



REPORT

PRIMARY TRAUMA CARE (PTC) COURSE

**Pukapuka Hostel: 11th -12th July 2011-Rarotonga, Cook Islands
&
Amuri Hall: 18th July 2011-Aitutaki, Cook Islands**



Executive Summary

What is the problem?

Trauma is a major cause of death and disability in many developing countries. The main causes of injury in the Cook Islands are car and motorbike crashes, and falls. The Primary Trauma Care course was developed to train health care workers to effectively and systematically manage trauma patients. Trauma management exercises have been held in the Cook Islands for the last 7 years but, until this year the main group of instructors were those local members who undertook the instructor training in 2010.

What did we do?

The local instructors consisting of Rangi Tairi (and Coordinator of the Programme), Nga Manea, Vaine Pirangi, Tungane Barrett, Mary Kata, Charlie Numanga, Dr Mary Tuke and Elizabeth Iro, were supported by colleagues from NZ Dr Deacon Teapa, and Dr James Hamill in delivering this training on Rarotonga.

Rangi Tairi (and Coordinator of the Programme), Nga Manea, Vaine Pirangi, Tungane Barrett, Mary Kata, Oirua Joseph, Charlie Numanga, Raui Marsters, Dr Deacon Teapa, Howard Tangimetua (IT) delivered this training on Aitutaki as well.

The training on Rarotonga was adapted to a one day programme with the second day involving an exercise scenario involving a motor vehicle crash in Tupapa, Maraerenga.

In Aitutaki a one day programme with no field exercise involved was delivered.

The aims of the course were to reinforce knowledge and skills for local instructors and participants.

A total of 35 participants for Rarotonga and 33 for Aitutaki were registered from the Ministry of Health, Airport Authority, Cook Islands Red Cross and Police, Private accommodations, Ports Authority and Marine.

What happens next?

The Cook Islands has an enthusiastic group of PTC instructors; it is important that we continue to use their knowledge and skills to improve trauma management in the Cook Islands. The local instructors plan to run another course in Rarotonga before the end of the year. In order to reinforce knowledge and maintain skills, it will be important to run at least yearly courses.

Introduction

The Cook Islands is a self-governing nation situated in the south Pacific about 4 hours flight northwest of New Zealand. It comprises 15 islands spread over a very large area of ocean. The population is 19,000. The main island, Rarotonga, has a population of 14,000.

Most injuries in the Cook Islands are caused by car or motorbike crashes. Contributing factors are drunk-driving, and low rates of seatbelt and helmet use.

The Primary Trauma Care course was developed with the backing of the WHO to train health care providers to prioritise and treat severely injured patients quickly and systematically, thereby reducing death and disability. The course is specifically designed for health care providers working in low income countries and takes into account the resource shortages in these countries. The very first PTC course was run in Fiji in 1997 but PTC is now being taught in many parts of the world, including many countries in Africa, South America and Asia.

Apart from teaching a system for managing trauma patients, PTC has a number of other benefits: PTC principles can be applied to non-trauma patients.

The course teaches teamwork and communication between doctors, nurses and other healthcare workers and first responders.

The course develops teaching skills and encourages ownership by local healthcare workers.

Trauma management exercises involving first responders and health workers have been held annually in the Cook Islands for the last seven years. This was the first time the local instructors took the lead in organising and preparing for the training and were grateful for the support of Dr Deacon Teapa, Dr James Hamill from NZ and Clinical Advisor Dr Teariki Maoate.

Local Organisers/Instructors

Rangi Tairi (Programme Coordinator) & Chief Public Health Nurse, Nga Manea In-charge of Out patients/Emergency Department, Vaine Pirangi OPD/ED registered nurse, Tungane Barrett Nurse Practitioner, Mary Kata OPD/ED registered nurse, Charlie Numanga Cook Islands Red Cross Disaster Management Coordinator, Elizabeth Iro Chief Nurse, Dr Mary Tuke, anaesthetist.



