

St Vincent's Pacific Fund Report: Advance and Basic Life Support Training in Northern Provincial Hospital, Santo, Vanuatu

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Over 2 days in February 2022, two Vanuatu nurses and myself took on the task of providing Advance and Basic Life Support Training to 18 health professionals at the Northern Provincial Hospital on Santo, one of the smaller islands of Vanuatu. This was the first medical training provided to a peripheral hospital in Vanuatu since the start of the COVID 19 pandemic 2 years ago.



Picture: 18 newly qualified ALS providers and the trainers: Dr Mim Scharkie, Cliff Luke and Noella Remy

Overview:

In 2019, Dr Danielle Faircloth developed the first Vanuatu specific Advance Life Support Manual and undertook training of professionals in the main referral hospital, Vila Central Hospital. Since then, myself and my fellow colleagues from the Vila Central Emergency Department, have completed a further two lots of training in both the hospital and the nursing school.

When I arrived in Vanuatu, however, the need to roll out this training in the peripheral hospitals of Vanuatu became apparent. The peripheral hospitals and medical outreach facilities of Vanuatu are all located on smaller outer islands, and have little access to training or resources, which has been made exceptionally worse during the COVID 19 pandemic.

The overall aim of this project was to upskill health professionals at the Northern Provincial Hospital in Luganville, in Santo in Basic and Advance life support (ALS and BLS). Despite being the 2nd largest hospital in Vanuatu, the hospital is grossly under resourced and understaffed. Many of the staff have not had any Advance or Basic Life Support training, and currently the hospital (which we found out during the course) has no working manual external defibrillator or automated external defibrillator (AED) in the Emergency Department.

Main objectives:

- 1) Provide Advance and Basic Life support training to health professionals at the Northern Provincial Hospital
- 2) Identify potential 'train the trainers' for future locally run ALS and BLS courses
- 3) Identify equipment need for purchase or repair for ALS provision in Santo

Key personal:

- 1) Dr Mim Scharkie, Visiting Emergency Registrar, through the Australian Volunteers Program
- 2) Mr Cliff Luke, Critical Care Nurse, ALS course instructor, Vila Central Hospital
- 3) Ms Noella Remey, Critical Care Nurse, ALS course instructor, Vila Central Hospital
- 4) Mrs Glenys Tabi, Theatre Nurse, Northern Provincial Hospital
- 5) Dr Donald Tangis, Medical Intern, ALS course instructor, Northern Provincial Hospital
- 6) Mr Simon Gilbert, Intensive Care Paramedic, Promedical

We began the two-day course on the 22nd of February at the Northern Provincial Hospital (appendix 1). Thankfully, Pro Medical (the local ambulance service) in Santo, were able to provide us with the equipment required to run the ALS course including mannequins, airway equipment, defibrillators, and even the training rhythm simulators.



Picture: Noella Remy teaching ALS participants CPR skills

Our first hurdle was that we had a few participants who had no medical training at all, however, due to the limited health professionals in Santo, were often required to help with resuscitation and medical care of patients. This was identified early, and we were able to tailor our teaching and learning goals for these participants. They did, however, far exceed our expectations and pass the course!

Amazingly for Vanuatu, we ran almost to time for the first day of training. Our first day went smoothly, and participation and engagement was amazing. The overall lessons learnt on the first day was basic life support, airway manoeuvres and most importantly identifying, assessing, and treating the deteriorating patient. The structure was similar to ALS courses in Australia with lectures followed by practical sessions.



Picture: ALS participants preparing for a practical simulation

It was during these first few practicals which we discovered our second hurdle. None of the AED in the Emergency Department in NPH had the correct type of pads, and hence whilst they did in fact have pads and AEDs, they were not able to use them. We had to become creative during the practicals by substituting pieces of paper etc as AED models, which only added to the enthusiasm of participants to truly immerse themselves in the scenarios.

The second biggest hurdle was the lack of resources in Santo. Parts of the ALS course require knowledge pertaining to certain equipment or skills which are not available in Santo, such as the ability to intubate a patient, the ability to perform interosseous access on patients, and as we earlier realised, the ability to defibrillate a patient! So whilst we were able to provide them with the theory regarding these skills and equipment, it was very unfortunate to think that they would not be able to use these skills in the current resource poor climate of Santo.

