

**DRAFT**

**Western Pacific  
Regional Framework on Rehabilitation**



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## EXECUTIVE SUMMARY

Being in one of the world's most disaster-prone regions, health systems in the Western Pacific face particular challenges in meeting the demands of emerging disease patterns and a growing ageing population (1). Countries in the Region share a range of challenges in strengthening health systems to provide rehabilitation services. A main rationale for the development of the *Western Pacific Regional Framework on Rehabilitation* is to address the current and growing demand for quality rehabilitation services in the Region. Collaboration through this Regional Framework will help countries understand and strengthen rehabilitation within their own contexts and promote sharing of knowledge and experiences, including the enhancement of support for rehabilitation development between well-resourced and less-resourced countries. It also encourages strengthening of rehabilitation as part of the continuum of care for all people, including support for the attainment of universal health coverage and the Sustainable Development Goals.

Member States may use this document like a menu to guide and identify where they can best strengthen rehabilitation within their own contexts. This Framework covers 2018–2023, and countries are encouraged to assess and determine the level of their rehabilitation services at present, prioritize work over the next six years, and consider a long-term approach to strengthening rehabilitation.

Rehabilitation is a health strategy for the entire population, including people with disability. The connection between rehabilitation and disability is an important one, and governments are developing leadership and governance structures related to disability, which may contribute to improving rehabilitation. This Regional Framework recognizes that rehabilitation is not a specific service for people with disability, but rather a service for all people. Because many people with disability may experience limitations in functioning, rehabilitation services are particularly important. Rehabilitation can assist children and adults who have a health condition or impairment to maximize their strengths and address limitations in carrying out daily activities, such as walking, communicating or self-care.

Rehabilitation has benefits both for the users and their families as well as for the health and other sectors such as social, education and labour (2). Within the health sector, rehabilitation has been found to reduce the length of stays in hospitals, decrease readmissions, and prevent costly and potentially fatal complications, thus helping mitigate negative social and health risks associated with prolonged hospital stays and health complications. Especially in the context of complex conditions that require intensive and highly specialized rehabilitation, cost savings in the health and other sectors may be realized in the long term, rather than in the short term.

### Situational analysis

Driving this Regional Framework is the real need of all countries in the Region to work together to address current and future health priorities, particularly those related to ageing populations, the rise of noncommunicable diseases and related increases in rates of disability. The growing need for rehabilitation services, combined with sporadic coverage and quality of services, means that families or caregivers often have to provide support, improvise and manage as best they can due to the lack of services. Limitations in a person's daily functioning are associated with levels of disability, and countries are encouraged to consider how to reduce disability and optimize functioning using rehabilitation. In some countries, rehabilitation is not strong at the tertiary (specialized care) level and

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very limited at the community level. People with long-term health conditions and impairments, including many people with disability, have to rely on family members or caregivers for basic daily activities.

Rehabilitation is an important aspect of health care for those who experience short- or long-term impairment and limitations in functioning following injury or illness (3–5). Rehabilitation builds on curative interventions so that people regain and maintain health and functioning, go to school, find employment, and participate in family and community activities. Key health issues in the Region that rehabilitation can assist in addressing include those related to ageing populations, noncommunicable diseases, mental health conditions, communicable diseases, child development and injuries. Furthermore, contributing to rehabilitation limitations are challenges in the health system related to service delivery limitations, governance and financing, workforce development, and limitations in the prioritization of data collection and research.

Member States are encouraged to build a strong foundation for rehabilitation by recognizing that rehabilitation is important for people to realize and enjoy the highest attainable standard of health. Further, recognizing that rehabilitation is a health service relevant to all people across the life course, as well as part of the continuum of care, will help Member States understand how to integrate rehabilitation within the various levels of the health system. This is important given the person-centred nature of rehabilitation – it focuses on people’s function, rather than their disease. People need to function at home, school, work and within their communities, and rehabilitation can support this participation.

## **Priority action areas**

This Regional Framework proposes four priority areas for Member States to strengthen rehabilitation within their contexts:

### ***1. Rehabilitation service availability and quality***

Service provision capacity for rehabilitation does not meet existing demand in all countries, with rehabilitation being provided at select levels of the health system in some countries. Service limitations in some countries relate to the general underdevelopment of the rehabilitation sector, limitations in human resources, and underdeveloped integration of rehabilitation in secondary and tertiary levels of care.

### ***2. Rehabilitation governance and financing***

Strong leadership and good governance are needed to coordinate the many stakeholders involved in rehabilitation service delivery. Nongovernmental stakeholders can include private non-profit or for-profit providers, faith-based organizations or user group associations, which can all be essential for the effective provision of rehabilitation.

### ***3. Rehabilitation workforce***

The rehabilitation workforce experiences challenges similar to those of the general health workforce, but also faces additional challenges. The number of those working in rehabilitation is comparatively smaller than in other areas of health, making it difficult to promote development and advance the professions.

#### ***4. Rehabilitation data and research***

Information about rehabilitation is very limited in the Western Pacific Region, which makes it difficult for policy-makers and service providers to make informed decisions that strengthen rehabilitation services. Data collection across health systems is vital for a range of policy development and implementation activities.

#### **The way forward**

While this Framework has a menu of actions for consideration by all Member States in the Region, some steps on the way forward are proposed. Where relevant, these include: understanding the situation of rehabilitation in order to improve integration of rehabilitation into broader planning; considering the availability and quality of rehabilitation in hospitals; enhancing the continuum of care; developing or implementing a range of guidance; considering workforce sustainability and clarifying the roles and responsibilities of various rehabilitation actors; and generating information about outcomes, quality and efficiency of rehabilitation services.

In addition to actions listed for Member States to consider, WHO supports Member States and key rehabilitation actors by providing, among others, technical guidelines, training and analytical tools for those involved in rehabilitation and rehabilitation interventions at all levels of the health system.





## 1. INTRODUCTION

The World Health Organization (WHO) Western Pacific Region is a geographically, culturally and linguistically diverse area that includes advanced economies, countries in economic transition and small island developing states.

Health systems face particular challenges in meeting the demands of emerging disease patterns and a growing ageing population in one of the world's most disaster-prone regions (1). Countries in the Region share a range of challenges in strengthening health systems to provide rehabilitation services. Member States, development partners and the health-care users have noted the importance of meeting these challenges in discussions with the WHO Regional Office for the Western Pacific.

These challenges also present opportunities, including the need to increase awareness of the role of rehabilitation in population health and achieving Sustainable Development Goal (SDG) 3: Ensure healthy lives and promote well-being for all at all ages. The SDGs promote a world where opportunities are equal for all, where everyone *can* participate and prosper, and “no one is left behind” (6). People who are at risk of being left behind include those who experience difficulties in daily functioning associated with health conditions and the environments in which they live (7).

Achieving the SDGs means making it possible for all people to be able to participate in a range of activities related to education, employment and community. To leave no one behind requires first recognizing that some people will be left behind if we continue to conduct business as usual and do not acknowledge that some people encounter particular barriers compared to others. Addressing these barriers will assist some people to be included.

One way countries can address these barriers and support achievement of the SDGs is through strengthening rehabilitation. Rehabilitation is a mechanism for optimizing functioning in everyday life of everyone experiencing limitations associated with a health condition, including people with disability.

### 1.1 What is rehabilitation?

WHO describes rehabilitation as a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment. Health condition refers to disease (acute or chronic), disorder, injury or trauma. A health condition may also include other circumstances such as pregnancy, ageing, stress, congenital anomaly or genetic predisposition.

For the purposes of this Regional Framework, this definition and the discussion on rehabilitation also includes habilitation. The term habilitation is used in relation to activities aimed at maximizing the functioning of children who acquire impairment congenitally or early in life. Habilitation and rehabilitation are both referred to in the Convention on the Rights of Persons with Disabilities Article 26 as important interventions to support the participation of people with disability (8). The focus of this Framework is rehabilitation for all people, as part of the continuum of health care and within health systems. Rehabilitation is important at all levels of the health system (tertiary, secondary, primary and community). In addition, WHO recognizes that rehabilitation may be delivered in education, employment and social sectors.

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Rehabilitation interventions, for example, can build muscle strength, cognitive ability or communication skills. This skill building can assist people to perform basic daily activities, such as moving around, self-care, eating and socializing. Rehabilitation also removes or reduces barriers in society through modification to people's personal environments such as home, school or work. A rehabilitation professional may modify a person's home when they are discharged from the hospital and recommend the use of mobility aids to safely move around.

In many countries, rehabilitation is closely associated with disability (Box 1), and sometimes considered a disability service. However, rehabilitation is a health strategy for the entire population, including people with disability. The connection between rehabilitation and disability is an important one, as noted in the Convention on the Rights of Persons with Disabilities, the *Ministerial Declaration on the Asian and Pacific Decade of Persons with Disabilities, 2013–2022* and the *Incheon Strategy to "Make the Right Real" for Persons with Disabilities in Asia and the Pacific*. Governments are developing leadership and governance structures related to disability, which may contribute to improving rehabilitation.

### Box 1. Rehabilitation and people with disability

The importance of rehabilitation is recognized by WHO and countries through both the recommendations of the *World Report on Disability*, which was endorsed by the Sixty-sixth World Health Assembly in resolution WHA66.9 (9) and the *WHO Global Disability Action Plan 2014–2021* (GDAP) (10). GDAP aligns with the obligations in the Convention on the Rights of Persons with Disabilities, for States Parties to organize, strengthen and extend comprehensive habilitation and rehabilitation services and programmes. Similarly, GDAP Objective 2 addresses the need for WHO to support Member States "to strengthen and extend rehabilitation, habilitation, assistive technology, assistance and support services, and community-based rehabilitation" (10).

GDAP is a significant step towards achieving health, well-being and the rights of people with disability. The Action Plan was endorsed by WHO Member States in 2014 and calls for them to remove barriers and improve access to health services and programmes; strengthen and extend rehabilitation, assistive devices and support services, and community-based rehabilitation; and enhance collection of relevant and internationally comparable data on disability, as well as research on disability and related services (see WHO Disability and rehabilitation at <http://www.who.int/disabilities/actionplan/en/>).

WHO recognizes that disability refers to an umbrella term for impairments, activity limitations and participation restrictions, and the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors) (11).