Course Participants for Rarotonga and Aitutaki

See appendix 1

Participants and instructors-Rarotonga



Course Programmes

See Appendices 2.

Overall, the timetables worked well.

Venue, Presentation, Catering

The courses were held in the Pukapuka hostel (Rarotonga) and Amuri Hall (Aitutaki). The venues were excellent as it was spacious and provided plenty of room for the different skill stations and catered for the large number of interested participants.

A data projector, Portable white screen and laptop were provided by the MOH.

Catering was excellent with plenty of fruits.

Teaching Materials

Course manuals were printed locally.

PTC slides as per manual.

Equipment supplied from hospital and from previous training sessions.

An Airway Management Trainer mannequin: funded by the World Federation of Societies of Anaesthesiologists and the PTC Foundation



Demonstration scenarios at skills stations



Aitutaki Practical Skills Station Airway 2

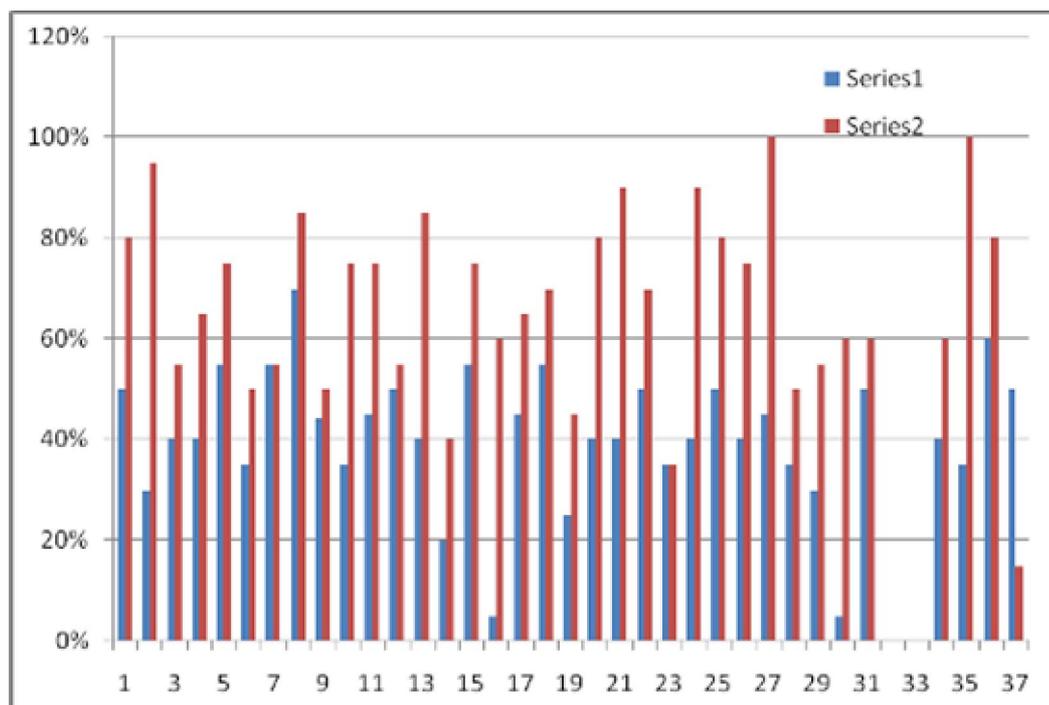
Motor vehicle

Rangi provided her own vehicle to run around for the PTC. Strickland Motors was hired to bring the two wrecked cars for the trauma exercise and was removed promptly after the exercise.

MCQs

MCQs were asked at the beginning and end of the one day course. There was some improvement in knowledge as demonstrated by the rightward shift of the graphs.

PRE & POST



Financial

The courses were very generously supported by AusAID through the Pacific Island Project (PIP), World Health Organisation and the Cook Islands Ministry of Health.

Field Exercise: "AKATANO"

This was the code name for the practical exercise on Rarotonga. Preparation and planning information are included as Appendix 3.

Analysis of Participants Feedback

Information from feedback forms is presented in Appendix 4.

