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| MINISTRY OF HEALTH |
| **PRIMARY TRAUMA CARE COURSE Tuvalu** |
| September, 2016 |

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# INTRODUCTION

Primary Trauma Care (PTC) Course was developed to train local health personnel in prioritizing and treating the severely injured patients quickly and systematically using available resources, thus reducing death and disability.

Trauma is one of the leading causes of premature death and disability in Funafuti, Tuvalu as is the case in many developing countries. Motor cycle accidents, violence and falls are the main causes of injury presenting to the Princess Margaret Hospital. Most of these incidents are alcohol related.

PTC course was planned prior to the Tuvalu Independence celebration on the 1st week of October. Due to limited support and unavailability of external instructors, we managed to train our local instructors to assist with the course. As a result of this, Tuvalu PTC Coordinating Team plan for these PTC courses for Tuvalu. (Attachment 1 – PTC course schedule)

**Tuvalu PTC Coordinating Team**

The members for this team are;

1. Dr Alani Tangitau – Anaesthetist
2. Dr Samson Mesol – General Surgeon
3. Dr Toko Amasone – Medical Officer
4. Dr Aloima Taufilo – Medical Officer
5. Dr Tamaika Kofe – Medical Officer

The local coordinating team organized for the PTC courses with the assistance from Acting Chief Nursing Officer, Mamaha Viliamu, and the Administration staff who has been magnificent with arranging and providing logistic assistance for the courses

**Plan**

1. Request funding assistance from SSCSiP & help from Vanuatu PTC Team but due to limited fund and assistance we couldn’t be able to bring the Vanuatu PTC Team to assist us.
2. Conduct an Instructors Course on the first day – participants will be from doctors who have done the PTC Provider in the last 2 years, especially the FSMed graduate.
3. Target participants : doctors, nurses (in PMH and outer islands), Nurse Assistant, staff from Red Cross & TuFHA and our ambulance drivers.
4. Allocating of tasks to our Instructors for the 1st course as per schedule
5. Another Instructors course was planned for those participants who have done well on the 1st PTC course, and they will assist with the running of the 2nd PTC course
6. The 2nd PTC course was held on the 2nd week of schedule
7. Funding for these courses were from the Ministry of Health (MoH) and we are so thankful for all the support and assistance from the MoH for making this important training happened.
8. Target to train all staff at PMH on PTC courses including the outer island nurses.
9. For PTC courses to be a regular training for all staff and it will be part of their professional development.

# PTC INSTRUCTORS’ COURSE

The main aim for this Instructors’ course is to build local capacity for PTC instructors in order to sustain PTC courses delivery in Tuvalu.

There were 12 participants were nominated to attend the Instructors’ course, 4 Doctors were initially trained to assist with the 1st PTC course and the remaining 6 nurses and 2 nurse assistants were picked from the 1st PTC course.



Tuvalu PTC Instructors that were trained and assist with the 2 PTC courses at Princess Margaret Hospital

At the completion of the PTC Instructors Course, Tuvalu has 12 qualified PTC Instructors, 2 are expatriates specialist doctors and the remaining 10 are local Tuvaluan Doctors, Nurses and Nurse Assistants.

**Tuvalu PTC Course Instructors Team**

1. Dr Alani Tangitau – Anaesthetist, PMH
2. Dr Samson Mesol – General Surgeon, PMH
3. Dr Toko Amasone – Medical Officer, PMH
4. Dr Aloima Taufilo – Medical Officer, PMH
5. Dr Tamaika Kofe – Medical Officer, PMH
6. Sokolito P Maloto – Nurse Practitioner, Vaitupu
7. Tekiboi Tiso – Staff Nurse, PMH
8. Kelera L Teaukai – Staff Nurse, PMH
9. Meiema L Lusama – Staff Nurse, PMH
10. Failauga Tanielu – Staff Nurse, PMH
11. Margaret P Veni – Nurse Assistant, PMH
12. Tagialofa Emiliata – Nurse Assistant, PMH

# **PTC PROVIDERS COURSE**

**Local Trauma Perspective**

Tuvaluan people are peaceful and friendly but like anywhere in the world are not immune to trauma as expressed by the participants. Trauma is one of the common causes of presentations to the Emergency Department and admissions to the hospital. The most common injuries were due to interpersonal violence from domestic arguments, road traffic accidents mostly motorcycle and falls. Majority of these incidents were alcohol – related.

