EXERCISING YOGI
AUSMAT AT INSARAG 2016

MIMMS PACIFIC | WHO EMT 2 VERIFICATION
TOUR DE TIMOR 2016 | HADR EXERCISE
NEGLECTED TROPICAL DISEASES | JAPAN
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The verification of being the fast and the furious.

With the verification date fast approaching, the team have maintained a furious daily pace. The process of preparing for the WHO Global verification team has become an amazing opportunity to collaborate, collate, improve and coordinate the content needed to deploy an AUSMAT. We have plans to share this exciting content with you, on line and via this newsletter, so keep a look out!

Despite our focus on October, usual business has continued and in this second edition there are some moving articles, adventures and educational pieces. We have engaged international contributors, journalists and have prepared a new way to focus on our AUSMAT community – check out page 15.

The Quarterly received some lovely feedback (thank you). Please give us your opinion on what you want to know and read, we value your input. The team hope you find this edition interesting, with the aim of sharing important activities taking place in your region in preparation for that next deployment.

To the team from across Australia that contribute to this publication, and those who support the many activities at the NCCTRC, thank you once again for your outstanding passion and commitment. We look forward to seeing many of you in October.

Happy Reading.

Abigail Trewin
A/Director of Disaster and Preparedness
Thank you Prof. Baggoley

The NCCTRC would like to thank Professor Chris Baggoley for his support since he was appointed as Chief Medical Officer in April 2011. Professor Baggoley has been a great supporter of the work that is undertaken by the National Critical Care and Trauma Response Centre and AUSMAT.

He has been an influential figure in supporting the deployment of AUSMAT to a number of missions on behalf of the Australian Government in particular to the Philippines following Typhoon Haiyan, to Vanuatu in March 2015 and to Fiji in February this year.

We would like to wish him well in his retirement.

>>See page 16 for Prof. Baggoley’s profile.

BronTE LEADS ALL WOMEN EXEC TEAM

We wish Hichem Demortier congratulations and bon voyage as he departs to undertake a 4 month Fulbright Scholarship focused on improving networks regionally and globally within the Humanitarian Aid sector at the Harvard Humanitarian Initiative.

Long standing and founding member of the NCCTRC family, Bronte Martin, Nursing Director (Trauma & Disaster) is leading an all female executive team as Acting Executive Director until the return of Professor Len Notaras AM in September.

Bronte is well placed to guide the NCCTRC through the interim period in the lead up to Global Verification of the AUSMAT EMT Type 2 Capability in October.

Top Tweets

You Retweeted
Lorenzo Stano (@LStano - Aug 12)
 Philippine Ambassador Nilda Cañagiano-Cruz recollects gratefully assistance of @NatTraumaCentre after CycloneHaiyan.

You Retweeted
Beth Epplision (@Bethp - Aug 19)
Great to see the AUSMAT crew today at #WorldHumanitarianDay @JulietBishopMP @NatTraumaCentre
"Meet me at the bottom level of heaven" the text said.

It’s not often you agree to such a meeting place, or usual that your companions would understand.

Drew had become separated from the four of us. Peter headed off in a circular motion around the seven levels of heaven in search of him.

The rest waited, enveloped in the beautiful fading evening sunshine. Surrounded by enlightened Buddhas, high at the top of the temple, Mt Merapi in the distance, a constant threatening reminder.

Borobodur Temple built in the 9th century discovered twice, the first, after the still active volcano buried it in volcanic ash, and the jungle swallowed what was left.

Sir Thomas Stamford Raffles dug it out in 1814, only for it to be partly destroyed during landslides and earthquakes common to central Java, a disaster prone region in the 'Ring of Fire'.

Borobodur damaged by disaster, its restoration begun by UNESCO in the 70’s took over a decade, with Australia a significant contributor to the ‘Save Borobodur’ fund.

This was our last day in Yogakarta and the final opportunity to explore the distinct culture of central Java.

Our guide, a smooth faced Javanese man, described as we climbed the levels to Nirvana - the path to enlightenment.

Motifs surrounded the walls, hand carved stories of the common people accompanying Buddha’s journey from birth.

By Abigail Trewin
Day One. The room heaved. Three hundred disaster responders from twenty-seven nations took their seats for the opening ceremony. It was the biggest INSARAG exercise ever attempted and the first to include emergency medical teams. The Australian representatives included USAR 1 & 2 and Six AUSMAT (EMT) members.

The lecture’s, swollen with acronyms, a foreign language UNDAC, OSOCC, BOO, RDC… pause…. Indonesian conversion, and then a continuation in English of the complex models of disaster coordination. The purpose, understand the obligation of responding to a disaster, and integrate with the expectations of a host nation.

Ten years prior, central Java lost five thousand people to the devastating 6.3 magnitude Bantua earthquake, thought to originate along the surface of the Sunda plate, 20km south east of Yogyakarta. Sixty thousand houses destroyed, the tight streets and densely populated city contributing to the losses. Mount Merapi ‘mountain of fire’ a constant reminder of the 2010 eruption with ash plumes and pyroclastic lava flow. More than three hundred people killed from the main eruption and two hundred thousand made homeless. The volcano remains one of the most active in the region.>>
“Day two, seventy jeeps loaded with exercise participants scaled the slopes of the active volcano after navigating in buses the constricted streets of Yogyakarta.”

Day two, seventy jeeps loaded with exercise participants scaled the slopes of the active volcano after navigating in buses the constricted streets of Yogyakarta. Appreciating the logistics of responding to a sprawling city of three and half million, spread over sixty five districts, identifying the confounding issues and considering the challenges ahead was not lost on us.

We headed for the ‘bunker’ one of seven designed to provide immediate shelter in the event of an eruption. The expedition was an opportunity to see the protagonist up close, and appreciate the enormity of both the 2006, and 2010 eruption and the devastation it left behind.

With the scene well set we arrived at ‘Simulation Day’. 0820, arrival Semarang airport 90km from the disaster. Yogyakarta airport closed due to extreme damage. 28 tonne of equipment and 50 AUSMAT deployee’s.

Engagement with the Reception/Departure Centre (RDC), critical information from USAR and DHL for transport and movement of the team and cache, and the loss of a AUSMAT logistics officer to the RDC to support all other EMT’s arriving. A new process but a welcome introduction and the first opportunity to coordinate all teams arriving after the disaster.

Movement to the Ministry and tasking to our site of operation. Forfeiture of another AUSMAT member to the EMT Coordination Centre.

The EMTCC is designed to support the ministry of health in managing the influx of EMT’s. It has an operational focus, supports health responders tasking and compliance to the standards. A valuable coordination strategy and a new initiative for disaster response.

The simulation over two days, required teams to record information on the VOSOCC, participate in the evaluation of health data, report to the MOH, complete comprehensive needs assessment of each district, attend EMT coordination meetings with the Indonesian ministry of health and finally submit exit reports on their activities.
The EMTCC took information submitted from the VOSOCC assisted the ministry with the tasking locations, mapped the location of the EMT’s, and reported the data submitted to the broader coordination groups. This included the Urban Search and Rescue Coordination Centre and the UNDAC team in the OSOCC.

Perhaps the most important function of the EMTCC is to support the daily operational meetings. Run by the ministry of health which include both the National and International EMT’ leads.

Unlike health cluster meetings its focus is solely on EMT operations and aims to provide direction and support to meet the changing need of the disaster. The opportunity for coordination, and information sharing makes this engagement essential and the exercise provided two opportunities for practice and understanding of its value.

The exercise concluded at the end of day four. It challenged each one of us, and we all felt at times, that our nose was just above the water line, but the experience? Rewarding!

An opportunity to test knowledge and learn complex elements of international coordination. The value of exercises such as this priceless. The take home message... EMT’s do not operate in isolation they work in a complex international coordination system and its essential we understand and meet these obligations.

The INSARAG Exercise well framed against a region that courts disaster.
Day of arrival 25/07/2016

We arrived at 1700 and the evening was filled with Indonesian food and warm weather (Melbourne isn’t exactly warm this time of year!), relief to be off the plane (damn they’re uncomfortable) and just a little bit of apprehension about what was going to be expected of us during the exercise and whether I was up to it. At least I could feel reassured that I was working for the week with a great team. My AUSMAT team members all brought extraordinary experience, knowledge and skill to contribute to supporting and managing an AUSMAT deployment. This was going to make it so much easier! I felt confident that all my dumb questions could be fielded by one or other of the group.

Day 1 26/07/2016

So many people, so many uniforms, so many organisations and so many countries represented. The challenges associated with organising an exercise on this scale was clear as we arrived at the venue to see a myriad of flags allocating seats for each country represented. And as the program progressed the enormity of the international and national systems involved in a large scale disaster response became ever clearer. But as the acronyms for the organisations and their committees, policy and systems for coordination flowed it began to feel like Sesame Street, brought to me by every letter! Thank goodness for the glossaries included in many of the policy and guideline books! As the day progressed numbers of presentations increased my understanding of how all of these groups and systems interconnected to create a web of coordination to support a country struggling to support a country struggling with an overwhelming disaster.

Day 2 27/07/2016

Our day started early with a trip to Mount Merapi, an active volcano located about 28km from the centre of Yogyakarta. It was a great opportunity to view the streets of the city and visit a local site but certainly not designed as a sightseeing trip. The narrow streets, dense population and the condition of many of the buildings provided me with insight into the likely destruction in the event of a natural disaster. Once at the volcano we visited the bunker cut into the mountain, built to serve as a refuge from the volcano, and a guide informed us that during the last eruption two people escaped into the bunker, were unable to close the door and died. He described the temperatures reached inside the concrete chamber and the positions in which these people were found. I had an almost visceral response to the image he painted and the horror of the disaster of another eruption. In the afternoon we completed a number of workshops in mixed groups which included members of the Indonesian and international medical teams in an attempt to help us all to understand the common ground that would support us working together and the differences in practice and culture that might lead the international teams astray. Our Indonesian colleagues were being asked to consider complex issues in a second language and presented to them using language and an approach considered appropriate for an Australian health professional. It struck me how easy it would be to make decisions that seem to be in the best interests of patients based on an Australian perspective and yet could be so inappropriate in another context.