This Regional Framework recognizes that rehabilitation is not a specific service for people with disability, but rather a service for all people. Because many people with disability may experience limitations in functioning, rehabilitation services are particularly important. Rehabilitation can assist children and adults who have a health condition or impairment to maximize their strengths and address limitations in carrying out daily activities, such as walking, communicating or self-care.

Rehabilitation also assists families when a member has difficulty carrying out daily activities. Rehabilitation can be provided by health professionals including rehabilitation medicine doctors and nurses, physiotherapists, occupational therapists, speech and language therapists, and orthotists and prosthetists. Rehabilitation interventions may also be provided by psychologists, social workers, audiologists, traditional and complementary medicine practitioners and community-based

rehabilitation (CBR) workers. Countries such as China and Mongolia indicate a strong relationship between traditional medicine and rehabilitation.

Rehabilitation services are often provided by a multidisciplinary team. This may include personnel beyond the health sector when goals are set that are highly person-centred, with treatment catering to the person's strengths, the underlying health condition, impairment, activity limitations and the environment according to the preferences of the individual. For example, if a goal for people is to be able to walk safely, they may require physiotherapy services to improve balance, strength and coordination. They may also have their home environment modified by an occupational therapist to make it safer through, for example, the installation of handrails.

A goal for young children may be to use speech therapy to improve communication skills so they can learn, reach developmental milestones and go to school. Older people may set goals with a rehabilitation professional to improve their self-care ability so they can live at home independently and safely as they age. The rehabilitation goals of a person can be addressed in a range of settings including hospitals, clinics, at home, in the community, at work or at school. Addressing people's strengths and limitations in functioning reduces the health, social and economic impact of health conditions, and improves well-being.

A good example of multidisciplinary rehabilitation can be seen in the Mobile Rehabilitation Outreach programme in Fiji. Community rehabilitation needs are being met by bringing a team of health professionals to people's homes or people to a health facility to receive rehabilitation care. This innovative service assists health workers to understand the nature of people's living situation and how best to support them within their own settings rather than clinical ones. A collaborative relationship is formed between families, community leaders and health workers, which helps to establish accountability and long-term care pathways when needed.

Rehabilitation is not disease specific, as its focus is to improve people's ability to perform a range of daily activities. For older people, rehabilitation has been shown to increase safety and independence, reduce the risk of falls, and decrease hospital and nursing home admissions (12). Rehabilitation can benefit all people throughout their lives if they have a health condition that limits their ability to perform daily activities. Without access to rehabilitation, some people, particularly people with disability, would not be able to participate in society on an equal basis.

## **1.2 The health, social and economic benefits of rehabilitation**

Rehabilitation has benefits both for the users and their families as well as for the health and other sectors, such as social, education and labour (2). Within the health sector, rehabilitation has been found to reduce the length of stays in hospitals, decrease readmissions, and prevent costly and potentially fatal complications, thus helping mitigate negative social and health risks associated with prolonged hospital stays and health complications. Especially in the context of complex conditions that require intensive and highly specialized rehabilitation, cost savings in the health and other sectors may be realized in the long term, rather than in the short term. "Prehabilitation", where services are provided prior to hospitalization or medical procedures, has also been demonstrated to improve health outcomes.

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A longer-term impact of rehabilitation may be seen in the ability of a person to return to employment or education, or regain independence in daily activities (7). When rehabilitation improves a person's independence and ability to resume work or other roles, the costs related to ongoing care and support incurred by social services, families and the individual can be reduced (13).

An example from Australia demonstrates potential cost savings that can be realized with a model of care for rehabilitation in hospitals in which timely, patient-centred care leads to timely discharges. Stage 1 of this project established the evidence base for providing rehabilitation services every day by health professionals such as physiotherapists and social workers: one extra hour of rehabilitation throughout a hospital admission is estimated to reduce patient length of stay by one day, resulting in a benefit-to-cost ratio of 2.5 and improving patient outcomes.

When rehabilitation improves a person's independence and ability to resume work or other roles, the costs related to ongoing care and support incurred by social services, the person or the family can be reduced. A longer-term impact of rehabilitation may be seen in the ability of a person to return to gainful employment or education, or in the degree of independence that rehabilitation has provided. In one example, a rehabilitation patient with spinal injuries at the National Trauma and Orthopaedic Research Centre in Mongolia went on to study nursing and alternative medicine, then graduated as a traditional medicine doctor and ended up working at the same centre.

### **Box 2. Assistive products**

Assistive products are essential for many people with impairments and health conditions to realize their full potential, and access to assistive products is a right under the Convention on the Rights of Persons with Disabilities (see Global Cooperation on Assistive Technology at [http://www.who.int/phi/implementation/assistive\\_technology/phi\\_gate/en/](http://www.who.int/phi/implementation/assistive_technology/phi_gate/en/)). However, only 1 in 10 people in the world have access to the assistive technology they need. For example, people with diabetes or cardiovascular disease may require a walking frame or wheelchair to assist with mobility, which is essential to management of their condition by ensuring their ability to maintain physical activity. Without access to assistive products and rehabilitation professionals to assess, prescribe and follow up on their use, people (and their families) can be excluded from a range of development opportunities.

While high-income countries in the Western Pacific Region report having regulatory agencies and legislation governing the prescription of assistive products, their systematic provision is limited. Few countries report specific standards and legal frameworks for assistive technology, and only six reported having an agreed list of essential assistive products (23). Regulation and procurement of assistive products are challenging as countries may have systems already established for medical products, but assistive products do not necessarily fall into these categories.

The lack of regulation of assistive products is a limiting factor in their provision to people with disability, chronic illness, and temporary injuries and disease. This is particularly problematic in the Pacific island countries and areas, which have relatively small populations dispersed over very large geographic areas. Manufacturing of assistive products can happen locally for basic mobility aids, for example, but generally products are imported or sometimes inappropriately donated from other countries. It is important that countries also ensure assistive products are suitable for the particular geographic context of the country, which may have extensive sandy terrain, or exposure to salt water, extreme heat, extreme cold or other particular climatic conditions.

For older populations, rehabilitation has been shown to increase safety and independence, reduce the risk of falling, and decrease hospital and nursing home admissions. Assistive products can have a profound impact on safety, level of functioning and independence. To realize the full benefits of recent growth in the development and availability of such products, access is required to providers who are proficient in assessing, prescribing and training in the use of the products (see Box 2). China encourages innovation and access to assistive products with an intergovernmental system to ensure coordination among departments in the provision of assistive products.

### **1.3 Purpose of the Regional Framework**

A main rationale for the development of the *Western Pacific Regional Framework on Rehabilitation* is to address the current and growing demand for quality rehabilitation services in the Western Pacific Region. While respecting the cultural diversity in the Region, collaboration through this Framework will help countries understand and strengthen rehabilitation within their own contexts.

This Framework also promotes sharing of knowledge and experiences, including the enhancement of support for rehabilitation development between well-resourced and less-resourced countries. It also encourages strengthening of rehabilitation as part of the continuum of care for all people, including to support the attainment of universal health coverage (UHC) and the SDGs.

This Regional Framework is another step in the long-term guidance by WHO for Member States on strengthening rehabilitation. While this Framework covers the period 2018–2023, countries are encouraged to assess and determine the level of their rehabilitation services at present and identify where they aim to be in the next 10–20 years. The actions in the Framework provide a basis for prioritizing work over the next six years, while encouraging a long-term approach to rehabilitation.

Countries are not expected to implement every action in the Framework, but rather to use this document like a menu to guide and identify where they can best begin. WHO currently supports countries in a range of activities to strengthen rehabilitation and will continue to provide guidance in line with this Framework.

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## **2. REHABILITATION IN THE WESTERN PACIFIC REGION: SITUATIONAL ANALYSIS**

Driving this Regional Framework is the real need of all countries in the Region to work together to address current and future health priorities, particularly those related to ageing populations, the rise of noncommunicable diseases (NCDs) and related increases in rates of disability. Many countries in the Region are developing capacity for rehabilitation, and the approach contained in the initial six-year Framework aims to support all countries to develop and strengthen their rehabilitation services, and collaborate with other countries, so that all people in need can access quality rehabilitation services.

### **2.1 Current and future health priorities**

The growing need for rehabilitation services, combined with sporadic coverage and quality of services, means that families or caregivers often have to provide support, improvise and manage as best they can due to the lack of services. Limitations in a person's daily functioning are associated with levels of disability, and countries are encouraged to consider how to reduce disability and optimize functioning using rehabilitation.

According to the Global Burden of Disease study, the prevalence of conditions associated with severe disability has increased by 24.9% in the Region since 2006 (14). This means that more people will experience limitations in daily functioning and require rehabilitation to promote their health and well-being throughout life.

In some countries, rehabilitation is not strong at the tertiary (specialized care) level and very limited at the community level. People with long-term health conditions and impairments, including many people with disability, have to rely on family members or caregivers for basic daily activities. This also can impact women and girls more directly, considering they more often fulfil the traditional family and caring roles in countries in the Region.

Rehabilitation is an important aspect of health care for those who experience short- or long-term impairment and limitations in functioning following injury or illness (3–5). Rehabilitation builds on curative interventions so that people regain and maintain health and functioning, go to school, find employment, and participate in family and community activities. The range of health and demographic issues in the Western Pacific Region highlight the need for immediate attention to rehabilitation services so they can be more closely integrated within the health sector and support individuals, families and communities.

#### **2.1.1 Ageing populations**

The Western Pacific Region has about 235 million people who are over 60 years old, constituting 13% of the population in the Region in 2010 (15). This number is projected to double by 2050 (16). This makes it an economic and social imperative to ensure that health systems are strengthened to support people to remain active, productive and independent for as long as possible. The rapid increase of the older population has been more acute in recent years and in middle-income countries in the Region. Thus, these countries have a shorter time frame compared to high-income countries to prepare their health systems to address age-related health issues. It has taken 35–50 years in Australia,

Japan and New Zealand for the proportion of the older population to double from 7% to 14% (15). Comparatively, in some middle-income countries, the same demographic changes have occurred in less than 30 years (15).

The issues related to healthy ageing have been recognized by many governments, including that of Macao SAR (China). They recently launched an outreach service aimed at older people in nursing homes, sending a team that includes doctors, nurses and therapists who provide rehabilitation to address individual needs and healthy ageing. This rehabilitation outreach service is one of a kind and aims at empowering nursing home staff to provide high-quality care through education and training.

