

Identifying Rehabilitation Workforce Strengths, Concerns and Needs: A Case Study from the Pacific Islands

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ABSTRACT

Purpose: *This exploratory case study was undertaken to inform capacity development of the rehabilitation workforce in member nations of the Pacific Islands Forum (PIF).*

Method: *Participants at the 1st Pacific CBR Forum in June 2012 were key informants for this study. They comprised the disability focal points from government departments in each of the 14 countries, representatives of DPOs and disability service providers. The study was conducted in 3 phases: a template to gather data on rehabilitation workers; key informant interviews; and, stakeholder workshops to identify strengths and needs of the rehabilitation workforce in the Pacific.*

Results: *The detailed case study findings suggest two critical drivers for rehabilitation health workforce development in the Pacific context. The first is leadership and commitment from government to serve rehabilitation needs in the community. The second is the urgent need to find alternative ways to service the demand for rehabilitation services as it is highly unlikely that the supply of specialist personnel will be adequate.*

Conclusions: *A multi-sectoral view of health and social service systems is a key element for the development of a rehabilitation health workforce. The endorsement of the WHO Global Disability Action Plan by the World Health Assembly in 2014 further enhances the opportunity to work collaboratively across sectors in Pacific countries. Specialist personnel are and will remain*

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in short supply. There is opportunity for the region to lead the development of alternate workforce mechanisms through the training and supply of skilled community-based rehabilitation personnel.

Key words: *community-based rehabilitation, health workforce development, disability, international development*

INTRODUCTION

The release of the World Report on Disability (World Health Organisation, 2011a) focussed attention on the unmet need for rehabilitation of many people with disabilities around the world. Rehabilitation specialists – doctors, nurses and therapists – are in short supply globally. Sourcing accurate data is challenging as many countries do not include rehabilitation personnel in their human resources for health reports (WHO, 2009). Gupta et al (2011) reported the first international mapping, noting the highly uneven distribution of the rehabilitation workforce, with the deepest penetration in high-income countries. There is a clear gap between unmet need for rehabilitation and the requirements of the UN Convention on the Rights of Persons with Disabilities (United Nations, 2006) for equity in health care (Article 25) and access to rehabilitation and habilitation (Article 26).

Objective

The purpose of this exploratory case study was to inform development of the rehabilitation workforce in the member nations of the Pacific Islands Forum (PIF) in collaboration with the World Health Organisation Western Pacific Region (WPRO). The aim was to be investigative rather than comprehensive in scoping the current 'state of play'. The focus was on analysing the rehabilitation health workforce situation from the perspective of health workforce development and disability inclusive international development. As this was an operational organisational study, independent ethics approval was not required.

The case study coincided with the first Pacific Community Based Rehabilitation (CBR) Forum, held in Fiji in June 2012. The Forum participants included key stakeholders in the disability, health and rehabilitation sectors from the countries of the Pacific Islands Forum.

The pluralistic methodological case study approach included the following: a scholarly literature review; completion of project specific workforce templates;

and interviews with key informants during the Pacific CBR Forum culminating in two Key Stakeholder Workshops at the Inaugural Dialogue on Human Resources for Rehabilitation which was held on the last day of the Forum.

LITERATURE REVIEW METHODS AND FINDINGS - THE PACIFIC ISLANDS CONTEXT

This case study was informed by a critical analysis of scientific literature and collation of regional and national reports. The search used Medline, Scopus and Google Scholar with hand searching of regional journals, websites and newsletters of International Non-government organisations (INGOs), Non-government organisations (NGOs), Disabled People's Organisations (DPOs), and the repositories of regional and international UN agencies. This search strategy produced 37 potentially relevant papers in the scientific literature from 1981 to 2012, of which 22 could be accessed electronically or in hard copy with the resources available. Seven regional reports and 7 national reports were also located (A list of papers and reports is available from the first author).

