

IEMNet News

Newsletter of the International Emergency Medicine Network of ACEM

Sea change in Vanuatu

June 2018 Issue 1

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Cover: Pristine waters surrounding Vanuatu





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Above: (Left to right) ACEM's Immediate Past President Professor Anthony Lawler, Dr Patrick Toito'ona (Solomon Islands), Dr Aung Myo Naing (Myanmar), Dr Sonai Giri Chaudhuri (Kathmandu), Dr Suraweeraarachchiga Aruna Chaminda (Sri Lanka), Associate Professor Maw Maw Oo (Myanmar)

The International Development Fund Grant 2017

The International Development Fund Grant aims to promote the development of emergency care in the developing world through teaching, training and capacity building.

In 2017, the ACEM Foundation awarded three International Development Fund Grants. Dr Michael Downes received \$6,573 for his project 'Toxic Issues in the 'ED – Sri Lanka'. Dr Sarah Mikhail received \$15,300 for her project 'Introduction to Emergency Medicine – Uganda. Dr Anselm Wong received \$6,336 for his project, 'Utility of an online toxicology information database (TOXBASE) to health professionals: The Global Educational Toxicology Uniting Project (GETUP)'.

The International Scholarship 2017

The ACEM Foundation International Scholarship is awarded to doctors and other health professionals from developing nations to support them in attending the ACEM Annual Scientific Meeting (ASM).

The Scholars present at the ASM to increase awareness and support for emergency medicine in developing countries. In 2017, Dr Suraweeraarachchiga Aruna CHAMINDA (Sri Lanka), Dr Sonai Giri CHAUDHURI (Kathmandu), Dr Aung Myo NAING (Myanmar), Associate Professor Maw Maw OO (Myanmar) and Dr Patrick Toito'ona (Solomon Islands) received scholarships.

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Message from the Editor

The IEMC newsletter continues to evolve. The aspirational goal of the newsletter has always been to promote the activities of FACEMs in international emergency medicine and to facilitate collaboration between those individuals and agencies active in this space. In the relatively brief period that I have been in the post of editor, I have greatly enjoyed the role and have tried to keep true to the founding editor's vision (Chris Curry).

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Message from the Chair...

Dr Georgina Phillips, FACEM International Emergency Medicine Committee Chair

Our International Emergency Medicine network continues to go from strength to strength, with more and more inspiring stories of the tireless efforts of FACEMs, trainees and Emergency clinicians helping build the capacity of emergency medicine programs in developing countries coming to the fore.

This edition of IEMNet News highlights some of these wonderful stories. Vanuatu, Laos, Kiribati, Yemen, Tonga, the Asia Pacific and Papua New Guinea are countries and regions where emergency clinicians are working in remote areas and making a difference.

As Chair of the International Emergency Medicine Committee (IEMC), I am proud to support and lead work towards our goal of ensuring emergency care in developing countries is supported in tangible ways that contribute to sustainable improvement.

Our role is to work as tireless advocates for International Emergency Medicine, and we're pleased to continue to be supported by the ACEM Foundation and the College more broadly in our work.

One piece of work we should all be proud of is the recent Global Health meeting of Specialist Colleges, Associations and Organisations, hosted for the first time by ACEM. The purpose of the meetings is to provide a forum for discipline groups to meet together and discuss global health issues in the region, with the aim of collaborating, networking and sharing ideas to improve the health status of peoples from low and middle income countries.

ACEM worked with the Royal Australasian College of Surgeons (RACS) (who hold the secretariat) to create an agenda with a focus on wide participation and collaboration towards improving clinical areas of need in the region. There was also representation from a wide range of medical colleges, organisations and societies.

Topics discussed at the March meeting included the Department of Foreign Affairs and Trade's Foreign Policy White Paper and the Indo-Pacific Centre for Health Security, other proposed Australian Government programs and regional issues for clinical improvement.

The meeting was highly collaborative and interactive, with excellent discussion and consistently positive feedback. In addition to continued networking between discipline groups, ongoing action items include the formation of a research working group looking at access time indicators for essential surgery and seeking potential funding opportunities and a clinical focus on pain and violence as two key areas for collaborative work towards improved care in the region.

It is work and ongoing projects like this that IEM Network members are dedicated to being a part of as we seek to improve emergency care beyond the shores of Australia and New Zealand.

Dr Georgina Phillips FACEM

Chair, International Emergency Medicine Committee



Take one family and stir vigorously

By Dr Leanne Cameron, FACEM
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Emergency physicians are well equipped to work in remote areas. I proved this to myself during my six months working as a doctor on the remote volcanic island of Tanna in Vanuatu. I spent most of that six months working as a sole doctor on the island and had to deal with every challenge you can imagine.



Opposite page: Dr Cameron with her family in Vanuatu

This page left: A view of the volcano Yasur on Tanna Island, Vanuatu

Above: Dr Cameron with a patient

I was on maternity leave having just had my fourth child. I was keen and excited but also scared and apprehensive. How would I cope: with the surgical demands of the job, the obstetric challenges in a severely resource limited environment, the 24/7 on call, and all without the back up and resources available in a tertiary care hospital? How could I justify dragging a husband and four young kids aged nine months, two, five and eight years to this remote island? I realised it wouldn't be easy but I could make a real difference. I just had to do my best and have confidence in the skillset and experience I have acquired as an emergency physician. We did it as a family and thrived!

Lenakel Hospital is the only hospital on the island of Tanna and serves as the referral hospital for a population of 35,000 across Tanna and the four smaller inhabited islands of the TAFEA province.

It has 40 beds covering male, female, paediatric, maternity and Tuberculosis wards. The hospital is staffed by a half a dozen nurse practitioners who generally run the outpatient service and three to four midwives that run the maternity service. Doctors are in short supply in Vanuatu so the hospital had been without a doctor on and off prior to my arrival. While I was there I was lucky enough to be able to work on/off with another Ni Van doctor. Unfortunately his obligations as medical superintendent meant that he was often travelling, leaving me alone for much of the time.