### **2.1.2 Noncommunicable diseases**

The prevalence of NCDs in the Region has also increased drastically. Since 2006, the incidence of ischaemic stroke has increased by 53.2%, diabetes by 13.1%, cardiovascular diseases by 35.5% and respiratory disease by 16.7% (2). For people with NCDs, rehabilitation can help slow the progression of the disease by supporting healthy and active lifestyles, or it can offer specific interventions.

For example, the progression of diabetes can result in ulcers or amputations, for which rehabilitation is directly beneficial through provision of prosthetics and therapy. The Marshall Islands is addressing the effects of diabetes through their Diabetic Foot Clinic. The clinic offers rehabilitation and also aims at preventing lower limb amputation. Training has moved beyond this clinic to other parts of the main hospital and to outer islands, bringing much-needed information to both health professionals and service users. This service is linked to a prosthetic limb and orthotic service providing further rehabilitation for people in more advanced stages of chronic conditions.

For individuals treated for cancer, rehabilitation can help them resume regular family and work life, as well as offer interventions for symptoms related to cancer or cancer treatment. Rehabilitation is also important for many people who experience a range of musculoskeletal conditions such as arthritis or muscle strain.

### **2.1.3 Mental health conditions**

Over 100 million people in the Region are affected by mental health conditions, with depressive conditions accounting for almost 6% of the disease burden (17). Depression is indicated as the single largest contributor to disability globally (18). Rehabilitation services can help some people with mental health conditions and cognitive impairment develop the emotional, social and intellectual skills needed to live, learn and work in the community.

The Government of Palau has initiated measures to provide rehabilitation services to people experiencing mental health-related conditions as a result of abuse and neglect. The Ministry of Health coordinates with the Bureau of Public Safety to support survivors, particularly at an early stage, to address social and emotional needs related to trauma. This interagency collaboration in Palau aims at ensuring people's mental health and well-being is addressed in a coordinated manner.

### **2.1.4 Communicable diseases**

Rehabilitation is important for addressing the effects of communicable diseases such as tuberculosis, tetanus, HIV and leprosy. People with communicable diseases may recover from the acute phase, and

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then experience the effects of the disease that limit their ability to function and return to home or work activities. Ensuring that health care beyond curative treatment is available for people with a range of communicable diseases will support health and well-being following the acute phase.

### **2.1.5 Child development**

Children form a significant proportion of rehabilitation users. In many countries, children represent the largest group needing rehabilitation services. Newborn complications such as preterm birth could result in impairment, and survivors often have complex long-term rehabilitation needs. Some children born with impairments are not able to meet their developmental milestones (19,20). Therefore, early interventions to optimize developmental outcomes in children with health conditions are essential and can impact positively on their participation in education, community and work prospects.

### **2.1.6 Injuries**

The number of road traffic injuries in the Region is very high, with the number of vehicles on the road continuing to increase. This increase in vehicles contributes to the exposure and high risk of road trauma. In Cambodia, Japan, New Zealand and the Republic of Korea alone, there were nearly 800 000 injurious crashes in 2015 (1). Integrating rehabilitation in patient care, along with medical and surgical interventions, can optimize outcomes and mitigate risks from complications affecting health and well-being, and the burden on health systems (21). Rehabilitation is essential for post-surgical care to ensure costly medical intervention is not wasted. As mentioned, rehabilitation can reduce negative economic, health and social costs associated with prolonged hospital stays; however, cost savings may only be realized in the long term.

This is also important for countries experiencing health emergencies, as these emergencies can result in large numbers of people becoming injured, developing illnesses, or experiencing psychological trauma. Preparedness for health emergencies is relevant to the Region, which is prone to natural and human-made disasters, outbreaks and conflicts (22). Rehabilitation services, including the provision of assistive products, are essential to support people with new and pre-existing impairments in the event of an emergency.

## **2.2 Health systems challenges**

### **2.2.1 Service delivery limitations**

According to WHO, 15 countries in the Region have well-developed (expanded) or growing (established) mechanisms to support quality rehabilitation practices; nine countries have only basic (emerging) mechanisms (23). In most countries in the Region, rehabilitation services are provided only at selected levels of the health system. Many high-income countries have comprehensive rehabilitation services available from primary- to tertiary-level health care.

Comparatively, most rehabilitation services in middle-income countries offer physical therapy only in tertiary-level health-care facilities. In most countries in the Region, rehabilitation service availability is extremely limited at the community level. Physical therapy is the most available service. If it is removed, the difference between high-income countries and the middle- and lower-middle-income countries is even more profound. Physical therapy is the only rehabilitation service available at the



primary-care level in some Pacific island countries. Otherwise, no rehabilitation services exist within primary care.

For rehabilitation services to develop and be available for the population, a range of basic infrastructure and technology components is essential. For example, physical space in health facilities is necessary so that patients can undertake rehabilitation programmes. Vehicles or other modes of transport are required for rehabilitation workers to go into the community so that the ongoing functional needs of people with disability and chronic illness are addressed.

WHO recognizes that infrastructure often represents a significant cost to the health sector; however, considering the limited coverage of rehabilitation in some parts of the Region, addressing infrastructure is unavoidable if countries are to provide services for people who need them. The deployment of telehealth and e-health technology needs to take into account rehabilitation so that those unable to access face-to-face services can still receive rehabilitation.

This need is particularly evident during health emergencies, when loss of life coupled with a surge of injury and illness can contribute to an increased prevalence of disability. Rehabilitation is often seen as action that can be taken after acute medical intervention and, thus, is not always included in emergency preparedness plans.

Rehabilitation services are important for people who have sustained injuries and illness as a result of a health emergency, or those who are immediately recovering from surgery or other medical interventions (see WHO minimum technical standards and recommendations for rehabilitation for emergency medical teams). The provision of basic assistive products can ensure that surgical treatments are safely and effectively managed after surgery. Rehabilitation needs to be included in emergency preparedness plans in the Region – to address surge capacity and ensure referral mechanisms are in place.

### **2.2.2 Governance and financing challenges**

Rehabilitation is delivered by health and non-health personnel, and often shared between ministries of health and ministries of social affairs (or similar ministries). It is essential, therefore, that effective governance mechanisms exist to enable the range of rehabilitation actors to play their parts. Government agencies have a responsibility to coordinate within and across departments and to identify unique and shared roles. Government leadership is also required to regulate the actions of non-state actors that deliver significant rehabilitation services in many countries.

These actors include non-profit and for-profit services, faith-based, and nongovernmental organizations. Governance can be complicated in rehabilitation because of the focus of interventions on people and their goals, and the link across health and social sectors. Governance mechanisms must be robust and flexible to meet these demands. In Cambodia, for example, children benefit from timely access to rehabilitation due to speedy referrals from health centres to physical rehabilitation centres. Nongovernmental organizations play a key role by helping families to pay ancillary costs, such as transport, meals and accommodations, which often prevent people from receiving needed rehabilitation.

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Rehabilitation services are weak in some countries and continually improving in others. Recognizing the need to strengthen services requires a whole-of-government approach, regardless of the level of development. This approach recognizes that rehabilitation extends from health facility settings to people's homes and that rehabilitation is further delivered in schools, and at the workplace. This approach also aligns with the need to support different models of care that facilitate access to rehabilitation, such as CBR, facility-based care, the engagement of private providers, as well as community- and faith-based organizations.

In the Western Pacific Region, only four out of 24 countries have stand-alone rehabilitation strategies, which limits rehabilitation service development at the national and subnational levels. Less than half of the ministries of health have integrated rehabilitation services into wider health services standards and packages of care; integration is limited in others. In particular, Pacific island countries and areas indicated little rehabilitation planning (neither separate plans nor integration into health strategies), though some include it in disability policies or plans.

Four out of five countries in the Region report having coordination mechanisms that support national rehabilitation planning, including the engagement of nongovernmental organizations and organizations of people with disability. Some countries have rehabilitation committees or working groups under the national disability coordination body.

Very few countries in the Region have designated ministerial focal points for rehabilitation. Where they do exist, resources and tools to guide and equip them are lacking. In fact, only a few countries have undergone a comprehensive process of assessment, strategic planning and budgeting to address unmet rehabilitation needs, or to include rehabilitation-related indicators in their health information systems. Without high-level planning, many of the barriers to availability and utilization of services cannot be effectively or sustainably managed.

Rehabilitation is not included in the national health or social welfare budgets of most countries in the Region.

Countries have various mechanisms related to funding rehabilitation. For example, funding for CBR centres can be identified separately within Malaysia's Department of Social Welfare. Fiji specifically earmarks funding for the Ministry of Health and Medical Services CBR programme, but is not able to report on costs of the physiotherapists and other rehabilitation services within the health budget. Tuvalu receives a budget specifically to cover supplies used by the physiotherapy department in the national hospital, which is the main provider of rehabilitation for the country.

Most high-income countries reported that the budget for rehabilitation is dispersed across various agency accounts and embedded in different service lines. All of the high- and upper-middle-income countries in the Region also reported that the government is the primary financial source for rehabilitation, whereas nongovernmental organizations or rehabilitation users contribute the most for funding in some middle-income countries.

New Zealand, the Republic of Korea and a few Pacific island countries indicated that the government is the sole funder for rehabilitation. In the lower-middle-income category, countries such as Cambodia and the Federated States of Micronesia indicated that nongovernmental organizations contribute the

most financial resources for rehabilitation. The Philippines has indicated that out-of-pocket payments by rehabilitation users are the biggest contributor to funding for services.

Countries also highlighted legislative and governance mechanisms that promote access to rehabilitation services. In Japan, there is legislation and a financial insurance scheme to support people who may not be able to afford rehabilitation. The Act on Comprehensive Support for Persons with Disabilities and the Long-Term Care Insurance System support people to claim their rights and finance the rehabilitation they need. Japan is supporting rehabilitation within health systems by ensuring UHC.

Similarly, the Republic of Korea has promoted non-discrimination in the access of health services, including rehabilitation. This is particularly relevant for people with disability, many of whom require rehabilitation to be able to maintain their health and well-being and participate.

### **2.2.3 Workforce underdevelopment**

In the Western Pacific Region, the rehabilitation workforce experiences similar challenges as the health workforce; however, the numbers are often comparatively smaller than other areas of health. This contributes to the limited development of rehabilitation services. Smaller numbers of rehabilitation workers make it difficult to promote and develop the profession (see Appendix 2, Fig. A2.1).

In resource-constrained health ministries, preventive and curative health care are often prioritized, which reduces support for the rehabilitation workforce and the services they provide. Rural areas can experience even greater challenges, as fewer rehabilitation workers are generally available outside of urban areas.