Recommendations

1. Regular courses

It is important that courses are run at least annually to maintain the knowledge and skills of both instructors and participants. PTC courses are cheap to run but some financial support will be required from the Ministry of Health (e.g. transport, laptops and data projector, printing and catering costs). It would be appreciated if AusAid & PIP and WHO to continue to assist funding so this course can be delivered on Rarotonga and the Outer Islands.

2. Course content

The instructors discussed course content and given the mix of healthcare and emergency workers a one-day format was adopted. It was appropriate to concentrate on Primary Survey topics in the morning with scenario teaching and disaster planning in the afternoon.

3. Airway management trainer

An airway trainer was provided in December 2010 sponsored by the PTC Foundation and AusAid, This has allowed advanced airway management training for participants. However it is of most benefit if this can be made available to our Emergency department doctors and nurses in the hospital.

4. Liaison

The local instructors have the knowledge and skills to run regular courses. Occasionally it may be helpful to have the input of an overseas instructor.

5. Instructors Course

An Instructor's course to be carried out next year. There were interest shown by participants to become instructors.

Acknowledgements: Rarotonga & Aitutaki

Special thank you to Dr Deacon Teapa and Dr James Hamill for their support to the local instructors in delivering this years PTC training.

Thanks to the Cook Islands Ministry of Health for its support and to the Secretary of Health Mr. Tupou Faireka for his support and for opening this year's PTC Training.

World Federation of Societies of Anaesthesiologists and the PTC Foundation.

AusAID through the Pacific Island Project (PIP), PTC (Primary Trauma Care) Foundation

World Health Organisation for assisting with funds for Rarotonga and Aitutaki PTC training

Local instructors - Rangi Tairi (and Coordinator of the Programme), Nga Manea, Vaine Pirangi, Tungane Barrett, Mary Kata, Charlie Numanga, Dr Mary Tuke and Elizabeth Iro,(Dr Koko, Kura Ioane-Instructors-Aitutaki) Dr Shwe, Tuakana Vahua, Metua Tuarae (Aitutaki participants who presented at the PTC training in Aitutaki)

Mr & Mrs Jane and Philip Strickland for their excellent catering-Rarotonga

To the Pukapuka community and executives for allowing us to hire the hall and their sound system

Cook Islands Trading Co for hirage of their marquee for our catering-Rarotonga

Cook Islands printing services for their patience in printing our PTC Manuals and certificates for Rarotonga and Aitutaki

Mr & Mrs Pekamu Maoate for supplying a marquee for our PTC on Aitutaki

Aroha and Teetu catering for their excellent catering on Aitutaki

Ministry of Health staff on Rarotonga and Aitutaki for assisting with preparation of both venues

All participants on Rarotonga and Aitutaki for their participation in the training