The hospital was staffed by a stream of Canadian emergency and rural doctors under ViVa (Victoria-Vanuatu Physician Project) until January 2015. These doctors sustained a relationship for twenty five years. Unfortunately, just after they wound up the project, Tanna was hit by Cyclone Pam—a devastating category 5 cyclone that destroyed much of the island—in March 2015.

When I arrived nine months after the cyclone in January 2016, the island was still in disaster recovery mode. The after effects were very evident in the medical conditions presenting to the hospital—most of which related to poor sanitation, inadequate access to clean water and malnutrition.

There were multiple challenges and frustrations encountered along the way. Tears for babies dying of preventable and treatable diseases. Heartache for the mum of eight young kids who died from post-partum haemorrhage that may have been prevented with adequate antenatal care. Helplessness for the new born baby with anencephaly in severe pain and abandoned by a superstitious distraught family. Frustration for the infant with hydrocephalus that can only be managed with basic pain relief as shunt surgery is not available in Vanuatu. And despair for the infant who died of severe bronchiolitis when the hospital runs out of oxygen.

Belief in traditional medicine is very strong amongst the people of Tanna, and it was the norm for patients to present to traditional healers prior to coming to hospital. I saw multiple complications from their practice, mainly related to infected wounds and lack of hygiene in administering their medicine. A lot of my frustrations were also related to a lack of public health awareness and resources available to educate on basic public health issues including hygiene and disease prevention, adequate nutrition for infants and children, the importance of breast feeding. This lack of basic health education for patients, traditional healers and even traditional birth attendants was obvious in the preventable diseases and complications I was seeing in the hospital.

Mixed in with these emotions, was admiration and enormous respect for the nursing staff who worked under very difficult conditions and were expected to fulfil the role of junior doctor and midwife after hours. This was despite a lack of pay for the previous six months. Morale was sometimes extremely low, but despite this they continued to turn up to work and form the backbone that ran Lenakel Hospital. Enormous respect too for the patients and their families who were incredibly resilient and always smiling even in the face of extreme hardship and suffering. And of course for the patients who put up with my poor attempts at Bislama, and who patiently waited through my prolonged lectures on hand hygiene and basic disease prevention. Those were long ward rounds! Some called me the 'Soap Lady' as I was endlessly handing out donated Canadian soap to patients.

Despite all the challenges, I and my family thrived. Never before had I had so much satisfaction from my work. I could see the obvious difference I was making to individual patients in the hospital but also being able to have an impact on a larger scale when I got to visit the remote health posts scattered around the islands.

Every Thursday my husband loaded the Rotary ute with kids, nurses, food and medical supplies for long drives around the mud tracks of the island to run clinics. Getting out helped me understand the very basic living situation of most of the people on this island with very limited access to clean water and lack of transport to the hospital. I was also able to provide public health education, with a focus on hygiene and screening children for malnutrition.

There were many preventable conditions I treated during my time on Tanna. Malnutrition became a real focus for me. Severe malnutrition had always been an issue on Tanna but was recently compounded by Cyclone Pam in 2015. The majority of families on the island are subsistence farmers who had their gardens destroyed and their homes and villages wiped out. I was shocked



when I arrived to see children in the paediatric ward dying of severe malnutrition. The paediatric ward was full of boxes of WHO protein rich milk and peanut paste to nourish those most severely affected. But once these children were discharged from hospital they would inevitably re-present having lost weight again. Follow up of these children was hard, as most came from remote communities that didn't have good access to transport to get back to the hospital. Working with a couple of the paediatric nurses, we managed to get a decent education programme up and running, focused on breastfeeding up to age two, and getting a daily source of protein in the diet of children. Peanuts and other nuts were the most readily available protein source that we identified and the parents were encouraged to crush up a handful and mix it with the child's kumara. We even got one of the local ladies to make nutritious protein rich meals made with locally sourced ingredients for the parents and malnourished children while they were on the ward. I was also lucky enough to be invited to speak at a meeting of the Tanna Women's Association. My hope is that these women will continue to spread these messages on nutrition and hygiene long after I have left.

Pamela's story is typical of many of the malnourished children that I saw. She was born two days after Cyclone Pam hit the island. Her mother was 18, and like everyone on the island in the aftermath of the storm, their basic hut and livelihood were destroyed by the cyclone. Daily survival was a struggle for many on Tanna including Pam's family. When Pam was just four months old her mother became pregnant with her second child, and she stopped breastfeeding Pam. Pamela was weaned to a diet of kumara and water and slowly began to lose weight and starve. I first met Pam when she was 12 months old, on her third hospital admission with the complications of severe malnutrition. She weighed only 4.2 kg and was skeletal except for oedematous legs typical of severe protein deficiency and a bloated belly most likely from a worm infestation. She was covered in infected sores and had chronic diarrhoea. She was slow to gain weight in the hospital and suffered multiple setbacks. It also became



Opposite page: Dr Cameron speaking with locals

This page left: Patients waiting to be seen

Below: Dr Cameron speaks with an elderly local



clear during the prolonged hospital admission that Pamela's family were unfortunately not well equipped to continue the intensive care and ongoing follow up that would be required for her survival.

As a last resort, a nurse suggested to her family that she temporarily stay with our children on discharge, to continue her weight gain. Her parents later approached us to take her permanently, and Pam became part of our family and slowly began to thrive and blossom into the beautiful child she is today. We arrived on Tanna a family of six and left a very happy, thriving family of seven.

My experience is to never underestimate what you, as an emergency physician, can contribute in resource limited remote health care environments. We are extremely well trained doctors and have a skillset that is readily transferable to different environments and situations. We can deal with most things that walk in the door and are resilient enough to learn from the toughest things and turn to face the next problem.