#### COURSE #1 : 19th – 20th September.

Instructors Team:

|  |  |
| --- | --- |
| 1. Dr Alani Tangitau | 1. Dr Aloima Taufilo |
| 1. Dr Samson Mesol | 1. Dr Tamaika Kofe |
| 1. Dr Toko Amasone |  |

The first PTC course was attended by 18 participants majority of whom were staff nurses and nurse assistants. The course was delivered over two days on Monday 19th and Tuesday 20th of September, from 0830hrs to 1630 hrs. Course contents were delivered using the participant manual, lectures using PowerPoint overhead projector, whiteboard presentations, demonstration scenarios, case scenarios, skill stations and workshop discussion groups. The participant manuals were delivered to the participants few days prior to the courses.

**PTC Multiple Choice Questions**

The PTC course was evaluated using a standard multiple choice questions related to trauma assessment and management before and after the course. There were 20 questions delivered on the PowerPoint projector and the participants were given papers to write their answers with their names pre and post PTC course delivery respectively. The answers were then analysed to ascertain the baseline knowledge as well as the gain from the course.

**Table 1 : Course 1 MCQ Results**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Scores** | **<5** | **6 – 10** | **11 – 15** | **16 – 20** | **Average** | **Range** |
| **Pre test** | 5% | 78% | 17% | 0 | 8.6 | 5 – 12 |
| **Post test** | 0 | 24% | 71% | 5% | 12.2 | 9 – 16 |

**Figure 1 : PTC Course #1 Multiple Choice Questions Results**

#### COURSE 2 : 26th – 27th September

**Instructors**

|  |  |
| --- | --- |
| Dr Alani Tangitau | Staff Nurse Esther Fili |
| Dr Samson Mesol | Staff Nurse Tekiboi Tiso |
| Dr Toko Amasone | Staff Nurse Failauga Tanielu |
| Dr Tamaika Kofe | Staff Nurse Meiema Lusama |
| Nurse Assistant Margaret Veni | Nurse Assistant Tagialofa Emiliata |

The 2nd course was delivered over two days on Monday 26th and Tuesday 27th September from 0830 to 1630 hrs. There were 22 participants and majority of them are staff nurses, nurse assistants, trainee nurses, Red Cross staff, and an ambulance driver. Course contents were delivered using the participant manual, lectures using PowerPoint overhead projector, whiteboard presentations, demonstration scenarios, case scenarios, skill stations and workshop discussion groups. The participant manuals were delivered to the participants a day prior to the courses.

**PTC Multiple Choice Questions**

The PTC course was evaluated using a standard multiple choice questions related to trauma assessment and management before and after the course. There were 20 questions delivered on the PowerPoint projector and the participants were given papers to write their answers with their names pre and post PTC course delivery respectively. The answers were then analysed to ascertain the baseline knowledge as well as the gain from the course.

**Table 2 : Course 2 MCQ Results**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Scores** | **<5** | **6 – 10** | **11 – 15** | **16 – 20** | **Average** | **Range** |
| **Pre test** | 15% | 70% | 15% | 0 | 7 | 1 – 12 |
| **Post test** | 0 | 12% | 71% | 3% | 13.3 | 8 – 20 |

**Figure 2 : PTC Course #2 Multiple Choice Questions Results**

# **DISCUSSION**

From our pre-course participation form, it was evident that majority, or almost all, of our participants wish to learn more about trauma and how to manage them in our local setting with the resources available at PMH and also out in the islands’ health centres.

