' with the aims of assessing the current functioning, development needs and technical assistance requirements of the ED at HNGV. There was clear desire within the Timor Leste Ministry of Health to invest in the ED, so the scoping mission presented an exciting opportunity to support and nurture the development of emergency medicine in a new environment. An emergency nurse educator, Kath Bowman, and I performed the scoping mission in January this year, finding strengths and vision in Timor Leste, and triggering an ongoing partnership for emergency clinicians in the region.

The 10 day mission was an intense mix of ED observation, interviews both within the HNGV and with external stakeholders, and the formulation and discussion of development ideas. Much time was spent sitting in the ED with the doctors and nurses, following them in their tasks, seeing patients with them and discussing their aspirations for developing their own skills and their ED. The hospital was a multicultural centre, where local clinicians worked alongside Cuban, Indonesian, Australian and Chinese doctors, despite the predictable linguistic challenges. Timorese medical and nursing leaders were already

emerging in the ED and the concept of triage, whilst not practiced, was understood and desired by many of the staff interviewed. What seemed obvious to the external experts (such as the use of front-facing windows and desk space for triage) was new to the Timorese, largely due to the lack of experience from within Timor Leste of EM systems and alternative models. Patient flow was also identified as a key issue, where, despite recently moving into a new purpose built department, crowding, congestion and access block were already creating a barrier to the provision of acute care. Delivering a consistent quality of care through the use of protocols was also identified, however the clinical imperative of a busy ED full of sick patients meant that there was no capacity to drive these changes. Staffs were highly engaged in the process of the scoping mission and were keen to develop their own ED skills, but lacked the resources and structure to attain expertise as EM clinicians. Naturally, as in any resource-depleted environment, basic equipment such as oxygen, suction, gloves and monitors were limited and poorly maintained, which provided an additional challenge when providing care to complex patients.

We prioritized these development issues into three key areas: 1) introducing a system for triage and managing patient flow; 2) investing in staff leadership, capacity and capabilities; and 3) improving quality of care by implementing guidelines, facilitating audits. We considered paediatric needs separately. Secondary issues included equipment, information management and communication.

The final 2 days were spent discussing ideas and recommendations with the ED staff and HNGV directors. It was important that any recommendations were acceptable to the Timorese ED staff and a true reflection of their own vision. There were significant strengths to build on, in particular the emergence of clinical leaders within the ED who could be nurtured to drive sustainable development for the department. Small steps had already been taken, with attempts to introduce the principles of triage and opening up communication channels within the ED so that there

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was unity and high morale amongst staff.

Many Timorese dismissed the idea of short term interventions as a pathway to sustainable change. The principles of long term involvement, building on relationships, professional mentoring and modeling were identified as much more acceptable and successful strategies for development at the hospital, and so these naturally became central to our recommendations for the ED development. Given that devising and introducing new systems such as triage and clinical guidelines are complex and require collaborative agreement, it was clear that long term technical assistance would be required. Our recommendations included placing an emergency physician and emergency nurse to the HNGV ED for 2-5 years in order to build capacity, mentor new leaders and aid in the introduction of new systems. The Timor Leste Ministry of Health was charged with identifying and facilitating the development of local leaders in EM by providing educational opportunities, clinical exchange and career structure.

The final day of our mission included presenting our Aide Memoire to the HNGV and ED leaders. The recommendations generated much excitement within the ED and were warmly received by the hierarchy of the hospital. The subsequent comprehensive report that followed included a table of observations of the ED as a whole and the patient journey through it, as well as a map of potential alternative uses of the current ED rooms, passageways and doorways, with flow suggestions. This has been translated into the Indonesian language, so that all ED staff can read and discuss the implications and suggestions in the report.

The post-script to this momentous starting point is exciting. Regular correspondence with some of the

Timorese ED staff has revealed that, as a result of the visit and report, they have already instituted some small changes to their use of space and direction of patient flow in order to reduce crowding. They have also started to introduce a system to separate the 'urgent' from the 'non-urgent' patients presenting to the ED.

A delegation of three; the ED director Dr Augusto, and 2 ED nurses, Mr Francisco Borges and Ms Lolita Maria recently returned from their own 'scoping mission' to visit EDs in Melbourne. They were hosted by St. Vincent's Hospital and also had short visits to the Box Hill, Sunshine and Royal Melbourne Hospitals EDs where they experienced different models of triage, patient care, clinical leadership and education. The value of these experiences from both a professional and personal perspective is enormous, and it is exciting to contemplate how ideas and systems in our environment will be adapted and modified to suit the needs of the HNGV ED. Many friendships have been established, so that the professional network of emergency clinicians in our region is expanding and enhancing to become a source of refreshment and support equally between our Asia-Pacific colleagues and those in the Australasian community.

