
WHAT IS THE ROLE FOR REHABILITATION IN DISASTERS?

DR TRACEY SYMMONS

M.B.,B.S, FAFRM, (RACP), MPH&TM, DA (UK), DRCOG, DGM

VANUATU 4TH HEALTH RESEARCH SYMPOSIUM

Port Vila, Vanuatu

12-13 October 2023



MY BACKGROUND

- Generalist doctor – PNG 7 years
- Rehabilitation physician Townsville (Floods, cyclones)
- Fiji including cyclone Winston

Solomons



INTRODUCTION



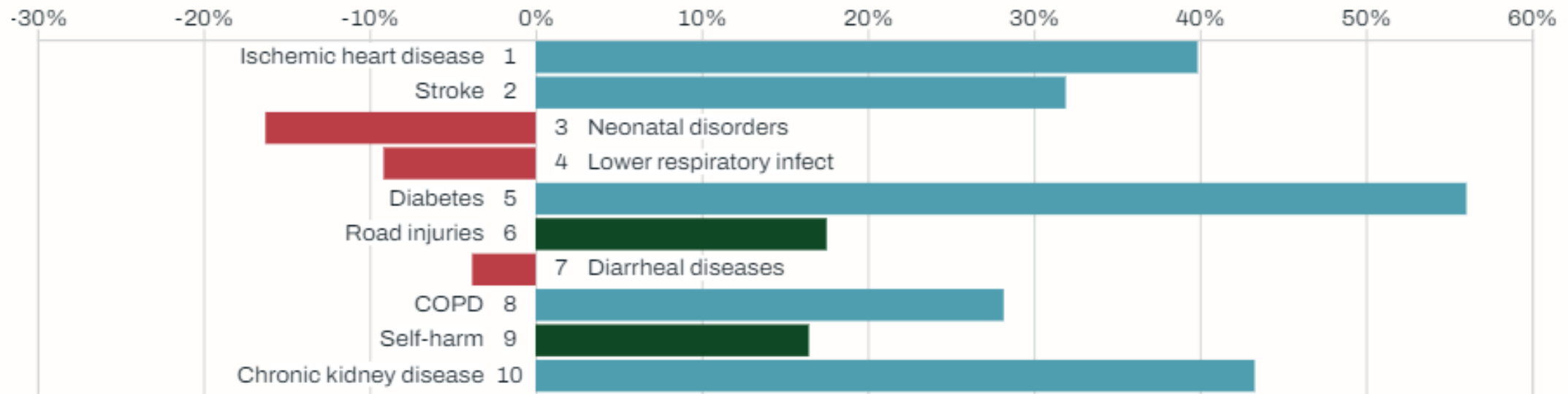
In the Pacific, there is a **substantial unmet need** for rehabilitation care for those living with disabilities from diabetes related amputations, strokes, children with cerebral palsy, and many chronic conditions.



VANUATU : HEALTH METRICS

What causes the most death and disability combined?

- Communicable, maternal, neonatal, and nutritional diseases
- Non-communicable diseases
- Injuries



REHABILITATION

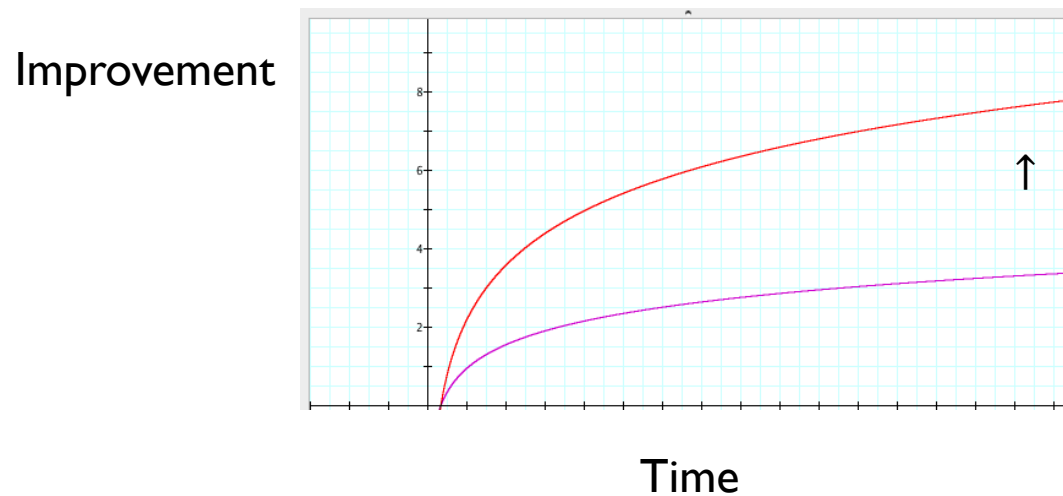
Rehabilitation :“A set of measures that assist individuals who experience or who are likely to experience disability to achieve and maintain optimal functioning in interaction with their environment” WHO