From the 2 PTC courses, we managed to train 36 participants while 4 did not complete the training. Participants were from varieties of background such as medical officers, nurse practitioners, staff nurses, nurse assistants, staff from Red Cross Tuvalu and also an ambulance driver. (Figure 3)

**Figure 3 : PTC Course Participants Background**

**Key :**

|  |  |  |
| --- | --- | --- |
| **Dr – Doctor** | **NP – Nurse Practitioner** | **SN – Staff Nurse** |
| **NA – Nurse Assistant** | **RC – Red Cross staff** | **AD – Ambulance Driver** |

Figure 1 & 2 above showed the participants results from the pre-course and post-course multiple choice questions. It’s highlighted that both courses has a better post – course MCQ results which showed that participants do learn the principles of PTC throughout the 2 days course. Table 3 below summarised the results of both PTC courses and the results of the multiple choices questions.

**Table 3 : Multiple Choices Questions Results Summary**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **PTC Course #1** | | **PTC Course #2** | |
| ***Pre – Course*** | ***Post – Course*** | ***Pre – Course*** | ***Post – Course*** |
| **Pass** | 33% | 89% | 25% | 88% |
| **Fail** | 67% | 11% | 75% | 12% |
| **Average** (out of 20) | 8.6 | 12.2 | 7 | 13.3 |
| **Range** (out of 20) | 5 – 12 | 9 – 16 | 1 – 12 | 8 – 20 |

In both courses, the pass rate during the pre – course MCQ were quite low, 33% and 25% respectively. The average mark for both courses were below 10 thus reflecting the high failure rate of 67% and 75%, while the range of marks were both below 12.

Post – courses MCQs reflect a higher pass rate of just less than 90% in both PTC courses which reflect that participants do learn something out of the courses. In addition, the average mark and the range of marks were increased while the failure rate reduced markedly.

**Figure 4 : PTC Courses Multiple Choice Results Summary**

**Post – Course Feedback**

At the end of the 2 days course, we distributed the course feedback questionnaire form to all the participants for their feedback on the course so to help us to improve the course in the future. Figure 4 summarized the participants feedback based on how these sessions were presented.

There was evidence in the above results together with feedbacks and performances during discussion, skill stations and workshops that the PTC Gospel was well taken. The participants were very enthusiastic from the start to the end and still were hungry for more and requested if all staff member in the outer island and PMH could be trained.The courses were well received and appreciated by the participants and the facilitators. Most participants felt very comfortable with the hands-on approach, hence the practical sessions and discussions proved to be worthwhile minus the time constraints.

**Administration Support**

The PMH Administration staffs were very supportive in arranging for the manuals printing & binding, distributing manuals to participants, and organizing logistic support and venue. The courses were conducted in the conference room at PMH.

# **RECOMMENDATION**

# Annual PTC courses

* ***Target Participants***

1. *Doctors* : All Interns and Doctors must do this course as part of their professional development – Tuvalu MoH & Medical Council to confirm that this is a compulsory training requirement for all doctors practice in Tuvalu as part of their annual registration.
2. *Nurses* : That all nurses at MoH, outer islands and PMH, must do this course – target for every nurse to attend this course in the next 2 years
3. *First Responders* : That ambulance driver, police and fireman should be trained using an adjusted PTC course to suit their level of medical knowledge.

* **Local PTC Instructors**
* With our current number (12) of local instructors, Tuvalu can be able to run their own PTC course with minimal assistance from external Instructors, therefore for sustainability purposes, Instructors course should be done on a bi-annual basis to ensure that the number of local instructors can be maintained.
* **Tuvalu PTC Coordinating Team**
* The coordinating team to continue to work together with the MHMS and KITP in planning & delivering of PTC courses throughout Tuvalu

# CONCLUSION

At the end of this PTC course training, MoH Tuvalu has 12 PTC Instructors and we have trained 36 participants from various health background ranging from doctors, nurse practitioners, staff nurses, nurse assistants and an ambulance driver.

