EXECUTIVE SUMMARY

A single one-day EPM workshop was held in the capital of Tonga, training a total of 20 participants. The course was taught principally by local staff – Dr. Matamoana Tupou, and Sr. ‘Ofa Vea, who had both attended an EPM workshop and instructors’ course in 2012. Recommendations from the course include the improvement of written protocols in the hospital, the introduction of EPM into the nursing school, and further EPMs to be held in Nuku’alofa and in the islands. Some longer term goals involve increasing the patient acceptance of pain medications, and improving education about the use of opiates.

Country information

Tonga is a small Pacific island nation lying north east of New Zealand. It has a population of 110,000, of which 70% live in the capital, Nuku’alofa. Tonga is an archipelago of more than 170 islands extending 800km from north to south and encompassing over 700,000 km$^2$ of the southern Pacific. Many islands are remote and support small isolated populations.

Tonga is a constitutional monarchy but is in the process of reform towards greater democratic control. There is free and mandatory primary and secondary education, and foreign funded scholarships encourage tertiary education. Literacy rate is 99%. About 100,000 Tongans have emigrated to NZ, Australia and the US.

Tongans have access to a national health care system where both care and medications are free. Health expenditure is 4.7% of GDP (2013). Life expectancy at birth is 77 years for women and 74 years for men. Child mortality is 12/1000 live births. Maternal mortality rate is 124 deaths/100,000 live births. (https://www.cia.gov/library/publications/the-world-factbook/geos/tn.html)

Vaiola Hospital is located 3 km south of the capital. The Japanese government has invested heavily in it’s infrastructure, constructing a new hospital wing in 2010. There are
40 bed wards each for Medical, Surgical and O&G patients. There is a 30 bed paediatric ward and a 40+ bed psychiatric unit. The hospital has a Nursing School, but doctors are trained at Suva or Port Moresby medical schools, and a small number receive scholarships to New Zealand or Australian medical schools.

There is a 75 bed hospital on the second biggest island in Tonga, Vava’u, which is about 400 km north of the capital. There is a single well-equipped operating theatre and five resident doctors. Outreach teams of surgeons and anaesthetist go there regularly to operate.

**Background of EPM in Tonga**

EPM has been taught in Tonga on two previous occasions (May 2012 and May 2013), with a total of 77 health workers trained. 26 of these have been trained as EPM instructors. Dr. Moana and a senior RN, Sr. ‘Ofa Vea completed the instructor training in 2012, and were the instructors in the EPM course for this trip.

English is well understood, but lectures given by the local instructors were in Tongan. All medical notes are written in English.

**Nursing School in Vaiola Hospital**

Sr. Tilema Cama is the head of the Nursing School, which currently has 114 students enrolled in the three year course.

Sr. Tilema and I spent some time going over the EPM materials, and she is keen to incorporate the course into the nursing curriculum. She was given an EPM manual, an instructor’s manual and electronic resources. I have written to her with contact details of some of the previously trained instructors to help teach the first course sometime next year. I will follow-up by e-mail.

**Local organisers & logistics**

Dr. Matamoana Tupou has been a champion of EPM since she first did the course in 2012. Moana is the Senior Medical Officer in charge of A&E.

Moana organised a “Conference Pack” for the EPM consisting of pens, notebook and manual. Some manuals were left over from the last course, and I brought another 8 from Australia. Printing and binding is available in town, but is expensive.

The venue, part of the new hospital, was ideal. There is a large light air-conditioned lecture room with whiteboard and projector. Healthy morning and afternoon teas and lunch were provided by external caterers. Funding for the catering and “Conference Packs” was provided by the World Health Organisation.
Course instructors

1) Dr. Matamoana Tupou  
Senior Medical Officer  
Accident and Emergency, Vaiola Hospital  
dr.matamoana@gmail.com

2) Sr. ‘Ofa Vea  
Senior RN, Accident and Emergency, Vaiola Hospital

3) Dr. Liz Bashford  
Anaesthetist  
lizbashford@mac.com

Course Participants

There were 20 participants at the course, see appendix 1. No anaesthetists attended as all had completed an EPM course previously.