Vanuatu faces chronic doctor shortages. More experienced doctors are required to fill the immediate gaps in the system and also to help mentor the new batch of recently graduated Ni Van students returned from their training in Cuba and China. There will never be a better time to help than now. Don't let having a family hold you back. They will love it too!

There will never be a better time to help than now. Don't let having a family hold you back. They will love it too!



Life changing Laos

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If one is to make a late career change within emergency medicine then you might as well make it a big one. I moved from Royal Children's Hospital in Melbourne to the Lao Friends Hospital for Children in Luang Prabang, Northern Laos. The former is a large, rich, world renown tertiary paediatric hospital with quite literally every subspecialty available at the touch of a button, and the latter is a small isolated regional hospital with limited resources servicing some of the poorest people in the world.

Leaving ‘the kids’ after 20 years as Director of Emergency Medicine was not easy. In that time, we had taken what was the old RCH ‘Emergency’ and built a modern emergency department with a clinical service, an educational program and a research agenda that was second to none. There was an enormous emotional investment and I had many friends and colleagues to leave behind.

If leaving the RCH was hard, starting as the Executive Director of Lao Friends Hospital for Children in Luang Prabang a few days later was so much harder. The somewhat grand title of ‘Executive Director’ effectively hiding the reality of what the job actually entailed. In the first weeks I would be an electrician, an orthopaedic surgeon, a blood donor, a teacher, a negotiator, a night shift doctor, an accountant, a clinician and only occasionally would I feel anything like an Executive Director.

In 2015, the Lao Friends Hospital for Children opened in Luang Prabang, Northern Lao as the paediatric service for the Luang Prabang Provincial Hospital. Initially offering just outpatient services the hospital had expanded to open a 20 bed inpatient unit and an emergency department a few months before the first birthday. The hospital is in a newly constructed building on the site of the Luang Prabang Provincial Hospital and is furnished with modern but basic equipment. The staffing model is that of a local Lao workforce of doctors, nurses and support staff with a small number of full time overseas doctors and volunteers providing support, education, training and guidance. The whole operation created, backed and financed by a New York and Tokyo based not-for-profit organisation Friends Without a Border.

As the hospital offered quality health care for no charge the numbers of children coming through the door were very quickly double what had been previously seen at the Provincial Hospital. The hospital rapidly grew both in numbers and medical complexity far beyond what was initially envisioned. With no aeromedical transport and an eight-hour drive on a bumpy road to the capital Vientiane virtually everything needs to be done here. Optimism and a ‘can do’ approach is essential. Clinical necessity drove the opening of an operating theatre, a neonatal unit and an expansion to 32 bed capacity. Now two years after opening up to 100 children a day attend outpatients, four to six children a day are operated on and around 30 children are receiving inpatient care.

The team



Plaster practise and more practise



Don't forget the bubbles



A look into the ward



We often have to remind ourselves that they are only a couple of years out of medical school as they take on responsibilities and clinical decisions that at the [Royal Children's] would be the realm of a senior registrar or consultant

Two months after arrival the precarious nature of the medical staffing model became apparent with no volunteers booked in for a month. My partner Chris and I found ourselves the only two overseas doctors in the hospital. Not since working as an intern over 30 years ago had I worked every second night and every second weekend. Of course the other major downside was that Chris was the other 'intern' and so was working at the time I was off—double jeopardy! But one does what one has to and one survives: so much for being an 'Executive Director'.

The hospital is full of a heady mixture of tropical medicine, 'bread and butter' paediatrics, and trauma all with a distinctly 'Lao' flavour. We will never forget the six-year old boy shot in the face by his seven-year old brother with a home-made gun, the 'bullet' being an industrial bolt lodged in this maxilla or the boy with abdominal pain (query appendicitis) and droopy eyelids who omitted to mention that he had been bitten by a snake a few hours earlier. Typhoid fever with every known complication, ascaris not only in the bowel but exiting through the umbilicus and the tragedy of lethal totally preventable diseases like neonatal tetanus were all things that we faced in the those first few months.

Economic circumstances contribute to the high child injury rate. Open wood cooking fires and large pots of boiling water are everywhere so large burns are common, as are head injuries from young children falling off motorbikes and serious fractures from falling out of mango trees. One six year-old boy with a fractured femur from falling from a mango tree who I put in a hip spica returned two weeks later with the spica shattered. The parents told me he had fallen again from the same mango tree but this was understandable because he found it difficult to climb the tree because of the spica!

Hallowed principles of resuscitation were redefined: take 'Airway' for example—nebulised adrenaline is of no use for stridor when it is caused by an angry leech sitting in the larynx. And then 'Circulation'—your 20ml/kg fluid bolus for poor perfusion will be counterproductive unless you have given thiamine first for the acute beriberi: so think T before C.

The medicine challenges us every day. What should be straightforward things to treat like pneumonia and gastroenteritis present late and with complications and not only do our children often have serious medical conditions, they also have major social and economic issues too. They come from remote places and have travelled 6 hours to get to hospital, they are malnourished, they are one in a family of ten children, they belong to a family with extremely limited resources or to a family that has a unique cultural understanding of disease.

But this job is as much about our Lao doctors, nurses and allied health staff as it is about our patients. In a country with 0.18 doctors per 1000 people (Australia has almost 20 times more at 3.27 per 1000) doctors are in short supply and paediatricians even more so. A paediatric residency training program in Vientiane has trained about 120 paediatricians but they are still rare especially in rural areas. Consequently most of our doctors are young and in the first 3 or 4 years out of medical school. Enthusiastic, hard-working and fun to be with we often have to remind ourselves that they are only a couple of years out of medical school as they take on responsibilities and clinical decisions that at the RCH would be the realm of a senior registrar or consultant.

