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The Tsunami

Four FACEMs have reported involvement in the response to the Indian Ocean Tsunami.

Rick Brennan:  
The dispatch from Rick Brennan in Aceh was circulated previously, but is represented here.

“Dear all, 
Greetings from Aceh. I will be quick, as I am running out the door for a meeting.

I just returned to Banda Aceh last night after 4 days in the field in Calang and surrounding villages. Water and sanitation is the biggest need (in a survey we conducted, 85% of kids < 5 years had diarrhea over past 2 weeks; 100% people collected water from contaminated sources; 100% of people are not using a latrine). But there are other issues: from health registries at 3 clinics, the second or third commonest medical condition is wound infection (in one village that had received no humanitarian aid, we retrieved a woman who had a penetrating supra-pubic wound, with signs of peritonism. Injury sustained from tsunami two weeks ago). Huge loss of staff: all 10 docs from Aceh Jaya District are dead.

There are still villages and communities that have not been visited. We are still sending health teams by boat/ chopper/on foot to these villages. Indonesian govt policy is still unclear about expats, but for the short-term we will be employing expat docs with primary care/emergency med experience, for at least the next two months.
In addition, we have a big water and sanitation team, as this will be our main intervention.

If anyone is interested in such an opportunity, check out our website: www.theirc.org.

Gotta run,
Rick

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**Norman Gray**

*The Tsunami response.*

**Combined Australian Surgical Team – Aceh (CAST-A)**

On Tuesday, 28th Dec. 2004, a number of people around the country were gathered to form medical teams in response to the Boxing Day tsunami. This was coordinated by Emergency Management Australia (EMA), via State Health Departments.

Teams generally consisted of a leader, general surgeon, orthopaedic surgeon, two anaesthetists, two theatre nurses, emergency specialist, emergency nurse, public health doctor, infectious diseases specialist, fireman and paramedic.

Two of these teams were combined and sent to Aceh via Sydney, Darwin and Jakarta. Work started by the evening of Dec. 30th. A still standing building that had previously been a private clinic was used as a hospital.

There were up to 300 people a day presenting and an inpatient load of about 70 patients. In 12 days the surgical team performed over 100 operations. At our location there were about 5 deaths per day, generally from sepsis.

Emotionally, the team performed well in helping the few health workers that remained in dealing with the ill or injured survivors. The team provided a timely response until further aid arrived. The bulk of the work involved debriding infected soft tissue and musculo-skeletal wounds and caring for those sick with aspiration pneumonia. The pus and sputum both smelled fairly much the same and not dissimilar to the puddles left amongst the devastation.

The team travelled light. We went with about 14 tons of needed drugs, supplies and equipment, prepared by Careflight Australia. Individually we brought our specialised skills. As a team we provided cohesiveness through the maturity of the members.

My favourite quote from the time away: “Ketamine……my friend!”

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**David Symmons**

“… the role of FACEMs after the initial few days is more limited than we would like to think. The ability to provide definitive care/ surgery/ anaesthesia is more useful, quite apart from the obvious public health/ sanitation / water supply issues. On the island that I visited there was in fact very limited need for ongoing medical care, once the initial injuries were dealt with. The main ongoing needs were for food water and shelter and eventually reconstruction.”

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**Andrew Pearce**

“I went with Team Echo, a 23 man South Australian Field Medical Team under the direction of EMA and AusAid.

We were based at Fakinah hospital, with surgical and medical capabilities. We did 140+ operations, set up a sustainable HDU, managed a lot of tetanus, aspiration pneumonia, as well as running resus as required, ultrasound, etc

A very interesting and tiring time.

Lots more work to do, but more in a recovery and transition phase.”
Early Contacts for EM in Sri Lanka

Varna Amarasinghe

Varna visited his homeland on an EM fact finding mission, returning to Australia five days before the Tsunami. He reports:

“The visit was a success:

- I visited three Major hospitals in Sri Lanka, namely National Hospital Colombo; General Hospital Matara and General Hospital Anuradhapura.

- I met with Professor Lalitha Mendis, Head, Postgraduate Institute of Medicine (PGIM), University of Colombo.

- I also had the opportunity to meet Professor Rizvi Sheriff, Director of Training, PGIM.

- I had opportunity to meet and discuss areas of interest with doctors working in Medical and Surgical emergency sections and the Trauma service. Also I took the opportunity to observe patient treatment at the Medical Emergency unit for about eight hours.

- I was invited to give a presentation on “Introduction to Emergency Medicine” at PGIM. That was held on Wednesday 8 December 04, at the PGIM lecture theatre. About 150 doctors attended; including cardiologists, surgeons, general physicians, anaesthetists and PGIM trainees.

- I had detailed discussion with a group of medical specialists who are currently in the process of bringing an international group of Private Hospitals to Colombo.

I was unable to meet with the Director of Training, Ministry of Health.

What I observed in all hospitals confirms that Emergency Medicine will be the specialty which will be effective in limiting overcrowding in Sri Lankan hospitals, with experienced physicians making decisions on patient treatment and admissions.