It is both a challenge and an honour to be involved in the early stages of EM development in one of the world's newest nations. There are opportunities for Australasian emergency physicians to continue to support Timor Leste and offer clinical and professional expertise with a view to the long term, sustainable assistance that EM development requires.

(For copies of the report, please contact Dr Georgina Phillips at drgeorgina@gmail.com )

### **Newsclips**

#### **PNG**

Two PNG emergency physicians have been awarded Master of Medicine in Emergency Medicine (MMedEM), the specialist qualification of the University of PNG. They are Sam Yockopua and Vincent Atua

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The Primary Trauma Care course is extending its range, with PNG PTC instructors contributing to developments in Fiji. They were Yongoe Kambue, Sam Yockopua and Lucas Samof. A report in the next issue.

### Myanmar

And extending the range of PTC still further, a first course has been conducted in Myanmar, with instructors from St Vincents in Melbourne, Georgina Phillips and Antony Chenhall. A report in the next issue.

### Nepal

## An Introduction to Emergency Medicine in Nepal Chris Curry

chris@chriscurry.com.au

### **Background**

Nepal is a poor country with population estimates in the range 23 - 30 million. While there are some 8,000 doctors registered, it is not known how many are in practice or what they are doing. Estimates have ranged from 3,000 (2,000 in Kathmandu and 1,000 for the rest of the country) to 6,000 (4,000 in Kathmandu and 2,000 for the rest). Reported estimates of doctor to patient ratios are 1:1000 in urban centres and 1:41,000 in rural areas. But the population of the Kathmandu valley is not accurately known, let alone that in rural areas. Per capita annual income is estimated at US\$290, but a large part of the rural population is mainly subsistent and has limited engagement with the cash economy.

Nepal is now emerging from more than a decade of civil strife in which the Maoists conducted a violent insurgency on the basis of seeking better conditions for the neglected rural poor. Following the establishment in 1990 of a democratically elected parliamentary government, the turbulence from 1995 led in turn to a monarchic dictatorship and then to overthrow and dissolution of the monarchy. A cease to hostilities was brokered in 2006. Elections for the restoration of a democratic parliamentary system were held in 2008, with the Maoists forming a government of fragile coalitions. While their intentions to improve the lot of the rural poor have popular support, the Maoists are finding the democratic process more difficult than an insurgency. Their tenure in government was brief and in May 2009 the Nepal Congress party formed a new government of coalitions, reasserting its influence on the country.

### Medicine in Nepal

The health system of Nepal is made up of a poor public system employing 1,259 doctors and a burgeoning private sector. There are 8 government teaching hospitals and now 14 private teaching hospitals. The latter produce graduates primarily for export, in particular to the USA (which, like Australia, produces insufficient numbers to meet its own needs).

The major government supported teaching hospitals with postgraduate programs are:

- 1. Tribhuvan University Teaching Hospital (TUTH) in Maharajgunj, Kathmandu. The academic institute is the Institute of Medicine (IOM).
- 2. Bir Hospital in Mahabaudha, Kathmandu. The academic institute is the Nepal Academy of Medical Sciences (NAMS).
- 3. Patan Hospital in Patan, Kathmandu. The academic institute is the Patan Academy of Health Sciences (PAHS).
- 4. B.P. Koirala Institute of Health Sciences (BPKIHS) in Dharan, eastern Nepal.
- TUTH and IOM are the oldest and largest government postgraduate training facility. www.iom.edu.np
- Bir Hospital is the oldest government hospital in Nepal. The newly established institute, NAMS, is based at Bir and includes other valley hospitals. The Indian government is building a 'state of the art' emergency and trauma centre at Bir.
- Patan Hospital was previously a mission hospital, directed for a long time by Frank Garlick FACEM.
   It is now the newest university teaching hospital.
   PAHS was established in 2009. www.pahs.edu.np
- BPKIHS occupies a site that was previously a large British Gurkha army base. It was established as a university in 1993 and has had very substantial support from India. www.bpkihs.edu

There are 14 Nepal medical journals, published in English. Three are accessible on-line:

- Journal of the Institute of Medicine (JIOM). www. jiom.com.np
- Journal of the Nepal Medical Association (JNMA). www.jnma.com.np
- Kathmandu University Medical Journal (KUMJ). www.kumj.com.np

### **Emergency Medicine in Nepal**

There is not yet a postgraduate training program for EM. There are only two full-time directors of EM in postgraduate teaching hospitals, Gyanendra Mulla at BPKIHS and Bharat Yadav at Patan/PAHS. Both trained in the rural general practice programs for MD GP. The EDs of the major teaching hospitals use MD GPs

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as part-time senior staff. The primary focus for these doctors is the hospital Outpatients department.