We are now over twenty months in and it has been far from plain sailing. Managing the rapid expansion in patient workload, a junior medical and nursing workforce on a steep learning curve and nascent operational systems has proven challenging. But there have been more ups than downs and more steps forward than back and still there is a constant feeling that we have not really scratched the surface of this complex and wonderful country. We are committed to be here for a little while longer and then, who knows. But the more I think about it, this will be my last job.

We are working on the start of emergency medicine in Laos but it is early days.

The model of care at Lao Friends Hospital for Children is for the emergency and clinical care to be delivered by our Lao doctors. They are supported at all times by international volunteers who provide education, training, mentorship and professional support. This work is ideal for paediatric emergency physicians, emergency physicians with experience in paediatrics or paediatricians comfortable with acute care. For further information on volunteering please contact Simon directly at simon@fwablaos.org



Kiribati Emergency Nurse Training Program (2017)

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When Brady Tassicker stood up at the 2015 Emergency Care Conference and asked if there were any nurses in the audience interested in offering to provide an emergency nursing component in support of the year-long medical training program he was intending to run in Kiribati, we signed up without hesitation.

Above: Bronwen and Ange at the graduation ceremony

Sponsoring a pair of emergency nurses to get to Tarawa for a month was probably not the request he expected, but he did so very cheerfully

Apart from knowing that it was a small Pacific nation rendered vulnerable by climate change, we knew little about Kiribati; however we were both looking for a new project, and intrigued by the prospect of a multidisciplinary collaboration that combined our shared emergency nursing and international health backgrounds.

We stayed in touch with Brady as he moved to Tarawa and catalogued the challenges and rewards of the working environment at Tungaru Central Hospital. While wrestling with the financial logistics of getting ourselves over to Kiribati on unpaid leave, we received the news that the Director of NZ company Ross Road Marking was in Tarawa when one of his employees had a serious illness, and was so grateful for Brady's efforts in expediting a retrieval that he had asked if there was anything he could do in return. Sponsoring a pair of emergency nurses to get to Tarawa for a month was probably not the request he expected, but he did so very cheerfully, and we found ourselves working in the Tungaru Central Hospital ED in August 2016.

Kiribati is a nation of scattered atolls and islands spread across 3.5 million square kilometres of the Central Pacific, bringing unique challenges to its national health system. The main island of South Tarawa is a long thin series of causeway-linked atolls that sticks out like a pincer into the ocean, curving as part of a wider land mass around a giant lagoon. This small stripe of roughly 15 square kilometres somehow contains almost half of the country's 100,000 people, with a population density similar to Hong Kong, but with none of the corresponding infrastructure. Tungaru Central Hospital (TCH), the country's largest referral hospital, is one of the country's only providers of tertiary care, and sees large numbers of high acuity patients both from South Tarawa, and from the Outer Islands.

The chronic overcrowding in the ED is exacerbated by a lack of structure in the built environment—there is no Triage area and no Resus, patients simply present to one of two beds at the entrance to the unit and are mostly

seen in the order in which they arrive. If they need further treatment they are then moved to one of the dozen beds inside the unit, or if waiting to be admitted, moved to a larger overflow area outside the rear of the department.

A further complication of an environment with so many manifest barriers to process and flow is that Kiribati has a policy of continuous nurse rotation to make up for the chronic nurse shortages in the workforce. This means that the Nurse Unit Manager is the only nurse permanently assigned to the department, and the development of the cohesive team based culture so essential in the emergency environment is rendered almost impossible due to constant staff turnover.

What we did find on this initial trip was that there were a significant group of nurses who were very keen to work in the ED as often as they were able to be assigned there, and who were extremely motivated to undergo further frontline training. In fact, enthusiasm for education ran across all nursing areas, and the rather impromptu bi weekly training sessions we held soon ran out of chairs.

The nursing administration at TCH are refreshingly open to ideas and strongly supportive of their nursing staff. They could already see that for the ED to advance in the future that the nursing staff needed a skills training program that went beyond the recent (and very welcome) inclusion of nurses in visiting medical courses such as Primary Trauma Care and Advanced Life Support.

Accessing nursing education in Kiribati, is however, easier said than done. Midwifery, which is currently the only recognized hospital specialty in nursing, requires post graduate training to be done in Fiji. Other nurse training programs have involved individual nurses traveling to study overseas and returning to the country with skills that may not be readily applicable to either the health burden of the country or the low resource hospital and clinic environment.

For emergency nurses to be able to leave the rotation system and remain in the ED, both the aspiring nurses and the Director of Nursing felt that the basis for a career pathway needed to be established, in which a specialised introductory education program could be the first step towards a future diploma of emergency nursing. After discussion around the logistics and the shape of the training program that the nurses wanted and the administration considered practicable, we promised to come back with a modular program that would be accredited by an outside institution and provide the first step in the pathway towards emergency nursing as a specialty. The program would be divided into two parts, with the initial course focussed on assessment and recognition of a sick patient, and the second part introducing triage, advanced assessment and the deteriorating patient. Owing to the current lack of a triage space at TCH, it was agreed that funding would only be sourced initially for the first part of the program.

The Australian College of Emergency Nursing agreed to accredit the course we outlined with CPD points, and shortly after we started the development process, we were able to access the new WHO Basic Emergency Care Course (BEC), which provided a bedrock of the ABCDE assessment skills which formed the heart of the program. Our own supporting material was designed and written to provide background to the BEC content, and also to specifically address issues relevant to the Kiribati emergency nursing environment, including acute local presentations such as fish poisoning and in depth coverage of NCD's. ISBAR was incorporated as a structured communication tool to facilitate effective handover and escalation of clinical concerns.