- Amputees new: 40-60/year
- GBS 4-5/year
- New stroke 12-44 /year
- Spinal injury : new 5

Physiotherapy data 2019-2022
Daniel Frankem , Port Vila



REHABILITATION : REDUCES DISABILITY



Natural disasters can result in substantial number of survivors with disabling conditions, and the disability could be reduced by effective rehabilitation



METHODS

Literature review

A limited literature review was undertaken to review the role of Rehabilitation Medicine in disaster settings, focus on the Pacific

Recent peer reviewed literature was selected with a search of key words: Rehabilitation, natural disasters, cyclones, earthquakes, spinal cord injury.



RESULTS

- 10 relevant papers were identified which were specifically relevant to rehabilitation in disaster settings.
- 4 related to the Australian context, the others related to disaster preparedness and response in international disaster settings.
- Review of WHO position

REHABILITATION IN EMERGENCIES

Emergencies can result in a massive surge in traumatic injuries, for which rehabilitation is an essential component of care.

Early access to rehabilitation in emergencies:

Helps speed up recovery and prevent complications that could prolong admission

Helps to achieve the best long-term outcomes for the patient

Rehabilitation in the EMT:

Can assist in identifying a patient's needs beyond discharge and refer them to the appropriate services

Can support a patient to self manage and continue their recovery after they leave the hospital

For more information about the WHO rehabilitation standards for EMTs visit: <https://extranet.who.int/emt/>

The infographic is divided into three main sections. The top section, 'REHABILITATION IN EMERGENCIES', features a blue background with white text. It includes three circular icons representing natural disasters: a blue wave for earthquakes, a green and brown jagged line for tsunamis, and a yellow and red flame for fires. Below these icons, it states that in emergencies, access to rehabilitation services is difficult. The middle section, 'Early access to rehabilitation in emergencies:', has a light blue background and shows three illustrations of people using mobility aids: a person with a cane, a person on a treadmill, and a person with a knee brace. The bottom section, 'Rehabilitation in the EMT:', has a dark blue background and shows an illustration of a person in a wheelchair next to two house icons, and another illustration of a person in a yellow shirt with a white bandage on their arm.

RESULTS

main themes

1. Impact of disasters on those who live with disability
2. Integral role of rehabilitation in disaster settings
2. Limited research done in the Pacific on disasters



RESULTS :

Need a deliberate focus on rehabilitation in disasters

- Before a disaster including care of those with disabilities
- Post disaster : care of the newly injured , to minimize secondary complications , return to community

Most disasters occur in low resource settings where rehabilitation services are underdeveloped



PEOPLE LIVING WITH DISABILITIES : VULNERABLE IN DISASTERS

Two to four times more likely to die or sustain injuries in disasters than the general population , more likely to be unprepared

- Have barriers with accessing information ,often hard to evacuate safely
- Challenges if blind or wheelchair dependent
- Need to ensure they can shelter safely



Contents lists available at ScienceDirect

International Journal of Disaster Risk Reduction

journal homepage: www.elsevier.com/locate/ijdrr

Experiences of people with physical disabilities before, during, and after tropical cyclones in Queensland, Australia

Jennifer Quail^{*}, Ruth N. Barker, Caryn West

College of Healthcare Sciences, Division of Tropical Health and Medicine, James Cook University, Cairns, QLD, Australia

International Journal of Disaster Risk Reduction 82 (2022) 103326



Contents lists available at ScienceDirect

International Journal of Disaster Risk Reduction

journal homepage: www.elsevier.com/locate/ijdrr

The lived experience of sheltering for individuals with disabilities during severe tropical cyclones in northern Queensland, Australia

Ruth Barker^{*}, Andrée Malpass, Caryn West

College of Healthcare Sciences, James Cook University, Cairns, Queensland, Australia



ABILITY TO COPE DURING A CYCLONE

Post Cyclone Harold: response should be specific to individual needs to ensure safe access to water /hygiene including for people with a disability

J. Quail, et al.

International Journal of Disaster Risk Reduction 39 (2019) 101122

Environmental Factors	Personal Factors
<ul style="list-style-type: none">• Cyclone impact• Logistical support• Psychosocial support	<ul style="list-style-type: none">• Readiness• Managing one's own health• Financial autonomy• Personal resilience

Fig. 1. Key environmental and personal factors influencing ability to manage wellbeing before, during, and after a cyclone.



