

Primary Trauma Care 2 day course report

Vila Central Hospital, Vanuatu 2018

Executive Summary

- We conducted a 2 day PTC course, 2015 edition, at the Vila Central Hospital pharmacy conference room on April 26th and 27th 2018.
- The 2 day PTC course was fully funded by Aspen Medical (Vanuatu) with the assistance of the Department of Foreign Affairs and Trade (DFAT) of Australia.
- Nine out of the ten selected candidates participated in the course instructed by three consultants and one observer based in Vila Central Hospital. One candidate was in absentia.
- All candidates are medical interns who graduated from the ELAM medical school in Cuba.
- All participants did the PTC course for the first time. None of them have heard of the PTC Foundation prior to the course.
- We also had the privilege of having Dr Basil Leodoro, who is involved with the Ambae volcano disaster relief effort and the deployed Vanuatu Medical Assistance Team (VanMAT), to talk about the current Vanuatu structured approach to natural and/or man-made disasters plus share his experience during deployment and the application of the PTC system.
- All nine participants had the pre-test and post-test showing an overall improvement in performance.
- All participants indicated that the 2 days PTC course was very good in all aspects. Most suggested that more time be allocated to the scenarios and group discussion sessions.
- All participants were awarded the PTC Foundation certificate of participation during the closing of the course.



Figure 1: Dr Trevor Cullwick demonstrating insertion of a chest drain during skill stations