By this time Brady and his family had completed their year in Tarawa, so there was no opportunity to develop a synchronous medical and nursing training program. The three of us nevertheless continued to collaborate on a submission to the International Development Fund Grant (IDFG) of ACEM and were fortunate enough to receive funding for the duly named Kiribati Emergency Nurse Training Program (KENTP), which was subsequently rolled out in May 2017. ('Rolled out' being a term that doesn't quite describe the tottering arrival of 100kgs of training manuals, indestructible wheeled sphygmo units for TCH ED, and our rather battered family of manikins)

We had decided that with only two of us, 16 nurses was the maximum group number that would still allow a hands on focus, so the Principal Nursing Officers (PNO's) who manage the rostering and rotation process selected 12 nurses from TCH and 4 from Betio, the smaller hospital at the other end of the Island. We were also approached by the Kiribati School of Nursing (KSN) to include a number of their lecturers, so we breathed a sigh of relief at having brought two extra training manuals and squeezed two extra members into the group to finish with a total of 18 participants.

Although the course only ran for nine full days, we allowed six weeks in country to ensure that not only would the participants have lead-in time with the material, but also that the course could be run at a pace that allowed the already tight staffing to be managed without undue risk. Nursing administration settled on a three day a week format as being one that was manageable, and we allowed an extra day at the end for re-testing (which we didn't need). In keeping with the multidisciplinary approach, and to facilitate consistency, training in the use of the ISBAR communication tool was also provided to the interns through the Kiribati Intern Training Program (KITP)

The support given to the program by the PNOs and senior nursing administration was absolutely central to its success. Despite the difficulties of removing 16 nurses from what was already very tight rostering, the PNOs ensured that all the nurses were able to attend every one of the education days, and that hospital transport would



Nurse Training Program graduation

be available to facilitate this. They also ensured that enough food to keep a small army on the move would turn up for the nurses at regular intervals, and they personally prepared dishes catering to the unusual food preferences of the presenters (we are both vegetarian, which is not something that fits easily in a country so fond of chicken and pork and so lacking in vegetables).

The nurses worked extremely hard to accommodate their shifts around the study days and many worked afternoon shifts after full days of lessons as well as weekends and night shifts. Many nurses also had families and babies or young children to care for on top of their study and work load, and the dedicated mother of one of our students brought her baby in to class twice a day to be breastfed.

The course was designed to be as hands on and interactive as possible, with the first half of the day being lectures and discussion and the second half practice and simulation. Both the BEC slides and the supplementary topics had been printed as part of the workbook to lessen the need for note taking, although most of the workbooks were impressively annotated by the end of the course, and some already had a colourful frill of cross referenced post-it notes before we started.

Final testing was both written and practical, with a multi-choice exam in the same format as the pre-test, and an OSCE based around structured assessment and handover using ISBAR.

Students demonstrated steady improvement throughout the course, both qualitatively (observed performance in simulations and communication) and quantitatively in formal testing. Informal quiz testing on each new subject area ensured that core information was being accurately received on a topic by topic basis, and final scores show an impressive trajectory from the pre-test to the final exam, in which all students received either distinction or high distinction.



Participants of the course come together on the last day

The majority of students had never been exposed to simulation before the course and many found the concept initially very daunting

The OSCE component showed an even more dramatic improvement, as the majority of students had never been exposed to simulation before the course and many found the concept initially very daunting. Watching their confidence and enjoyment in the Team Leader role grow over the three weeks was one of the (many) highlights of our experience in Tarawa.

Anonymous written evaluations confirmed the high level of engagement demonstrated throughout the course and an enthusiastic commitment to ongoing training, particularly in the acquisition of triage skills.

The graduation ceremony that completed the course was a wonderful celebration of the effort and dedication that both nurses and nursing administration had contributed to the training. In keeping with local tradition, specially designed graduation garments were created for the event, and despite the selected fabric only appearing a few days

before the ceremony, somehow everyone managed to appear resplendently in an individually designed outfit, to receive their certificate and a course lapel badge from the Permanent Secretary for the Minister of Health. A wide representation of hospital management attended the ceremony, as did Dr Tanebu Tong, the doctor in charge of the ED.

In a heartening confirmation that the skills and enthusiasm shown throughout the course weren't diluted by hangovers from the post-graduation parties, the Director of Nursing emailed us some weeks after our return to Australia. She relayed a number of successful 'saves' by the new and now permanent ED nursing team, and commented on how they all want to work out the front with the sickest patients to keep their skills up.

Funding and infrastructure are, as ever, the two biggest elephants in the room. We would love to go back and complete the training program in Kiribati, however concrete plans for restructuring of the Emergency Department are still many years away. How many of the KENTP nurses will still be working in the department by the time triage training is available, and how well maintained their initial skills will be are both issues of concern. Nursing administration would like to see the introduction of a two to three day Train the Trainer course encompassing assessment and communication training that would allow emergency nurses to become a resource for developing the frontline skills for nurses and Medical Assistants on the Outer Islands, but realistically this will also need to wait until it can be tagged on to the second stage of the training program.

In the meantime, we are setting up a website and linked facebook page to assist in building and maintaining momentum around emergency nursing in the Pacific and to allow the exchange of ideas and stories to support people working in this fledgling space. Although

traditionally the funding priorities have been medical in their focus, it makes both practical and economic sense to support nurses in gaining the frontline skills they need to effectively prioritise their care in an environment increasingly focussed on climate related disaster preparation. These are tools that will benefit whole communities, and there is certainly no shortage of nurses with the enthusiasm and motivation to take them up.

We feel very grateful that Brady has given so much of his time and support to a project designed by and for nurses, and that the Australasian College for Emergency Medicine awarded the funding that made the course a reality - allowing a fantastic group of clinicians in Kiribati to be able to call themselves 'Emergency Nurses' for the first time.