The setup of emergency sections is very different to Australasia. There is a separation of Medical, Surgical sections and the Trauma service. In effect the patient needs to make a decision to attend the correct service! I think this system is resource and manpower inefficient; and leads to confusion among the patients, which may result in treatment delays.

In my discussions with the doctors working in Emergency treatment units and from the questions that were asked at my presentation I think that there is a great interest in the concept of Emergency Medicine.

At the discussion with Prof Sheriff it was apparent that he supported education in the way of a course of lectures and practical sessions in Emergency Medicine which may lead to a diploma in Emergency Medicine. I think this is worth pursuing if possible. As with any large organisation, most people want to maintain the status quo if they are not forced to change.

I had very enthusiastic reception and understanding from the group of specialists who were involved in the international private hospital project. I am sure that they saw emergency medicine as a specialty that will result in rapid and effective patient management with resource efficiency, and the inertia preventing change is definitely less than in a huge government organisation. I will be in close contact with this group.

I enjoyed working on this project and will pursue this further. I will keep you informed.”
Liverpool was the first city in the world to establish a School of Tropical Medicine. This was in 1898 in response to the burden of disease in travellers from the tropics when Liverpool was one of the busiest ports in the world.

These days there are few patients and the diploma course does not have a bedside clinical component. However, it is intensive and covers a vast curriculum, mainly with conventional lectures and parasitology and entomology work in the laboratory. There are workshops and group discussions, but these are limited by numbers of staff available. The majority of the teaching faculty is or has been active in tropical medicine in Africa. A few have experience from Papua New Guinea and one from Indonesia. It is a rigorous course, and is a solid foundation for further involvement in infectious diseases in the tropics. A measure of the seriousness with which the diploma is taken is in the final assessment. There are a total of nine hours of examinations, including three hours in the laboratory.

The majority of participants were European, the biggest groups being British and German. Non EU participants were predominantly from West Africa, but origins included USA, Canada, Central America, Kurdistan, India, Hong Kong and Australasia. Most Europeans were in early years out of medical school and were seeking a way into MSF and other humanitarian aid work. A small number were at the ‘top’ end of careers, including a nephrologist and a psychiatrist, looking for a change of direction. The course is full time and three months in duration. It is slightly shorter and less costly than the competition in London. The School is very helpful in organising accommodation.

Contrary to reputation, Liverpool is an interesting city to live in. Remnants of Empire, decaying mansions and lovely parks contrast with vandalism, razor wire on walls and steel roller door security for shops. The city is undergoing a major face-lift to take on the mantle of EU City of Culture in 2008. A self-appointed social convenor organised an exhausting schedule of events. There is great access to fresh air, often moist, in North Wales, Yorkshire Moors, Lakes District and Peaks District.
I took the four month London School of Tropical Medicine & Hygiene Diploma during sabbatical leave, in order to broaden my skill and knowledge base, for moving from full time emergency medicine, to browner pastures. It was a wonderful experience, meeting some 65 international post grads, living in Bloomsbury (London) and studying at one of the international hubs for tropical medicine research.

We has about 30 contact hours a week, with twice weekly lab sessions (mostly parasitology), two fascinating ward rounds at the nearby Hospital for tropical Diseases, behind St Pancras Station, where refugees, tourists, expats exhibited their rare and baffling maladies to us. Great Ormond St and Queen Square (Neurological diseases) were within walking distance and visited for grand rounds of interest.

Each morning delivered two lectures, and there was one weekly pm seminar on a topical tropical subject. Many world figures lectured us while visiting the centre.

We had use of an extensive library, a personal email address, and a helpful student counsellor.

The course was mainly clinical, and most students were headed south, with government, IRC, MSF, Merlin, or rotating between Commonwealth countries. Several from the tropical world attended on scholarship.

The course Convenor, gregarious Prof David Mabey, constructed a social committee, so there were twice (at least) weekly events, from a country walk, to salsa dancing, restaurant visits, a soccer game, BBQ at his place, pub nights, quizzes, no one could feel left out. A 64 yo German ophthalmologist did the course, essentially for social reasons, being recently bereaved, and he loved it, as did we him, he gave impromptu tropical ophthalmic lectures in the café, daily.

The exam was multimodal over 2 days and searching, but when we did the VAQ at the Royal College of Physicians, almost all the slides had been shown on the course, and we had seen some of the patients in clinic; explaining why participants did so well in the exam. Nevertheless 6 participants failed, including a physician from Bahrain. I was surprised to pass, considering the amount of beer consumed, and time spent as social secretary, but then, tropical medicine is no different from general medicine, its mostly the medicine of deprivation, and we see enough of that in ED!

An overseas DTM & H is highly recommended for a sea change, and as a gateway to some fascinating international medical practice.
Experience with Malaria in East Africa introducing artemisinins

Megan Cox

I arrived in East Africa in late 2002 and worked mostly in Southern Sudan with a NGO.