In addition to financial issues, clinical and social competencies of rehabilitation personnel should be addressed to ensure capacity to work in multidisciplinary teams and address the needs of a wide range of people without discrimination. Most countries have some data on the rehabilitation workforce, but there are gaps across the professions and often the rehabilitation workforce specialities are not counted separately within health systems.

Physical therapists are the most available rehabilitation workers across all countries except for Mongolia, which has more rehabilitation physicians. The number of physical therapists in the Region per 10 000 people ranges from 0.69 to 11.26 for high-income countries, with this number decreasing in middle-income countries.

A proxy indicator of levels of met and unmet needs of rehabilitation is the relationship between the prevalence of all health conditions for which people might benefit from rehabilitation (based on the level of associated disability) and the number of health professionals who deliver rehabilitation services (including rehabilitation specialists and health professionals who deliver rehabilitation services).

The available data from countries in the Region on this relationship indicate a profound limitation in the number of rehabilitation workers in lower-middle-income countries. This improves somewhat as the country's income level improves (Annex 2). People in lower-middle-income countries have

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limited access to rehabilitation services: in some, the skilled practitioner density is below 10 per 1 million people.

The unmet need for rehabilitation can be seen in every area of specialized rehabilitation services, for example orthotists and prosthetists, occupational therapists, physiotherapists, and physical rehabilitation physicians (Annex 2).

### **2.2.4 *Lack of prioritization of data collection and research***

The collection of rehabilitation data in the Region is most common at the level of rehabilitation facilities. Eighty-eight per cent of countries in the Region indicated that they collect data at the facility level, and half said that facility-level data were used in rehabilitation sector planning. In nearly all countries of the Region, rehabilitation is not well integrated into health information systems.

There is limited rehabilitation information available to guide decision-making. Health information systems underpin decision-making in health policy, management and clinical care. Information is used by policy-makers to identify and respond to problems with evidence-based solutions and to allocate resources effectively, by planners to design more effective services, by managers to monitor and evaluate these services, and by clinicians to provide high-quality and evidence-based care.

For example, research from the United States National Institutes of Health has improved clinical practice in rehabilitation. Research on movement therapy for stroke patients led to clinical practice guidelines that strongly recommend this type of therapy post-stroke. Similarly, research related to the use of fitted seat cushions to prevent pressure ulcers in older people in nursing homes informed clinical practice guidelines. This research can support better health outcomes for people with a range of health conditions.

Since rehabilitation-related data are not included in health information systems of countries in the Region, stakeholders lack information they require. For example, middle-income countries have some information on rehabilitation in general, but they have no information about which rehabilitation services are available and what they provide (23).

A challenge with data is also the lack of collection, analysis and use to guide policy- and decision-making. Information needs to be disaggregated by stratifiers such as sex, age, disability and geographic location. Also, the information collected during health emergencies like cyclones or earthquakes is scarce and inconsistent, making planning and response actions that include rehabilitation services difficult to undertake.

The Philippines addressed this issue following Typhoon Haiyan. With support from WHO, the Government surveyed a range of needs of people with disability in the most affected areas. This information served as the basis for rebuilding rehabilitation services, developing a directory of services with coordination and referral mechanisms. The information also provided a guide for non-health workers to identify who may need rehabilitation services.

## **2.3. Opportunities for strengthening rehabilitation**

While Member States may identify a range of opportunities to strengthen rehabilitation, supporting the involvement of non-state actors and fostering increased collaboration among countries will help

many countries in the Region develop their rehabilitation services in line with this Framework and within their own contexts.

### ***2.3.1 Actively encourage and support non-state actors and families and caregivers***

In countries in the Western Pacific Region, in addition to governments themselves, non-state actors, including non-profit and for-profit organizations including faith-based organizations, are providing rehabilitation services. Member States are encouraged to support non-state actors in their provision of rehabilitation through improving regulatory mechanisms, encouraging service development, addressing standards and quality attributes, and promoting inclusive governance so that non-state actors can engage with government to meet the rehabilitation needs of the population.

Whether funded by governments or by other sources, this government leadership and engagement is necessary and recognizes the diverse range of actors needed for the delivery of quality rehabilitation services. For example, the Ministry of Health of Vanuatu, through the Physiotherapy Department of Vila Central Hospital, works closely with the Vanuatu Society for People with Disability in delivering quality CBR. Rehabilitation users who are seen as inpatients at the hospital and who are provided with assistive products (for example, a wheelchair) can be referred to teams from the Vanuatu Society for People with Disability who follow up with them in their homes. This ensures that ongoing rehabilitation is provided in the person's home and that assistive products can be maintained. The collaboration is a good example of how government and nongovernmental agencies can effectively work together to achieve a goal that one may not be able to achieve alone.

Families and caregivers are another group that is essential for ensuring people have access to the rehabilitation they need. Female members of households, including wives, partners and daughters who often take responsibility for family and home activities in some communities, are particularly important for supporting people with rehabilitation needs when there are no services available. There is a need to provide support, guidance and respite to families and caregivers who take on these types of responsibilities.

An example of good engagement with user groups and families is the Strategy Service Framework for Rehabilitation Services in Hong Kong SAR (China), which was developed by the Hospital Authority to guide rehabilitation services in public hospitals. The development was highly participatory with a broad range of input from staff and rehabilitation user groups and their families. The intensive participation from stakeholders assisted in creating an effective framework that was relevant to rehabilitation users themselves.

This Regional Framework recognizes that governments are not responsible to provide all necessary services for people who need rehabilitation, including people with disability, but governments are encouraged to *ensure* people have access to the required services. Governments play an important regulatory role and for this reason their relationship with non-state actors is crucial. To enable the delivery of rehabilitation services for people who need them, non-profit and for-profit rehabilitation providers are essential, including through the private sector and faith-based community.

The Framework recognizes the important role of non-state actors to acts as an enabler for rehabilitation services and to meet the demand required now and in the future. In some countries, it

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will be decades before basic rehabilitation services meet the needs of the population; without non-state actors, the wait would be even longer.

***2.3.2 Establish and nurture regional, multi-country and bilateral collaboration***

The range of country experiences with rehabilitation in the Western Pacific Region, as well as the various stages of development of rehabilitation services that each has, can help provide guidance to other countries. Some countries have extremely well-developed rehabilitation services, while others have very limited capacity and service provision.

In order to move the Region forward and deliver stronger rehabilitation services for all people who need them, it is important that countries have the opportunity to learn from each other, share resources, and jointly deal with issues such as procurement, human resources and research. WHO encourages Member States to continue to work together, and to increase collaboration among neighbouring countries in strengthening the provision of rehabilitation services.

Well-resourced countries in the Region could extend support to less-resourced countries, particularly on workforce development, data and research, in an effort to provide examples of how rehabilitation services could develop over time. This could include the provision of scholarships, short-term training fellowships, partnering institutions with workers, and providing specialist expertise to government and rehabilitation services in the Region.

Funding support could also be prioritized among well-resourced countries that provide overseas development assistance within the Region. For example, the support and funding from well-resourced countries for Kiribati's rehabilitation services has been used to recruit more qualified staff and to provide higher-quality interventions for the citizens of Kiribati. Additional funds have enabled the purchase of a vehicle to implement a home visiting programme, which has extended accessibility to community members who require rehabilitation support. Kiribati in particular recognizes and highly values the support from well-resourced countries in the development of their rehabilitation services.

WHO encourages donor countries to share experiences about their own health and social programmes to ensure rehabilitation services in other countries in the Region are strengthened to enable people to maintain health and well-being, and promote the SDG commitment of leaving no one behind. WHO is able to support countries on this front through formal collaboration, technical meetings and country consultations, and also through linking specific technical areas such as data or workforce development so that countries can collaborate to work directly on actions of this Regional Framework. WHO provides support through convening regional and multi-country meetings to bring rehabilitation stakeholders together to share experiences and advance national progress.

### 3. FOUNDATIONS FOR REHABILITATION

For people with disability, chronic illness and age-related conditions, or following acute illness or injury, rehabilitation is an essential requirement to live healthy lives and maintain their well-being. Getting timely rehabilitation services presents particular challenges, including financial ones, as not all people are equally able to access available services. WHO encourages countries to consider the following foundational principles to support the development and strengthening of their rehabilitation systems to assist in particular vulnerable people, their families and those at risk of being left behind.

#### **Principle 1. Access to rehabilitation is important to the realization of the right to the enjoyment of the highest attainable standard of health**

The WHO Constitution, written in 1946, declares that “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” This definition aligns directly with rehabilitation, emphasizing the need to promote functioning in the context of health conditions and impairments. If people are to achieve “health” in this respect, rehabilitation is – and has always been – an essential part of the health care people need.

The right to the enjoyment of the highest attainable standard of health as enshrined in the WHO Constitution is the foundation of personal and societal prosperity, and is too often missing in the planning of health policies and programmes. Promoting, protecting and fulfilling this right must consider rehabilitation as an essential part of people’s health and well-being. Rehabilitation contributes to healthy lives, supporting people to participate in education, employment, family and community activities (24).

Application of this principle must also consider equity issues associated with gender and disability, given the particular disadvantage and barriers that women and people with disability can experience. Women can experience disability differently compared to men, due to discrimination that can be related to gender, and mechanisms to address this inequity need to be considered as part of this Regional Framework. This principle also aligns with the rights expressed in the Convention on the Rights of Persons with Disabilities, relevant to those States parties in the Region.

#### **Principle 2. Rehabilitation is a health service for all people across the life course as well as part of the continuum of care and universal health coverage**

Rehabilitation is closely associated with disability and is sometimes seen as a disability service. However, rehabilitation is a service for the whole population across the life course (24). Rehabilitation services can benefit all at any age, as they do not focus on disease, but rather are aimed at supporting people to recover from injury or illness and return to activities such as walking, communication or self-care. These are important for people’s health and well-being.

Rehabilitation is part of UHC, recognizing its importance to people’s overall health, contributing to the provision of comprehensive person-centred care (24). Strengthening rehabilitation services is one way to progressively advance UHC by addressing the growing health needs of people who are living longer with chronic health conditions or impairment (24).