This is quite an achievement for the MoH Tuvalu, and we need to work together to progress and implement the recommendations and target for PTC in Tuvalu.

Overall, let’s congratulate ourselves for a work well done and hope that we continue to spread the gospel of PTC not only in Princess Margaret Hospital but throughout the whole of Tuvalu and other relevant stakeholders

# **ACKNOWLEDGEMENT**

Thanks to the Permanent Secretary for Health, Mr Isaia Taape, and the Director of Health, Dr Nese Conway, and the Ministry of Health for their support. We also acknowledge the support from the Acting Chief Nursing Officer, Mrs Mamaha Viliamu, and the Administration staff. A special thanks to all the instructors, who all willing to assist on our first ever PTC course in Tuvalu, as well as the instructor’s course. Congratulations to all the local participants for their keenness and enthusiasm during the training.

The PTC course was funded by the Ministry of Health (MoH), and we thank you so much for making it possible to deliver these PTC courses in Tuvalu.

Last but not the least, our sincere thanks to the Administration staff for their tireless assistance with the organizing and sorting out the logistic needs for the running of the PTC courses smoothly and you have been wonderful.

Congratulations to all and keep up the excellent work by all teams.

**Attachment 1** : Tuvalu PTC Course Schedule

|  |  |
| --- | --- |
| **Date** | **ACTIVITIES** |
| Friday 16th Sept | 1400 – 1600hrs : Instructors Course #1 Part 1 |
| Saturday 17th Sept | 0900 – 1200hrs : Instructors Course #1 Part 2 |
| Monday 19th Sept | 0830 – 1600hrs : PTC Course #1 Day 1 |
| Tuesday 20th Sept | 0830 – 1600hrs : PTC Course #1 Day 2 |
| Friday 23rd Sept | 0830 – 1600hrs : Instructors Course #2 |
| Monday 26th Sept | 0830 – 1600hrs : PTC Course #2 Day 1 |
| Tuesday 27th Sept | 0830 – 1600hrs : PTC Course #2 Day 2 |

**Attachment 2** : Tuvalu PTC Course Participants List

|  |  |  |  |
| --- | --- | --- | --- |
| **PTC Course #1** | | **PTC Course #2** | |
| ***Participants*** | ***Position*** | ***Participants*** | ***Position*** |
| 1.Mamaha Viliamu | Sister in Charge  PMH | 1.Manipola Nikotemo | Senior Nurse  PMH |
| 2.Kelera Teaukai | Staff Nurse  PMH | 2.Faailo P Eliesa | Staff Nurse  PMH |
| 3.Esther M Fili | Staff Nurse  PMH | 3.Koli Faulufalega | Nurse Practitioner  Nui |
| 4.Tekiboi T Panapa | Staff Nurse  PMH | 4.Lauefa V Vave | Staff Nurse  PMH |
| 5.Sueina Pelita | Staff Nurse  PMH | 5.Fatele Vakafa | Staff Nurse  OT/PMH |
| 6.Failaunga Tanielu | Staff Nurse  PMH | 6.Elenoa Bruce | Senior Nurse  OPD&ED/PMH |
| 7.Felolini Anitelea | Senior Nurse  Nukufetau | 7.Felise M Afasene | Senior Nurse  Kavatoetoe HC |
| 8.Tenako Reete | Senior Nurse  Nanumaga | 8.Eline M Soloseni | Senior Nurse  Lofeangai HC |
| 9.Sokolito P Maloto | Nurse Practitioner  Vaitupu | 9.Lauto Maani | Senior Nurse  Nanumea |
| 10.Melelita Pelasio | Staff Nurse  Nukulaelae | 10.Fisanga Tauleta | Nurse Practitioner  Nanumaga |
| 11.Teveve Elisaia | Staff Nurse  OT/PMH | 11.Matagali Norm | Nurse Assistant  PMH |
| 12.Tilesa Tepaula | Senior Nurse  RH Clinic/PMH | 12.Lasela Iuni | Nurse Assistant  PMH |
| 13.Meiema Lusama | Staff Nurse  OPD & ED/PMH | 13.Priscilla Esau | Nurse Assistant  PMH |
| 14.Margaret P Veni | Nurse Assistant  OT/PMH | 14.Eleala Avanitele | Red Cross |
| 15.Tangialofa Emiliata | Nurse Assistant  PMH | 15.Milikini Failautusi | Red Cross |
| 16.Ruby Futinga | Nurse Assistant  RH Clinic/PMH | 16.Dr Suria E Puafolau | Medical Officer  PMH |
| 17.Lisa Puapua | Red Cross Staff | 17.Dr Tuese S Falesa | Medical Officer  PMH |
| 18.Loloimele Vailele | Red Cross Staff | 18.Logomalie Tumua | Driver  PMH |