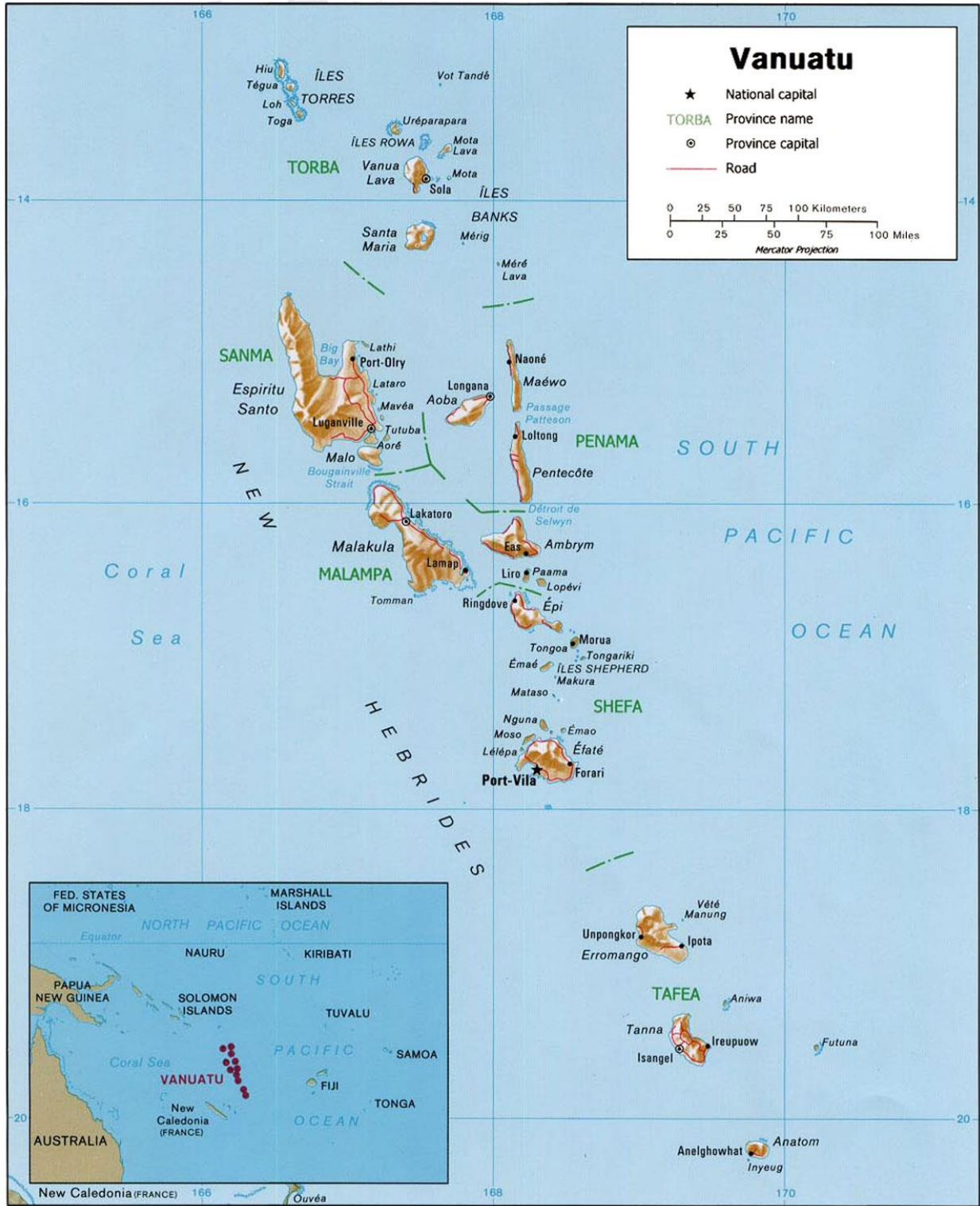


Figure 2: Map of Vanuatu. Courtesy of nationsonline.org

Background:

Vanuatu has about 80 islands and its capital Port Vila is located on Efate Island in the south. It has an estimated total population of about 270,402 (2016) with an annual growth of 2%. Life expectancy at birth for males and females is 70years and 74years respectively. Its GDP per capita is about US\$0.77 billion with an annual growth of 4%. Total health expenditure per GDP is about 5%.

www.databank.worldbank.org/data/reports.aspx?source=2&country=VUT

www.who.int/countries/vut/en



Figure 3: Dr Tildena Mandavah lecturing about Airway

Vila Central Hospital (VCH) has about 200 beds and is located in the capital of Vanuatu, Port Vila. It is the primary referral hospital receiving cases from all peripheral hospitals including the second largest hospital on the big island Espiritu Santo. Trauma is one of the most common problem patient present with at Vila Central Hospital second only to non-communicable disease related illnesses. Our operating theater patient registry indicated that we have at least

two trauma related cases in theater every week. Trauma cases consist of limb fractures, mandible fractures, thoracic trauma, abdominal injuries, pelvic injuries, burn injuries, and traumatic brain injuries. Most patients were managed acutely by the attending consultant doctor using the ABCDE approach. However the medical interns are often the first officers to attend to patients in the emergency department. Thankfully we seldom have mass casualty trauma incidents, however they have happen in the recent past. Presently whilst we conduct our 2 day PTC course, Vanuatu has a natural disaster situation with the volcano eruption on Ambe (Aoba) Island to the north of Vanuatu archipelago. A number of doctors including medical interns were deployed to the evacuation centers.

We have a good number of medical interns who were trained in Cuba, Fiji and some from mainland China. Only the Fiji graduates from the Fiji National University have done the 2 day PTC course during their pre-internship training year in Fiji. Therefore our aim is to train all medical interns in Vanuatu who have not done the course or whom, upon their supervisor's recommendation, are deemed required to have a refresher course on PTC.

Key Staff involved:

1. Dr Tildena Graziela Mandavah (anesthesiologist, local instructor)
2. Dr Trevor Cullwick (surgeon, local instructor)
3. Dr Basil Leodoro (surgeon, local instructor / course director Vanuatu)
4. Dr Robinson Toukoune (anesthesiologist, observer)
5. Ms Berlinrose Nimbtik (aspen medical, logistics coordinator)
6. Dr Christian Leepo (aspen medical, locum anesthesiologist, course coordinator)

Table 1: PTC Day 1 Activities

Day 1			
8:30	30'	Welcome and Introductions and MCQs	Dr Tildena
9:00	15'	Local Trauma and Primary Survey	Dr Leepo
9:15	15'	PTC Overview	Dr Leepo
9:30	30'	ABCDE of Trauma and Primary Survey	Dr Tildena
10:00	10'	BREAK (Morning Tea)	
10:10	40'	Airway and Breathing	Dr Leepo
10:50	35'	Circulation and Shock	Dr Tildena
11:25	35'	Chest Injuries	Dr Trevor
12:00	45'	LUNCH BREAK	
12:45	80'	Skill stations	
	(40')	<i>Basic / Advanced Airway</i>	Dr Leepo
	(40')	<i>Cervical spine / Logroll</i>	Dr Tildena
	(40')	<i>Chest drains</i>	Dr Trevor
14:05	10'	BREAK (Afternoon Tea)	
14:15	50'	Abdominal, pelvic and Limb injuries	Dr Trevor
15:05	15'	Demonstration Scenario	Dr Tildena
15:20	70'	Scenario Practice (in groups)	Dr Tildena
16:30	5'	Overview and summary	Dr Leepo