Assessment

The results may not be very reliable as about half of the participants were late, and we ran the test after the introduction and the first three lectures. There was little improvement in the results pre- and post-tests, but there was an overall high standard of answers. Disappointingly, three participants achieved lower scores in the post-test.

Pre-test mean – 19.1
Post-test mean - 20
(Appendix 2)

Feedback forms

Comments:
- “Recognise, Assess, Treat”
- “More confidence”
- “More willing to prescribe opiates”

How can workshop be improved?:
- “Twice a year”
- “Need extra time to read material”
- “Have material prior to workshop to read”
- “More case discussions”
- “Repeat yearly”
Discussion of Barriers to effective pain management

The most significant barrier appears to be a cultural one, in that patients often deny pain when questioned, refuse medications, or are non-compliant when prescribed pain relief. Some of this is due to ‘saving face’, compounded by gender issues (especially male patients and female nurses) and status issues (older patients and young nurses). Staff are understandably reluctant to push pain relief onto patients who deny pain. Discussion on this problem centred around educating patients and staff, and focusing on the advantages of treating pain.

There is strong community reliance on traditional medicines and traditional healers, particularly for palliative care. Patients are more likely to seek help from traditional sources than through doctors. Discussions ensued about educating patients about pain relief options available through western medicine. Also, the possibility of working with traditional healers who could refer difficult and refractory cases to the hospital.

Another significant barrier is from medical and nursing staff around the fear of causing addiction by using opioids. Again, education was proposed as the best solution.

There is inconsistency in the writing up of pain medications by the medical staff. As a solution, one of the suggestions was to arrange for standardised protocols for the doctors write up areas, so there was uniformity in the post-operative orders for pain relief, and this was completed during the visit (see Appendix 3).

Printing of protocols was difficult through the hospital, as all printing had to be done by the secretarial staff in administration. As they were often busy, it would have been an advantage to have a small portable printer to format and print protocols. There were several laminating shops in town, but the cost of laminating was about A$2 per sheet. With respect to the time it took to write/format/print/circulate for approval/and then distribute, laminated protocols are labour intensive. Realistically, they may not have been done by the busy local staff.

Recommendations

Short-term goals

1) Pain protocols for post-surgical pain are written, printed, laminated and put up around the hospital, and anaesthetists and surgeons are encouraged to use them. Encourage anaesthetic staff to write up post-operative medications rather than surgeons. Also protocols for acute pain in A&E and the ward (Appendix 3).

2) Triage form for A&E be modified to include a “faces” pain scale and a 1-6 pain scale rating (Appendix 4).
3) Formulary available on IV trolleys in A&E and in the wards that include drugs for pain relief.

Intermediate goals

4) EPM is taught to the nursing students on a regular basis starting from 2016.

5) Further EPMs to be run by Dr. Moana on an as-needed basis. Continue to educate patients and staff about the benefits of effective pain relief.

6) Make plans to run another EPM at the other hospital on Vava’u.

7) Encourage use of morphine rather than pethidine for post-operative and acute pain.

Long term goals

8) Enlist community support for seeking help for pain relief from the hospital, especially those requiring palliative care. Possibility of involving church leaders and traditional healers.

9) Improve acceptance of pain relief by Tongan patients by education and good medical care.

10) Ongoing education to overcome fears of opiate addiction.

Acknowledgements

I particularly want to thank Dr. Moana, who organised the course with skill and originality. She continues to show great enthusiasm towards improving pain management in her hospital and deserves our ongoing support.

Thanks to the acting CEO of Vaiolo hospital, Dr. Lisiate K’Ulupoana for allowing his staff time to attend the course. EPM/ANZCA funded airfares and accommodation for this trip. Also grateful to the World Health Organisation, which donated funds towards the running of the course.