Day 3 28/07/2016

The simulation begins! The exercises included in the team member and team leader training are my reference for what might happen during this simulation. Yep, I was wound up like a top, expecting to be kidnapped at any moment or asked to negotiate with war lords, never mind recognise the multiple layers of coordination that a leadership team will interact with and understand my responsibilities to them. As the day progressed I was reminded time and time again why we do these sorts of exercises. It’s all been presented to me in theory on other occasions, even on day one during the presentations, but it never makes as much sense or imprints on your memory quite as well as if you have to do it. By the end of the day I was pretty sure that I could meet the requirements to get a medical team into the country and registered with all the right authorities and coordination groups to ensure that we would be working within a well organised system for disaster management and not on the periphery. Furthermore, I was delighted to find that I hadn’t been kidnapped and hadn’t been involved in any complex negotiations!
The program included a Welcome Dinner and we were bundled onto a convoy of buses to attend dinner at the end of the first simulation day. Tired and ready for bed I wasn’t keen for a late night, so a 40 minute drive from the hotel wasn’t what I had in mind. However, this saw us arrive at an outdoor restaurant located in front of an outdoor stage with the 8th century Hindu temple of Prambanan forming a spectacular backdrop – the temple looked almost magical against the dark sky. Our hosts had far exceeded my expectations for a welcome dinner and made the trip more than worthwhile! After dinner we were entertained with a classic Indonesia ballet during which they impressively burnt down a small hut on stage! Sneaky – they kept it all a surprise and it had what I’m sure was the desired effect.

Day 4  29/97/2016
The simulation today was designed to propel us two weeks forward to navigate a handover to a new team, manage a change in patient presentations from trauma to communicable diseases and close or facility. Today’s performance anxiety was a fraction of what I felt yesterday. Today I felt reassured by having a better understanding of what was likely to be expected of us based on yesterday’s events, not to mention the confidence I felt in the expertise of my colleagues. I’d now had the opportunity to get to know them and see them in action the day before – all bases were covered with by Abi, Tarun Drew and Peter.

Day 5  30/97/2016
Borobudur visit.

Day 6  30/97/2016
Homeward bound – tired and buzzing just a little with an increased understanding of the mechanisms that support the deployment and management of an international medical team and confident that AUSMAT has an impressive system in place and that if asked I’d be deploying with some very skilful people, all of who as it turns out have a pretty good sense of humour!

Diary entry day 1 INSARAG Asia Pacific Regional Earthquake Response Exercise
Having yesterday met my fellow team members (Dianne, Peter and Drew - nursing, medical and logistics team leaders respectively), and got a briefing from Abi and Bronte last night, the exercise started today. I learnt heaps. Even the Welcome reinforced some important principles, that are embedded in the AUSMAT training. Nationals are always hosts and foreigners are always guests. Protocols are important and give a clue to relationships. Culture is a huge source of pride and exquisite movements as in the Gamb Yong dance that formed part of the Welcome give a clue as to the importance of sweating the details in deployments.

The exercise here in Yogyakarta is being held 10 years after 5000 lives were lost in an earthquake in this same region. Indonesia sits on the Pacific Rim of Fire, and is central to the region where the majority of natural disasters occur. Our region.

EMTs are also the guests of INSARAG in this exercise, and from Ian’s talk, we have a unique opportunity to fast track our development through learning the lessons they have learnt over 25 years.

Final broad point – regional, not just national identity is important, and ASEAN is developing a strong disaster focus with many coordination mechanisms that seem to parallel UN mechanisms. These will be trialled in this exercise, but certainly add (yet) another level of complexity to the environment into which AUSMAT may deploy
COORDINATION OF RESPONDERS: ON-SITE OPERATIONS COORDINATION CENTRE (OSOCC)

OSOCC
The role of the OSOCC is to work in close liaison with Local Emergency Management Agencies (LEMA) to facilitate cooperation with, and coordination of, international humanitarian assistance. It is also intended to serve as a platform for information exchange between the LEMA and various relief providers in a disaster receiving international assistance. The OSOCC is constituted of different functions such as Information Management, Liaison, Safety and Security, Operations, Logistics, Media, Administration and Support. The organisation of the OSOCC for a certain emergency is adjusted to the specific needs of that situation. (INSARAG Technical Note 2012)

The ASEAN-ERAT
The ASEAN-ERAT is formed to strengthen ASEAN's disaster preparedness and response, particularly in conducting rapid assessments and facilitating ASEAN's collective response in a timely manner. "ASEAN-ERAT is an essential component of our regional mechanism in disaster management. Since its inception in 2008, ASEAN-ERAT has been deployed with a total of 63 members of various ASEAN nationalities, in 12 disaster response missions in six disaster-affected countries in the region.

In November 2013, the role of the ASEAN-ERAT was expanded to include support to emergency response operations. In additional to rapid assessments, the current scope of ASEAN-ERAT includes support to logistics, emergency communications, and coordination, among others. Since then, the ASEAN-ERAT is known as the ASEAN Emergency Response and Assessment Team.

The ASEAN-ERAT is also deployed together with the UN Disaster Assessment and Coordination (UNDAC) Team managed by the UN OCHA. (INSARAG Technical Note 2012). The AHA Centre's onsite coordination centre is co-located with the United Nations (UN) On-Site Operations Coordination Centre (OSOCC).
The core purpose of the EMTCC is the overall coordination of the surge of responding EMTs (both National and International) to best meet the excess healthcare needs resulting from increased morbidity due to the emergency, or from damage to existing capacity. Ideally, the EMTCC should be an entirely internal MOH (or national authority equivalent) entity that is activated, managed and staffed by trained and experienced personnel from within the MOH. However, in many cases, the MOH requires external support and expertise to operationalize an EMTCC. Where external support is utilized, the primary responsibility for coordination remains with the MOH or national authority. The external support is used to temporarily bridge gaps in the functioning of the EMTCC while working to build and transfer this coordination capacity back to the MOH. (WHO EMT Coordination handbook)

**USAR Coordination (UCC)**
At a disaster with an influx of international USAR teams, a UCC function should be established. The UCC constitutes a part of the OSOCC and is staffed by USAR specialists. The function is subordinated to the OSOCC Manager. The USAR Coordinator is the appointed person in charge of the UCC function. The main responsibility of the UCC is the overall coordination of the USAR operations. (INSARAG Technical Note 201)

**Reception and Departure Centre (RDC)**
In many disasters there is a need to establish an RDC as a part of the OSOCC. The RDC should be located at the arrival point of international relief teams and items in order to facilitate and coordinate their arrival and further deployment to the disaster site. The primary responsibility of the RDC is to register teams, provide a briefing of the latest information, direct them to the OSOCC and pass processed information of incoming teams to the OSOCC in order to facilitate the operational planning in the OSOCC. (INSARAG Technical Note 2012)
In the cyclone-prone Pacific, emergency preparations are not for a hypothetical once-in-a-lifetime occurrence, they’re part of life. Locals know storms will destroy villages. Power outages will spoil some medicines and in extreme cases, there will be mass injuries and limited resources.

When Australian medical and outreach teams arrived in Vanuatu after Cyclone Pam and Fiji after Cyclone Winston, they found strong villages picking themselves up and an emergency system prepared for much of the aftermath.

To build on this resilience, NCCTRC teams returned to the two countries this year to deliver the Major Incident Medical Management Support (MIMMS) course.

Clinical nurse consultant Rebecca Weir led the Vanuatu course, and said everyone participating was keenly aware of how these new skills would help them.

"I don’t think anyone needed more realisation of how serious emergency situations can be, they’re very aware and they’re hungry to get the support and training they need to improve their health systems and their country’s response to disasters.”

MIMMS is available to registered medical practitioners, nurses, paramedics, ambulance officers, emergency managers and emergency first responders like police, fire and SES. When Weir first did the course herself, she said she saw the bigger picture.

"I was quite young at the time and I realised I didn’t really have an appreciation or understanding of what the other emergency services did. It really gave me a better understanding of the role played by police, fire and emergency services. Often when I’m teaching the course in a developing country, it will be the first time health workers are at the table with police, fire and emergency services. "Over three days, you see this wonderful appreciation of each other develop and a greater realisation of where they each fit." The course is a combination of structured lectures, tabletop drills and practical exercises as well as full major emergency field exercises, sometimes involving inflatable adult and child-sized dummies that each have their own injuries to be assessed.

It’s designed to equip participants for any major incident, whether it be natural or man-made with a focus on the unfolding scene and pre-hospital care.

Weir said the courses were also an opportunity to strengthen relationships.

“It’s the second time we’d done the course in Fiji and they’d made some quite significant improvements since we were last there. They started running some of their own scenarios and had key people engaged. “After Cyclone Pam, I was deployed there so it was really rewarding to go back again and see the staff I’d worked pretty closely with. Those relationships are so invaluable.”

A highlight for Weir was seeing local Fijian trainer Mamatuki Sosefo step up and teach the Fijian course himself.

"Mama was identified back in 2014 as having significant leadership skills. He had the knowledge and the aptitude so we really wanted him to come to Australia and do the instructor’s course. "When he passed, I was so proud. "His commitment and passion for emergency nursing and for his country is something to be admired. I’d have Mama in my own nursing group any day — you can do a lot with passion.”

As for Weir, who first taught the course in 2007, growing up in regional Victoria showed her the importance of being prepared when you’re far from help.

"My dad was a single-provider ambulance officer in a rural setting so the ambulance was parked at our house, people would phone the house, we always knew what was going on. "Coming from rural and regional areas, you tend to have an appreciation of resource-limited environments. I think it’s about having a set of skills and being adaptable.”

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MIMMS PACIFIC: FIJI

"...when Weir first did the course herself, she said she saw the bigger picture.”
Rebecca Weir demonstrates a major incident emergency response scenario to MIMMS participants in Fiji.

Rebecca Weir is a Victorian Nurse who is an AUSMAT Clinical Team Leader. Rebecca was deployed to Tacloban as Clinical Nurse Leader Team Bravo 2013.
In the final days of the Fijian deployment following Tropical Cyclone Winston, AUSMAT received a request from the Fijian Ministry of Health to leave behind a range of medicines for the ongoing response.

Often, the gifting of both equipment and pharmacy items are considered by teams during their exit planning. AUSMAT were able to meet the request guided by gifting recommendations from the WHO, (WHO Guidelines for medicine donation) and the support of the Australian Governments Crisis Response Team (CRT).

The process of gifting medicines needs to ensure that:
- The gifting benefits the recipient and is based on expressed need
- Conforms with government policies and the wishes of the country
- Co-ordination and collaboration with the donor and recipient countries
- There should not be a double standard in quality
- Financial approval from the Australian government
- The Fijian experience followed this process well.