BENEFICIAL EFFECT FOR MEDICAL REHABILITATION IN DISASTERS

- Evidence strongly supports the early involvement of rehabilitation health professionals (doctors, physiotherapists, nurses, others allied health) for minimising mortality and disability
- Rehabilitation interventions strongest predictors for increased and sustained functional gains and improved quality of life



ROLE STRETCH

- Rehabilitation professionals may need to stretch beyond usual roles to meet the complex needs of disaster victims
- Substantial increase in the numbers of non communicable disease

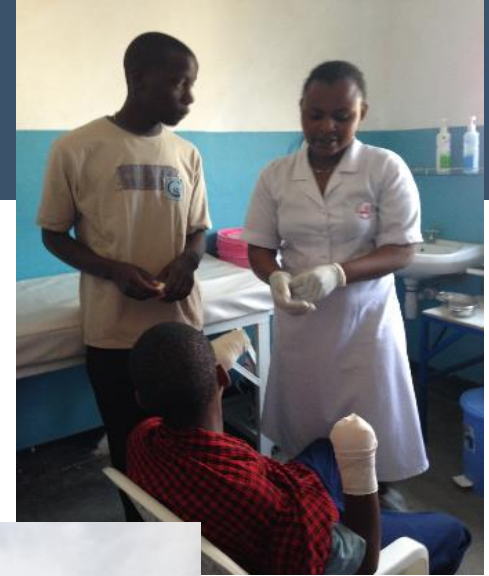
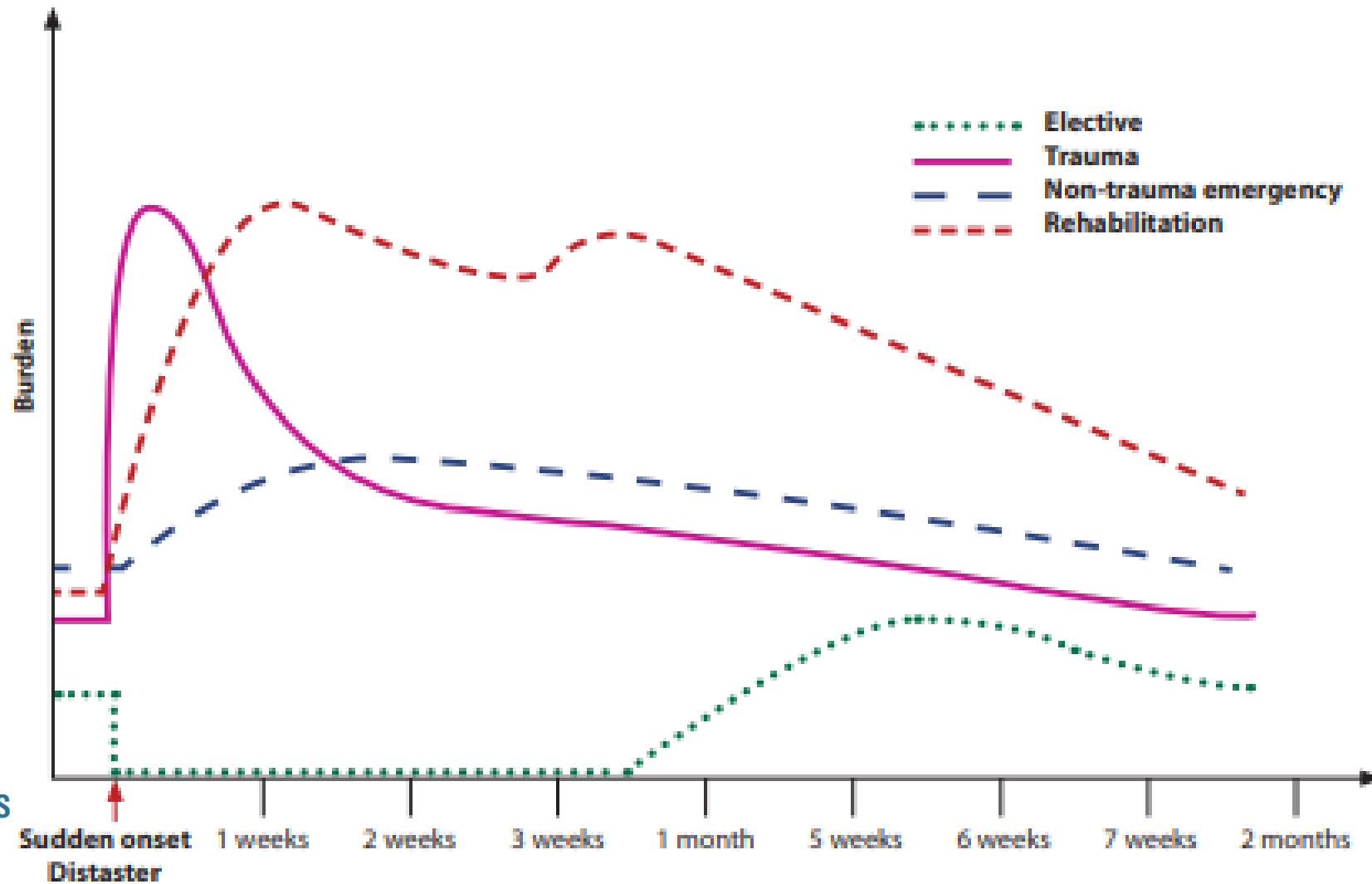