Key features of health-related rehabilitation in the region include rehabilitation services being largely concentrated in urban tertiary hospitals. Fiji, Solomon Islands, and Papua New Guinea are the only three countries with government-sponsored Community-Based Rehabilitation (CBR) services. Training courses in health rehabilitation professions are offered in Fiji (physiotherapy, CBR), Papua New Guinea (physiotherapy, CBR) and the Solomon Islands (CBR). The geographical features of the Pacific region feature prominently in the literature in relation to rehabilitation workforce development. This region has dispersed, small populations, separated by large distances involving costly travel. There are numerous and diverse language and cultural groups that attribute different meanings to impairment, illness, accident and trauma. Rehabilitation services are relatively unknown in the broader community; assistance from these services is rarely sought early, and sometimes not at all.

Health trends and subsequent rehabilitation needs

More than a quarter of the global deaths due to NCDs occur in the Western Pacific Region (WHO, 2012) and 70% of deaths in the Pacific Islands are as a result of NCDs (World Bank, 2014). Impairments that can limit function often accompany NCDs and ageing. For example, stroke can cause paralysis, speech difficulties and cognitive limitations; heart disease contributes to limited physical endurance;

and, diabetic peripheral vascular disease too often results in vision impairment and/or limb amputation. The need for rehabilitation services has increased with the increasing NCDs and population ageing in the region (Richards et al, 2016).

Challenges in integrating rehabilitation services into health systems

Best practice service delivery occurs when community and hospital rehabilitation services are well-integrated with mainstream health and primary care services (WHO, 2011a). A first step is for countries to recognise the need for rehabilitation services at tertiary, secondary and primary levels. In Papua New Guinea and Fiji, rehabilitation services exist in urban tertiary hospitals. These services are primarily for the adult population. Watters and Dyke (1996) and Watters et al (2001), writing about Papua New Guinea, stress the need for ongoing rehabilitation services in the community after urgent medical needs have been met. They argue that this is particularly important following accidents or injuries from violence. Powell (2001) and Shaw (2004) note that in Papua New Guinea rehabilitation services tend to be limited to traditional categories of physical disabilities, with the need for services in the community to reach people with other disabilities. Culverwell and Tapping (2009) and Karthikeyan and Ramalingam (2012), writing about two childhood conditions (talipes equinovarus and meningitis, respectively) lament the lack of rehabilitation services for children that are able to work collaboratively with families to ensure good long-term outcomes.

In Fiji there is a National Medical Rehabilitation Hospital, with physiotherapists in some provincial hospitals and community rehabilitation assistants providing services at the community level. However, Maharaj (1996) writes about the need to integrate the specialist rehabilitation services with the well-developed Fijian system of primary care to ensure breadth, reach and depth of rehabilitation to people in urban and rural communities. Over a decade later, Roberts et al (2007) made similar observations about the mental health services in Fiji, which are primarily restricted to an urban psychiatric hospital. This leaves people with mental health disorders poorly served, particularly in non-urban areas.

Available and culturally relevant workforce

Understandings of disability are culturally and socially located (Ingstad, 1995; Bickenbach, 2009; Lewis-Gargett et al, 2015). Yet, as Soldatic and Meekosha (2014) report, all too frequently health services are imposed from the North upon countries of the South. These may not align with the host country perspective on

service delivery or workforce development. A primary theme in the literature is that rehabilitation services would ideally be staffed by nationals or, at a minimum, nationals would deliver culturally relevant training for all rehabilitation workers. Byford and Veenstra (2004), writing about the Middle Ramu region of Papua New Guinea, found that implementation of CBR programmes could only succeed if the programme implementers understood the cultural beliefs about the cause and likely 'cure' for disability.

One important inhibitor to a local workforce is the health workforce 'brain drain' occurring across the region (WHO, 2004; Nair et al, 2009). It has been reported that there are almost as many Fijian-born doctors working in Australia and New Zealand as there are in Fiji (Negin, 2008). Cheng (2010) presents an initiative for building a locally trained rehabilitation workforce; a collaborative model with a US mainland university and the University of Guam to deliver a Master's level speech pathology course in Guam. This prevents the need for further training abroad, leading to the observation that if rehabilitation personnel are trained locally they may be more likely to remain in their own countries.