The medicine request provided to the AUSMAT Mission Lead at the health cluster, required the AUSMAT pharmacist to identify corresponding medicines from our medicine kit suitable for donation. This is not a simple task, and requires expert knowledge to prepare a detailed list that would meet the WHO guidelines.

Requirements include a comparison of medicines to the National list; drug name, strength and form, expiry date, quantity and cost. The AUSMAT Mission Lead presented the list to DFAT for financial approval.

Approval was received on the second last day of deployment allowing the AUSMAT pharmacist to present the list of medicines to the Ministry of Health’s Chief Pharmacist to determine if they would like to accept the medicine donation.

This is an important step to ensure that the recipient country isn’t burdened with an oversupply of medicines. In addition all the medicines had temperature and storage conditions monitored to ensure the quality was not compromised.

The gifting discussions between the AUSMAT pharmacist and the Fijian Chief Pharmacist also presented an opportunity to offer assistance in the national medicine store, Fiji Pharmaceutical and Biomedical Services (FPBS), where a range of medicine donations were flooding in.

Additional pharmaceutical expertise was required to sort through medicines where the drug name, strength of form differed from the national medicine list.

This was evident in many cases where the donated medicine did not have a Fijian equivalent or the strength of the product varied significantly. This creates additional burden to a host country where donations do not meet the WHO guidelines.

Disposing of huge quantities that can not be distributed because of poor labeling, safety concerns, or unfamiliar drug content some 600 tons of expired, damaged, or inappropriate medicine went to Aceh after the December 2004 tsunami. In early July, 150 tons of these drugs were burned. Some 200 tons of unusable drugs were delivered to nearby Nias Island after an earthquake in March 2005 need to be incinerated.

The cost of dealing with unsuitable or dangerous drugs can be considerable. The United Nations Development Programme, (pays for the disposal) points out that at a cost of $250 per ton to incinerate dangerous medicines, a health center could be built instead. (www.worldwatch.org/node/4593)

Unfortunately despite the WHO Guidelines the standards are frequently ignored. In Banda Aceh, 70 percent of donated drugs were labeled in a foreign language other than English or Bahasa Indonesia, contrary to WHO guidelines.
What is ZinCfant?
ZinCfant (zinc sulphate) is an essential mineral supplement used for the treatment of acute diarrhoea in children >2 months old in conjunction with oral rehydration solution (ORS).

Why Coartem?
Zinc deficiency is widespread among children in developing country including South Asia. Zinc plays a critical role in cellular growth and function of the immune system. Zinc improves water and electrolyte absorption, enhances regeneration of the intestinal epithelium, increases brush boarder enzyme levels and thought to reconstitute the immune system which in turn allows for enhanced clearance of pathogens.

The World Health Organisation added Zinc to the Model of Essential Medicines in 2005 to be used in conjunction with ORS for the management of acute diarrhoea. Zinc reduces the severity and duration of diarrhoea and replaces zinc lost in the stools thus reducing the risk of diarrhoea in the following 2-3 months. It is now recommended in all children with diarrhoea.

Dosing:
The tablets are dispersible and vanilla flavoured.
Babies 2-6 months: ½ tablet daily for 10-14 days
Children 6months-5 years: 1 tablet daily for 10-14 days
*Use 1 blister strip of 10 per patient

Disperse the tablet in 5mL of water (or breast milk), this generally takes around 60 seconds, and then give to the child.

Tablets are recommended to be taken in between meals and repeat the dose if vomiting occurs within 30 minutes of dosing.

Only remove tablets from the blister pack immediately before administering.

Considerations:
If the patient is taking antibiotics (tetracyclines, quinolones or cephalosporins) it should be doses 3 hours apart to prevent reducing the absorption of these medicines
Penicillins, sodium valproate and ethambutol may inhibit zinc absorption and should not be co-administered with zinc unless the risks of discontinuation of the drug are judged to outweigh the benefit of zinc in treatment of the child’s diarrhoea.

Side effects:
Vomiting, abdominal pain and dyspepsia.
In the space of 18 hours, Australia can have a team of experts ready to deploy into a disaster zone with full surgical capabilities.

The decision to launch this mammoth response does not rest on any one person’s shoulders and Australia’s former Chief Medical Officer Professor Chris Baggoley said he felt privileged to be part of the chain.

"Mine is a small part, it goes with the job but from my perspective, I look upon the work of the NCCTRC as being a major contribution to acute health care in our region."

Baggoley was himself an emergency doctor for more than 20 years, giving him a great understanding of the centre’s needs as it grew.

"I reflect on Bali 2002 – from there to where we are now.

"We’ve gone from essentially having a retrieval process for Australians through to the 2004 tsunami where we sent state-based teams, each under their own uniforms and protocols.

"Then how we responded to Typhoon Haiyan in 2013 really demonstrated how Australia’s response had become integrated.

"The Philippine government requested assistance from the Australian Government and I was asked via the Department of Health to compile a team."

Baggoley called the centre in Darwin along with two state health officers as per a rolling roster. Within less than a day, a team of 35 was ready to go with their equipment loaded into defence planes.

"We now have a highly prepared and truly national group, all in the one uniform.

"It is simply a joy to be a small part in the process.""

Looking back on his career, Baggoley said it was nearly very different.

"I completed training in veterinary science in 1973. I enjoyed it but had a sense that probably when I got to the end of my working career, I would look back and have a sense that I’d be more fulfilled -- my time better spent -- if I studied medicine.

"I was obviously still young and idealistic but my career has been remarkably rewarding and fulfilling."

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Prof. Chris Baggoley

RETIRING CHIEF MEDICAL OFFICER
The Navy seemed like an obvious choice for Dan Martin. His dad and grandfather had both been in the military but a turn of events saw him enrolled in nursing.

"To be completely honest, it wasn't my first choice but when I started, I knew right away I had a real affinity for it," Martin said.

"In an emergency department, I learned what sick looked like, and how to manage a sick person as a whole."

An interest in helicopter rescue “and all that cool stuff” led him to train up with the MIMMs disaster response course and get his Retrieval Nursing ticket.

Then the 2004 Boxing Day Tsunami hit and Martin’s skills were in high demand.

He was deployed to Banda Aceh – one of the worst-hit Indonesian regions, where an estimated 167,000 people died.

"It was apocalyptic."

"It had a very profound affect on me – about where I fit in the world and about how Australia could help our neighbours."

"It really started me on the path to emergency response."

He’s now SAAS MedStar operations lead nurse in Adelaide and has since been a nursing team leader with the NCCTRC in Fiji after Cyclone Winston.

"It was an exhilarating challenge and it was rewarding because you could see people who’d been treated a few days later getting better."

"We also left with strong relationships with the Fijians."

As for Martin’s Navy ambitions, he said his father, who passed away four years ago, immediately saw the similarities between Navy outreach and the NCCTRC.

"Dad was as proud as he could be."

"I’d tell him about stories from Banda or Fiji and he’d be right there in the minute with me."

"There’s also a sense of role modelling for the family. My son is only three but there’ll come a time when he understands the stuff that takes me away and what it means."

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Dan Martin
CLINICAL TEAM LEADER

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"There’s also a sense of role modelling for the family. My son is only three but there’ll come a time when he understands the stuff that takes me away and what it means."
It’s one smile that will stay with Carissa Oh for life.

The emergency and retrieval specialist was in Rakiraki, Fiji days after Cyclone Winston when she treated a little girl.

“This young girl had been hit by debris when trying get to safety,” Oh said.

“Her house had been destroyed and she and her mother had to run to find shelter. She had a nasty swollen elbow in a sling but she was smiling most beautiful smile.

“She said to me ‘I don’t know why god punishes good people but I’m so thankful to be alive’.

“To be able to help her was a really rewarding experience.”

Oh puts her hand up to travel to places like Fiji with the NCCTRC or Christchurch after the 2011 earthquake because for her, it’s an honour to help people in need.

“It’s very humbling to see people who have bigger problems than you can barely imagine that are able to be resilient and be able to ease their burden.”

After completing emergency training in Sydney, Oh worked with Careflight’s International Air Ambulance from Darwin. When East Timorese President José Ramos-Horta was shot in 2008, Oh and her team were called.

“It was my first international retrieval.”

From that moment, she said she knew emergency retrieval and critical care was for her and has since worked in Indonesia, the Solomon Islands, Papua New Guinea and more.

“My friends don’t say ‘How are you?’. They ask ‘Where are you?’.”

At some point, she hopes to answer that she’s in Fiji, with no emergencies, relaxing on a beach.

“The last time I was in Fiji was for a retrieval and I arrived in the dark and left before the sun came up.

“It would be nice to go back and sit in the sun.”
Tom Randell

ALLIED HEALTH RADIOGRAPHER

Public speaking has never been a favourite pastime of radiographer Tom Randell. But when he got on stage at an international conference to share his experiences with the NCCTRC, something amazing happened.

“I was always a terrible public speaker because I never had a topic I wanted to talk about,” Randall said.

“Suddenly I had this amazing experience I was busting to talk about.

“The people at the conference actually wanted to hear it too. What we do is pretty groundbreaking for radiography.”

Indeed Randall is able to run a full x-ray service in a field hospital with just one device.

“It looks like a trolley with an x-ray arm at one side and a lap top at the other.

“No darkroom or chemical dipping tanks, it’s all self contained in a rugged little unit and all I need is a power point.”

Armed with this device, he flew into the Philippines after Typhoon Haiyan to work in the surgery suite.

“I was on the first plane in and as we landed, I’ve never seen anything like it.

“The airport terminal was ruined and there were so many people trying to get out. Everything was just rubble.”

Before getting to work, he helped the team set up the field hospital.

“The thing about these teams is everyone’s a leader in their area, they’re the people that hunt out the training to get these opportunities, so when it comes to working together, everyone gets into it.”

He’s since deployed to Vanuatu where he was able to teach local staff how to better use new equipment, and said his experiences have changed the way he paid attention to events in our region.

“Now every time there’s an earthquake or a natural disaster, my dad will be on the phone saying ‘are you going?’.

“I’m always happy to help.”
Steven Malseed

AUSMOG LOGISTICIAN

A big, juicy steak is the second thing logistician Steve Malseed wants when he returns from a deployment.

Number one is time with his wife Jill and children Jacob, Kayden, Thomas and foster daughter Marilyn.

The senior firefighter said his experiences deploying to places like the Philippines after Typhoon Haiyan or Vanuatu after Cyclone Pam brought out his sense of gratitude.

"I'm a pretty laid back guy – nothing really phases me but coming home, you realise how lucky you are and I try to reinforce that with the kids," Malseed said.