**Staff Who Did Not Complete the PTC Course**

|  |  |
| --- | --- |
| 1. Telisa Tekapu – Staff Nurse / PMH | 1. Losa Kaisala – Nurse Assistant/PMH |
| 1. Ivy Kaisala – Trainee Nurse | 1. Miliama Apisai – Trainee Nurse |

**Attachment 3** : Tuvalu PTC Course 1 Program

DAY 1 : 19th September

|  |  |  |
| --- | --- | --- |
| 0830hrs | Welcome / MCQs | *Welcome DoH/Dr Alo MCQ* |
| 0900hrs | Introductions & Local Trauma Perspective | *Dr Alo* |
| 0915hrs | PTC Overview | *Dr Alani* |
| 0930hrs | ABCDE of Trauma & Primary Survey | *Dr Agi* |
| 1000hrs | **MORNING TEA** |  |
| 1015hrs | Airway & Breathing | *Dr Toko* |
| 1100hrs | Circulation & Shock | *Dr Alo* |
| 1145hrs | Chest Injuries | *Dr Mesol* |
| 1230hrs | **LUNCH** |  |
| 1300hrs | Skills Station |  |
| *Basic / Advance Airway – Drs Toko/Alani* |  |
| *Cervical Spine / Log-roll – Drs Alo/Agi* |  |
| *Chest Drain – Dr Mesol* |  |
| 1400hrs | **AFTERNOON TEA** |  |
| 1415hrs | Abdominal, Pelvic & Limb Injuries | *Dr Agi/Mesol* |
| 1500hrs | Demonstration Scenario | *Team* |
| 1510hrs | Group Work – Scenario Practice |  |
| 1600hrs | Overview & Summary |  |

DAY 2 : 20th September

|  |  |  |
| --- | --- | --- |
| 0830hrs | Recap from Day 1 |  |
| 0845hrs | Head & Spinal Injuries | *Dr Mesol* |
| 0930hrs | Trauma in Children & Pregnancy | *Dr Toko* |
| 1000hrs | Burns | *Dr Alani* |
| 1030hrs | **MORNING TEA** |  |
| 1045hrs | Secondary Survey | *Dr Agi* |
| 1145hrs | Workshop  ***Topics :***  *Analgesia/ Paediatric Trauma : Toko & Agi*  *Transportation/Disaster Management : Alani* |  |
| 1230hrs | **LUNCH** |  |
| 1300hrs | Workshop Group Presentation |  |
| 1400hrs | Scenarios |  |
| 1445hrs | **AFTERNOON TEA** |  |
| 1500hrs | Repeat MCQs |  |
| 1530hrs | Summary, Feedback & Evaluation |  |
| 1600hrs | **CLOSE** |  |