The MD GP was established in 1982 as the first postgraduate training program in the country and was supported by the University of Calgary in Canada. The purpose of the program is to provide generalists with a broad range of procedural skills for practice in district areas. It is provided at three institutions, TUTH/IOM, Patan/Bir and BPKIHS. The graduation rate has been slow, with only 60 MD GPs by 2005. As everywhere else in the world, there is difficulty retaining generalists in district areas and in providing them with a career path after district practice. The Outpatients and EDs of major urban hospitals have become a default career path.

Early consideration of training in EM was led by Owen Lewis. Originally a GP from Adelaide, Owen was professor of family medicine and emergency medicine at BPKIHS for many years until 2008. In 2006 he convened a meeting with the idea of establishing a Society for EM as a way of developing an EM special interest group. This was opposed by influential leaders of general practice training. He also put propositions to BPKIHS to establish an MPhil EM as a follow-on to MD GP, and a stand-alone MD EM. Neither has yet been enacted.

### **Developments in 2009**

In December 2008 I visited BPKIHS in Dharan and met directors of EDs in Kathmandu. I was invited to speak



Four sick patients in one resuscitation bay



Bir Hospital ED Entrance

at the Nepal Medical Association Annual Meeting held in April 2009 and I extended contacts then.

There is a strong general feeling amongst senior doctors, particularly in Kathmandu, that there is a need for major hospital EDs to have senior staff who are full-time and who have trained for EM. There are now two lines of thought emerging about how this might be achieved: a) as advanced training beyond MD GP, and b) as a stand-alone MD EM. At time of writing, the former is favoured by TUTH/IOM and BPKIHS, the latter by Bir/NAMS and Patan/PAHS.

The case for a) eg MPhil EM, is that it would provide a place to go for MD GPs returning to urban centres, and it would not compete with recruitment to MD GP programs. The case for b) MD EM, is that it will provide specifically for a role that is very different from that of a district hospital generalist.

In May/June 2009 three MD GP doctors led by Pratap Prasad, professor of general practice and emergency medicine at TUTH/IOM, toured in Victoria under the auspices of the Nossal Institute. The tour was organized by Owen Lewis and involved visits to EDs, including the Royal Melbourne and The Alfred.

Emergency Medicine is at a beginning in Nepal. It is hoped that Australasians will be able to contribute to its development. Anyone with an affection for Nepal and with an interest in assisting is invited to contact Chris Curry at chris@chriscurry.com.au



Bir/NAMS Emergency and Trauma Centre under construction



A relative ventilates while watching a cardiac arrest a metre away

### Sri Lanka

### Progress for Emergency Medicine in Sri Lanka

### **Shane Curran**

shane.curran@bigpond.com

An emergency medicine diploma programme in Sri Lanka has been approved by the National Board of Education, with 22 candidates selected out of 105 applicants through a screening exam. This will be overseen by a multidisciplinary working group of interested clinicians and educators in Sri Lanka. The diploma programme will be 6 months in duration and will be modelled on a modular system, similar to a university degree programme.

The working group met in November 2008 before the Sri Lanka Society of Critical Care and Emergency Medicine (SSCCEM) annual meeting. The group met to confirm progress beyond the diploma to a specialty training programme for emergency medicine in Sri Lanka. This had tentative approval from the Board of Education as well. This development has been met with significant enthusiasm amongst potential trainees.



Mark Fitzgerald, Shane Curran, Alan Broomhead, Chula Goonasekera

I was fortunate to attend this meeting and was very impressed by not only the broad mix of craft groups interested in developing emergency medicine as a specialty, but the unbridled enthusiasm to do so. At that time I was fortunate to see the skills training centre set up at the University of Perediniya in Kandy. This includes the equipment donated by the ELS course from a grant via IEMSIG from the College.

The chair of the working party is Professor Ariyananda, who is head of the Emergency Treatment Unit at Galle. This unit is associated with the Alfred Hospital in Melbourne who have teams visiting regularly for training and education. The curriculum will be modelled on the IFEM curriculum. Professor Chula Goonasekera attended the ICEM conference in 2008.