Appendix 1: Participants

Rarotonga

1.	Rufina Tutai Van Eijk	Public Health Nurse CHS –MOH
2.	Tearuru Takai	Public Health Nurse CHS –MOH
3.	Upoko Takau Matapo	Public Health Nurse CHS –MOH
4.	Teio Kea	Public Health Nurse CHS –MOH
5.	Moka Apera	Public Health Nurse CHS –MOH
6.	Tereapii Taurarii	Public Health Nurse CHS –MOH
7.	Mama Toranga John	Public Health Nurse CHS –MOH
8.	Dr Rangi Fariu	Director of Community Health Services (CHS) –MOH
9.	Edwina Tangaroa	R/N-Health Promotion Manager CHS- MOH
10.	Oirua Joseph	Health Protection Officer-CHS-MOH
11.	Ngametua Matangi	R/N- Medical Ward-MOH
12.	Annie David	R/N-Medical Ward- MOH
13.	Tangi Nganu	R/N- Gynae&Obs-MOH
14.	Elena Seru	R/N-Surg/Paeds-MOH
15.	Vaine Tei	Ambulance Officer-MOH
16.	MamaTiare George	R/N & Midwife -Mangaia- MOH
17.	Ake Teiotu	Enrolled Nurse-Surg/Paeds-Hospital
18.	Doris Tariipo	R/N& Eye nurse-Hospital
19.	Elina Henry	Nurse Practitioner/Midwife-Hospital
20.	April Tamatoa	R/N –Surg/Paeds Hospital
21.	Simi Taqicakibau	R/N –Surg/Paeds-Hospital
22.	Raui Marsters	Ambulance Officer-MOH
23.	Maine Foster	Receptionist-Hospital
24.	Ngakiri Teaea	Nurse Manager- Medical ward-Hospital
25.	Teariki Boaza	R/N- Surg/Paeds & Theatre Nurse-Hospital
26.	Elizabeth Raeina	R/N- Surg/Paeds-Hospital
27.	Mere Woonton Tearea	Nurse Practitioner & Midwife-Hospital
28.	Teokotai Areai	R/N & Midwife-Hospital
29.	Tuariki Henry	Cook Islands Police
30.	Tangata Tupa	Cook Islands Airport Security
31.	Caroline Poko	Manager Receptionist-Hospital
32.	Dr Frank Obeda	Out Patient and Tupapa Community Health -MOH
33.	Oropai Mataroa	Cook Islands Red Cross
34.	Reboama Samuel	Cook Islands Red Cross
35.	Angelina Noema	R/N -MOH

Aitutaki

1.	Mataiti Pitomaki	Health Protection officer-MOH
2.	Tangi Tapora	Ward Maid- Ministry of Health(MOH)
3.	Teinakeu Akakoromaki	Enrolled Nurse – Ministry of Health
4.	Tukoe Pareanga	Laundry lady– Ministry of Health
5.	Kauariki Henry	Police
6.	Tereapii Jnr Kavana	Health Protection officer – Ministry of Health
7.	Kura George	Enrolled Nurse – Ministry of Health
8.	Ngatokorua Rota	Rescue Fire Service
9.	Tuakana Vahua	R/N – Ministry of Health
10.	Tutai Low	R/N- Ministry of Health
11.	Ngatokorua Vahua	Maintenance-Ministry of Health
12.	Pi David	Maintenance- Ministry of Health
13.	Kaiti Tamu	Kitchen hand- Ministry of Health

14. Tina Neale	Kitchen Hand- Ministry of Health
15. Victor Ioane	Admin and Clerk- Ministry of Health
16. Matangaro Ioane	Enrolled Nurse- Ministry of Health
17. Mtueakore Bobby Strickland	Enrolled Nurse – Ministry of Health
18. Taia Charlie	Dental Therapist – Ministry of Health
19. Temanu T. Riki	Ambulance Officer – Ministry of Health
20. Lione Tuara	Cook Islands Red Cross
21. Teinakore George	Cook Islands Red Cross
22. Metua Tuarae	Public Health Nurse/Midwife – Ministry of Health
23. Kura S. Ioane	Charge Nurse Hospital – Ministry of Health
24. Dr Koko Lwin	Ministry of Health
25. Dr Shwe Yee Win	Ministry of Health
26. Alfred Marsters	Cook Islands Police
27. Parama Williams	Etu Moana Accommodation
28. Joe Katangi Kaukura	Marine
29. Toruariki Hewett	Ports Authority
30. Vavia Puapii	Environment service
31. Ngata Vahua	Rescue Fire Service
32. Aumate Ngati	Pharmacist-MOH
33. Teteva Ua	Ambulance Officer-MOH