Malaria was epidemic where I was working and the treatment regimes changed during my time. Falciparum malaria (P.f) was the major concern in my area and the initial treatment guidelines were first chloroquine followed by Sulfadoxine Pyrimethamine (SP or Fansidar)

Although resistance to chloroquine was extremely worrying, resistance to SP was becoming a major concern. Previous studies showed resistance of P.f to SP chiefly spread to areas where it was extensively used. Resistance to SP followed the distribution of chloroquine-resistance give or take a few years, and appeared rapidly after only a few years of SP use.

At the time I arrived, the NGO I was working with encountered increasingly heavier resistance in almost all East Africa (Tanzania, Kenya, Uganda, Burundi) and decided that SP’s effectiveness could no longer be guaranteed.

A paper was released quoting figures from many places in East Africa, and artemisinin derivatives were rapidly sent to all the missions.

“The resistance data and the need to protect the molecules mean that the attitudes towards the case management of malaria in our missions must change, in terms of both diagnosis and treatment. In our missions, we have to guarantee an effective diagnosis and treatment for all patients treated and above all those most vulnerable (children and pregnant women).”

New Regime

1. Diagnosis
To limit the emergence of resistance, it was extremely important to limit the drug pressure. To do this, our malarial diagnosis had to be improved. Given the growing problem of resistance, it became no longer reasonable to treat a malaria attack simply on the basis of clinical suspicion.

Any clinical suspicion of malaria now had to be confirmed by a positive biological test before it was treated. In our primary health care centres we used “Para check”, a simple spot blood test for P.f that our staff were easily taught to use. This had a large number of benefits but also a few problems.

False positives in the 10-14 days after having had P.f
Only detected P.f – other malariae needed a blood smear to diagnose or rule out.

2. Treatment
If one of the conventional anti-malarial treatments (CQ, SP, and Amodiaquine) was effective, it became important to be able to retain this effectiveness over the long term, by delaying the emergency of resistant parasites. To achieve this, the drug was combined with a 2nd anti-malarial drug: an artemisinin derivative

Our treatment regime was artesunate (orally) or arthemeter (IM) with SP
See regime below (attachment 1)

The theories behind the combination we used were
An initial rapid drop in large numbers of parasites (including resistant parasites), thanks to the artesunate. The low remaining parasitemia, which will therefore include fewer resistant parasites, is then eliminated by the 2nd longer-acting anti-malarial treatment.

Combining 2 molecules with different resistance mechanisms further reduced the risk of appearance of
resistance to the combined treatment. Finally, although this had yet to be formally demonstrated, it was possible that combining an artemisinin derivative restores the 2nd anti-malarial drug to its prior levels of effectiveness.

Anecdotally, I saw amazing changes in the patient recovery and less side effects with the artesunate. Examples of this were: Unconscious children regaining consciousness in hours and eating, less anaemia requiring blood transfusions and quicker recovery times with earlier discharge. My local staff also noticed this; several of them having to be disciplined for stealing the drugs and selling them to relatives and friends.

**Artesunate + Sulfadoxine-Pyrimethamine (SP) Protocol**

**Indication:**
Uncomplicated malaria confirmed with a positive Para check

**Dosage and Administration:**
50 mg scored Artesunate tablet + Fansidar (500 mg Sulfadoxine + 25 mg Pyrimethamine)
Take drugs as single oral dose per day.

**FIRST DOSE MUST BE SWALLOWED INSIDE THE PHCC,**
In front of a witness (consultant or pharmacist).

If folic acid given then wait at least 7 days for the Fansidar.

D1: Artesunate 4 mg/kg/day + SP 1 tab / 20 kg weight
D2: Artesunate 4 mg/kg/day
D3: Artesunate 4 mg/kg/day

<table>
<thead>
<tr>
<th>Weight</th>
<th>50 mg Artesunate tab (4 mg/kg/d) D1,D2,D3</th>
<th>Fansidar D1</th>
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<tr>
<td>5 - 7 kg</td>
<td>½ tab</td>
<td>½ tab</td>
</tr>
<tr>
<td>7.1 – 12 kg</td>
<td>1 tab</td>
<td>½ tab</td>
</tr>
<tr>
<td>12.1 – 20 kg</td>
<td>2 tab</td>
<td>¾ tab</td>
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<td>20 - 30 kg</td>
<td>2 tab</td>
<td>1 tab</td>
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<tr>
<td>30.1 – 40 kg</td>
<td>3 tabs</td>
<td>1 ½ tab</td>
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<tr>
<td>40 – 50 kg</td>
<td>4 tab</td>
<td>2 tab</td>
</tr>
<tr>
<td>50.1 – 60 kg</td>
<td>4 tab</td>
<td>2 ½ tab</td>
</tr>
<tr>
<td>&gt; 60 kg</td>
<td>5 tab</td>
<td>3 tab</td>
</tr>
</tbody>
</table>

**Contraindication**
1st trimester of pregnancy (give Quinine for 7 days instead)
Weight less than 5 kg (give Quinine for 7 days instead)
Do not combine Fansidar with Cotrimoxazole