Sound data to demonstrate need for rehabilitation and corresponding workforce supply

Disaggregated data on disability and need for support is the 8th goal in the Decade of Persons with Disabilities from 2013-2022 (UNESCAP, 2012). UNESCAP's publication 'Disability at a glance 2010: a profile of 36 countries and areas in Asia and the Pacific', produced initially in 2006 and now in its 5th edition (UNESCAP, 2015), is a beginning. Mortality data is routinely collected but morbidity data is not, yet this data would provide information on potential need for rehabilitation services and workforce. A promising start along these lines has been made in 'Women and Health in the Western Pacific Region: an overview' (WHO, 2011b). Reporting the top five causes of disability life adjusted years for women in the region allows workforce planners to develop demand-relevant responses. Similarly, if data on human resources for rehabilitation was included in regular human resources for health collections, supply, under-supply and demand could be mapped. The inclusion of this data would enable identification of areas of workforce stagnation and guide workforce planning. The WHO regional collection -WPRO Country Health Information Profiles (CHIPS) – offers an excellent opportunity to incorporate rehabilitation workforce data (WHO, 2011c).

An outline of the case study research methodology follows, in light of these contextual features of the Pacific region.

METHOD

Sampling

In the lead up to the 1st Pacific CBR Forum, WPRO identified key informants for this project from national disability focal points, DPOs and disability service providers. Each was well known to the fourth author in her WPRO role working with disability focal points, DPOs and disability service providers on rehabilitation, workforce, and disability matters. In the absence of available government data from member countries, working with key informants was the only suitable data collection method for this case study. The key informants participated in each phase of data collection outlined below.

Data Collection

Pacific Rehabilitation Health Workforce Template (PRHW)

The first phase involved collecting data using the Pacific Rehabilitation Health Workforce Template (PRHWT) designed for this study. This template (in questionnaire form) and following Gupta et al (2011) was used to systematically enumerate the number of workers, the employing body, where trained, and type of services provided in each of the nine occupational categories derived from the International Standard Classification of Occupations (ISCO). Traditional and complementary medicine professionals, traditional, complementary associate professionals and community-based rehabilitation workers were added, based on the findings from the literature review. The PRHWT was sent to all key informants 2 weeks prior to the Forum.

Key informant interviews

During the CBR Forum, the first and second authors conducted focus groups with key informants (totalling 47) from each country. The guided interview format focussed on the strengths, weaknesses and key challenges for the rehabilitation workforce. Three case studies were presented for discussion: a child with cerebral palsy, an adult post stroke and an individual with a mental health condition. The informants described how individuals in these situations would

access rehabilitation services in both urban and rural settings in their countries. Participants were also asked to describe their ideal scenario for rehabilitation services and associated workforce in their country.

Stakeholder workshops

The 'Inaugural Dialogue on Human Resources for Rehabilitation in the Pacific' occurred on the last day of the Forum, during which key informants participated in two workshops. In the first, key informants worked in stakeholder groups – DPOs, government representatives, and service providers - to identify the top five key strengths and concerns facing the rehabilitation workforce in the Pacific. In the second workshop, participants identified rehabilitation workforce needs in the Pacific.

RESULTS

The findings represent analysis of the data from each phase. Table 1 presents the rehabilitation workers identified in each country, collected from the key informants and based on their working knowledge of the rehabilitation workforce in their country. Following this study, the category Physiotherapist was included in the regular WHO Western Pacific Regional Office Country Health Information Profile data collection process.