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**Principle 3. Rehabilitation is person centred and about their functioning, not their disease**

A fundamental aspect of rehabilitation is that it addresses functioning in the light of the health condition rather than being focused on disease. Rehabilitation is highly person centred as it draws on the individual goals that people set as part of their treatment. Rehabilitation addresses impairments, activity limitations and participation restrictions, as well as personal and environmental factors, including assistive products that impact functioning. Also, because rehabilitation is outcome-focused, it makes it a valuable health service to improve quality of life for people who experience impairment or difficulties in functioning associated with any health condition.

For many people who experience difficulties in functioning, access to rehabilitation is foundational to health and well-being. For success in rehabilitation, a person must be an active participant, set goals and improve their functioning. Rehabilitation supports people's quality of life, making it crucial to include in planning, funding and delivery of health services for the entire population.



## 4. PRIORITIES AND COUNTRY ACTIONS

Through ongoing technical support to Member States in the Region, the WHO Regional Office for the Western Pacific has identified rehabilitation issues, priorities and entry points for action. They are grouped into four “pillars” and focus on addressing: (1) service availability and quality; (2) governance and financing; (3) the workforce; and (4) data and research issues. Within these pillars, specific country-focused actions have also been identified through years of technical collaboration between WHO and Member States and through various regional and national meetings related to rehabilitation.

**Core actions** are encouraged by WHO for countries where rehabilitation services are emerging but remain limited in national coverage or quality (23). **Expanded actions** are important for countries to progress and improve their rehabilitation services and to demonstrate more challenging actions that countries may need to develop over time to deliver effective services.

Noting this, Member States are encouraged to develop their rehabilitation services through a range of actions without limiting their options to those listed in this Regional Framework, depending on where they understand they can make the greatest impact. The pillars and country-focused actions provide entry points for countries to address the strengthening of rehabilitation. They are not listed in a particular order, meaning that countries are not expected to implement them sequentially. Rather, they are a menu of options from which to pick.

### **Pillar 1. Rehabilitation service availability and quality**

While the need for rehabilitation is growing, service provision capacity in many countries in the Region fails to meet existing demands, with rehabilitation services provided only at selected levels of the health system in some countries. Reasons for limited service availability and quality include the underdevelopment of the rehabilitation sector and limited human resources and investment. Several long-standing misconceptions about rehabilitation have also influenced at which level rehabilitation is available (24).

When the role of rehabilitation in acute and post-acute care is not recognized, its integration into secondary and tertiary levels of the health system is possibly neglected. Rehabilitation delivered at the community level is particularly important, given barriers that some people face in being able to travel to health facilities (Box 3).

#### ***Core actions to support rehabilitation service availability and quality***

1. Strengthen the availability and quality of rehabilitation services in hospitals both in terms of numbers and scope of staff delivering rehabilitation interventions.
2. Establish or develop multidisciplinary rehabilitation at all levels of care responding to the population needs.
3. Deliver rehabilitation services in the community, including rural and remote areas, through collaboration and use of appropriate mechanisms for the country, for example telemedicine, mobile clinics, community outreach, accessible transportation modalities and training of primary health care workers.

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4. Adapt and implement priority intervention packages for rehabilitation at all levels of care.
5. Develop rehabilitation centres, units or wards that deliver comprehensive rehabilitation services for clients with complex needs, including undertaking a functioning assessment on admission and discharge of all clients.
6. Promote the delivery of timely rehabilitation that is strength-based and goal-oriented on rehabilitation user priorities and includes outcome assessments.
7. Develop a continuum of care through effective referral mechanisms and coordination across providers and sectors.
8. Develop and adopt protocols, standards and guidelines to improve the quality of rehabilitation services and provide a benchmark for service quality assessment.
9. Adopt a list of priority assistive products, address procurement including through the establishment of national mechanisms that include state and non-state actors, and expand the provision of assistive products through development of one-stop mechanisms and training of personnel in product delivery (see Global Cooperation on Assistive Technology at [http://www.who.int/phi/implementation/assistive\\_technology/phi\\_gate/en/](http://www.who.int/phi/implementation/assistive_technology/phi_gate/en/)).

***Expanded actions to support rehabilitation service availability and quality***

10. Evaluate the current standard of care in rehabilitation services and develop and adopt national standards.
11. Expand the number of guidelines, standards and protocols to improve timely rehabilitation service delivery for people with a wide range of health conditions.
12. Include mental health-related rehabilitation services for adults, adolescents and children, including those related to a range of health conditions such as trauma in connection with health emergencies.
13. Strengthen decentralization of rehabilitation services where appropriate, including for the provision of assistive products.
14. Collaborate with other countries to increase provision of assistive products.
15. Strengthen and expand early identification and services for children with developmental delays and disability as well as for their families.
16. Engage clients in decision-making and supporting families and caregivers to improve the people-centredness of rehabilitation services.

***Support actions of WHO***

- a. Provide guidance on the benefits of rehabilitation for target populations.
- b. Disseminate and provide guidance on the package of priority rehabilitation interventions.
- c. Support governments to integrate priority rehabilitation intervention packages at all levels of the health system.
- d. Provide technical support in the development of protocols, standards and guidelines.
- e. Support the training of rehabilitation workers to deliver key rehabilitation interventions at all levels of the health system.
- f. Support the adoption of a list of priority assistive products and the expansion of the provision of assistive products.

### Box 3. Community-based rehabilitation

Community-based rehabilitation (CBR) has been adopted and developed in many countries in the Western Pacific Region over the last 30 years. However, it differs widely across the Region. In some countries, CBR is conducted by or in close collaboration with ministries of health and consists of the delivery of rehabilitation interventions by health providers aimed at improving the daily functioning of anyone in the community with health conditions or impairments. In this way, CBR is delivered as mainstream community services.

Conversely, other countries give CBR a broader remit of inclusive development and take a whole-of-government approach. In this case, it typically focuses on including people with disability in their communities and on addressing the barriers they encounter in the health, education, employment and social sectors. CBR thus emphasizes the empowerment of people with disability and their families in the community, rather than on the functioning of an individual.

The *Western Pacific Regional Framework on Rehabilitation* recognizes the urgent need of promoting both the rehabilitation and inclusive development aspects of CBR. It focuses specifically on the rehabilitation aspect since it is closely aligned with health system responsibilities and the continuum of health care. The Framework, however, also promotes the inclusive development aspect since it is fundamental to achieving the SDGs and the principle of “leaving no one behind”. Furthermore, both approaches need to coexist and be coordinated so that people’s needs are holistically addressed and well-being is promoted.

This Framework builds on the effective implementation of CBR in some middle-income countries in the Region such as Solomon Islands, where a coordinated network of CBR workers under the Ministry of Health and Medical Services supports people across the country. The Ministry is now exploring further skills development of the workforce in data and mental health-related services.

In Vanuatu, the Ministry of Justice and Community Services has expanded its leadership role through support at the provincial level, undertaking a review of their national CBR action plan and linking this more closely with the newly developed National Disability Inclusive Development Policy 2018–2025. Similarly, since the 1980s Viet Nam has been developing its CBR services, in coordination with nongovernmental organizations. As far back as 2009, the Government approved a manual to support workers to deliver consistent CBR services. Now CBR service coverage spans 51 out of 63 provinces in the country.

## Pillar 2. Rehabilitation governance and financing

Strong leadership and governance are essential in coordinating the multiplicity of stakeholders, governmental and nongovernmental, involved in rehabilitation service delivery. Nongovernmental stakeholders can include private non-profit or for-profit providers, faith-based organizations or user-group associations. In some countries, accident compensation schemes support rehabilitation service development. For example in New Zealand, the Accident Compensation Corporation has a significant role in rehabilitation administration and coordination and services.

In addition, China established mechanisms to improve access to rehabilitation, including work-related injury insurance and universal medical insurance that include rehabilitation services. Rehabilitation is a key health strategy, and considering ageing populations and increases in NCDs and their corresponding rehabilitation needs, relevant government ministries are encouraged to coordinate across government and with non-state actors to prioritize rehabilitation (Box 4).

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***Core actions to improve rehabilitation governance and financing***

1. Undertake an assessment to identify rehabilitation needs in the population and the situation of rehabilitation services, including financing mechanisms and the barriers to accessing services.
2. Develop national or subnational rehabilitation strategic plans, including financing and costing considerations, ensuring local governments are engaged to support implementation at the community level.
3. Allocate adequate financial resources for rehabilitation including assistive products according to need, so that people do not suffer financial hardship.
4. Clarify the roles and responsibilities of health, social services or other sectors in the governance and planning of rehabilitation services, including, where relevant, the identification of the responsible officers in ministries and how local and traditional leaders can be engaged.
5. Establish new or strengthen existing coordination mechanisms between ministries of health and other relevant ministries, such as a technical working group, which may include key civil society stakeholders.
6. Identify priority actions aimed at improving the integration of rehabilitation into national health and/or social services planning, recognizing the associated financing implications.
7. Establish a monitoring and evaluation framework for accountability of rehabilitation, which includes user perspectives and pays particular attention to gender differences.
8. Develop strong leadership for rehabilitation by increasing government capacity (for example resourcing of a policy unit or officers) and supporting “champions”.
9. Undertake service planning considering the knowledge of rehabilitation users, families and civil society organizations, including faith-based organizations, providing rehabilitation user groups with a role in strengthening rehabilitation.
10. Consider alternative ways of providing rehabilitation interventions such as through health insurance or related social protection mechanisms, including for particularly vulnerable people such as non-citizens who may not be entitled to access regular state-managed social protection.
11. Engage in intersectoral coordination, planning and financing for the development of early childhood interventions and rehabilitation services for children.
12. Where feasible, consider how to gradually introduce rehabilitation interventions into health insurance mechanisms to complement other reimbursable health services.
13. Identify outcome measures that can be used to assess the effectiveness of interventions and programmes.

***Expanded actions to improve rehabilitation governance and financing***

14. Include rehabilitation in health insurance and related social protection mechanisms to support access to rehabilitation and assistive products, and reduce out-of-pocket expenses, including at the central, provincial and district levels.
15. Develop frameworks for rehabilitation services that include guidance for public–private partnerships.
16. Integrate rehabilitation and assistive products into existing regulatory mechanisms to support quality and safety.
17. Develop a communications strategy for rehabilitation, informed by service users, that includes promotion of good practices within government and across health providers and the general public.

### *Support actions of WHO*

- a. Provide guidance and analyses for rehabilitation policy-making and planning, including the provision of rehabilitation assessment, planning and monitoring tools.
- b. Provide support for government officials in key rehabilitation policy and programming positions.
- c. Encourage funding for rehabilitation as part of other health system programming.
- d. Provide guidance on assistive product regulation and provision.
- e. Provide evidence-based guidance on appropriate funding mechanisms and allocations within public financial management systems for rehabilitation.