**Attachment 4** : Tuvalu PTC Course 2 Program

DAY 1 : Monday 26th September

|  |  |  |
| --- | --- | --- |
| 0830hrs | Welcome / MCQs | *Welcome DoH/Dr Toko MCQ* |
| 0900hrs | Introductions & Local Trauma Perspective | *Dr Toko* |
| 0915hrs | PTC Overview | *Dr Alani* |
| 0930hrs | ABCDE of Trauma & Primary Survey | *Dr Agi* |
| 1000hrs | **MORNING TEA** |  |
| 1015hrs | Airway & Breathing | *Dr Toko* |
| 1100hrs | Circulation & Shock | *Dr Alani* |
| 1145hrs | Chest Injuries | *Dr Mesol* |
| 1230hrs | **LUNCH** |  |
| 1300hrs | Skills Station |  |
| *Basic / Advance Airway – Dr Toko/Margaret* |  |
| *Cervical Spine / Log-roll – Dr Agi/Tangi* |  |
| *Chest Drain – Dr Mesol* |  |
| 1400hrs | **AFTERNOON TEA** |  |
| 1415hrs | Abdominal, Pelvic & Limb Injuries | *Dr Mesol/Dr Agi* |
| 1500hrs | Demonstration Scenario | *Meiema/Failauga/Kelera* |
| 1510hrs | Group Work – Scenario Practice |  |
| 1600hrs | Overview & Summary |  |

DAY 2 : Tuesday 27th September

|  |  |  |
| --- | --- | --- |
| 0830hrs | Recap from Day 1 |  |
| 0845hrs | Head & Spinal Injuries | *Drs Mesol/Agi* |
| 0930hrs | Trauma in Children & Pregnancy | *Dr Toko* |
| 1000hrs | Burns | *Dr Alani/Esther* |
| 1030hrs | **MORNING TEA** |  |
| 1045hrs | Secondary Survey | *SN Esther* |
| 1145hrs | Workshop  ***Topics :***  *Analgesia – Dr Agi*  *Paediatric Trauma – Dr Toko*  *Transportation & Disaster Management – Dr Alani* |  |
| 1230hrs | **LUNCH** |  |
| 1300hrs | Workshop Group Presentation |  |
| 1400hrs | Scenarios |  |
| 1445hrs | **AFTERNOON TEA** |  |
| 1500hrs | Repeat MCQs |  |
| 1530hrs | Summary, Feedback & Evaluation |  |
| 1600hrs | **CLOSE** |  |

**Attachment 5** : Tuvalu PTC Course Feedback Form

We would be very grateful for your feedback on the course so help us to improve the course in the future. Please put a cross ‘X’ in the most appropriate column

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Very Poor**  **1** | **Poor**  **2** | **Average**  **3** | **Good**  **4** | **Very Good**  **5** |
| **DAY 1** |  |  |  |  |  |
| Local Trauma Perspective |  |  |  |  |  |
| The ABCDE of trauma and Primary Survey |  |  |  |  |  |
| Airway & Breathing |  |  |  |  |  |
| Circulation & Shock |  |  |  |  |  |
| Skill Stations |  |  |  |  |  |
| Secondary Survey |  |  |  |  |  |
| Demonstrations Scenario |  |  |  |  |  |
| Scenarios Practise |  |  |  |  |  |
| **DAY 2** |  |  |  |  |  |
| Head Trauma |  |  |  |  |  |
| Spinal Trauma |  |  |  |  |  |
| Abdominal Trauma |  |  |  |  |  |
| Limb Trauma |  |  |  |  |  |
| Trauma in Children |  |  |  |  |  |
| Trauma in Pregnancy |  |  |  |  |  |
| Burns |  |  |  |  |  |
| Workshops |  |  |  |  |  |
| Disaster Management |  |  |  |  |  |
| Scenarios Practise 2 |  |  |  |  |  |
| Multiple Choice Questions |  |  |  |  |  |
| What the best part of the course | | | | | |
| What would you change | | | | | |