"After seeing some of the things I've seen, I don't take anything for granted, and I tell my kids to just take every opportunity, whether it's school or sport or life."

Malseed knows where opportunities can take you. He and Jill decided to foster children in 2005 and now they have a home filled with family. He took on a carpenter and joiner trade in the military and it led him to serving in the First Engineering Regiment rebuilding communities in Timor.

Later, as a firefighter, the NCCTRC brought him back to Timor, this time as part of mountain bike race Tour de Timor.

"Going through the town, you see progress and it's good to think you may have been part of teams that contributed to that in your own little way."

As a logistician, it's Malseed's job to arrive in a disaster-stricken location and build a field hospital with surgeries, communications tents, latrines and more not to mention maintaining water purification and electricity and other jobs.

"Sometimes I'll be figuring out how to make a pair of crutches from what I can find."

After deployment he's happy to slot back in at home, coaching juniors, which he's done for more than 10 years, being his kids' "taxi service" and spending time with his wife.

"I think she's used to me being away because of the military but that doesn't make it easy. We'll usually go to a restaurant when I get home – somewhere that does a nice, big steak."
At 14 years old, Gustodio ‘Todi’ Alves de Jesus was separated from his parents as waves of violence shook Timor’s after the 1999 referendum for independence from Indonesia.

Much of Todi’s small community in Aileu fled as militia terrorized those who voted for independence. Todi’s house was burnt to the ground so he went to his school, which had become a makeshift refugee camp.

He did not break down or give up. Rather, he did something exceptional for a teenager, or anyone else for that matter.

“We looked after about 5000 refugees – mainly women, children and the elderly.”

“There were no medical personnel to care for those refugees. It was just us students.”

For three months, he and 13 students cared for them as best they could.

Sadly we lost two refugees – a small child with post-diarrhoea complications and an elderly person who probably had pneumonia.”

“We didn’t have enough experience in the medical field to tend to the sick, especially in those numbers but we had no choice to care for them because they are our people who sought safety.

“This experience inspired me to do medicine.”

Todi stayed true to his goal as he began his training at Fiji School of Medicine with an AusAid scholarship.

He also spent a year at the University of Wollongong where he learned English and now is studying Emergency Medicine with the University of Papua New Guinea.

This year, he’s gearing up to be part of the NCCTRC’s Tour de Timor mountain bike race. He said it was a proud moment to work alongside the centre.

“The NCCTRC has great experiences in dealing with trauma and disaster response.”

“If someday I become an emergency physician, this will help boost my knowledge and experiences in developing emergency medicine in Timor Leste.”

He and his wife, who is also a doctor, are raising their daughter in a Timor with a bright future, thanks to people like him.
JDR Verified.

By Ms Noriko SUZUKI, Director General, Secretariat of Japan Disaster Relief Team (JDR), Japan International Cooperation Agency (JICA)
Assurance of quality medical care is common responsibility to all of us, emergency medical teams responding to sudden onset disasters and humanitarian emergencies.

In that context, Japan Disaster Relief (JDR) Medical Team has appreciated and participated in EMT initiatives actively led by WHO, and Japan has been supporting this since its beginning. Our leading role in Minimum Data Set working group is an example of our dedication to the initiative.

EMT verification of JDR, successfully completed in June 2016 as type 1 and 2 with specialist cells in the end, was indeed a precious opportunity of learning process for the team with 57 deployments in its more than 30 years of history. Team members built up confidence, realized new ideas and identified directions of further refinement and capacity development beyond “minimum” standard.

All those would never been materialized without support from AUSMAT, especially dedication of Ms. Bronte Martin, our great mentor from Australia. She kindly provided profound advices and guided us to the right direction throughout the process started in February this year. Bronte’s work would be a benchmark for us to provide assistance to verification process of other countries in the future.

AUSMAT has a great capacity of team management, logistics, and medical operation. By participating in trainings and meetings, JDR has learnt many ways to manage an EMT from AUSMAT. We firmly believe that AUSMAT will be successfully verified as a Type 2 EMT team at future verification.

The Asia and the Pacific region is particularly prone to natural disasters such as earthquakes and typhoons, we hope JDR and AUSMAT are able to continue building their capacities to a higher level by supporting and learning from each other.

This will bear the fruit of saving more lives at the time of disaster.

“By participating in trainings and meetings, JDR has learnt many ways to manage an EMT from AUSMAT.”

Japan Disaster Relief (JDR) Medical Team (Type 2) – performing medical operation after the Nepal earthquake in 2015.

Japan Disaster Relief (JDR) Medical Team (Type 1) – providing outpatient care at the Vanuatu Cyclone Pam 2015.
The Australian EMT 2 Capability has engaged in the WHO Global Verification process. The confirmed dates are the 6th – 7th of October 2016.

The EMT secretariat has assigned Lead Mentor Flavio Salio who is supporting the NCCTRC through the preparation process for peer review toward verification and global classification.

Flavio's role is to cross check the self declared information against the set criteria established by the EMT Secretariat. Where necessary he provides support and recommendations on how to reach the minimum standards required for successful verification. He will also share with us the experience of the final review during the Mentor Team visit.

The Mentor team: We are yet to find out who will join in October, but it usually up to 5 mentor technical expert advisors, ideally from our region. They will provide additional support and advice during the peer review process.

They will receive a few weeks prior to their visit the check list with supporting documents. Currently three very large spiral bound folders.

Their site visit will include a thorough review of the information provided by the NCCTRC, as well as an inspection and examination of stocks, procedures and capacities.

The final review and recommendation of the Site Visit Team will be collated, assessed and evaluated by the EMT secretariat and made available to the NCCTRC.

If the site visit satisfactorily demonstrates that the minimum Standards have been validated; the organization will be considered as Globally Classified and will be listed on the WHO Global EMT Initiative site as such.

We will receive a flag indicating we are a verified team, and badges for our uniforms! The EMT classification does not guarantee an invitation to be deployed. Authorisation to practice in a country affected by an emergency is with the permission of the affected host government and a request to the Australia Government.

To ensure we maximise the opportunity that verification presents, we will build the full EMT 2 Field Hospital. The rational is we have changed and developed the capability significantly since the deployment to the Philippines in 2013. Since that time we have not constructed or deployed the full capability.

This seemed too good an opportunity to miss. Consequently, we have begun the preparation for the build – testing the aircraft limitations with our transport POD construction. The warehouse floor is covered in large monoliths of hospital to ensure that it will all fit (both the essential and the wish list).

The log team at the request of the WHO will begin the build in late September and will host international logistics personnel to a five-day logistics workshop.

WHO EMT Global mentors have been invited to visit the facility, international guests and the AUSMAT Clinical Team Leaders will be funded to attend and a specific build workshop in the early part of October.

All other guests, dignitaries and AUSMAT members are invited to visit and view the footprint from the afternoon of the 7th of October until the 9th, when it will be packed up and put away until the next deployment.

Profiles
The Quality Assurance Process

78 teams have commenced the quality assurance process.

Currently there are 4 verified EMT 2 teams in the world they are:

- **China**
- **Russia** (2 teams)
- **Japan**

**WHO Events**

The road to Verification.

Flavio is currently working at the World Health Organization within the Emergency Medical Team Secretariat, providing technical and operational guidance and oversight for the coordination and emergency health operations management to ensure predictable, timely and quality emergency medical care is delivered in response to a disaster and/or outbreak.

Since 2005, Flavio has been active in providing strategic leadership to health programmes and emergency response coordination for International and Non-Governmental Organizations in different type of emergencies (natural disasters, outbreaks, conflict/protracted crises) and country contexts (Pakistan, Bangladesh, Central African Republic, Sudan, Mozambique, Bosnia, Malta to name a few).

He played an important role in leading the development of emergency preparedness plans, rapid response teams, field hospital set up and management. Recent deployments include West Africa Ebola outbreak and Nepal earthquake as Emergency Medical Teams Coordinator on behalf of the World Health Organization.

Flavio is also a faculty member of the European Master in Disaster Medicine, involved in medical operations and health policy research and training. He is a certified Emergency Manager and has also a Master in Peacekeeping Management and training in Epidemiology.

Flavio speaks English, Italian, Spanish, French, Portuguese.

**WHO Lead Mentor Profile**

Flavio Salio

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Kath has worked at the National Critical Care and Trauma Response Centre since 2008. As a Registered Nurse and Trauma Research Coordinator, Kath manages the AUSMAT health information portfolio and is the Clinical Research Nurse for the Melioidosis research program at Menzies School of Health Research.

In May Kath was invited to represent AUSMAT at the inaugural World Health Organisation ‘Emergency Medical Team Data Set Working Group’. The initial meeting was held in Tokyo, Japan and hosted by Japan International Cooperation Agency (JICA).

The multidisciplinary international working group was comprised of: epidemiologists, emergency physicians, adult and paediatric trauma surgeons, public health physicians, health informatics, two registered nurses, logisticians from both government and non-government organisations.

The purpose of the working group is to standardise data collection across EMT’s and therefore daily reporting to the Emergency Medical Team Coordination Cell (EMTCC) during deployments. The initial steps for this is to establish the minimum data; medical and other information that EMT’s need to collect and report.

The ability for EMT’s to collect and report data is essential and powerful; examined by WHO during the EMT verification and informs the host nation about what is happening on the ground. In turn host nations and the EMTCC are notified of the immediate needs, disease outbreak, clinical activity and imperative for planning action and public health response. This information is also critical for future disaster preparedness.

In September Kath will travel to Jerusalem, Israel for the concluding three day workshop hosted by Israel’s Agency for International Development Cooperation (MASHAV). During the workshop the minimum data set and reporting will be tested during a disaster simulation exercise. It is envisaged that a standardised information technology platform for data collection and reporting will be developed in the future.

An Epidemiologist in training – Kath is currently completing her Masters Philosophy (Applied Epidemiology) at the Australian National University. The evaluation and establishment of the AUSMAT Health Information System will form one of her thesis chapters. Two Centre for Disease Control, Northern Territory employees are also completing their studies; Anthony Draper (Drapes) - Fellow AUSMATeer and Epidemiologist Linda Garton.

Positive changes are taking place in the AUSMAT health information system arena. The take home message to you from Kath is that although documentation in the field may even sting a little at times and not rate high on your priorities; it is essential, it is valuable, it is part of being a team member and write neatly. Data collected is also important for your patients and the local health service by way of discharge summaries, operational reports, external fixator details, date of babes delivery and weight.

