Doctors in Training Grant

FINAL REPORT

Dr Sam Brophy-Williams

Paediatric Training Program

Hospital Nacional Guido Valadares
Dili, Timor-Leste

Acclimatising to the tropics!

All of a sudden it's behind me – the coconuts, the tropics, the bon dias and the disculpas, the poverty and the history, the work and the whole vibrant energy of Timor-Leste. I'm in Perth now, back in what some people call the "real world". I have to say though, the children with malnutrition dying of diarrhoeal disease, the asphyxiated babies, the hardworking Timorese team, the grinning coconut sellers – that's all pretty real as well. It might all seem unimaginable or fanciful from the perspective of medicine in Australia, which despite our frequent complaints really is world class and essentially infinitely resourced, but it's all fresh in my mind.

That's not to begrudge for a second the standard of care I've come back to – rather to express my belief that this is how it should be, for everyone, everywhere. It's been a seismic shift, but I am loving practicing again in Australia, where paediatric medicine is high resource, high expertise, high expectations, and we can see what the sum of human knowledge, ability, application and will can achieve for sick children. Inspiring. The contrast doesn't necessarily imply pessimism.

One of my jobs in Timor-Leste was helping the Diploma of Paediatrics candidates prepare for their clinical exams which are assessed by visiting volunteer Royal Australasian College of Physicians (RACP) examiners from Australia. Being part of that, seeing a new generation of Timorese doctors applying themselves to improving child health care in their own country, can't help but stoke the fires of optimism.

Since my last despatch, I've been lucky to be part of a very large screening program for Rheumatic Heart Disease (RHD). RHD is virtually unknown in Australia outside of Indigenous communities, and across the world is found only in the most disadvantaged communities. Prior screening studies had estimated the prevalence of definite RHD in asymptomatic Timorese school children to be as high as 2% – compare this to the Australian national prevalence in comparable age groups, at less than 0.05%.

This current study served the dual purposes of furthering our knowledge about prevalence of RHD in Timor, and of assessing the diagnostic value of a single echocardiographic view of the mitral valve, performed with a hand-held echo machine by a health worker who had undergone just a five day training course in detecting RHD. The study was conducted in Maningrida, a West Arnhem Land Indigenous community, and in Timor.

So, early on a dusty Dili Sunday morning, we loaded half a dozen cardiologists, health workers both Timorese and Aboriginal, nurses and educators, drivers and Captain Starlight into a lurid pink bus for a seven hour drive to one of the most inaccessible regions in Timor, breathing a non-anaesthetic approved mix of 50 percent air and 50 percent dust.

The study is still in the pipeline, but we found similar rates of RHD to what we expected – this meant we could start children on monthly penicillin injections, the only way to prevent further progression of valvular disease. The study pricked up ears in the halls of power, such as they are in Timor, and a national RHD strategy is now in the pipeline (we don't have one in Australia yet), and I hope that one day I'll see the effects of a systematic approach to preventing this cruel disease.

Doctors in Training Grant
FINAL REPORT

Dr Sam Brophy-Williams
Hospital Nacional Guido Valadares, Dili, Timor-Leste

1. About to perform the country's first CT aortogram
2. Chatting with kids as part of the PEDRINO rheumatic heart disease screening program
3. PEDRINO rheumatic heart disease school screenings in rural districts

Back in the Hospital Nacional Guido Valadares, I was lucky enough to play a role in strengthening the capacity of the national laboratory microbiology department – we introduced blood cultures and multiplex PCR technology in the time I was there. In a hospital where clinicians are used to making choices about antimicrobials empirically and titrating regimens to response, identifying causative organisms for common infections provides a huge opportunity for making better choices for our patients, as well as allowing the identification of recognisable epidemiological patterns, facilitating more informed empiric antibiotic choices. This is all at a fledgling stage, but in an era when antibiotic resistance around the world is at crisis point, and diagnostic technology is becoming more and more accessible, it's a direction I'm excited to see the hospital taking. Watch this space for upcoming publications from Timorese paediatric trainees on gastrointestinal and respiratory pathogens in hospitalised children – the results might surprise!

Supervising trainees in their first foray into clinical academic research has been hugely rewarding, and has kept my Timorese time alive even as I'm back in the dreary Perth winter. It's also given me a renewed appreciation for the quality of medical education I was privileged to receive in Australia, where every medical student (OK, most) can do a half reasonable job of evaluating a journal article, where the principles of evidence based medicine are instilled in us from early on, and where the simple fact of not owning a computer on which you can write an article and make a few spreadsheets isn't going to arise as a barrier to entry to that world.

Timor's medical training system, especially for those graduates on a pathway to GP/family medicine, involves placement in a small village or district health post, rarely with senior support, and often hours away from any higher level medical facilities. These young doctors with relatively little experience are thus thrust quite suddenly into dealing with births, deaths, and everything in between. I would find it incredibly daunting, but they're all either very brave or resigned to this baptism.

An Australian/Timorese NGO, Maluk Timor, are doing fantastic work in helping continue professional education for the family medicine doctors who provide so much of Timor's primary care, and I went along to help with neonatal resuscitation training. By this time my Tetun was just sufficient that I would kid myself into thinking that I could deliver the whole training in Tetun. Suffice to say it was lucky I'd brought a Timorese paediatric trainee along with me! It was great to see a room full of doctors, intently bent over their newborn baby mannequins, performing skills they'd learned only that week, but would soon be called upon to put into practice in the most critical of emergencies, unsupported. I hope that a few of them remember what we talked about that day, and find it helpful in the clutch.

Maluk Timor are also working to keep these junior doctors in touch with each other, and in touch with a world of ongoing professional education even after they take the long, dusty roads out to the villages in which they'll work for two years – a valiant and vital effort in supporting the workforce upon which the future of this country's medical system must be built.

Back on the hospital wards and work rolls on, heedless to the distractions of heart disease screening trips and lab projects. Many cases are truly heartbreaking – vaccine preventable diseases, malnourishment through food insecurity, diseases of poverty and overcrowding. In all of that though are moments of lightness, of recovery and of triumph. Some of them are simple things – like playing jenga with the girl whose nasopharyngeal carcinoma was resected in Australia thanks to the generosity of donors, and whose chemotherapy treatment we're now able to give in Dili. Seeing the boy with the awful, life-threatening pneumonia walk out the door, hopefully to forget us forever. Finding one of the neonatal nurses, having taken on the teaching about breastmilk and feeding establishment, staying after the end of her shift to help a new mum establish breastfeeding, setting her and her baby on a path away from bottles and formula, a lifesaving intervention. Reading the research project draft from one of the paediatric trainees, the future leaders of paediatrics in the country, and seeing concepts understood and articulated. You've got to take those smiles, those moments, and use them as fuel to keep finding ways to create more of them.