Table 1: Rehabilitation Services and Workforce in the Pacific Islands

Legend:

Country	Government Health System	Worker title	Privately employed	Worker title	INGO / local NGO	Worker title
Cook Islands	National Hospital	Physiotherapist (1)	Self employed	Acupuncturist (1)	NGO – Community Based Rehab	Physiotherapist (1)
Federated States of Micronesia	State Hospital	N/D	Private Hospital	N/DN/D	N/DN/D	N/D
Fiji	Hospitals (5) with rehabilitation unit at National Hospital	Rehabilitation Specialist (1) Physiotherapist (A/ND) Prosthetist (A/ND) Occupational Therapist (1)	N/D	N/D	N/D	N/D

		Speech Therapist (1) Community Rehabilitation Assistant (16)				
Kiribati	National Hospital – rehabilitation centre	Physiotherapist (2) Physiotherapy Technician (1) Prosthetic Technicians (2)	Nil	Nil	Nil	Nil
Nauru	National Hospital – rehabilitation unit	Physiotherapist (1) Physiotherapy Aide (1)	Nil	Nil	Nil	Nil
Niue	National Hospital	Physiotherapist (1)	Self employed	Massage Therapist	Nil	Nil
Paulau	National Hospital	Physiotherapy Counselling	N/D	N/D	N/D	N/D
Papua New Guinea	Regional Hospitals	Physiotherapist (A/ND)	N/D	N/D	NGO – resource centres	Physiotherapist (A/ND) CBR Workers (60) Speech Therapist (1)
Republic Marshall Islands	Hospitals (2 -Majuro and Ebeye)	Physiotherapist (3) Physiotherapy Technician (3) Prosthetic Technician (3)	Nil	Nil	Nil	Nil
Samoa	National Hospital	Physiotherapist (1) Physiotherapy Assistant (1)	Physiotherapy clinic	Physiotherapist (1) Physiotherapy Aide (2)	NGO – CBR NGO – hearing and vision support	Occupational Therapist (1) Field Worker (10) Speech therapist (1)
Solomon Islands	National Hospital CBR Programme	Physiotherapist (A/ND) CBR Field Worker (11)	Nil	Nil	NGO-special education	N/D
Tonga	National Hospital	Physiotherapist (1) Overseas visitors	N/D	N/D	NGO – Respite Day Centre NGO – Residential Centre	CBR workers Visiting Therapists (physiotherapy, occupational therapy, speech therapy) Volunteers

Tuvalu	National Hospital	Physiotherapist (1)	Nil	Nil	NGO – Home visiting service	Volunteers
Vanuatu	National Hospital	Physiotherapist (3) Prosthetic Technician (1)	Self employed	Physiotherapist (1)	NGO – CBR	Community Rehabilitation Assistant (2) Volunteer (3) Speech therapist (1)

Nil – no health personnel in this category

N/D –No data available from key informants

A/ND - Key informants aware of health workers in this category but no numbers available

Key informants provided the completed PHRWT to the authors prior to or at the Forum (allowing an opportunity for questions and checking). The data was checked again with key informants prior to production of the final report.

In the following sections are reported the key strengths, concerns and needs identified in relation to the rehabilitation health workforce. The issues raised by the DPOs in relation to the Pacific rehabilitation workforce are also presented.

Strengths

The first strength is the presence in each country of individuals committed to gaining more support for people with disabilities and their rehabilitation needs. Frequently these individuals, whether from NGOs, DPOs or government, have a long-standing and visible presence. They are involved in regional and national meetings and international events which broaden their networks and deepen their knowledge of possible rehabilitation interventions and service models. Many have strong relationships across and outside the region.

A second strength is the good working relationships between government health service providers, NGOs and INGOs and with the DPOs. The presence of a core group and these working relationships means there is familiarity and a willingness to work together and share ideas across the region.

A third strength is the presence of higher education institutions in three of the countries: Papua New Guinea; Fiji; and the Solomon Islands providing training in rehabilitation. This is at two levels – Baccalaureate for physiotherapists, and Diploma or Certificate level for community rehabilitation assistants/ CBR workers.

A fourth strength is that access to the internet is reasonably well-established in main urban areas, although not in all countries. These internet services, coupled with the high levels of English literacy in the Pacific Islands, enable relatively easy access to technical knowledge, clinical guidelines, disability advocacy, policy and legislation, and professional organisation websites.