Dr. Liz Bashford
December 2015

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Dr Matamoana Tupou (Moana)  Senior Medical Officer in charge of A&E
  dr.matamoana@gmail.com

Dr Lisiate K’Ulupoana  Acting CEO of the hospital (previously, Medical Superintendent)
Dr Ma’ake Tupou  Acting Medical Superintendent
Dr Selesia Fifita (Sia)  Consultant in Anaesthetics
Melenaita Mahe  Chief Pharmacist
Sr. Tilema Cama  Head of the Nursing School
Mr Eddie Hingeley  Biomedical engineer, due to leave end 2015, but based in Melbourne and has spent two years in Tonga
Dr Sam Cosman  Anaesthetic Consultant from Canada

“EPM Conference Pack
Dr. Moana Tupou (right) and Sr. ‘Ofa Vea, local instructors on this course.

Sr. Tilema CAMA, Head of the Nuku'alofa nursing school.
Appendix 3:

PAIN MANAGEMENT PROTOCOLS FOR ACUTE PAIN
Effective pain relief will reduce complications and lead to earlier mobilisation and discharge.

R RECOGNISE

Does the patient have pain?
Is the injury or illness likely to cause pain?
Ask the patient regularly.

A ASSESS

Measure severity, using words (mild, moderate or severe) or pain scale

I he ngaahi fika koena, fakailongai mai ai e tuunga ho falangaaki.

T TREAT

Use multi-modal analgesia (non-drug treatments and combination of drug treatments).

NON-DRUG TREATMENTS

- Ice application, measures to cool
- Address medical and other problems - e.g. antibiotics for infection, hydration, nutrition, nursing care, physiotherapy, surgery.

DRUG TREATMENTS

Different drugs work on different parts of the pain pathways. Combining drugs gives more effective pain relief at lower doses.

MILD-MODERATE PAIN

Give regular Paracetamol, 500 mg PO q8h (peak: 15 mg/kg q8h PO/PR)
Consider adding an NSAID if no contraindication (renal disease, gastrointestinal upset, high blood pressure, caution in the elderly and TB).

E.g. Ibuprofen 200-400 mg PO q8h (5 mg/kg q8h PO/PR)
Indomethacin 50-100 mg PO q12h (5-10 mg/kg q6h PO)
Naproxen 500-750 mg PO q12h (5-10 mg/kg q6h)

Consider adding Codeine:
E.g. Codein 30-60 mg PO 4 hourly (peak: 5-10 mg/kg q6h PO)

SEVERE PAIN

For very severe pain, give IV Opiates or consider using IV Ketamine

- E.g. Morphine 1-2 mg IV every 5 minutes until pain controlled
- Ketamine IV 10 mg (0.1 mg/kg) repeat in 3min until controlled

For severe pain, give:
- Morphine 5-10 mg/m² in 24 hours (5-10 mg/kg)
- Fentanyl 50-100 mcg SC/M 1/2 h (1-2 mcg/kg)
- Codeine 30-60 mg PO q4h (peak: 5-10 mg/kg q6h PO)

(adjust doses downwards for elderly, unwell and asthmatic)

Also give Paracetamol 1000 mg PO q8h (peak: 15 mg/kg q6h PO/PR)
Consider adding an NSAID if no contraindication (renal disease, GIT upset, high blood pressure, caution in the elderly and TB).

E.g. Ibuprofen 200-400 mg PO q8h (5 mg/kg q8h PO/PR)
Indomethacin 50-100 mg PO q12h (5-10 mg/kg q6h)
Naproxen 500-750 mg PO q12h (5-10 mg/kg q6h)

Re-assess patient after 1-2 hours or shorter if severe pain, if pain persists, consider increasing the dose of morphine or adding another analgesic.

Note: severe pain improves, change from injected to oral opiate.

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Appendix 4: Faces Pain Scale in Tongan

I he ngaahi fika koena, fakailongai mai ai e tuunga ho falangaaki.

Ikai ha falangaaki
Ikai matuuali’e langa