Appendix 2: PTC Course Programme 2011

Rarotonga

Day 1

Venue	PUKAPUKA HOSTEL	
8.00-8.10	Registration	
8.10-8.15	Opening Prayer	(Rev Moutaiki)
8.15-8.25	Opening Ceremony	(Mr Tupou Faireka)
8.25-8.30	Welcome/Opening	(Rangi Tairi)
8.30-8.40	Introduction	(Deacon Teapa)
8.40-9.10	MCQs	(Deacon Tepa/James)
9.10-9.40	ABCDE, Primary Survey	(C. Numanga)
9.40-10.00	Airway and Breathing	(James Hamil)
10.00-10.15	MORNING TEA	
10.15-10.35	Circulation	(Tungane Barrett)
10.35-10.50	Chest	(Vaine Pirangi)
10.50-11.50	Skills Stations – practical session	
	- Airway 1	(Mary T/Vaine)
	- Airway 2	(James/Mary K)
	- Cervical spine	(Rau/Charlie)
	- Chest drain	(Deacon/Nane)
12.00-12.30	Application of skills scenario	(Nga Manea/Vaine)
12.30-1.00	LUNCH	
1.00-1.30	Secondary Survey	(Deacon)
1.30-2.00	Abdominal and Pelvis Trauma	(James Hamil)
2.00- 2.30	Burns	(Mary Tuke)
2.30-3.00	Head and spinal Trauma	(Deacon Teapa)
3.00-3.15	AFTERNOON TEA	
3.15-3.45	Paediatric and Obstetric Trauma	(Tungane)
3.45-4.30	Workshops	(Mary Tuke)
	Analgesia	(Nga/Vaine))
	Transportation	(Deacon)
	Paediatrics	(Mary Kata)
	Neuro assessment	(Charlie/Rangi)
	Disaster Mx	
	Post Test & Closing prayer	

Day 2: Field Exercise 'AKATANO'

Exercise 'AKATANO' is a field exercise, designed to evaluate the effectiveness and efficiency in which emergency services respond to any disaster as well as public awareness.

8.00-8.10	Registration	
8.10-8.15	Opening Prayer	(Oirua Joseph)
8.15-8.40	Recap and questions	(Deacon/Rangi)
8.40-9.00	Brief on Field Exercise	(Rangi Tairi)
11.30-1200	MORNING TEA	
12.00-1.30	Evaluation/ Way forward	(All)
1.30-2.30	Presentation of Certificates /Closing of Training workshop By Director of Community Health Services- Dr Rangi Fariu on behalf of Secretary of Health	
	Closing Prayer/Closing of Workshop/Closing LUNCH	

Aitutaki

Venue **AMURI HALL**

1100-1105	Welcome/Opening		Rangi
1105-1120	Introduction/Principals of PTC		Deacon
1120-1145	ABCDE, Primary Survey		Mary Kata
1145-1215	Airway and Breathing		Tuakana Vahua
1215-1225	Triaging		Nga Manea
1225-1255	Circulation		Metua Tuarae
1255-1345	Lunch		
1345-1405	Chest Trauma		Deacon
1405- 1455	Skill Stations	Airway 1 Airway 2 Cervical Spine Chest Drain	Dr Shwe/Tutai Dr Koko/Tuakana Rau/Temanu Deacon/Kura
1455-1520	Secondary Survey		Dr Shwe
1520-1545	Abdominal/Pelvic Trauma		Charlie
1545-1600	Burns		Dr Koko
1600-1630	Head and Spinal Trauma		Deacon
1630-1635	Afternoon Tea		
1635-1655	Application of Skills Scenario		All
1700	Closing Prayer		

8pm Presentation of PTC Certificates were presented at the Aitutaki Conference Dinner at Amuri Hall by: Ministry of Health Minister-Hon Nandi Glassie

2 Laptops were also presented to the Aitutaki Ministry of Health workers- Metua Tuarae PH Nurse/Midwife and Mataiti Pitomaki-Health Protection Officer.

Appendix: 3 Rarotonga Trauma Exercise. Field Exercise “AKATANO”



Tuesday 12th July 2011.

Preparing Authority

Local Instructors

Exercise code Name ‘AKATANO’

Introduction

Since the year 2003, the Cook Islands Ministry of Health had constructed a mythological strategy in the field of preventive measures.

Workshops were held annually in Rarotonga and Aitutaki with the assistance of key medic personnel’s from regional Countries like New Zealand and Australia.

Neighbouring Islands medical personnel's like Fiji and others were also present to promote awareness in health issues here in the Cook Islands.