A fifth strength is the strong recognition of the need for institution-based rehabilitation services complemented by rehabilitation services in the community. A model, thought desirable, would involve an integrated system of hospital and community-based rehabilitation services coordinated with CBR and front-line primary healthcare nurses to ensure early and appropriate referrals.

Concerns raised by Persons with Disabilities

The first concern related to the evident need for more locally based rehabilitation services. Across the region, public rehabilitation services remain primarily hospital based in the national capitals or large urban areas. These urban-based services are very hard to access for those in non-urban areas or for those with limited or costly transport options. Family members are not usually involved in rehabilitation interventions. This represents a lost opportunity along with the opportunity to educate the community more broadly and reduce the stigma associated with impairment and disability.

A second concern was the widely held view that there are few strong champions in the Health and Social Affairs ministries (the latter are sometimes the lead disability ministry) to advance the status of people with disabilities. Government-funded rehabilitation services are delivered primarily through Health ministries. With small populations and small governments, the focal point for disability and/or rehabilitation within a ministry of Health is likely to be responsible for many programmatic areas and may have limited experience in disability. This could contribute to the perception among DPO informants that there is a lack of advocacy for rehabilitation and disability issues from within the government. The lack of funding and priority given to rehabilitation services and assistive aids and equipment within Health ministries was frequently identified as a major weakness across the region.

A third concern is that many in the rehabilitation health workforce are working alone and are isolated from professional colleagues in their own discipline or in related rehabilitation disciplines. This may help explain the relatively traditional

perspectives on rehabilitation service models. For example, some key informant health providers proposed their ideal model of separate (vertical) rehabilitation units with at least one physiotherapist (PT), occupational therapist (OT) and a speech therapist (ST). There was almost no mention of inter-professional or trans-disciplinary approaches to maximise the scarce resources.

A fourth concern is the lack of understanding among doctors and nurses about disability and the need for rehabilitation. This was thought to effectively impede referrals and the maximum use of the scarce rehabilitation services available, with little advocacy for additional or more rehabilitation services appropriately located at the community level.

Needs

Six major workforce needs were identified across the region.

1) Better knowledge of rehabilitation and stronger referral pathways across service systems and community

The need for better knowledge about disability and rehabilitation across Pacific Island communities specifically referred to primary care doctors and nurses being better informed about the contribution of rehabilitation to health, wellbeing, functioning and prevention of further disability. DPO key informants stressed the need for health professionals to be much better informed about family, social and economic issues facing people with disabilities, and not to focus only on the individual's health condition. It could be anticipated that better informed primary healthcare workers would contribute to more efficient use of referral systems from primary health services to rehabilitation. For some key informants, this need for better informed workers also applied to village health workers having an understanding of frequently encountered impairments and health conditions, and the benefits to be gained from rehabilitation intervention.

2) Increased rehabilitation posts and employment security

There is a lack of secure employment for all rehabilitation personnel due to central control of government posts, and not all locally trained graduates finding a government post. Positions with NGOs and INGOs are dependent on donor funding and usually involve short-term contracts. Both aspects make a secure career path difficult to achieve.

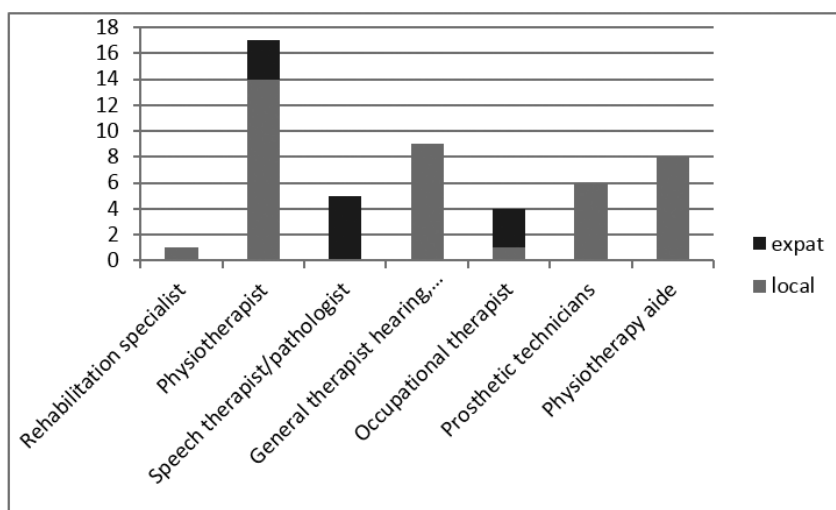
3) Increased range of rehabilitation personnel and skills