#### **Box 4. Crucial role of non-state actors in rehabilitation service delivery**

Some countries in the Western Pacific Region have been affected by war and protracted conflict that have significantly disrupted their health systems and left millions without access to health and rehabilitation services. These countries, which include Cambodia, the Lao People's Democratic Republic and Viet Nam, have recognized the need and opportunity to strengthen rehabilitation as they reconstruct their health systems.

This strengthening has been supported by the efforts of non-state actors. In Cambodia, there have been significant investments in provincial rehabilitation centres, initially managed and funded by non-state actors, that have historically served people affected by landmines and unexploded ordnances. In the Lao People's Democratic Republic, provision of assistive products such as orthotics and prosthetics has supported individuals (and their families) recovering from injuries, allowing them to participate in school, work or social activities.

Also, in many countries, faith-based entities support people with rehabilitation services. For example, the Church of Jesus Christ of Latter-day Saints provides critical assistance in Fiji, Tonga, the Federated States of Micronesia and other countries in the Pacific. The Church provides assistive products including wheelchairs and crutches, as well as equipment for rehabilitation workers to use, such as prosthetic clinic equipment. The support from groups like this benefit people with a range of health conditions that impact their daily functioning.

### **Pillar 3. Rehabilitation workforce**

The rehabilitation workforce experiences challenges similar to those of the general health workforce, but also faces additional challenges. The number of those working in rehabilitation is comparatively smaller than in other areas of health, making it difficult to promote development and advance the professions. Additionally, in resource-constrained health ministries, prioritizing preventive and curative health care reduces support for rehabilitation services and the rehabilitation workforce.

The challenges that many rehabilitation workers experience in resource-constrained settings can contribute to low numbers of people entering or remaining in those professions. China is addressing this workforce issue through the use of family doctors who will be trained to provide basic rehabilitation services at the local level. This approach not only addresses a gap at the community level but also promotes integration of rehabilitation interventions within the health system.

#### ***Core actions to support rehabilitation workforce development***

1. Undertake workforce assessments and targeted planning to ensure that a multidisciplinary rehabilitation workforce is aligned with the market needs.
2. Develop and maintain a sustainable workforce for rehabilitation and integrate the rehabilitation workforce into the wider planning for human resources for health.

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3. Train and mentor non-rehabilitation health personnel (undergraduate, postgraduate and in-service) on rehabilitation, particularly for early identification, assessment and referral of people who can benefit from rehabilitation, support and assistance services.
4. Implement measures to improve recruitment and retention of rehabilitation workers, particularly in rural and remote areas.
5. Support the development of national professional associations and practitioner networks that advance rehabilitation and promote opportunities for professional development.

***Expanded actions to support rehabilitation workforce development***

6. Allocate resources for continuing professional education of the rehabilitation workforce.
7. Produce national training standards aligning with international standards (for example undergraduate, postgraduate and professional development courses) for different types and levels of rehabilitation personnel, including paediatric rehabilitation personnel, that enable career development and continuing education.
8. Integrate the rehabilitation workforce into national health professional regulations and credentialing.
9. Promote greater understanding and skills development related to rehabilitation for doctors, nurses and other non-rehabilitation health professionals to ensure rehabilitation interventions are available regardless of the existence of a rehabilitation workforce.
10. Countries support each other in the development of a rehabilitation workforce, including sharing skills and knowledge at subregional levels.

***Support actions of WHO***

- a. Provide training and tools for non-rehabilitation health workers to deliver key rehabilitation interventions.
- b. Convene national meetings of rehabilitation professionals and mid-level rehabilitation workers to promote networking and professional development.
- c. Provide guidance for the recruitment, training and retention of rehabilitation personnel.
- d. Provide technical support for the capacity-building of rehabilitation-training providers and support the development of standards for training.

**Pillar 4. Rehabilitation data and research**

Information about rehabilitation is very limited in the Western Pacific Region, and this limits the ability for policy-makers and service providers to make informed decisions that strengthen rehabilitation services. Data collection across health systems is vital for a range of policy development and implementation activities, and this Regional Framework acknowledges that in many countries in the Region the necessary data on rehabilitation are limited or absent. Promotion of research is needed if countries are going to learn from each other, make evidence-based policy decisions and justify the allocation of resources to support rehabilitation service development.

***Core actions on rehabilitation data and research***

1. Generate information about the daily functioning ability of the population, as well as its rehabilitation needs.
2. Include rehabilitation-relevant information, specifically service availability and utilization, in administrative sources, facility assessments and facility reporting systems.
3. Utilize national and international data and evidence to inform decision-making for rehabilitation.
4. Generate information about the outcomes, quality and efficiency of rehabilitation services.
5. Provide the health information system with the necessary resources to record data on rehabilitation in personal health records, health facilities and population services to obtain evidence to increase the quality and efficiency of services.
6. Encourage mutual support among countries to develop capacity on rehabilitation research and secure funding for priority rehabilitation research activities.

***Expanded actions on rehabilitation data and research***

7. Include rehabilitation in the priorities of national research funding agencies, including international funding opportunities.
8. Strengthen and build rehabilitation research capacity, especially to undertake health systems and policy research.
9. Promote the development of regional and country networks of rehabilitation professionals, research institutions and other stakeholders.

***Support actions of WHO***

- a. Provide support to countries on the Model Disability Survey and support its implementation to gather data on the functioning of the population.
- b. Provide guidance on rehabilitation data collection at different levels of the health system.
- c. Encourage well-resourced countries to support research on rehabilitation in less-resourced settings.
- d. Develop tools to support countries to measure rehabilitation outcomes.

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## **5. THE WAY FORWARD**

Member States are encouraged to consider how focusing on a range of actions from the four priority pillars can assist with rehabilitation strengthening. While there is no single path for all countries, drawing on the actions considered in the Framework, the following are suggested steps that Member States could take in addressing the various challenges for rehabilitation in their own contexts.

### **5.1 The way forward for Member States**

In line with the actions outlined in this Framework, Member States may consider the following:

- Understand the situation of rehabilitation in their own context, including, if relevant, undertaking an assessment to identify priority actions to improve the integration of rehabilitation into national health and/or social services planning.
- Consider the availability and quality of rehabilitation in hospitals to enable strategic support, through the development of multidisciplinary rehabilitation at all levels of care.
- Enhance the continuum of care, through effective rehabilitation referral mechanisms as well as coordination across service providers and relevant sectors.
- Consider the development or implementation of relevant protocols, standards and guidelines to improve the quality of rehabilitation.
- If necessary, clarify the roles and responsibilities of health, social services or other sectors in the governance of rehabilitation services.
- Consider how to develop and maintain a sustainable workforce for rehabilitation and integrate the rehabilitation workforce into the wider planning for human resources for health.
- Generate information about the outcomes, quality and efficiency of rehabilitation services.

### **5.2 The way forward for WHO**

In line with the actions outlined in this Framework, WHO will provide the following:

- Guidance on the benefits of rehabilitation as well as on support for governments to integrate rehabilitation at all levels of the health system
- Technical support to develop protocols, standards and guidelines as well as support for training of health workers to deliver key rehabilitation interventions at all levels of the health system
- Guidance and analysis for rehabilitation policy-making and planning, including the provision of rehabilitation assessment, planning and monitoring tools
- Training and tools for non-rehabilitation health workers to deliver key rehabilitation interventions
- Guidance on assistive produce regulation and provision
- Support to countries on the Model Disability Survey and rehabilitation data collection at different levels of the health system.

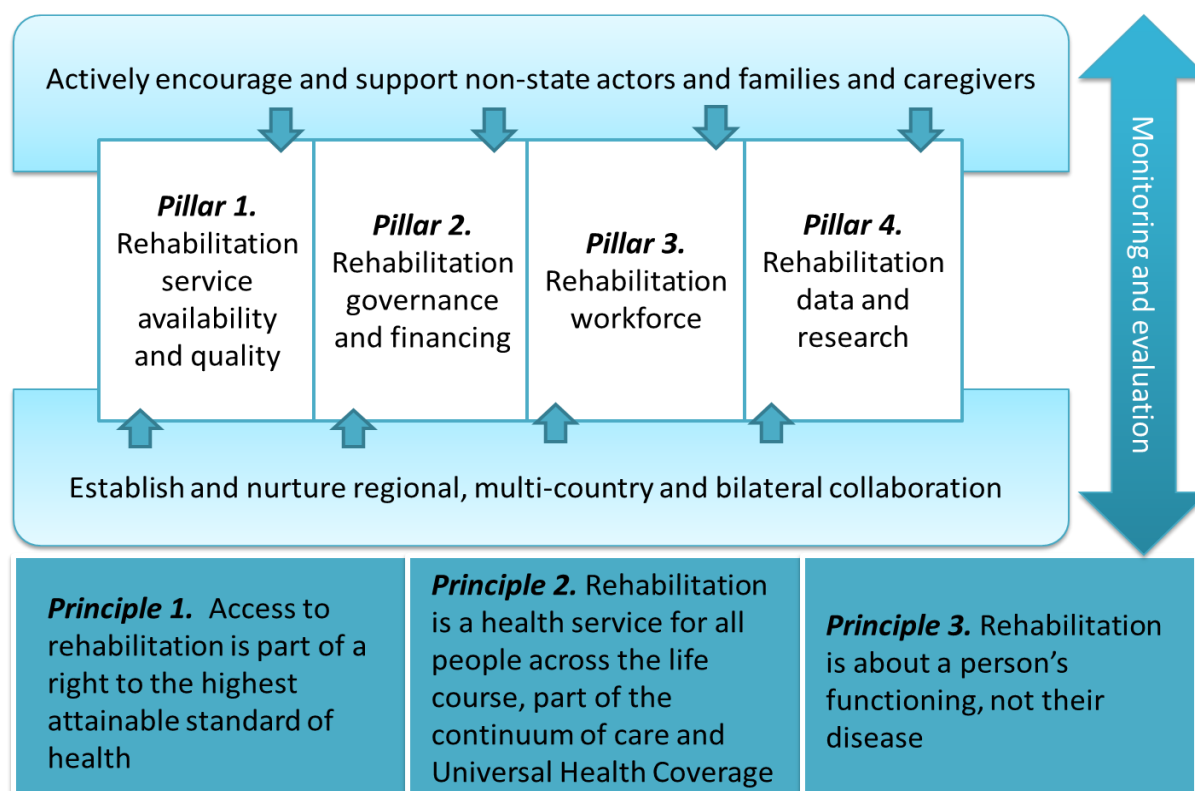


## 6. MONITORING PROGRESS

WHO in collaboration with Member States will develop a rehabilitation survey and support Member States to conduct this baseline survey in 2019. It will assess the rehabilitation capacity of Member States and inform the compilation of a regional profile of rehabilitation to understand, compare and share experiences. The survey can be repeated to monitor progress over time. Prior the end of the period covered by this current Regional Framework in 2023, WHO plans to work with Member States to review progress on this Framework, which would inform the development of the next framework to ensure ongoing support to Member States.

