



## RACP Foundation Research Awards

### FINAL REPORT

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|--|---|--------------|
| <b>Project / Program Title</b>         | Development of training module for rehabilitation physicians for the management of disaster victims |              |
| <b>Name</b>                            | Dr Fary Khan  |              |
| <b>Award Received</b>                  | 2017 RACP AFRM Education Development Grant  |              |
| <b>Report Date</b>                     | 12 March 2019   |              |
| <b>Chief Investigator / Supervisor</b> |   |              |
| <b>Administering Institution</b>       | The Royal Melbourne Hospital  |              |
| <b>Funding Period</b>                  | Start Date:   | 1 March 2018 |
|  | Finish Date:  | 1 March 2019 |

#### PROJECT SUMMARY

The World Health Organisation (WHO) Emergency Medical Team Initiative (EMTI) is currently undertaking classification and registration of teams which have been deployed in previous emergencies. This initiative recognizes Rehabilitation as an integral aspect of the medical response and patient-centred care in disaster settings and has specified the minimum standards for rehabilitation in emergencies. There is strong consensus that medical rehabilitation should be initiated in the immediate emergency response phase, and should be continued in the community over the longer-term until treatment goals are achieved and survivors are successfully integrated into the society. The guidelines should ensure a rapid, professional, coordinated medical response by both national and international EMTs and that effective and coordinated patient care can be delivered during disasters and beyond their departure.

With the increasing frequency of natural disasters, especially in the Asia-Pacific region, it is important that rehabilitation physicians in Australia are able to respond to the call for inclusion of their specialty in EMTs. Therefore there is a need to build or strengthen capacity in disaster preparedness within the profession. Capacity building in this area is endorsed by the Disaster Relief Committee of the International Society of Physical and Rehabilitation Medicine (ISPRM), and fits with the increasing interest of rehabilitation physicians within Australia to be involved in disaster settings.

This grant was used to develop a short on-line training module for rehabilitation physicians - which will provide important information about the rehabilitation management of injured in a disaster setting. We focused on the management of traumatic brain injury in the first instance, as it is common in disasters and can be used as a template for future series of modules in disaster preparedness, e.g. management of amputations, multi-trauma etc. The aim of this resource is to provide preparation for rehabilitation physicians in Australia, New Zealand and other countries in the Asia-Pacific region who are about to be deployed to a disaster situation, whether as an

independent cell, or as part of a larger Emergency Medical Team. This resource will be provided under the auspices of the AFRM, and will be hosted on the AFRM/RMSANZ website .. It is intended to be freely available to users following registration.

### **PROJECT AIMS / OBJECTIVES**

Objective: Enhance capacity of Rehab physicians deployed in future disasters under auspices of the WHO/ AFRM. The Neurorehabilitation course comprises the following sub-modules:

1. Overview of the disaster environment
2. Acute management of head trauma
3. Medical complications of traumatic brain injury (neuroendocrine, motor, sensory, perceptual, spasticity, heterotopic ossification, fractures etc)
4. Cognition and behaviour management
5. Bladder and bowel management in low resource environments
6. Pain and fatigue management
7. Triage, assessment, reintegration in the community setting
8. Caregiver goiver strain and training

The design is based on the platform used in thee-Learn initiative of ISCoS on spinal cord injury. The web platform will be supported by an interface that will provide the course administrators the flexibility to update, move or change the content as needed, so as to ensure its long-term viability.

Each sub-module will comprise:

- A presentation giving an overview of the topic
- Activity-based learning exercises, including reviewing case studies, listening to interviews from experts, answering questions and viewing photos and videos.
- References
- Self-assessment questions

The activity-based learning exercises will ensure that users are actively engaged in the learning process rather than passive recipients.

### **SIGNIFICANCE AND OUTCOMES**

The proposed course is the first course in the world in disaster preparedness for rehabilitation physicians. As such, it is supported by both RMSANZ & ISPRM - to form the basis for the development of future modules, not only for rehabilitation physicians but also for other members of the rehabilitation team.

Upskilling rehabilitation physicians in disaster preparedness is essential to ensure that they fulfil the expectations of the WHO EMT Initiative that rehabilitation should be an integral aspect of the medical response and patient-centred care in disaster settings. Although rehabilitation has been provided after the acute medical response in previous disasters, lessons have been learned from those experiences that have recognised that early involvement of rehabilitation staff is needed to provide patients with coordinated care that will minimise complications (e.g. contractures, pressure ulcers) and maximise functional outcomes.

This initiative will enhance the profile of rehabilitation medicine and strengthen the role of rehabilitation in improving the care of patients in disaster settings.

## PUBLICATIONS / PRESENTATIONS

We thank the RACP &AFRM for their kind support. The following publications have arisen as a result of this project:

- Amatya B, Vasudevan V, Zhang N, Chopra S, Astrakhantseva I, Khan F. Emergency Medical Team-Minimum Technical Standards and Recommendation for TBI Specialists Care Team. *Journal of International Society Physical and Rehabilitation Medicine* 2018;5(5):2018.
- Lee SY, Vasudevan V, Amatya Band Khan F. Updates in Management of Adults with Traumatic Brain Injury: A Rehabilitation Perspective. *Phys Med Rehabil Int.* 2019; 6(1): 1160.

Also currently Under review:

- Khan F, Amatya B, Lee SY, Vasudevan V. Rehabilitation in disaster relief (Invited Chapter). *Physical Medicine and Rehabilitation Clinics of North America*
- Lee SY, Amatya B, Judson R, Truesdale M, Reinhardt JD, Uddin T, Xiong XH, Khan F. Clinical Practice Guidelines for Rehabilitation in Traumatic Brain Injury: A Critical Appraisal, *Archive of Physical and Rehabilitation Medicine*
- Lee SY, Amatya B, Khan F. Applicability of Traumatic Brain Injury Rehabilitation Interventions in Natural Disaster Settings. *Archive of Physical and Rehabilitation Medicine*

Note: additional 2 publications are currently underway.

This grant funded the content and development work of the TBI educational material for the neurorehabilitation course and is now finalized. However, further funds are required for the videos and other interactive material to be developed and is being funded through research grants at the Rehabilitation Research Centre at the Royal Melbourne Hospital. A further grant has been submitted to the ISPRM to fund & develop thee-platform ( February 2019). This is being processed.