The workshop were also designed to improve our Health personnel and other emergency service providers in their field of medical treatments, as well as to bring to our people an awareness in this changing world the kinds of sicknesses and disease we're exposed to and the preventive measures that we need to abide with.

On top of that, we have in the recent decades experienced the vast amount of changes to our environment, mainly in the import of machineries, like motor vehicles, and the escalation of road accidents we now experience.

Exercise 'AKATANO' is a field exercise, designed to evaluate the effectiveness, efficiency in the manner of handling, by our emergency services during a respond to motor accident with casualties sustaining severe injuries.

It is expected that not only will the exercise lead to a greater understanding of roles and responsibilities of all agencies involved in the exercise, but will also generate much an awareness to the community.

The exercise is implemented by the local instructors:

- Exercise Director (Charlie Numanga)
- Deputy Director (Nga Manea/Liz Iro.)
- Damage Control Officer (George Nicholls)
- Role Play (Rangi Tairi)(Mere Kata)
- Safety Officer (Tungane Barrett)(Deacon Teapa)
- Media/ Public Relations (Deacon Teapa/Charlie Numanga)

Venue & Timing

The exercise will take place on the main road in Maraerenga, the exact location will be made known on the exercise day. It will be conducted on Tuesday 12th July, Approximately at 0900 or 1100 hours as decided by the Exercise Director on the day of the exercise.

Aim

The aim of the exercise is to test the response and handling capabilities of the emergency services.

Objectives

1. Alerting
2. Timely response of the emergency services to the scene
3. Crowd control & Security
4. Effective communications amongst Scene Coordinator and responding agencies.
5. Triaging/Care and handling at the scene/ Transporting
6. Receiving/Triage/ Care & Handling at hospital.

Exercise Participants

3 Emergency Service – Police, Health, Fire and Cook Islands Red Cross, plus participants from the workshop.

Exercise Cancellation

1. Adverse weather condition and as decided by the Exercise Director
2. Real Emergency eventuates and the Exercise Director decides so.
3. The exercise may be pre-maturely terminated when a '**NODUFF**' situation (i.e. a real emergency exists) occurs and based on the decision of the Exercise Director.

Exercise Termination

The exercise may be terminated by the Exercise Director When:

- He feels that the objectives are met and the exercise may no longer need to proceed
- A real emergency situation takes place elsewhere, where the response of the Emergency Service is imminent
- An accident takes place during the exercise, where severe damage to resources and/ or injury to participant/s.

NODUFF

Should an injury to anyone occur during the exercise, the Exercise Director shall be notified immediately who will then announce a "NO DUFF" and then direct assistance required to the injured.

Declaration of a 'NODUFF' is a code for a real emergency. It shall be pronounced as 'NODUFF' followed by the word 'Emergency' (spoken 3 times)

Special Idea 1

On Tuesday 12th July 2011 at 1300 hours, four adults were travelling towards town (from Tupapa) on a Blue Nissan car, Reg CI 17794. They were heading in town from the Fishing Club after a party session when the driver's cell phone activated.

The driver struggled to pull out his phone from his right jeans pocket and lost concentration in manoeuvring the car.

A second car with 2 people on board was travelling in the opposite direction, Brown Toyota Reg CI 71749.

The driver to the brown Toyota saw the Blue Car off track and heading towards them.

He sighted one pedestrian immediately in front of him walking along the road side.

Instantly he made a move to dodge the on-coming vehicle at the same time avoid running in the pedestrian.

He pulled the steering wheel to his left to move out, but 'BANG' a loud crash was heard and the brown Toyota was crushed into a Power-pole on the road side.

Injuries

Out of the 6 casualties, 5 sustained major injuries (Abd injury, Head Injury, Spinal Injury, 30 weeks Pregnant woman, # Pelvis & # Tibia and Fibula) and only 1 with minor injury.

Witness from a by-stander

He saw the Blue car coming at a high speed, suddenly veered to his right and collided with the Brown car.