This Framework is also represented in Fig. 1, indicating the relationship between the foundational principles, pillars and opportunities for the path in supporting countries to strengthen rehabilitation in their contexts.

**Fig. 1. Overview of the Regional Framework**



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## APPENDICES

### Appendix 1. Glossary

Administrative sources	<p>Institution-based sources generate data as a result of administrative and operational activities. These activities are not confined to the health sector and include police records (such as reports of accidents or violent deaths), occupational reports (such as work-related injuries), and food and agricultural records (such as levels of food production and distribution). Within the health sector, the wide variety of health service data include morbidity and mortality data among people using services; services delivered; drugs and commodities provided; information on the availability and quality of services; case reporting; and resource, human, financial and logistics information.</p> <p><b>Individual records</b> – include individual health records (for example, growth monitoring, antenatal, delivery outcome) and disease records (consultation, discharge) routinely produced by health workers as well as by special disease registries. One of the most important functions of these records is to support the quality and continuity of care of individual patients.</p> <p><b>Service records</b> – capture information on the number of clients provided with various services and on the commodities used. To the extent possible, the national health information systems (HIS) should capture service statistics from the private sector as well as communities and civil society organizations. Such records also include reports of notifiable conditions, diseases or health events of such priority and public health significance that they require enhanced reporting through surveillance systems and an immediate public health response. Integrating reporting for disease surveillance and monitoring of focused public health programmes reduces the burden on those completing or reviewing reports and increases the likelihood that information will be acted on.</p> <p><b>Resource records</b> – a related component of service records concerned with the quality, availability and logistics of health service inputs and key health services. This includes information on the density and distribution of health facilities, human resources for health, drugs and other core commodities and key services. The minimum requirement is a database of health facilities and the key services they are providing. The next level of development of this aspect of the national HIS involves the mapping of facilities, human resources, core commodities and key services at national and district levels. Mapping the availability of specific interventions can provide important information from an equity perspective, and can help promote efforts to ensure that needed interventions reach peripheral areas and do not remain concentrated in urban centres. For the purposes of policy development and strategic planning, financial information is compiled using the National Health Accounts (NHA) methodology. The NHA provides information on the financial resources for health, and on the flow of these resources across the health system. In the case of resource records, there are four subgroups: Infrastructure and health services; Human resources; Financing and expenditure for health; and Equipment supplies and commodities.</p> <p>(Assessing the national health information system: an assessment tool – version 4.00. Geneva: Health Metrics Network, World Health Organization; 2008 <a href="http://apps.who.int/iris/handle/10665/43932">http://apps.who.int/iris/handle/10665/43932</a>)</p>
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Annex

Assistive products	<p>Any external product (including devices, equipment, instruments or software), especially produced or generally available, the primary purpose of which is to maintain or improve an individual's functioning and independence, and thereby promote their well-being. Assistive products are also used to prevent impairments and secondary health conditions.</p> <p>(Global Cooperation on Assistive Technology retrieved from <a href="http://www.who.int/phi/implementation/assistive_technology/phi_gate/en/">http://www.who.int/phi/implementation/assistive_technology/phi_gate/en/</a>).</p>
Assistive technology	<p>The application of organized knowledge and skills related to assistive products, including systems and services. Assistive technology is a subset of health technology.</p> <p>(Global Cooperation on Assistive Technology retrieved from <a href="http://www.who.int/phi/implementation/assistive_technology/phi_gate/en/">http://www.who.int/phi/implementation/assistive_technology/phi_gate/en/</a>).</p>
Continuum of care, or continuity of care	<p>Indicates one or more of the following attributes of care: (i) the provision of services that are coordinated across levels of care – primary care and referral facilities, across settings and providers; (ii) the provision of care throughout the life cycle; (iii) care that continues uninterrupted until the resolution of an episode of disease or risk; (iv) the degree to which a series of discrete health-care events are experienced by people as coherent and interconnected over time, and are consistent with their health needs and preferences.</p> <p>(Health Systems Strengthening Glossary retrieved from <a href="http://www.who.int/healthsystems/hss_glossary/en/index2.html#13">http://www.who.int/healthsystems/hss_glossary/en/index2.html#13</a>)</p>
Disabled persons' organization (DPO)	<p>Organizations or assemblies established to promote the human rights of disabled people, where most the members as well as the governing body are persons with disability.</p> <p>(World Health Organization, World Bank. World report on disability 2011. Geneva: World Health Organization; 2011)</p>
Early intervention	<p>Involves strategies which aim to intervene early in the life of a problem and provide individually tailored solutions. It typically focuses on populations at a higher risk of developing problems, or on families that are experiencing problems that have not yet become well established or entrenched.</p> <p>(World Report on Disability 2011)</p>
Environmental factors	<p>Make up the physical, social and attitudinal environment in which people live and conduct their lives</p> <p>(International Classification of Functioning, Disability and Health, 2001)</p>
Equity	<p>The absence of avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically or geographically. Health equity is achieved when everyone has the opportunity to attain their full health potential and no one is disadvantaged from doing so because of their social, economic, demographic or geographic circumstances.</p> <p>(Universal health coverage: moving towards better health – action framework for the Western Pacific Region. Manila: World Health Organization Regional Office for the Western Pacific; 2016)</p>
Functioning	<p>An umbrella term for body functions, body structures, activities and participation. It denotes the positive aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors).</p> <p>(International Classification of Functioning, Disability and Health, 2001)</p>

Impairment	Problems in body function or structure such as a significant deviation or loss. (International Classification of Functioning, Disability and Health, 2001)
Habilitation	Aims to assist those individuals who acquire disabilities congenitally or in early childhood and have not had the opportunity to learn how to function without them. (Community-based rehabilitation guidelines. Geneva: World Health Organization; 2010).
Health condition	An umbrella term for disease (acute or chronic), disorder, injury or trauma. A health condition may also include other circumstances such as pregnancy, ageing, stress, congenital anomaly, or genetic predisposition. Health conditions are coded using ICD-10. (International Classification of Functioning, Disability and Health, 2001).
Health workforce	Can be defined as “all people engaged in actions whose primary intent is to enhance health”. (Health workforce retrieved from <a href="http://www.who.int/healthinfo/systems/WHO_MBHSS_2010_section2_web.pdf">http://www.who.int/healthinfo/systems/WHO_MBHSS_2010_section2_web.pdf</a> )
Model Disability Survey	A general population survey that provides detailed and nuanced information about how people with and without disability conduct their lives and the difficulties they encounter, regardless of any underlying health condition or impairment. The Survey helps Member States identify the barriers that contribute to the problems people encounter, which, in turn, helps guide policy and service development. The Survey can also contribute to monitoring the Sustainable Development Goals. (Model Disability Survey retrieved from <a href="http://www.who.int/disabilities/data/mds/en/">http://www.who.int/disabilities/data/mds/en/</a> ).
Non-state actors	<p>Nongovernmental organizations, private sector entities, philanthropic foundations and academic institutions.</p> <p>Nongovernmental organizations are non-profit entities that operate independently of governments. They are usually membership-based, with non-profit entities or individuals as members exercising voting rights in relation to the policies of the nongovernmental organization, or are otherwise constituted with non-profit, public-interest goals. They are free from concerns which are primarily of a private, commercial or profit-making nature. They could include, for example, grass-roots community organizations, civil society groups and networks, faith-based organizations, professional groups, disease-specific groups, and patient groups.</p> <p>Private sector entities are commercial enterprises, that is to say businesses that are intended to make a profit for their owners. The term also refers to entities that represent, or are governed or controlled by, private sector entities. This group includes (but is not limited to) business associations representing commercial enterprises, entities not “at arm’s length” from their commercial sponsors, and partially or fully state-owned commercial enterprises acting like private sector entities.</p> <p>International business associations are private sector entities that do not intend to make a profit for themselves, but represent the interests of their members, which are commercial enterprises and/or national or other business associations. For the purposes of this framework, they shall have the authority to speak for their members through their authorized representatives. Their members shall exercise voting rights in relation to the policies of the international business association.</p> <p>Philanthropic foundations are non-profit entities whose assets are provided by donors and whose income is spent on socially useful purposes. They shall be clearly independent from any private sector entity in their governance and decision-making.</p>