Bronwen Griffiths and Ange Gittus are Clinical Nurse Specialists in Emergency in Northern NSW. Angie will complete her MPH (Tropical Medicine) this year and Bronwen tutors for the MPH program at Syd Uni. Brady Tassicker is a FACEM in Tasmania who spent a year in Kiribati in 2016.



Participants in the course practising a 'log roll' manoeuvre



Paediatric simulation during the course



Participants of the course demonstrating great teamwork



Yemen still remains an afterthought

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The scale of suffering in Yemen is hard to grasp, but should be impossible to ignore. After over two and half years of devastating conflict, a massive cholera outbreak, and a near total blockade of the country that brought humanitarian operations to a halt, Yemen somehow still remains an afterthought for the international community—and those who can change that, remain seemingly indifferent.

The neutrality of medical care has continually been violated

The scale of suffering in Yemen is hard to grasp, but should be impossible to ignore. Médecins Sans Frontières (MSF) has treated more than 64,000 people wounded as a result of this war—just a fraction of the true number of injured people. The UN estimates that more than 10,000 men, women, and children have been killed in the conflict, but this too is almost certainly well below the true figure. It does not, for example, take into account the thousands of Yemenis who have died of otherwise preventable or chronic medical conditions as their public health services have crumbled.

And yet things continue to deteriorate. On 6 November, the Saudi-led coalition cut off most of Yemen from the outside world for a full 14 days. Humanitarian flights—already the only planes allowed to land in the capital, Sana'a, for years—were blocked during this period, preventing medical care getting to Yemenis in dire need.

The rapid, but by no means inevitable, spread of cholera across Yemen this year is just one example of how much suffering has been inflicted on Yemen. As Yemen's water and sanitation services collapsed and its health centres closed, the disease thrived, causing almost one million people to suffer needlessly. Now there may be a resurgence, as the Saudi-led coalition's blockade drives fuel and water shortages, and prevents people from being able to afford transportation to the few health facilities that remain functional.

Compounding this, many Yemeni families have been left financially devastated as, for over a year, most of the estimated 1.2 million Yemeni civil servants have received no salaries, including tens of thousands of public sector health workers across the country. This has left them, and the millions of family members who depend on them, on the brink of destitution.

Not only have salaries gone unpaid, but hospital operating budgets have vanished, supply chains have been strangled by economic warfare and blockaded ports, and hospitals have been attacked by all sides of the conflict. Medical staff have been harassed, threatened, and killed; the sick and wounded have been denied treatment; and the neutrality of medical care has continually been violated.

None of this happened by chance. It is the result of military objectives trumping concern for the lives of

Yemeni civilians, alongside indifference and indecision on the part of the international community. Weeks after the Saudi-led coalition blockade, that indifference remains glaringly obvious.

The responsibility to pay the salaries of civil servants lies with those who claim to govern—that is indisputable. The responsibility to protect civilians and allow humanitarian operations lies with all parties to the conflict—that too is indisputable. But those who claim a humanitarian motive—including states, UN agencies, donors, international non-governmental organisations and all those who denounce the suffering in Yemen—also have a responsibility to act. What is being done in Yemen today to respond to the crisis falls far short of what is possible, let alone what is needed. The complexity and scale of people's needs cannot be an excuse for further inaction.

MSF does not have a solution for reversing the collapse of Yemen's public health system—we know that cannot happen while Yemen remains at war. We know what we do will never be enough, but we cannot allow that to prevent us from doing what we can now.

Empty gestures and unfulfilled promises by the international community only undermine the collective credibility of humanitarian organisations, eroding trust in our abilities and making it harder for us to help those in need. The international community must respond now to the needs of Yemenis who are being denied even basic healthcare. The Saudi-led coalition must continue to grant unrestricted access into all areas of Yemen for humanitarian assistance. The absence of political will to force warring parties to meet their irrefutable obligations only helps to condemn Yemen to further destitution.

Children need vaccinations to avoid the further spread of diphtheria and nutritional support needs to be provided to the malnourished. Chronic diseases persist and pregnant women experiencing complications need emergency care. The conflict continues to mentally and physically traumatise civilians and outbreaks of diseases remain a threat.

Yemen's health system could do far more, but not without unimpeded humanitarian access to and within Yemen, and urgent action to provide salaries for Yemeni health workers, so they can continue saving lives. What is missing is the will—and most of all a sense of urgency.



ELSi and SIREN courses in Tonga (2017)

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The Kingdom of Tonga is a nation comprising 170 plus islands with a population of approximately 105,000. The main island of Tongatapu has a population of more than 70,000. Vaiola Hospital is the major hospital in the capital city Nuku'alofa, with an emergency department (ED) that sees around 300 patients a day.



Opposite: Advanced airway skill teaching. Above left: More advanced airway management teaching. Above right: Skills station in SIREN course

This was our second visit to Tonga following the successful delivery of ELSi and SIREN courses in May 2016. We had eight medical and two nursing instructors from around Australia and New Zealand. Both courses are designed for resource-poor environments.

ELSi

ELSi is Emergency Life Support international. It is a two-day course designed for any medical staff who may be involved in treating emergencies and is a combination of interactive lectures and 'hands-on' skill stations.

12 doctors attended the course in August. They included junior medical officers (registrars, RMOs, interns) currently working in ICU, anaesthetics, paediatrics, psychiatry as well as ED registrars from Vaiola Hospital and medical officers from the outer islands.

The formal feedback from the participants was extremely positive. The main suggestion for improving the course was to include more information on the management of obstetric emergencies as many doctors spend considerable time on the various islands or remote clinics and the potential to encounter obstetric emergencies is what causes most fear.

SIREN

SIREN is Serious Illness in Remote ENvironments. This is also a two-day course primarily designed for nursing staff and health officers.

47 participants attended the SIREN course August 10th–11th including ED, non-communicable disease, reproductive health and public health nurses along with two health officers.