Overall, I feel we achieved our main learning objectives. We had 18 participants successfully pass the Advance and Basic Life Support Course. What made this course unique, was that it was the first ALS course taught primarily in Bislama (local dialect), which made it more accessible to the participants.

Despite the fact that we discovered Santo has no working defibrillator, the biggest impact I think our course had was in the teaching and practical session on 'Identifying the deteriorating patient'. The knowledge and skills surrounding preventing arrest, by using observation charts and identifying and intervening in downward trends in a patient's physiology, I believe will prevent unnecessary death in Santo. The teaching gave the participants a systematic method of approaching a sick patient, which I feel will help them greatly in their future interactions with unwell patients.

If I was to do this course again, I think I would want to be able to also provide the hospital with a working AED or at least find compatible pads for the AED they have in the department. Defibrillation forms the basis of ALS, and without it, it did make some of the teachings more 'academic' rather than 'practical'.

Sadly, I also feel that the current ALS course, is not quite appropriate for the setting in which the participants from Santo operate in, and I feel would be even more unsuitable for some of the more remote medical outposts, with the lack of equipment, staff, or even referral processes which are assumed to be available in the course teaching. I would love to see a peripheral hospital specific training course, based on the ALS created, which acknowledges the incredibly challenging environment these amazing health professionals work in, often with only paracetamol and perhaps some antibiotics available to treat patients.

Despite this hurdle, I am proud to say I have been a part of a local Vanuatu team to provide training to 18 participants, and now have 18 more qualified Advance Life Support Providers in Vanuatu.



Picture: ALS trainers: Noella Remy, Dr Mim Scharkie, Cliff Luke relaxing after two days of training

Cost Breakdown:

Item	Cost (AUD)
Flights	1184.4
Lamination/ stationary	44.12
Accommodation	1397.70
Departure Tax	14.63
Food	109.74
Transport	30.50
Total	\$2781.09

Appendix:

ALS Course Day 1 :22nd Feb

Time	Topic	Facilitator
8:30	Ice breaker/introduction	Mim
8:35	Lecture 1 Intro to ALS 10min	Mim
8:45	Lecture 2: Recognition and prevention of deterioration lecture 30min	Cliff
9:15:	Skills 1 scenarios: deteriorating patient: ADD chart, ABCDE 45min	All
10:	Morning tea	
10:30	Lecture 3 BLS + choking 30min - Including BLS and choking demonstration	Noella
11	Skills 2: compressions, BVM, Choking, defibrillation using AED 45min	All
11:45	Lunch	
1:00	Lecture 4: Airway adjuncts and LMA 10min	Mim
1:10	Skills 3: airway adjuncts and LMA's 20min	
1:30	Lecture 5 Team-work and communication 1 hour - Includes group work of ISBAR and graded assertiveness communication	Noella
2:30	Afternoon tea	
3:00	Skills 5 scenarios: deteriorating patient-BLS + ISBAR 1hour	All
4:00	Lecture 6 cardiac arrest Rhythm recognition + defibrillation 20min	Cliff
4:20	Skills 6 defibrillation using COACHED 30min	All
4:50	Close	

ALS Course Day 2 23rd February

Time	Topic	Facilitator
830	Lecture 1: Recap day 1: 15min	Mim
845	Lecture 2 ALS algorithm 30min	Noella
0915	ALS demonstration 15min	All
0930	Skills 7: ALS scenarios 1 hour	All
1000	Morning tea	
1030	Lecture 3: Resus special circumstances 30min NFR (role playing)/ pregnant/trauma/asthma/anaphylaxis	Mim
1100	Skills 8: Resus in special circumstances 30min	All
1130	Lunch	
1200	Lecture 4 Arrhythmias 30min	Noella
0100	Skills 9: Arrhythmia 15min	All
0145	Lecture 5 : Post Resus Care	Cliff + Donald
0200	Skills practice/scenario practice 15min	All
0230	Afternoon Tea	
0300	ALS assessments –Test : MCQ and Practical Test	All
0430	End	
05:00	Discussion with those nominated to be trainers about an online virtual training day to become facilitators of ALS	Mim, Donald, Cliff, Noella