He cited a person walking on the road side just before the impact, but unsure what happened to that person.

Appendix 4: Analysis of Participant Feedback

Rarotonga & Aitutaki PTC

50 forms received.

What went well?

- The opening of the PTC by Secretary of Health –Mr Tupou Faireka.
- Very useful training, to keep up with up-skilling in emergency preparedness and response.
- Practical sessions was very useful especially those working in A&E Dept.
- Provision of PTC Manuals and Airway Management Manikin was a +++ several comments
- Well prepared practical skill stations.
- Majority really enjoyed the Pre & Post test but they enjoyed the post test more because it showed how their knowledge and skills has improved a lot.
- Excellent Venue, very spacious for theory and practical skill stations.
- Instructors presented very well, excellent training(several comments).
- Majority of presenters have a sense of humour, clear and straight to the point.
- The integration of our Maori language into the training is a +++ so that the participants will understand more.
- Instructors were well prepared with their teaching and practical exercise “AKATANO”.
- Practical exercise well organised the use of 2 wreckage cars for the crash scenario it made it so real.
- Victims used in the practical exercise were awesome! They really act as if it’s the really thing.
- Several comments said It was really cool to see 3 media persons present, 1 Disaster Emergency Management staff, Rescue Fire Services response team and Police doing their own thing (coordinating).
- Several comments said thank you to Rangi Tairi for organising an excellent PTC training and field practical exercise and for dedicating 2 weeks of absence from her scholarship in Fiji- wish you well...
- Several commented and said thank you to the PTC coordinator for extending the participants list (from 15-35) and changing to a bigger venue, also for seeking funding to keep this programme going.

What didn't go so well?

- Not enough time (several comments) needed more time during skills station.
- Some instructors need to speak loud into the mike.
- As a receptionist it helps if medical terms be explained more
- One commented that presenters appears rushed so that their presentation is within the time frame.
- Several comments-Not enough time for Aitutaki PTC- its combined with Aitutaki conference on the first day which delays the starting of PTC on Aitutaki.
- Police and Recue Fire PTC Instructors did not participate due to work commitments-more work for coordinator to organise Police and Recue Fire involvement in the field exercise.
- Names and numbers for Aitutaki participant was not confirmed till the day of the training in Aitutaki which led to shortage of certificates (printed out 30 certificates before going to Aitutaki-will send over some certs for those who did not receive theirs).
- No walkie talkie available for staff to use during field exercise.
- Personal phones were mainly used which ran out of credits. Had to borrow phones off Dr Fariu and Liz Iro.

Change?

- More time but majority did not want to change anything.
- More practical time.
- PTC Manuals to be given to participants well before PTC programme starts.

- Several comment-Aitutaki PTC to start 1 day before the conference so that enough time is spent on skills station.
- Aitutaki to start planning own Course Program using the PTC format given.

Comments?

- “Was an eye opener and being exposed to this course made me appreciate the importance of continued education in relation to my profession?”
- Awesome course!
- One commented to include leaders in the community so that they are able to assist with any trauma.
- PTC –need regular ongoing training and exercises (several comments) on Rarotonga and Aitutaki please don't STOP!
- PTC training to be introduced to other outer islands and not based on Rarotonga and Aitutaki only
- Next practical exercise on Rarotonga should be unannounced, to see how long each services gets on the scene.
- Have funding available to run another instructors course.
- Several first timers to PTC programme recommended that this PTC be provided to others
- “Please can we have more of these workshops in the future”.
- Several comments on congratulated Rangī Tairi for a very successful workshop and please to continue organising more PTC training.
- Thank you AusAid/PIP for funding the Airway Management Manikin-Coordinator to sometimes send Manikin to Aitutaki for staff training not only for Rarotonga.
- Instructors (some) to come to Aitutaki once or twice a year to train nurses and ambulance officers so that they are capable of dealing any trauma and for up-skilling too.
- To budget some credits for phone use.
- Nearly all 50 forms received asked for Dr Deacon to return for PTC courses during the Health conferences.