Table 2: PTC Day 2 Activities

Day 2			
8:30	45'	Head and Spinal injuries	Dr Leepo
9:15	30'	Trauma in Children and Pregnancy	Dr Trevor
9:45	30'	Burns	Dr Tildena
10:15	15'	BREAK (Morning Tea)	
10:30	80'	Workshops <i>Analgesia</i> <i>Transportation</i> <i>Paediatric trauma</i> <i>Neurological assessment</i>	Dr Leepo Dr Tildena Dr Trevor Dr Robinson
12:00	30'	Secondary survey	Dr Leepo
12:30	40'	LUNCH BREAK	
13:10	50'	Disaster Management	Dr Basil
14:00	80'	Scenarios (in groups)	Dr Leepo
15:20	10'	BREAK (Afternoon Tea)	
15:30	15'	Repeat MCQs	Dr Tildena
15:45	20'	Summary, Feedback and Evaluation	Dr Leepo
16:05	10'	Certificates and Closing	Dr Tildena Dr Leepo

Course participants:

- | | |
|---|--------------------------------------|
| 1. Carole Aki (medical intern) | 6. Linda Kitawi (medical intern) |
| 2. Shem Joel (medical intern) | 7. Jenneth Jeantino (medical intern) |
| 3. Evatt Stephanie Ala (medical intern) | 8. Lidency Valele (medical intern) |
| 4. Ryan Lulu (medical intern) | 9. Randy Vagaha (medical intern) |
| 5. Bradley Wai (medical intern) | |

Table 3: Pretest and Post-test results of participants

	Pretest Result (out of 20)	Post-test Result (out of 20)
Highest score	17	20
Lowest score	9	12
Average score	12.67	16.1