The formal feedback from the SIREN course was also extremely positive with many participants writing heart-warming messages of thanks and appreciation of the time and energy put into the teaching by each of the instructors. The lectures and skill demonstrations were regarded as clear and easy to understand and had increased the confidence of the participants in managing emergency cases in the future. The main suggestions for improving the course were to have instruction on IV access and that the course should run over three days rather than two.

We intend going out to some of the outer island groups (particularly Vava'u, then Ha'apai) to provide a combined ELSi/SIREN course for the local medical and nursing staff next time. The main advantage of a combined medical/nursing course would be to focus on teamwork between the nursing and medical professions. We ran teamwork scenarios in both the ELSi and SIREN courses but it is apparent that this kind of session would be of far greater value if both the nursing and

the medical staff went through the scenarios together.

The courses were supported by an ACEM Foundation International Development Fund Grant of \$4000 which covered the costs of transporting the equipment to Tonga, catering and printing of the manuals.

The course evaluation and feedback confirmed the importance and relevance of both courses to the participants. While there were many contributory factors, the presence of nursing instructors, in particular, was fundamental to the successful delivery of the SIREN courses both this and last year.

I would like to acknowledge the invaluable support of Dr Lisiata K 'Ulufonua, Dr Viliami Vao and Pinomi Latu (ED NUM) without whom we could not have achieved our shared goals, the participants for their open engagement and enthusiasm during each course, and finally, all of the instructors for their commitment, good humour and willingness to always put in the hard yards.

We have previously provided ELSi and SIREN courses in PNG, Solomon Islands, Vanuatu and Fiji as well as further afield in Myanmar, Timor Leste and Sri Lanka. Our feedback has always been overwhelmingly positive.

Alan Tankel is a FACEM based in Coffs Harbour for the last 18 years and has organised and participated in a number of these courses.



Mission Aviation Fellowship: Bringing hope to isolated communities in Asia Pacific

Emily Davies

Her name was Sila,” shares missionary, Anton Lutz. “I walked into her presence at the remote health centre where I was visiting for the day. All I could feel was the same welling, helpless terror that had gripped me previously when we waited through the night with another mother, for whom help came too late. The same unseeing eyes, the same septic stench, the same dry, thirsting mouth. Dying with yet another baby in her womb.”

“With an aeroplane coming within the hour to deliver her to the hospital however, Sila now had a chance.”

Mission Aviation Fellowship (MAF) has been working for over seven decades flying light aircraft into some of the most remote areas of the world. We take aid, technology and relief into these communities, as well as transporting passengers, whether they be medical personnel, government officials or missionary workers. Medical evacuations – like Sila’s in Papua New Guinea – are a regular occurrence. We save lives by flying patients from isolated communities to the expertise and facilities that they so desperately need, patients who would otherwise likely die due to a lack of transportation and access.

The MAF story began in 1945 when Second World War pilots, having witnessed first-hand the destruction aircraft could wreak in combat, wanted to use their skills and the aviation technology available to deliver relief, comfort and hope to the isolated world. MAF was born.

Today, a MAF aircraft takes off or lands every three minutes in countries where roads are treacherous, if they exist at all, and the alternative is often to walk for days to get help. These communities lack facilities, infrastructure, resources and expertise. However, they know that if they can get to an airstrip they are in with a chance.

MAF serves in Africa and Asia Pacific, as well as South and Central America. Notably, our largest programme is in Papua New Guinea where we operate 13 aircraft, with two more in Timor-Leste and 13 in Arnhem Land. With an amphibious plane operating in Bangladesh, programmes in Indonesia and Myanmar complete our operations in this region.

In 2017 alone MAF performed 500 medical evacuations in Asia Pacific totalling 354 hours of flying*. Often these evacuations involve pregnant women who are suffering birth complications.

One such flight took place in Papua New Guinea in March 2017. Pilots had been forced to postpone a medical evacuation from Yapsi to Tabubil due to challenging weather. A young woman, Ester, had given birth that morning. Her baby had sadly died but she was losing a lot of blood and had a retained placenta.

Though flight delays can be frustrating, on this occasion 15 hours made all the difference. By the time Captain Mathias Glass came to take off, he had acquired three more medical evacuees – Osa, who was in labour and whose baby was breech, Kolina, who was suffering with intestinal pains (and later turned out to be pregnant) and Lucy, an elderly woman who was suffering with TB. We were unable to gain an update on Lucy, however the three other women are alive and well. Kolina stayed in Tabubil for the remainder of her pregnancy, Ester returned home and Osa had emergency surgery to deliver a healthy baby girl. All of these lives were saved or impacted by the work of MAF and the emergency doctors who they partner with.

Kim Job, wife of the Timor-Leste programme manager Jason, recounts another story: Joanita was pregnant but had a significant growth on her jaw:

“Joanita had been examined in Dili previously for her medical condition, but the family’s fear of surgery, doctors and the medical world, had overwhelmed them and they had refused treatment. However, several weeks later as her condition deteriorated significantly, they were requesting help. MAF pilot, Daniel Moser flew to Maliana the next morning to collect her.”

At the hospital, doctors drained the abscess and an X-ray suggested that a tumour had destroyed most of her right jaw. Two months after our medical evacuation, Joanita delivered a premature but healthy baby boy who she named Daniel, but sadly she passed away about eight weeks later. Baby Daniel is now cared for by his Grandmother with his two brothers.

“The world of medicine is a complicated one,” says Kim. “The ending isn’t always quick or what we desired. As MAF partners with the Ministry of Health and other organisations in Timor-Leste to medevac sick and injured people to Dili, we often don’t know what happens; often we don’t even know what medical condition the passenger is suffering from, but we can pray and we can use our aircraft to assist those in need.”