So for your patients, please write clearly!!

"During the workshop the minimum data set and reporting will be tested during a disaster simulation exercise. It is envisaged that a standardised information technology platform for data collection and reporting will be developed in the future."
World Health Sensei's regroup in Tokyo

By Abi Trewin

Japan in my opinion is an amazing country, elegant beautiful, exquisitely precise yet with a warmth that encourages return visits and further exploration. I fell in love with the country two years ago on an extended visit with family. It was all I had hoped it would be and still surprised and challenged my expectations.

It was lovely to return to Tokyo to attend the WHO Regional Asia Pacific and Americas Emergency Lead Mentors meeting in June. As a new recruit, I was joined by my colleagues, eminently qualified Dr Peter Aitken (blue book author), Terry Trewin (Log Lead) and existing Lead Mentor Bronte Martin. We merged with new faces from our region such as Thailand, Korea, Fiji and the Philippines.

Hosted by Japan International Cooperation agency (JICA) in collaboration with the World Health Organisation (WHO) Emergency Medical team (EMT) initiative. It was perfectly timed with Australia embarking on the process of verification. The meeting aimed to bring EMT mentors from the region up to date on developments within the EMT initiative, including updates to the classification process.

Our JICA hosts were exceptionally gracious, particularly as they were completing their own verification process the day we arrived, classifying as a Type 2 EMT. The meeting allowed lessons learned from recent consultative and verification missions to EMTs in Asia, Europe and the Americas to be discussed and an opportunity for AUSMAT logistics to present our application of the technical standards for the AUSMAT field hospital.

The work of the WHO to build a holistic approach to incorporating the standards should be commended. A team is supported throughout the process of preparing for verification with a Lead Mentor that can draw expertise from a pool of people across the world.

With an evening of Japanese delicacies and Asahi beverages to conclude it was a privilege to be welcomed into the EMT mentor community. 

"The meeting aimed to bring EMT mentors from the region up to date on developments within the EMT initiative, including updates to the classification process.”

PICTURED: WHO Regional Asia Pacific and Americas Emergency Lead Mentors
Dengue virus is a member of the Flavivirus genus that is spread by the Aedes aegypti and Aedes albopictus mosquitoes. Given the colloquial name "Break-bone Fever" patients describe such severe joint pain it’s as though bones are fracturing.

Such pain with fever (for 5-7 days), blanching erythematous rash, retro-orbital pain, and a metallic taste are often found 3-7 days after being bitten. Unfortunately, these symptoms when mild can mimic at least two other diseases present in our area – Chikungunya and now Zika.

Dengue spread has occurred globally in tropical and sub-tropical regions, and in SE Asia and the Pacific is now considered largely endemic. Forming 11% of acute febrile presentations in some SE Asian studies it has also been the cause of a number of outbreaks. Approximately 50 million infections occur worldwide each year with, 100 countries considered to have endemic circulation.

Dengue’s 4 serotypes all present similarly and while infection with one gives immunity to that serotype it fails to protect against the other 3. In fact more troubling is the discovery that being infected with a second serotype seems to carry with it the increased ability of the new virus to proliferate. This, known as Antibody Dependent Enhancement (ADE), means the second time someone is infected (this time with a different serotype) they are more likely to progress to Dengue Haemorrhagic Fever (DHF), and Dengue Haemorrhagic Shock (DHS).

"...more troubling is the discovery that being infected with a second serotype seems to carry with it the increased ability of the new virus to proliferate."

DHF/DHS syndromes are characterised by capillary leakage of fluid to ‘third spaces’ (abdomen and interstitium), and marked thrombocytopenia from bone marrow suppression and platelet destruction. Diffuse petechial haemorrhage into the stomach, skin, lungs, and heart along with the ‘third spacing’ of fluid, causes death. Such manifestations are more likely in the young, those infected with Dengue serotype 2 and those with a second infection of a different serotype.

Managed symptomatically with IV fluids and analgesia there are no specific antiviral treatments for any of the stages of infection but good fluid management and support has been shown to be of benefit.

Of greater hope is prevention. With the mainstay of public health focusing on vector control the latest changes include the developments in vaccines.

Released in April 2016 were WHO’s recommendations on the use of the first vaccine - Dengvaxia® (CYD-TDV). Now available to individuals 9-45 yrs living in Endemic regions of Brazil, Philippines and Mexico it unfortunately has variable efficacy. Taking 20 years and an estimated cost of $1.8 billion in development its incomplete efficacy means other vaccines are continuing on (currently in Phase III trials). These promise the hope of better effect against those considered ‘virus naïve’ (people without prior exposure to dengue who do worse with the current vaccine) and those under 9 years of age (currently excluded due to worse outcomes in some trials).

Testing for Dengue is helpful given the mimic of clinical manifestations seen with Zika and Chikungunya. Current lateral flow assay cards used by AUSMAT members provide results in 15-20min at the point of care and can be relied upon for a good combined sensitivity (88.65%) and specificity (98.75%). These card based assays test for a dengue protein produced early in infection (NS1) and the antibodies produced by the body in defence against the virus (IgM - early, IgG - late). Use of such tests have helped ensure correct fluid management and tracking of outbreaks. All regional AUSMAT deployments to Dengue endemic areas have these available for testing.
As with all of Neglected Tropical Diseases public health measures are essential and constitute the backbone of control. Limiting the egg laying processes, by removing artificial man-made water sources (e.g. pooling of water in tyres), covering domestic water containers, and using household protection (window screens, and mosquito nets) all help and have the combined effort of preventing other mosquito borne diseases.  

It is a cause of significant morbidity and mortality, and has been added to the list of neglected tropical diseases (NTD) in an effort to curb its spread. Any tropical or subtropical regional disaster will require medical assessment for Dengue and therefore an understanding of its challenges in sudden onset disasters is essential.

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When I first got the call that I might be deploying with AUSMAT to Fiji, I mentioned it to a colleague. I think I talked about typhoid, dengue and leptospirosis. She replied: “You’ll probably see more people unwell from having their anti-hypertensive meds blown away in the cyclone!” and I remember half dismissing it and half thinking that there was a grain of truth in it. Well, there was more than a grain; it was more like an entire wheat silo of truth. After all, Fiji - like many islands in the western pacific region - is famous for suffering the so-called ‘triple burden of disease’. This refers to the usual historical burden of communicable diseases; the growing burden of non-communicable disease (NCD); and the emerging threat of new diseases arising from environmental and social change. Little did I understand the extent to which Fiji had transitioned into the brave new world of NCDs. The burden of non-communicable disease, both in terms of morbidity and mortality, stands at around 80% of the total disease burden.

Of course, the pattern of illness burden is not like Australia’s. Fiji’s burden is overwhelmingly lifestyle and nutrition-related. Diabetes and hypertension make up a very significant proportion of illness burden. And the consequences of this are eye disease, amputations, kidney disease and cardiovascular disease causing preventable, premature death in a country where taking daily medications and presenting for preventive care are not embedded cultural norms. This places an enormous burden on tertiary hospital care as well as at clinic and community level.

In responding with AUSMAT we saw all the usual suspects – boils, abscesses and fungal skin infections; even the regional conjunctivitis epidemic was evident. And typhoid, diarrhoea and leptospirosis started to emerge in the fortnight following the cyclone. So communicable diseases were present and needed surveillance and treatment. Nonetheless, we saw scores of cases of extreme high blood pressure, with an average systolic of 160 mmHg. At least a dozen of our 500 consults had potentially life-threatening systolic measures above 200 (up to 245!). There was also a huge prevalence of diabetes, with most known cases being poorly controlled and many previously undiagnosed.

What does all this mean for AUSMAT and disaster responses? I think we need to start with a really good understanding of the disease profile for any country we are assisting, and tailor our response accordingly. We’re pretty good at that, and it did happen for Fiji. The other two big issues for me are ‘localisation’ and ‘surge capacity’. Localisation is the process of enabling a more locally-led response, a commitment being made by NGOs globally. The Fijian government was fantastic in the first few weeks in managing the really critical health priorities - major injuries requiring surgery and evacuations. Yet the challenge was always that hospital staff were burdened by the enormous routine needs of people with NCDs and so struggled to cover other priorities, such as village by village checks and communicable disease surveillance. Local surge capacity will remain an elusive goal if staff cannot be re-tasked because of NCDs which could be managed at nursing post or clinic level by the many competent and willing nursing staff.

I hate to continue to wonder what killed more people in Fiji – trauma from the cyclone or lost packets of enalapril, blown in the wind?
You may remember from our last edition; we had declared habitat hunting season OPEN!

In pursuit of a replacement for the Campmor shelters. We had invested in a ROFI, with the promise of Scandinavian design, we were eagerly waiting its arrival.

Like kids on Christmas eve, the logistics boys eyed off the very large ROFI emblazoned box. Just like IKEA, it came in a myriad of parts – high quality poles and canvas with an assembly map that would challenged any good AUSMAT member’s navigation skill.

Two hours later, eight men, exhausted, appeared from under the folds of a very large shelter. The verdict:

The ROFI certainly provided luxury décor when compared with the Campmor, a width that would allow for an impromptu logistics dance off, a flash floor that would protect the logistics bellies when doing the ‘worm’ and a length ten of our larger team members might squeeze into without having to cuddle at night.

The demise:

Minimal hanging points limiting the ability to not only use mosquito nets, but of course hang the necessary disco light configurations.

Ventilation – while the Scandinavians like a good sauna, the thought of ten sweaty AUSMAT bodies in these quarters, didn’t paint an attractive picture!

When a ‘simple’ shelter evokes our mild mannered log team into heated arguments, accompanied with profanities that would make a sailor blush, and a two hour effort using eight highly skilled people… it paints a picture that this unit might not suit the AUSMAT ethos of Medical personnel establishing their own habitat!

All is not lost, the ROFI will stay. It will be repackaged out of its enormous 280kg box, into light weight bags – like the ALASKAN and it will become the AUSMAT MESS facility, and built AFTER everything else in the camp is up!

With the disappointment of the ROFI not meeting our expectations, we went back to the drawing board - literally.

The team undertook another analysis of the market and even investigated building our own shelters. While you might be surprised that this was feasible, it would have resulted in a similar design to the Campmor which really wasn’t the aim.

The purpose of these shelters is to accommodate a minimum of ten members in a weatherproof, well ventilated, secure environment. The shelter should have an inbuilt floor, minimal velcro to simplify the clean, hanging points for; mosquito nets, lights, fans and power outlets. The outside must come in a reflective colour to minimise heat storage and be light, quick to build with unskilled personnel.