Certain rehabilitation skills are in short supply, with OT, ST and podiatry frequently mentioned as rare or missing altogether. OTs and STs were regarded as critical to reducing ongoing disability after stroke and for children identified with learning, motor and speech difficulties. The aggregated number of workers by title and across the countries, drawn from the completed country PHRWTs, is presented in Table 2.

Table 2: Rehabilitation Workers in the Pacific Islands

Worker Title	Number
Rehabilitation Specialist	1
Physiotherapist	17
Speech Therapist/Pathologist	5
General Therapist- hearing, speech, language	9
Occupational Therapist	4
Prosthetic Technicians	6
Physiotherapy Aide	8
Total	50

Figure 1: Distribution of Local and Expatriate Rehabilitation Workforce, according to worker title



There is a dominant presence of expatriate rehabilitation health professionals. Figure 1 contains the proportion of expatriate versus local staff. Some countries also reported support from visiting specialists, volunteers and via telehealth; however, with the quantum and stability of these uncertain, figures are not available.

While providing a much needed service, concerns were expressed about the following:

- Most on-the-job training of local rehabilitation assistants and carers is carried out by expatriate rehabilitation health professionals.
- Donor organisations appear to expect that rehabilitation staff will be from a non-Pacific Island country; thus it is less likely that a regionally trained person would be employed in a donor funded programme.
- Local high school students are not aware of the rehabilitation professions as career options. It is unlikely that they or their families know anyone who is a rehabilitation health professional or assistant.

4) Increased role and outreach of rehabilitation personnel in community settings

A fourth major workforce need was for rehabilitation personnel to be active in the community, contributing to health promotion and health prevention initiatives. In this way, they could influence individuals and family members, provide early interventions to prevent and minimise the impact of disability, and improve access to appropriate equipment and accessible environments.

5) Increased scholarships for new rehabilitation personnel

A need for further training and scholarship opportunities in the region was identified, with education and outreach to young people so that becoming a rehabilitation professional takes its place alongside careers such as medicine, nursing, teaching or law. This reflects the strong preference for rehabilitation health professionals to be locals who understand the local context.

6) Increased professional development for current rehabilitation workforce to improve quality and broaden skill set

The final issue raised was the lack of opportunity for rehabilitation professionals to gain specialist skills to work in areas where there were serious workforce shortages, such as in mental health. To gain further knowledge usually meant

leaving a permanent position and moving to Australia or New Zealand, away from employment and family, and this was not considered a desirable choice. Other health professionals also had few opportunities to develop new skills or gain specialist qualifications in rehabilitation.

Additional concerns raised by People with Disabilities

DPO key informants were concerned about advocacy to government regarding the importance of rehabilitation and the benefits to be gained. There was a strong focus on developing policies that would underpin and sustain the provision of rehabilitation services. However, there was a lack of funding to help DPOs prepare evidence to support their advocacy. DPOs recommended that there be a disability and rehabilitation champion within cross ministerial working parties – this need for disability to have a strong “place” in government was high on their agenda.

A frequently occurring theme was inequitable access to services. Service use appeared to be limited to only those who had been told a service existed. Another noticeable impediment to accessing services was logistics and cost of travel. Cost occurred in two ways: for travel to an urban area for rehabilitation, which was usually too prohibitive for individuals; and the prohibitive cost of providing rehabilitation services in outlying areas. For example, with little or no budget for governments to support CBR workers to visit outlying areas, visits to remote areas only occurred if workers could manage a ride or walk between villages. A final impediment was lack of services to meet areas with increasing demand. For example, few countries have prosthetic services, despite the increase in the Pacific region of amputations secondary to diabetes complications.