Figure 1. Trends in rehabilitation burden in sudden-onset disasters over time (20)



von Schreeb J, Riddez L, Samnegård H, Rosling H. Foreign field hospitals in the recent sudden onset disasters in Iran, Haiti, Indonesia, and Pakistan. Prehosp Disaster Med 2008;23:14

DISCUSSION

Positive benefits for health care systems with disaster survivors who have received rehabilitation services

- ✓ better clinical outcomes
- ✓ less complications
- ✓ shortened length of stay,

important in an already stretched health care system.



BUILD LOCAL CAPACITY

Building local capacity is imperative to halt the perpetual cycle of disability and poverty seen in low- and middle-income countries



The volume of traumatic injuries and the exacerbation of chronic medical conditions that can arise in emergencies **place considerable demands on the ministry of health** and **can leave a legacy of disability for years to come**



POTENTIAL ROLE OF REHABILITATION STAFF

Mitigate /
prepare

- Strategies to reach vulnerable populations
- Triage , tracking, training

Response

- Rescue, medical care ,triage
- Post surgical care, assistive devices ,

recovery

- Discharge planning, self care training
- Community rehabilitation



REHABILITATION IS INTEGRAL

Rehabilitation is integral to disaster response and management

- There are unmet needs and gaps in rehabilitation in disaster settings
- Goal : comprehensive care to disaster survivors

How ?

- ? Build local capacity /include in disaster plans
- ? EMT rehabilitation teams
- ? Increase linkage with NGO/VSPD



ACKNOWLEDGMENTS

- Developing Post Disaster Physical Rehabilitation Gosney, J et al J Rehabil Med 43 (2011) 965-968
- Medical rehabilitation after natural Disasters : Why , When and How Rathore F et al Arch Phys Med Rehabil 93 (2012) 1875-1881
- Water Women and Disability; using mixed methods to support inclusive WASH programme design in Vanuatu Mactaggart I et al Lancet Regional Health Western Pacific 8 (2021) 100109
- Disaster Response and management: the integral role of rehabilitation Bhasker A Khan F Ann Rehabil Med 47 (2023) 237-260
- Update on Disaster rehabilitation Khan F, Bhasker A Am J Phys Med and Rehab 100 (2023) 1021-1026
- Rehabilitation in Disaster Relief Khan F et al Phys Med Rehabil Clin N Am 30 (2019) 723-747
- Disaster Rehabilitation Response Plan Now or Never Bhasker, A et al Am J Physical Medicine and Rehab 99 (2020) 170-177
- Overview of medical rehabilitation Natural Disasters in the Pacific Island Countries Amatya B Khan F Phys med Rehabil Int 3 (2016) 1090
- Experiences of people with physical Disabilities before during and after tropical cyclones in Australia Quail, J et al In J Disaster Risk Reduction 2019
- The lived experience of Sheltering for Individuals with disabilities during severe tropical cyclones in Northern Queensland, Australia Barker, R et al Int J Disaster Risk reduction 2020

MINIMUM TECHNICAL STANDARDS AND RECOMMENDATIONS FOR REHABILITATION

Emergency Medical Teams



Townsville Hospital and Health Service

Stay safe and healthy after storms, floods and cyclones

<p>WATER SUPPLY Ensure water supply is clean and free from contamination</p>	<p>PROTECTIVE CLOTHING Wear protective clothing, i.e. closed-toe shoes, long sleeves, gloves, hat and sunscreen</p>	<p>FLOOD WATERS Don't walk or wade through flood water</p>	<p>WOUND CARE Clean and cover wounds with water-resistant dressings</p>
<p>WILDLIFE SAFETY Watch out for snakes, spiders and mosquitoes</p>	<p>HAND WASHING Wash your hands with soap or hand sanitiser</p>	<p>FOOD SAFETY Think food safety, if in doubt throw it out</p>	<p>HAZARDOUS DEBRIS Take precautions if handling cement, asbestos or other debris</p>

For further information - www.health.qld.gov.au/disaster
Contact your nearest public health unit - 13 QGOV or 13 HEALTH

Queensland Government

International Journal of Disaster Risk Reduction 82 (2022) 103326

Contents lists available at ScienceDirect

International Journal of Disaster Risk Reduction

journal homepage: www.elsevier.com/locate/ijdrr

The lived experience of sheltering for individuals with disabilities during severe tropical cyclones in northern Queensland, Australia

Ruth Barker*, Andrée Malpass, Caryn West

College of Healthcare Sciences, James Cook University, Cairns, Queensland, Australia