Enter the HDT Base X 308.

Canberra, August 2016: An industrial area outside the CBD, a dodgy back-road lined with industrial storage facilities. AUSMAT Operations arrive in a taxi, optimistic but apprehensive. A display, a small version of the 308 (405 Xpress), set up in 76sec! pulled down in less than 5min! room for five. All requirements but size mist... Could this be the one?

Three weeks later... and a horrendous freight bill. Six dubious Log eye off a black plastic wrapped pallet. We’ve been here before, so much promise, so much disappointment, can we bare to go through this again?

Only two Loggies can handle the experiment. They come in on a Sunday – to minimize the team’s pain. Thirty minutes later, a large habitat stands before them. Gleaming, beautiful the HURAH moment has arrived!

The HDT 308 is the larger light weight, quick erect shelter able to accommodate 10 -12 AUSMAT members and their kit. It is well ventilated, protected by a second skin to manage tropical downpours, with a built in high walled floor and minimal Velcro. It has hanging points everywhere! And a built in electrical distribution system for each team member.

It’s concertina collapse is similar to a shade shelter, making it quick and simple for all our workforce to build. Its added features include air-conditioning socks that will match our ALASKAN’s and the ability to be used as a light weight clinical facility.

So now we wait for their arrival from the USA. JOB COMPLETE.
The conundrum: Categorised coloured Space Cases to transport medical consumables, with the added feature of POP and PLAY. Meaning... on arrival the space case turns vertical and becomes an instantly usable cabinet with pre-sorted dressings, bandages, cannulas etc.

Solution: Take a qualified Log Carpenter, named Malseed. And ask him to solve the problem.

Result: a prototype draw and shelf system, inside a space case. We loved it, but the prototype wood draws were not the answer.

Next Problem: Find a box that fits perfectly, is lightweight, collapsible, makes quarantine cleaning easy or can be thrown away without ridiculous expense.

Solution: This part was very tricky... No Australian or New Zealand suppliers could help, the size was just too awkward. ...Alibaba perhaps???

We spent three months contacting bulk suppliers of boxes to custom make our units, with the same reply, unless we were ready to import 10,000 units it simply wasn't possible.

Finally a company in Taiwan had a unique approach. Laser cut plastic that can be assembled after arrival, is lightweight but very strong and at a price and volume that could be supported.

We began the technical drawings (scratching on paper), submitted them and two months ago and received our first prototype.

It was amazing!

I'm not sure everyone in the office was quite as enthusiastic, (however, those with a shoe collection could clearly see the brilliance).

It was masterpiece to those who had spent close to twelve months trying to solve the problem.

As of August, 1400 units arrived in the warehouse, and Malseed has started the unenviable task of fitting the space cases with aluminum framework to support the draws.

We are aiming in September to begin to reorganising the contents of the cases to ensure they are truly POP and PLAY!
The motto of our logistics team is "good things come in space cases". And they continue to surprise us with what they manage to squeeze in one. They have recently commissioned their latest piece of equipment to ensure our drinking water and the reticulated water around the facility, including surgery, is of the highest possible quality in a disaster setting.

The new water filtration unit was built at a fraction of the cost to similar units on the market. It is fitted with a high intensity ultra violet bug smasher (MOG terminology) which adds an extra level of protection for our water making processes. The unit, which hasn’t been given its customary childish name by our MOGS, is fitted with all the technical gadgetry that ensures if anything faults within the unit it will shut down automatically. It also has expandable features via Ethernet for data logging and trouble shooting, the unit constantly monitors itself and also alarms when servicing is required or faults are detected.

Easily capable of supporting an EMT 2, the flow is purposely throttled back by triple 20 inch filters to maintain high intensity UV treatment at around 40,000 litres per day.

@THE CACHE

Peter left school after completing year 11 and worked on the family farm for a decade before setting himself up with his very own fuel agency where he delivered bulk fuel to local farms and service stations. Peter then started engineering, firstly sheet metal, making steel cupboards, toolboxes and trailers and then progressed into larger engineering projects which kickstarted another business venture in Sea Lake, Victoria. It was in Sea Lake that Peter became involved with the local ambulance service which lead him to Darwin in 2005 where he became a qualified Paramedic with St. Johns Ambulance Service.

Peter worked as a supervised student paramedic with Abi Trewin (scarily) as his mentor. Peter has been involved with AUSMAT and the NCCTRC for since 2010. He has been deployed to Tacloban, and Port Villa post typhoons in both these regions.

“I have also been lucky enough to be the “Motorbike Paramedic” on two TDT mountain bike rides.” Jones adds.

When I’m not working I like to go fishing (although it seems I do more boating than fishing) and have recently take up the sport of pistol shooting. I also play AFL Masters Footy and don’t mind a beer and a bbq. I am married to Gaylene, a police auxiliary, have two daughters, one is a Paramedic in Melbourne, who has a 3-1/2 year old daughter, the other is a school teacher here in Darwin.

I also have a 2-1/2 year old Curly Retriever called GUS.
Supplying 10,000 – 20,000 litres of clean water to a field hospital isn’t as simple as turning on a tap. Water quality and availability are a significant issue across the world and disasters are likely to further disrupt local supply. Many of the places AUSMAT deploy, quality water on a good day is hard to come by.

Water facts:
- One in nine people worldwide do not have access to improved sources of drinking water
- One in three lacks improved sanitation,
- Approximately 3.5 million people die each year due to inadequate water supply, sanitation and hygiene. (UN Water.org).

The most common and widespread health risk associated with drinking water is contamination, most commonly by human and animal faces. In SE Asia where there is no access to a sanitary facility open defecation is practiced. In fact: more than 300 million people still defecate in the open. (WHO, SERO Drinking water quality in the south-east Asia region).

Drinking water quality guidelines and standards are designed to enable the provision of clean and safe water for human consumption, to protect human health. These are usually based on scientifically assessed acceptable levels of toxicity to either humans or aquatic organisms, (UN Water.org). A field hospital requires high quality potable water that is safe to drink, and able to be distributed across the facility without losing integrity, this includes the operating theatre. This means a regular supply is required, and food grade, closed distribution hoses with the right number of pumps is needed to move it across a 6000m² site.

To further enhance AUSMAT’s water management plan, which can support up to 70,000 litres of fresh water filtration, disinfection and storage daily, is a Wagtech Potatest + Intermediate Water Quality Laboratory.

It is a lightweight microbiological test kit can do up to 200 samples and has its own incubator.

The lab employs the membrane-filtration technique, where a measured volume of water is filtered through a membrane, which retains the bacteria on its surface. The membrane is then incubated on a suitable medium, using a battery-powered incubator, for 18 hours. During this time, the thermotolerant coliform bacteria reproduce and form colonies. The number of colonies formed provides an index of the degree of faecal contamination in the original sample.

Bacteriological guidelines
Conventional bacteriological standards may be difficult to achieve in the immediate post-disaster period.

The WHO guideline of zero E. coli per 100 ml of water should be the goal (World Health Organization, 1993a) and should be achievable even in emergencies, provided that chemical disinfection is employed.
Watch out for white lab coats
AUSMOGs are now scientists!

Water Disinfection and Distribution Layout

Water Layout for Outbreak Contingency

Water Requirements
- Responders: 100L/day
- Inpatients: 40L/day
- Outpatients: 50L/day
- Surgical: 100L/surgery
- Turbidity: <1 NTU
- Free/Residual Chlorine: 0.2 - 0.5 ppm
- Total Dissolved Solids: <500 ppm

Minimum Filtration Specifications
- Carbon Block in system
- <0.5 Micron Filter
- UV: 40 mJ/ml

Water Requirements
- Patients: 60 - 100 L/day
- Visitors: 15 L/day
- Decon: 0.5% Chlorine for decontamination of equipment
- 0.05% Chlorine for hand/air hygiene
CONTINUED...

MASTER CHEFS ON TOUR

In the pursuit of culinary excellence the Disaster team hunt regularly for food to improve our custom made ration packs.

The aim? Manage the fussiest pallet and give you warm feelings of home when you savour our packed delicacies.

Sorry, Alice in Wonderland moment...

...what we mean is, we aim to ensure you can swallow and digest what appears to be food without experiencing sodium overdose or an impacted bowel as the dehydrated food sucks the last remaining moisture from your gut.

With any RAT Pack we need to consider the limitations of field cooking and the perishability of the goods, while avid supporters of Food Bank, we do aim to be responsible stock managers. (Linda has developed many hiding spots to stash the lollies from our logistics team.)

The additional challenge is the volume required to deploy a team.

With more than 1400 main meals as a minimum required, wholesome and healthy snacks that won’t trigger hyperglycaemia and enough variety to keep you all entertained.

Our resident HOT GUY, Dr Matt Brearley takes this science very seriously...

...mainly because he is very tall and needs a lot of food.

Earlier this year he travelled as our food critic, to the Australian Defence Force Rations conference in Tasmania.

Culinary Matt did not disappoint. His hunting and gathering skills brought home a business card linked to a Singaporean company who specialised in Retort meals, a process similar to canning.

Retort: The food is first prepared, either raw or cooked, and then sealed into the retort pouch. The pouch is then heated to 116-121°C for several minutes under high pressure inside a retort or autoclave machine. This process reliably kills all commonly occurring microorganisms (particularly Clostridium botulinum), preventing it from spoiling.

The retort pouches are being considered as a possible replacement to the current dehydrated options.

So, we assembled the disaster team in the kitchen..., heated the mystery pouches in the microwave... and poured the contents across our taste test bowls.

Four brave team members stepped forward.

WOW!

It was excellent Chinese! and slow cooked braised beef with a rich glossy gravy. Sumptuous Nasi Goreng, and peanut sate vegie stir-fry.

The rest of the team tucked in. The team were delighted with the flavours, texture and overall presentation of the food. In fact, we ate all our samples (5kg worth) in 24hrs.

An additional exciting prospect of retort is meal trays, which are used for airlines, hospitals and other immediate meal services. Dietician informed, portion controlled, these meals can embrace speciality diets such as diabetic, post surgical or high protein without the fuss of a camp kitchen.

So to make this all possible, we embark on the challenge of importing.

DAFF have been excellent in providing guidance and advice and we hope to explore further in the next few months’ access to this product and continue our aim to be Australia’s RATION MASTER CHEFS.