Limitations and Strengths of the Case Study

The pluralistic methodology employed in this study produced detailed data which could be cross-referenced across the three methods: the PHRWT to systematically gather data on rehabilitation workers; key informant interviews; and stakeholder workshops to identify strengths and needs of the rehabilitation workforce in the Pacific. Asking participants to complete the PHRWT prior to the 1st Pacific CBR Forum was only partially successful however, given their resource constraints. The project’s aim was ambitious in wishing to explore workforce status at both country and regional levels. Government data is typically difficult to access, and particularly at the level of detail achieved in this study. The advantage of

implementing this project at the inaugural regional Forum far outweighed the limited time available within an already full programme. The Forum setting and two workshops facilitated networking and sharing of initiatives and innovations across the countries; discussions in some instances however had to be continued by Skype or email, due to the time restrictions imposed by the Forum programme. Key informant methodology has limitations in that only the perspectives and voices of those invited are included. This limitation was offset by the expertise of this group of key informants; they are in regular working relationships with WPRO and each other, as the most knowledgeable individuals with regard to rehabilitation and disability in the countries of the Pacific Island Forum.

DISCUSSION and CONCLUSIONS

Strengthening the Rehabilitation Workforce in the Pacific Region

This exploratory case study was conducted at a time when there was an upswing of interest in services to people with disabilities, an interest which continues to gain momentum. The WHO General Health Assembly endorsement of the WHO Global Disability Action Plan: Better health for all people with disability 2014-2021 (WHO, 2014), has further stimulated momentum. This plan lays out three clear objectives and actions for member states, international and national partners and the WHO Disability and Rehabilitation secretariat. Initiatives in mapping rehabilitation services provide country case studies of innovations and challenges in the development of rehabilitation services and the health workforce in geographic, political, economic, cultural and social contexts (Axelsson, 2014). The study reported here contributes a perspective from the Pacific Island region to inform the implementation of this Plan.

The findings suggest that health workforce development benefits where there is leadership and commitment from government to serving rehabilitation needs in the community. It benefits from a 'helicopter' view of health and social service systems to suggest better integration between institutional and community-based services. It also benefits from local 'bottom up' culturally embedded perspectives, to ensure acceptability of rehabilitation personnel to service recipients. Ideally however the acceptability of rehabilitation services and their workforce would not be considered in isolation. There are practical lessons that can be learnt from broader health systems strengthening initiatives and applied to rehabilitation systems as explained by Kuipers (2014) in a recent article in this journal.

Secondly, and as pointed out in the World Report on disability (WHO, 2011a), it is highly unlikely that the supply of specialist personnel will come anywhere close to meeting the global demand for rehabilitation services. Disability is on the rise with increasing longevity, accidents, violence and trauma, and the increase in non-communicable diseases with attendant morbidities. There is a need for alternative ways to meet rehabilitation service demand. The Pacific Island region is already underserved by specialist personnel. This region could lead the way in initiating community-based rehabilitation cadres in rural, remote and urban locations along the lines, for example, proposed by MacLachlan, Mannan and McAuliffe for the African context (MacLachlan et al, 2011).

Future studies may consider aligning their aims with the explicit objectives of the regional implementation of the 2014 WHO Global Disability Action Plan. This would result in a detailed analysis of the components required for developing a health-related rehabilitation workforce. Such research is vital in developing a context-appropriate, quality rehabilitation workforce that is better able to meet the needs of people with disabilities in the Pacific region.

ACKNOWLEDGEMENT

This case study was conducted as part of a performance of work agreement with WHO Western Pacific Regional Office. The authors would like to sincerely thank all the participants who gave their time and efforts so graciously before, during and after the 1st Pacific CBR Forum in June 2012.

The authors report no conflicts of interest.

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