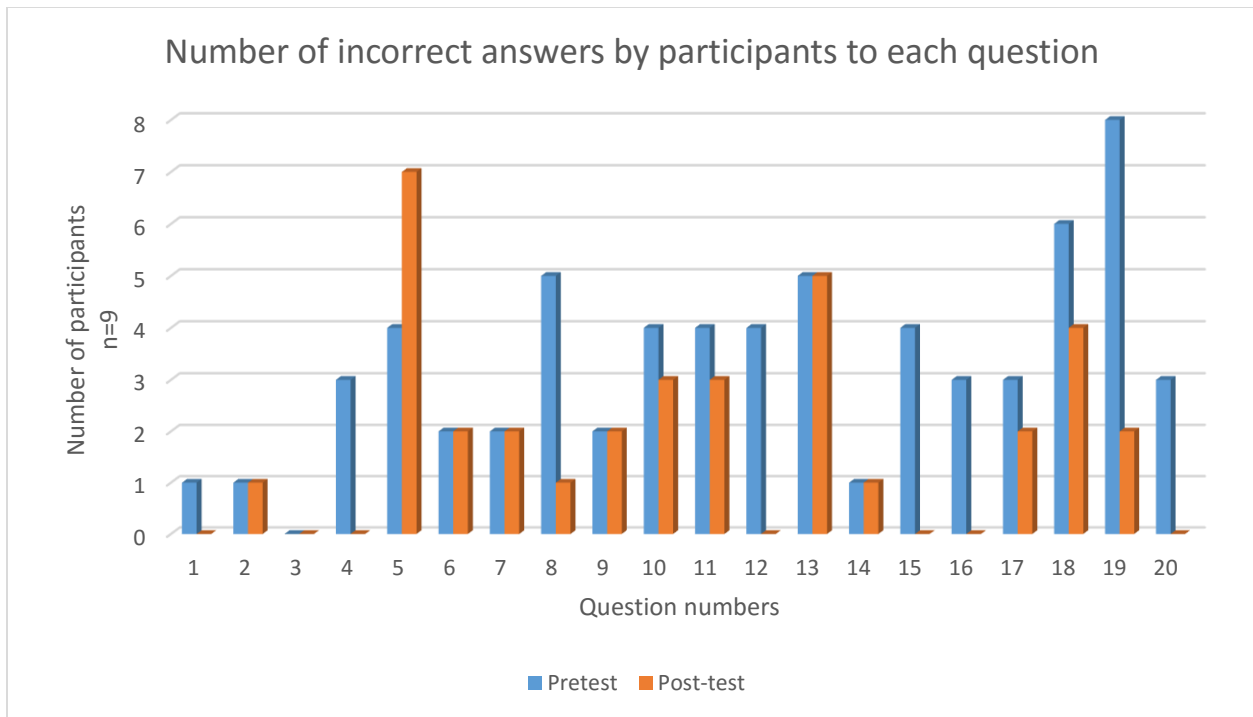


Figure 4: Number of questions answered incorrectly by participants for the pretest and post-test

All except one candidate managed to get a higher score in the post test compared to their pretest score. However it appears that most seems to be struggling to understand the concept of a 'secure' airway which was asked in the multiple choice question number 5 and Hemothorax in question number 13. Otherwise all candidates have demonstrated the PTC system approach of ABCDE well during the scenario sessions.

The PTC 2 day course have demonstrated the need for our candidates to have more capacity building in the areas of anatomy, physiology and pathophysiology, at least with regards to the topics covered during the course. Perhaps early distribution of the PTC manuals prior to the course proper may help. All candidates received their manuals on day 1 of the course.



Figure 5: Dr Tildena Mandavah talks about C-Spine

The candidates may be able to demonstrate good hands on approach to learning but they need adequate knowledge and basic science as part of understanding how complications or untoward events can happen should certain pathology or trauma takes place. Such understanding would allow our candidates to improve their critical thinking processes. Nonetheless, at least our PTC course also insist on asking for consultant help at the earliest when handling trauma cases within the hospital whilst they implement the ABCDE approach during simultaneous clinical assessment and resuscitation.

Dr Basil Leodoro talked about the current Vanuatu National Disaster Committee system and protocols as well as the challenges faced during his recent deployment with the Vanuatu Medical Assistance Team (VanMAT) to the volcano eruption crisis on Ambe Island in the Northern Province. Dr Basil also demonstrated how the PTC systems approach to ABCDE is very essential in triaging and managing patients in the field during a mass casualty situation. VanMAT teams deployed to the field used the PTC system to manage trauma patients.

During our group scenario sessions on Day 2 the head ambassador for the Australian High Commission to Vanuatu, Her Excellency High Commissioner Madam Jenny Da Rim visited us to witness our training session and to emphasize her office's commitment and ongoing support in providing assistance towards capacity building and training of health personnel in Vanuatu.

All the candidates noted their appreciation of the course and indicated that perhaps more time could be allocated to the scenarios session. The candidates all appreciated the catering services as well.

The PTC 2 day course in VCH needs to be implemented on an annual basis in a financially sustainable manner. Perhaps the VCH administration could allocate adequate funds from the health budget for in-hospital trainings including the PTC 2-1-2 day course.

Acknowledgement

We the PTC Vanuatu instructors are very thankful to ASPEN MEDICAL (Vanuatu), the Australian company working in partnership with the Australian Department of Foreign Affairs and Trade (DFAT) in implementing the essential medical workforce support program in Vanuatu, for their logistic and financial support. Without whom our ongoing in-hospital training in VCH such as PTC would prove very difficult to implement.

Special thanks to Ms Belinrose Nimbtik of Aspen Medical for organizing the logistics, catering and venue. To Dr John Graham of Aspen Medical, thank you for printing all our materials and bringing them over from Australia. We would also like to thank the Australian High Commissioner to Vanuatu, Her Excellency High Commissioner Madam Jenny Da Rim and her team for taking the time to visit us. We are very pleased and grateful to the Australian High Commission for their ongoing support with health personnel capacity building and assistance in improving health services in the country.

Last but not least, I would like to thank all the facilitators and candidates involved for making this PTC 2 day course such a success and a fun learning experience.

Tankiu tumas.

Dr Christian Leepo

PTC course co-ordinator (VCH)