HOWZAT?! Cooked by real chefs, retorted by people in super-clean-white-lab-coats and stored by yours truly, awaiting the day to satisfy your tastebuds.
The all too common theme of disaster responders arriving and being unable move due damage to transport routes is something our MOG’s have long been working on to overcome.

Being the envy of most disaster responders to Typhoon Haiyan our logistics personnel and medical staff managed to move approximately 20 tonnes of equipment, evacuate numerous patient movements to and from waiting military aircraft, distribute aid and move around the disaster area unimpeded.

Without considering the above benefits, and in the context of preventing one back injury for our personnel, the “Buggies” are invaluable. That’s how our MOG’s sold it to us anyway.

With the value of side by side (SXS) all-terrain vehicles (ATV’s) well demonstrated by AUSMAT in the Philippines, it was a natural progression for our team to want to improve and set their sights on the Honda 1000cc 3 seater Pioneer ATV.

The Honda Pioneer 1000/3 is the premier 4x4 SXS in its class and as much as we would like to take some credit, hats off to our Japanese friends. The vehicles are powered by a 1000cc liquid cooled twin cylinder unicam four stroke engine. The auto transmission has six forward gears and a reverse which includes 2WD, 4WD, Turf Mode and Differential Lock. You can also shift from an auto to manual gear shift mode with a flick of the switch.

Fitted with both emergency and warning beacons the Honda 1000/3 is wired up for safety around airports and the field hospital.

If Honda has gone all out on the safety features which include seat belts, safety netting and roll-over protection system for the occupants.

A leader in the SXS class the Honda can carry 450kg in the tray and has a 900 kg towing capacity. As the Honda is fitted with a single stretcher system our MOG’s are currently designing a fold-up single stretcher trailer that can also be adapted for freight.

The purchase of the buggies demonstrates the close working relationship between the NCCTRC and the Northern Territory Police Fire and Emergency Services.

Heil THERE LIL’ DUNE BUGGY

By Terry Trewin

According to Peter and Terry, these new buggy’s will also help the team respond and treat within the critical ‘golden hour’ - Hmmm.

@THE CACHE

Matthew was born in Darwin and has recently turned the BIG 21. After completing year 12, he worked as a service consultant at Australian and New Zealand Banking Group for a year. Matthew joined the NCCTRC in 2014 and is currently working at the NCCTRC cache.

Matt has attained a forklift license, light rigid and Cert IV Work Health and Safety since being a part of the team.

His role is responsible for assisting with the logistics capability of the warehouse, specifically the red bags.

Matt maintains the supplies and consumables contained within the red bags to ensure that AUSMAT Team Members are able to eat, sleep and function to the best of their ability allowing the team to deliver a successful mission.

He is also responsible for the procurement or a large number of goods and services centre wide just recently acquiring new HDT tents that will help the NCCTRC transition into an EMT 2 capability.

His interests include reading, FIFA and sports.

Matt is patiently waiting for Hawthorn to claim their fourth premiership later this year.
Ever wondered how military and humanitarian responders coordinate their response to a national disaster?
In June the Government of Timor-Leste hosted its first large Humanitarian assistance / disaster relief workshop in Dili.
HADR workshops are facilitated by the Office for Coordination of Humanitarian Affairs (UN OCHA) and are designed to support a host country in exploring how they will manage Civ-Mil Coordination in disaster response.
This was a component of Exercise Pacific Partnership, an annual US-led humanitarian and civic assistance program, which aims to improve the interoperability of the region’s military forces, governments, and humanitarian organisations.
In addition it provides medical, dental and engineering assistance and training, strengthening the relationships and security ties between nations in the Asia-Pacific regions.

Timor Leste is located <700km northwest of Darwin, with 60% of its 1.2 Million population <25 years of age, and gained its independence from Indonesia in 2002, and so globally is one of the youngest countries. It is a developing nation and it is still shaping its administrative processes – with this workshop allowing them to apply and refine their emergency response plans.
The 5 day HADR workshop, brought together the Government of Timor Leste (the Defence Force, Police Force, and Civil protection services), supported by Foreign Military Forces (e.g. Australia, United States, New Zealand, Singapore); and, the Humanitarian Country Team, which was composed of NGOs (Red Cross, OXFAM, PLAN), and United Nations organisations (e.g. World Food Program, UNICEF, UNDP), including OCHA.
Day 1 -2 of the workshop were dedicated to presentations on the fundamentals of HADR; an overview of the disaster response model within Timor Leste; and, Lessons learned from previous operations/deployments. It was also an opportunity to share what AUSMAT is capable of, should we be requested to respond

Photo Credit: United States Navy ID 050329-N-8629M-054
Coordination between different actors, the Timor NDMD (National Disaster Management Directorate) and OCHA should jointly convene meetings with representatives from both sides.

Given that the humanitarian sector often responds to a needs-based system while the military specialises in demand-driven system, it was suggested that a Humanitarian-Military Operations and Coordination Centre (HuMOCC) was formed.

A HuMOCC provides a predictable and effective coordination mechanism between military and civilian actors. It is the 'SPACE' where humanitarian capacity gaps during the critical period emanating from the OSOCC, Humanitarian Country Team (HCT) or clusters could be temporarily filled-up by available military capacity.

At the HuMOCC the Humanitarian Coordinator requests the military forces to support the identified problem. The representatives take these requests to the Multinational Military Coordination Centre (MNCC) to identify if a responding Military force is able to support the request. The military force with the capability re-assigned the task; they then coordinate directly with the requesting humanitarian agency to support the request.

Example: Humanitarian responders define priorities and needs, shelter for 5,000 displaced persons, or that safe drinking water needs to be provided for the population.

While military actors plan/execute requests for assistance such as, providing manpower to set-up the camp for the displaced population, or delivering water purification tablets and storage containers to the population in remote areas by means of truck transport.

Timor Leste is a young country and has recognised the importance of building a disaster response capability. They are using these opportunities to strengthen their understanding of disaster response and ensuring their current processes are communicated to those who may come to assist. HADR is an excellent platform to understand our differences but work with strategies to overcome and ensures our focus remains the effected population.

By Guy Price, AUSMAT Operations Manager
COORDINATION OF RESPONDERS:
HUMANITARIAN MILITARY OPERATION COORDINATION CENTRE

The structure of any civil-military coordination mechanism will be dependent on the Affected State’s national structure. Depending on the context, the establishment of a Humanitarian-Military Operations Coordination Centre (HuMOCC) might be the preferred option.

The HuMOCC objective is to provide a predictable humanitarian-military coordination platform complementary to the OSOCC, the HuMOCC aims to provide the physical space dedicated to facilitating the interface between humanitarian and military actors present in country.

This is the “space” where humanitarian capacity gaps during the critical period emanating from the OSOCC, Humanitarian Country Team (HCT) or clusters could be temporarily filled-up by available military capacity.

The HuMOCC will also serve as a one-stop shop for information-sharing and update, task sharing and division, and shared/joint planning on humanitarian needs and gaps (actual, anticipated or projected) and available military capacity on the ground. The HuMOCC services are geared towards optimising the use of available military assets to support humanitarian priorities in critically affected locations.

Example: Procedure for requesting Foreign Military Assets (FMA) as a means of last resort:

Humanitarian partners requesting to move cargo, should approach the Logistics Cluster. WFP/Logistics Cluster will then contact the requestor and provide the details of the cargo movement. Should the request exceed the capacity of the Logistics Cluster, the request will be conveyed through the HuMOCC to the MNMCC for tasking to the national and foreign military forces.

( ReliefWeb.int/.../CMCoord)
Multinational Military Coordination Center

A MNCC is a multinational coordination center that facilitates coordination and cooperation of foreign military forces with the affected nation to support humanitarian assistance and disaster relief (HA/DR) missions. Two key differences between the Combined Task Force MNCC and a HA/DR MNCC:

HA/DR MNCC does not rely upon formal command relationships among military forces – most HA/DR missions will not require activation of a multinational military (combined) command

Cooperation and coordination will be the working relationship framework with no binding or controlling mechanisms among the foreign military forces

HA/DR MNCC will operate at the UNCLASSIFIED level of information sharing

The affected state still exercises sovereignty and is functioning throughout the country. The affected state government (including its military) is able to generally prioritize and coordinate requirements and make these requirements known to international disaster response agencies and other countries

The affected state government has a designated National Disaster Management Organization/Local Emergency Management Authority (NDMO / LEMA) or at least key points of contact for international assistance.

Humanitarian Coordinator or Resident Coordinator

Effective coordination of humanitarian action in the field hinges upon humanitarian coordination leaders: the Humanitarian Coordinators (HCs) or Resident Coordinators (RCs). In effect, while the primary responsibility for coordinating humanitarian assistance rests with national authorities, if international humanitarian assistance is required the HC or RC is responsible for leading and coordinating the efforts of humanitarian organizations (both UN and non-UN) with a view to ensuring that they are principled, timely, effective and efficient, and contribute to longer-term recovery. At the field level, the HC/RC is responsible for designating Cluster Lead Agencies for all key humanitarian response sectors, in consultation with the Humanitarian Country Team (HCT) and the Emergency Relief Coordinator (ERC) (UN OCHA)
Tour de Timor Part Deux: Boys Own Adventure

By Steve Malseed

With the alarm going off at 04:30, my bags pre-packed the night before, I am off to pick up Ryan. A quick text message and out he stumbles, trying not to wake his wife and kids.

We arrive at the Darwin International Airport at the respectable time of 5 am. Upon lining up in the restless queue, we make our way through to the international departure lounge. After a quick flight of an hour and 20 minutes we touch down at the Dili airport (President Nicolau Lobato International Airport to be exact).

From here we set off to pick our reliable hire car and make our way the local shops. We grab some much needed supplies for our recce and are also met by Mr Joel. He provides us with sound knowledge of the road conditions and who will be joining us this time, TAKE TWO! Just after nine we are off on our way travelling along the highways of Timor. We are fortunate enough this time to travel the coastal route through the rolling hills, looking at those waves, wishing we had our surfboards on the roof.

First point of call is Manatuto where there is a much appreciated stretch of our legs, we load up again as we head through Baucau for Quelical. Along this stage we purchase some local fish on stick and some rice for our travels. The fear stars to set in as flashbacks occur from being bogged for 24 hours, 3 weeks earlier on our way from Quelicia to Iliomar. Fortunately for us, this time the track is dry and bog free while still holding some monster ruts.

We pull up for the night 20klm short of Iliomar and are put up by the local law enforcers who are keen to show us their hospitality. Our B&B is up on the side of a hill with panoramic views over the village and out to the ocean. After a feast of local cuisine, it is off to our bamboo slated beds.