Despite Joanita’s death, Daniel has life. For that we are grateful and encouraged to continue in reaching some of the remotest parts of the world, giving these people the best chance of life possible. There are so many needs and every day is different, but facilitating the work of medical professionals by providing emergency transportation across the roughest of terrain will always be a vital part of what we do – saving lives in the most tangible of ways and bringing hope to forgotten or hidden people living in isolation.

As for Sila, she recovered fully thanks to the care she received and we hope went on to deliver a healthy baby!

*statistics exclude Indonesia.



Remote Medical Patrol work in Papua New Guinea

Dr Susanne Leenders

accepted a placement as a doctor on patrol for Australian Doctors International (ADI) in September 2017 and was selected to work in the Western Province of Papua New Guinea (PNG).



ADI runs development programs in PNG, Australia's nearest neighbour, to provide immediate medical aid, and more importantly, to build the skills and capacity of the local health workers so they can be more sustainable and effective. Each year ADI sends volunteer doctors to New Ireland and Western Province in PNG for anywhere up to six months where doctors join local health staff on long and difficult patrols through jungle, over mountains or on banana boat to access remote aid posts.

I chose to work with ADI after positive reports from friends who had already experienced what it was like to work as a doctor as part of the ADI team. It was the combination of learning about their experience and my desire to work in areas outside of the Netherlands that appealed to me, as well as the opportunity coming at the right time.

I grew up in the Netherlands and studied medicine at Leiden University and after that did a course called "Doctor in Tropical Medicine and Global Health". It is unique training as it has three parts – surgery, obstetrics and gynaecology as well as tropical medicine & public health. My motivation for doing this course was my interest in working in low resource settings that are more in need of doctors with certain skills. I always wanted to work outside of the Netherlands because in the Netherlands we have more doctors than patients. It's great from the patient perspective but it made me more aware that this isn't the case in all parts of the world. For instance, in PNG some people might not see a doctor for months or even years. The locals there are so happy to see you and if you can help them then that's the best reward.

I also like to take a holistic approach to medicine and prefer to be a generalist. My time working in PNG on patrol meant I was able to develop very good clinical skills by employing all of my senses. I didn't have access to high tech equipment and scanning technology. I think it's a very valuable skill to have and

To get around we would have to take the Fly River (third largest river in PNG) to get to the villages – it's like the main road but on water.

Opposite page: Dr Susanne Leenders with baby in Namatanai

Below: Dr Susanne Leenders travelling on the Fly River





Top: Dr Susanne Leenders with PNG patrol team
 Above: Hiking to aid post with Winnie

PAPUA NEW GUINEA

the foundation of what makes a good doctor. Working in remote areas forces you to use all these senses when treating patients or teaching others.

I really enjoyed working on the patrols in very remote areas rather than being based in a hospital. In Western Province the area is so remote and all the villages are really far from each other, there are no roads. To get around we would have to take the Fly River (third largest river in PNG) to get to the villages – it's like the main road but on water.

A place like Kiunga in the Western Province of PNG still has medication shortages. When you visit the aid posts and health centres it's unbelievable how the locals do their work as they hardly have anything. Sometimes they don't have any form of communication so they have to make all the decisions by themselves –I think this is the hardest part of the job. They can't communicate back to the hospitals and doctors when they need a second opinion. If they had a functioning radio they could contact the doctors and talk through a case and ask questions to guide them. They only have their standard treatment manual to rely on but these can be out of date and only cover certain diseases, not all situations.

A highlight for me occurred in November 2017 when I undertook my second patrol to a sub health centre in Kungim, of the North Fly district of Western Province as part of a team of four. It was an eight day patrol. It was amazing to experience a remote area like Kungim but it is very difficult for people to travel there. For many locals they don't have much money to buy fuel so the opportunity to go to a referral hospital is difficult. The situation is made worse when the referral hospital isn't functioning well and people travel all the way there to try to get health care they need and they don't get it.

On the first day of my patrol I came into contact with a mother in labour. The mother was about 35 weeks along and had been in labour all day and was progressing until our team arrived. Around 6:00pm I was asked to assess the patient as well, because progress had stopped and there was a malpresentation. She had been assessed to be fully dilated two hours before, but was only having two weak contractions per 10 minutes and not pushing on a contraction. When I assessed she wasn't fully dilated yet, but just 8-9 cm and I could feel a forehead, nose and eye sockets. It was a rare malpresentation.

I knew the first option for referral would be in daylight, in the morning. After consulting the obstetric doctor in Tabubil we decided to augment labour in Kungim. We had good progression and good foetal condition until the last phase. We had a team of four ready - Agnes (trained in Midwifery, Nursing Officer), Emma (Community Health Worker), Winnie (Community Health Worker) and myself. In the last few contractions before delivery we saw a nose and eyes. There were signs of foetal distress and we were able to do a successful episiotomy. The baby had to be resuscitated and it was hard to get air into the lungs because of swelling to the face and little choice of masks. Eventually we used an ambu bag and mask I had from the doctors kit I brought and we managed to successfully resuscitate. Although the child was still experiencing slight grunting while breathing, we put the baby with the mother to ensure warmth and bonding. That evening we got home at midnight and I wrote my account of this event in the morning to share with the ADI Sydney office. At the time I hoped that the small baby would survive the night but was really happy the mother was doing well.

I later learned that both mother and baby were doing just fine. I felt really fortunate to be in the right place at the right time given the Kungim sub health centre only does about three deliveries every month. I was also especially pleased that it was a great teaching opportunity for the three PNG health workers that assisted with the delivery. It was a great example of ADI's work in the region, being available to save lives while building local capacity and working as a team. It was really great to be teaching the whole way through the experience.

I know mine is just one example of the positive impact ADI is having in PNG and I'm grateful for the opportunity to be part of something special.

ADI are now recruiting doctors for 2019 – more information can be found at www.adi.org.au



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