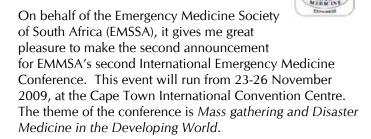
The annual meeting of the SSCEM was held in November at the National Blood Bank auditorium in Colombo. This was a large packed auditorium, with talks from Professor Mark Fitzgerald, Alan Broomhead, myself and excellent local speakers on a variety of adult and paediatric topics. The level of interest and discussion was high and is indicative of the enthusiasm for development of the specialty within the country. The announcement of funding for the construction of the Galle ETU building by the Victorian Government was confirmed at this time.

One of our colleagues, Joanne Oo, is heading to Jaffna to work in a Medecins Sans Frontieres (MSF) post in the north of the country.

Professor Tony Brown has kindly arranged for copies of his book "Emergency Medicine diagnosis and management" to be provided to every medical school library in Sri Lanka.

### **CONFERENCES**

### Hello and welcome from the conference chairperson



We intend to run several parallel streams looking at all aspects of Emergency Medicine and will once again include all levels of emergency care from pre-hospital practitioners to nurses and emergency care doctors. The emphasis throughout will be on best practices for a resource poor setting, whether this is in the developing world or in hostile environments. The upcoming FIFA 2010 Soccer World Cup poses significant challenges and opportunity for us to develop effective emergency and disaster care systems, and this conference will significantly contribute to our ability to cope with this prestigious event.

Following the great success of EMSSA's initial international conference (held in October 2007 in Cape Town), we believe that this conference offers a real opportunity for international experts to help shape the way that the specialty develops in developing world settings. Workshops will be presented on ultrasound in the emergency department, difficult airway, ECG masterclass, hospital disaster planning, mass gathering risk assessment and emergency radiology. These will run as pre-conference workshops on 23 November 2009 with the main conference following from 24 to 26 November 2009.

In addition, there will also be an opportunity for delegates to participate in the Adopt-a-Delegate project . This initiative will provide financial assistance toward the cost of attending the conference for delegates from the developing world, by peers from the developed world. The long term aim is to form international partnerships and encourage responsibility. Please visit our Adopt-a-Delegate project page <a href="http://www.emssa2009.co.za/adoptDelegate.php">http://www.emssa2009.co.za/adoptDelegate.php</a> for information on joining up.

The setting for this conference is world renowned for its stunning scenery, and friendly people. Come and join us in the Rainbow Nation, and experience true Cape hospitality at a world class scientific conference.

I look forward to seeing you in November 2009.

Professor Lee A Wallis (Conference Chair) For more information on this event contact Belinda Chapman. Belinda.Chapman@uct.ac.za www.emssa2009.co.za

### Darwin, June 2009

The Winter Symposium, Australasian College for Emergency Medicine

#### **Announcement**

There will be an informal meeting of the International Emergency Medicine Special Interest Group (IEMSIG) of ACEM at the Winter Symposium. Thursday 24th June 1030-1200.

Venue: the Kakadu Room

Registrants with any interest or curiosity about international EM are encouraged to attend.

### Letter to the Editor

Hi Chris

Re: proposed EM study tour of China, September 2009

I thought the Group may be interested in a study tour of China we are trying to organise. At this stage I am testing the level of interest to see if it is a goer.

The tour would be jointly organised by Queensland University of Technology (QUT) and the Ministry of Health in China.

The tour would involve the following steps:

- Beijing to examine Olympic preparations, Pandemic preparedness and disaster management. A brief joint seminar will be the centre piece of this visit.
- Tianjin to explore pre-hospital care in particular.
- Xi'an to examine prehospital, hospital ED and helicopter rescue services.
- Shenyang to explore Emergency medicine in particular.
- Shanghai to examine EDs and rural responses.
   The tour will last approximately 10 days. You could anticipate that the local hosts will ensure you get some time to see key cultural and other things of interest at each location.

The tour is self funded. An estimated cost would be about \$2,500 plus international airfares at cost including all internal travel and accommodation and most meals.

We plan to travel in the last two weeks of September 2009.

I would be grateful for any indication of interest. If there is sufficient interest to underwrite the tour then we will proceed to plan in detail.

Regards

Gerry

Professor Gerry FitzGerald MD FACEM, FRACMA, School of Public Health Queensland University of Technology Victoria Park Road, Kelvin Grove, Qld 4059 Mobile 0439 772383 Phone +61 7 31383935 Fax +61 7 31383369 Email gj.fitzgerald@qut.edu.au