With a quick pack up we are at the local police station to sample their morning coffee and are off on the stone road again with a quick pit stop to the local mechanic to put some much needed air into a tyre. It doesn’t take long and we are reaching top speeds of 20km an hour along potholed, washed out, windy, dusty, one lane albeit picturesque track.

We continue on through Iliomar, Lospalos and onto the finish line of Baucau with the continual shouts of “MALAY!” as we traveled through many a village...

...But wait there’s more, Baucau is not the finish, we still need to make our way back to Dili with a four hour drive just to finish it all off.

Plane to catch, and homeward bound. Bring on the 13th of September!
Tour de Timor 2016

The Tour De Timor is an international mountain bike race held in stages in Timor-Leste since 2009. The NCCTRC has been invited to provide medical support for the annual bike race since 2011-2015, at the request of the Office of the President of the Republic of Timor-Leste. Prior to 2011, the event relied upon its limited national medical resources and volunteer medical support to manage hundreds of competitors.

The event being will be held from 13-17 September 2016. The event is in its eighth year and attracts a large number of Australian competitors. This year it will include the first and final stages as a Union Cycliste Internationale (UCI) Mountain Bike race. It is expected that 100 competitors will take part.

The Tour De Timor is a major event for Timor-Leste and is focused on showcasing the country as a safe and beautiful destination for tourism and investment. It provides a welcome opportunity for employment for several hundred Timorese and contributes to community economic development.

The NCCTRC will deploy a multi-jurisdictional team to the 2016 Tour de Timor comprised of volunteers from seven Australian States and Territories. There will be 23 clinicians and logistics personnel deployed to support the Tour de Timor. They spend their day, awake very early, travelling in multiple vehicles across each stage following the peloton and providing assistance where required.

The NCCTRC works alongside the National Ambulance Service of East Timor to medically support the race, providing advice during the planning stages through to being on the road every day with the riders. Our mandate is to provide medical and trauma care to competitors, support crews and event management.

Each year we send up our senior logistics personnel to review the race circuit, evaluate the risks to the team and inform our planning for the daily arrival into the various camps. This year due to late seasonal rains – we had to have two attempts. Finally the Reccy complete we now move on to the process of planning for the teams arrival into Darwin on the 11th of September.
Timor-Leste Ambulance Service: A personal reflection

By Dr/Paramedic Felix Ho
Resilient. Dedicated. Professional. These are just some of the words I would use to describe my observations of the staff and volunteers of the Timor-Leste Ambulance Service.

I was fortunate to have been able to work alongside, observe and learn from the dedicated professionals during involvement in Dili from 13-17 June, along with the team of Peter Jones and Abigail Trewin. The opportunity to be return back to Timor-Leste and to work with the ambulance service was one too good to miss, having previously been employed with the United Nations Integrated Mission in Timor-Leste (UNMIT) as a Paramedic a number of years ago.

At the time, I had fallen in love with the small island nation, so when I was invited to be part of the team to travel to Timor, I literally jumped at the opportunity.

Our brief for the week was to provide basic training to the team at the Timor Leste Ambulance Service. Discussions between Dr Nuno, Senior Medical Officer for the service; John Moore, Australian paramedic (DFAT Sponsored position); and Abi Trewin, had provided a framework of some of the skill gaps for the participants.

18 participants from around Timor Leste with varied skill mix from medical officers (PGY2 to PGY6), paramedics, registered nurses and volunteer telephone operators attended. Our intent was to make the training as fun and interactive as possible. As a team, we were aware that the skills were varied and there was a general reluctance to treat for cultural and confidence reasons. Added with a language barrier, delivery of didactic lessons were limited and we concentrated more on the practical aspects of pre-hospital care, in a fun, competitive and engaging manner to improve confidence.

Topics were varied, from drawing interactive surface anatomy utilising t-shirts to demonstrate patterns of trauma, hare-traction splint team competitions to instil confidence in the use of manual traction devices, BLS resuscitation team simulations focusing on the roles and teamwork, use of the Zoll Defibrillator and a very healthy intubation competition full of laughs. The doctors were very skilled intubators! Interspersed amongst these practical skills were presentations on ECG, mass casualties, medical anatomy and resuscitation.

However, we learnt a lot from our hosts as much as we provided training to them. Some of these include approaches to trauma in a resource poor environment; the minimal use of analgesia and other medications to treat trauma and medical patients; their approach to psychiatric patients which focused on family and networks instead of psychiatric services; pre-hospital use of doppler for foetal heart monitoring; and pre-hospital use of non-pneumatic anti-shock garments in patients with distributive shock. We even took up the challenge of learning the Timor-Leste national anthem!

We were privileged to have been able to observe on road during our time in Timor-Leste, which was extremely valuable to all parties in our ability to learn from their methods and approaches in a pre-hospital setting, cultural approach to dealing with patients, and handover at the Hospital Nacional Guido Valadares (HNGV) (Dili National Hospital). Cases were varied, from an obstetric case, to psychiatric patients at risk of self harm, resuscitation of a cardiac arrest, and a major trauma involving a grinder and electrocution. We were able assist and mentor at the same time as observing, providing suggestions on different approaches to cases and ideas for management while respecting their training, methods and protocols.

Overall, it was a very valuable experience and sharing of knowledge and skills between the Timor-Leste Ambulance Service and our experience at the NCCTRC. It was a privilege to have been invited over and to have been welcomed so warmly and the generosity of the skills exchange. I look forward to future engagement with the Timor-Leste Ambulance Service.
The AUSMAT surgical field hospital will be on display to coincide with World Health Organisation Global Verification visit – Darwin, Australia from the afternoon of the 7th October 2016.

Interested national, regional and international visitors are invited to the unique opportunity to explore a fully–functioning AUSMAT EMT2 Field Hospital

Register via email NOW of you would like to participate.

✉️ ausmat.ncctrc@nt.gov.au
In the previous edition of the NCCTRC Quarterly, we profiled some of the research that is maximising the performance of our team during deployment. In this edition, we take a closer look at how a seemingly simple survey completed by team has changed the way the mission leader manages the team.

The AUSMAT response to TC Winston was not like any other AUSMAT deployment. With small teams spread across a variety of locations, oversight of team welfare was likely to be challenging, due to the lack of day to day visibility and communication with each team member. In these circumstances, the AUSMAT welfare questionnaire proved invaluable. Upon establishing internet access, team members accessed the secure questionnaire following their work shift each day to provide anonymous feedback. Areas of interest included physical workload, weather conditions, sensation of body temperature, symptoms of heat stress, access to food and fluids, fatigue and sleep factors.

The responses were compiled by Darwin based NCCTRC Research Manager, Matt Brearley, ensuring that the responses remained anonymous. A brief report consisting of two paragraphs – overall trends and specific recommended actions was compiled and emailed to the mission lead on a daily basis. See below for examples of the overall trends report.

Overall trends (Day 1) - It appears that the team are exposed to a similar or slightly greater than normal workload, the conditions they are working in are generally warm, causing them to feel warm to hot with approx. 50% of the team experiencing light headaches (light enough that they can be ignored if needed). Approx. 20% of the team also noted that they felt thirsty during shift. Sleep scores were good, no systemic issue reported there. With more responses we can assess trends and report more descriptive stats.

Overall trends (Day 3) - The trend for some dehydration and some minor headaches has continued. Approx. 33% of the team reported hot working conditions. Approx. 50% of the team reported feeling moderately to severely hot during shift. Several team members reported severe to extreme fatigue post shift. Approx. 40% of the team reported warm sleeping conditions but sleep patterns seem good. Approx. 30% of the team aren’t able to get out of the warm/hot conditions during their down time.

The daily team leader report was considered critical to understanding how each team member was responding to the environment during the Fiji response. It prompted strategies to manage heat and hydration prior to the manifestation of serious symptoms, despite the geographical separation of the team.

The NCCTRC will continue to utilise and refine the questionnaire for team leaders to positively contribute to team welfare. The 2016 Tour de Timor deployment is our next scheduled opportunity for daily feedback, where we will also conduct physiological monitoring of selected team members during the daily construction of the medical facility. Such information contributes to our knowledge of the AUSMAT member workloads, assisting to prepare teams for future deployments.
Tour de Timor Reccy – PART 1. Before the biggie.
Ryan Gray, Nelson and Steve Malseed

Blue Steel! Jiwon (Korean Disaster Response Team) & Peter Archer (Vic)

Dr/Para Felix Ho, Mentor Ride along Timor Leste Ambulance Service

East Timor Olympians! Lead by Nelson – (tall guy, from TDT organizing committee)

AUSMAT COMMUNITY
EMT’s Bus to Merapi, NZMAT Ryan (FR) , Mercy Malaysia(second R) Matt -Rubicon USA (front L) AUSMAT (second L)

Terry Trewin delivers presentation AUSMAT logistics Global Mentor Workshop Japan May 2016

Michael Hasset Director Humanitarian Response and Partnerships section Humanitarian branch Leaves to take up a posting in the Solomon Islands. We wish him well on his new endeavor.

Who look like brothers?? Tarun (WA), Di (Vic)Peter (Vic),

Dr/Para Felix Ho, Mentor Ride along Timor Leste

Blue Steel Jwon (Korean Disaster Response Team) & Peter Archer (Vic)

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Team Vanuatu MIMMS training.

AUSMAT, NSW USAR, QLD USAR, NZMAT, NZUSAR. MT Merapi

EMTCC – Andrew Innes AUSMAT Log, a little excited?

Bronte Martin, Peter Aitken (Qld), Japan Global Mentors Workshop May 2016

Fiji Responders World Humanitarian Day (Vic) meet Minister Bishop. L-R. Dr Brett Sutton, Dr Peter Archer, Hon J Bishop, Ms Nadine Tipping, Ms Alison McMillan

Rahman Yase [NCCTRC Trauma Nurse Coordinator], Hollie Sleicher, NCCTRC Planning – prepare for Timor training. Dili Plaza

Very tall Dr Matt testing the rations.

Fiji Responders World Humanitarian Day (Vic) meet Minister Bishop. L-R. Dr Brett Sutton, Dr Peter Archer, Hon J Bishop, Ms Nadine Tipping, Ms Alison McMillan

Senghali Hospital Morning Briefing

AUSMAT, NSW USAR, QLD USAR, NZMAT, NZUSAR. Mt’ Merapi

Team Vanuatu MIMMS training.

Bronte Martin & Tarun Weramanthri INSARAG July 2016

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