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	<p>Academic institutions are entities engaged in the pursuit and dissemination of knowledge through research, education and training.</p> <p>(Resolution WHA69.10 Framework of engagement with non-States actors. In: Sixty-ninth World Health Assembly, Geneva, 28 May 2016. Resolutions and decisions, annexes. Geneva: World Health Organization; 2016)</p>
Participation restrictions	<p>Problems an individual may experience in involvement in life situations.</p> <p>(International Classification of Functioning, Disability and Health, 2001)</p>
People-centred care	<p>An approach to care in which individuals, carers, families and communities are consciously adopted as participants in and beneficiaries of trusted health systems that respond to their needs and preferences in humane, holistic ways. People-centred care also requires that people have the education and support they require to make decisions and participate in their own care. It is organized around the health needs and expectations of people rather than diseases.</p> <p>(Rehabilitation in health systems. Geneva: World Health Organization; 2017)</p> <p>Care that is focused and organized around the health needs and expectations of people and communities rather than on diseases. People-centred care extends the concept of patient-centred care to individuals, families, communities and society. Whereas patient-centred care is commonly understood as focusing on the individual seeking care – the patient – people-centred care encompasses these clinical encounters and also includes attention to the health of people in their communities and their crucial role in shaping health policy and health services.</p> <p>(Health systems strengthening glossary retrieved from <a href="http://www.who.int/healthsystems/hss_glossary/en/index8.html">http://www.who.int/healthsystems/hss_glossary/en/index8.html</a>)</p>
Personal factors	<p>The particular background of an individual's life and living, and comprise features of the individual that are not part of a health condition or health states. These factors may include gender, race, age, other health conditions, fitness, lifestyle, habits, upbringing, coping styles, social background, education, profession, past and current experience (past life events and concurrent events), overall behaviour pattern and character style, individual psychological assets and other characteristics, all or any of which may play a role in disability at any level.</p> <p>(International Classification of Functioning, Disability and Health, 2001)</p>
Physical accessibility	<p>Understood as the availability of good health services within reasonable reach of those who need them and of opening hours, appointment systems and other aspects of service organization and delivery that allow people to obtain the services when they need them.</p> <p>(Universal health coverage and universal access, 2013)</p> <p>As defined in the human rights context, “health facilities, goods and services must be within safe physical reach for all sections of the population, especially vulnerable or marginalized groups, such as ethnic minorities and indigenous populations, women, children, adolescents, older persons, persons with disability and persons with HIV/AIDS, including in rural areas”.</p> <p>(Accessibility retrieved from <a href="http://www.who.int/gender-equity-rights/understanding/accessibility-definition/en/">http://www.who.int/gender-equity-rights/understanding/accessibility-definition/en/</a>)</p>
Rehabilitation	<p>A set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment. Health condition refers to disease (acute or chronic), disorder, injury or trauma. A health condition may also include other circumstances such as pregnancy, ageing, stress, congenital anomaly, or genetic predisposition.</p> <p>(Rehabilitation in health systems, 2017)</p>



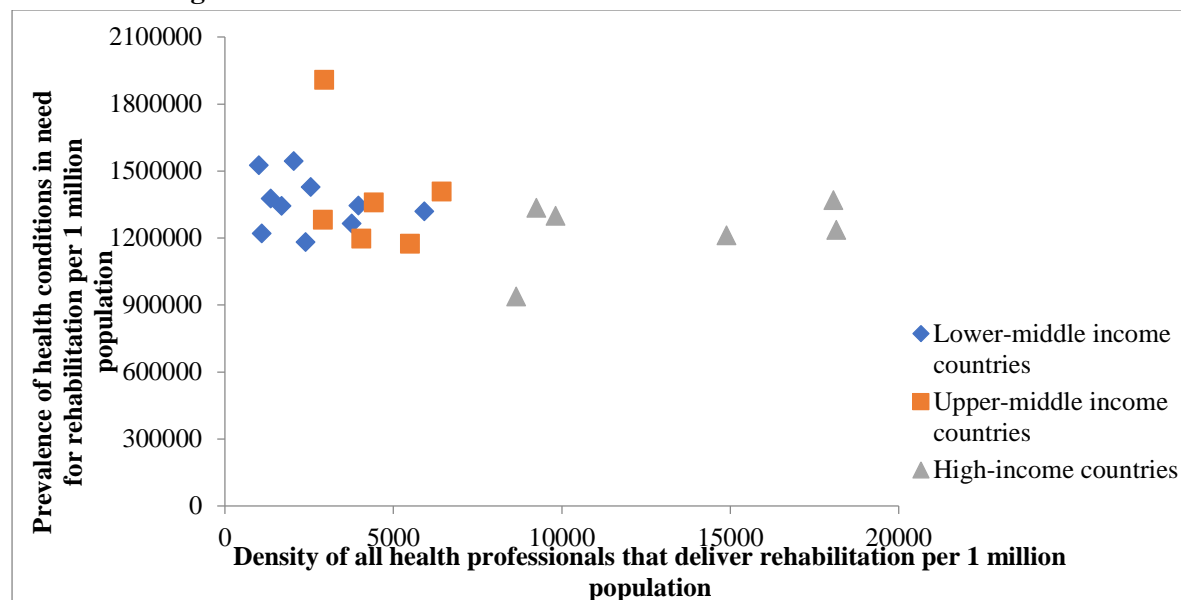
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Rehabilitation outcomes	<p>Changes in the functioning of an individual over time that are attributable to rehabilitation interventions. They may include fewer hospital admissions, greater independence, reduced burden of care, return to roles or occupations that is relevant to their age, gender and context (e.g. home care, school, work) and better quality of life.</p> <p>(Rehabilitation in health systems, 2017)</p>
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## Annex

### Appendix 2. Rehabilitation workforce

**Fig. A2.1. Prevalence of rehabilitation-relevant health conditions compared to density of health professionals who can deliver rehabilitation services in the Western Pacific Region**

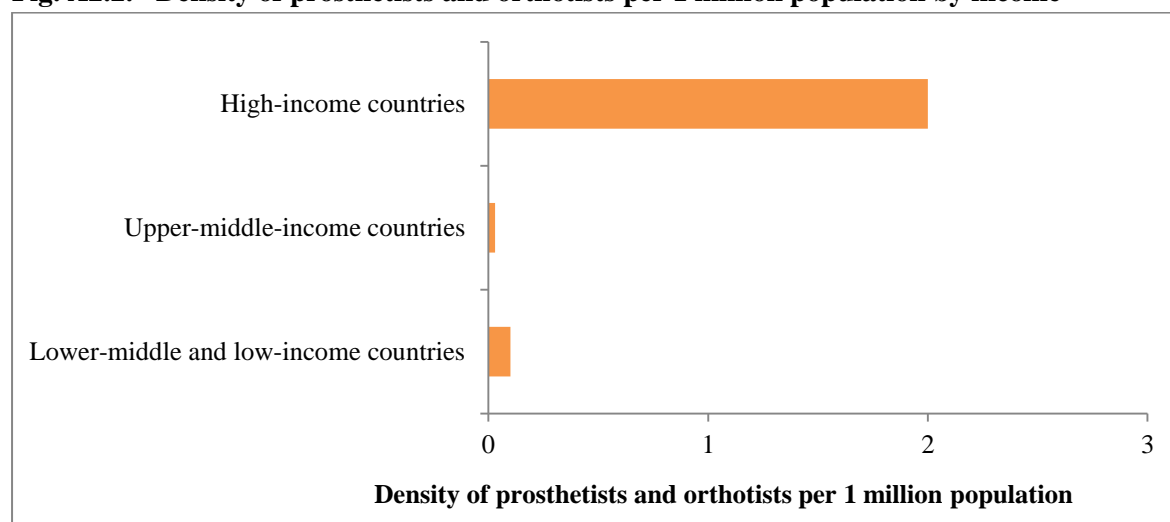


Notes: Data are from 10 lower-middle-income countries, six upper-middle-income countries and six high-income countries. Health professionals who can deliver rehabilitation services include physicians, nurses, midwives, physiotherapists, occupational therapists, prosthetists and orthotists.

Source: WHO Global Atlas of the Health Workforce, International Society for Prosthetics and Orthotics, World Confederation for Physical Therapy, World Federation of Occupational Therapists and Organisation for Economic Cooperation and Development

#### *Orthotists and prosthetists*

Based on the 2017 WHO standards for prosthetics and orthotics, for every 1 million population, a country would need to have at least five prosthetics and orthotics professionals in order to meet the needs of all individuals. Data from the International Society for Prosthetics and Orthotics show that the number of registered prosthetists, orthotists, technicians and technologists does not reach the minimum number of required personnel even in high-income countries in the Western Pacific Region. In China, the Philippines and Malaysia, for example, the number of practicing prosthetics and orthotics professionals is less than 1 per 1 million population (Fig. A2.2).

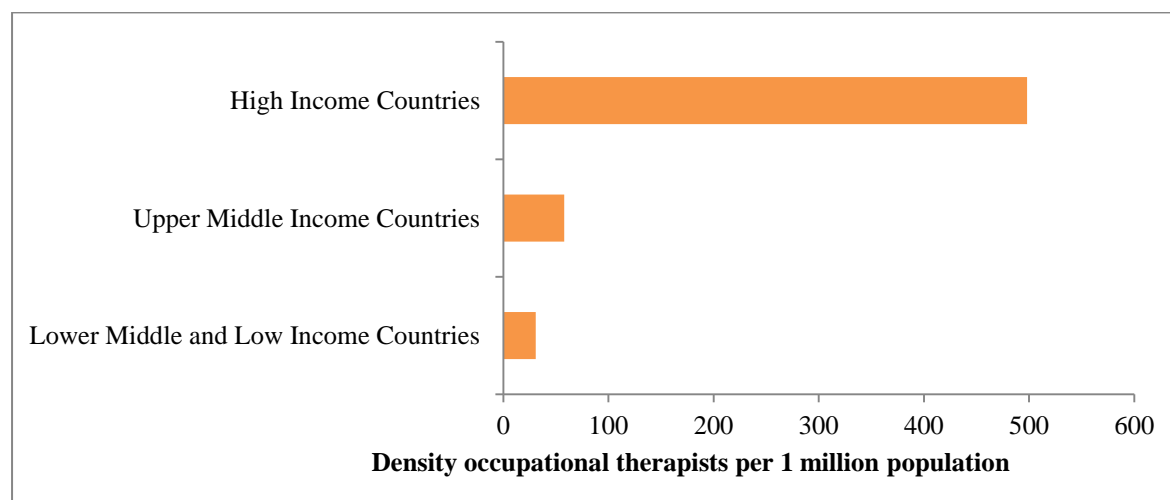
**Fig. A2.2. Density of prosthetists and orthotists per 1 million population by income**

Notes: Data are from 14 countries. High-income countries are those with a gross national income (GNI) per capita of US\$ 12 475 or more in 2015, as estimated by the World Bank. The lower number of prosthetic and orthotic professionals per 1 million in upper-middle-income countries compared to lower-middle-income and low-income countries might not be real, because data were available from only two upper-middle countries (China and Malaysia).

Source: International Society for Prosthetics and Orthotics

### ***Occupational therapists***

The World Federation of Occupational Therapists states that the minimum number of occupational therapists per 1 million population should be 750. Data from the Region show that the number of registered occupational therapists is far below this required minimum, even in the high-income countries. Fig. A2.3 shows data from seven countries in the region – five high-income countries (Australia, New Zealand, Japan, the Republic of Korea and Singapore), one upper-middle-income country (Malaysia) and one lower-middle-income country (Philippines). Even though high-income countries have a significantly larger workforce, the number is still far below the required minimum to address the needs of individuals.

**Fig. A2.3. Density of occupational therapists per 1 million population by income**

## Annex

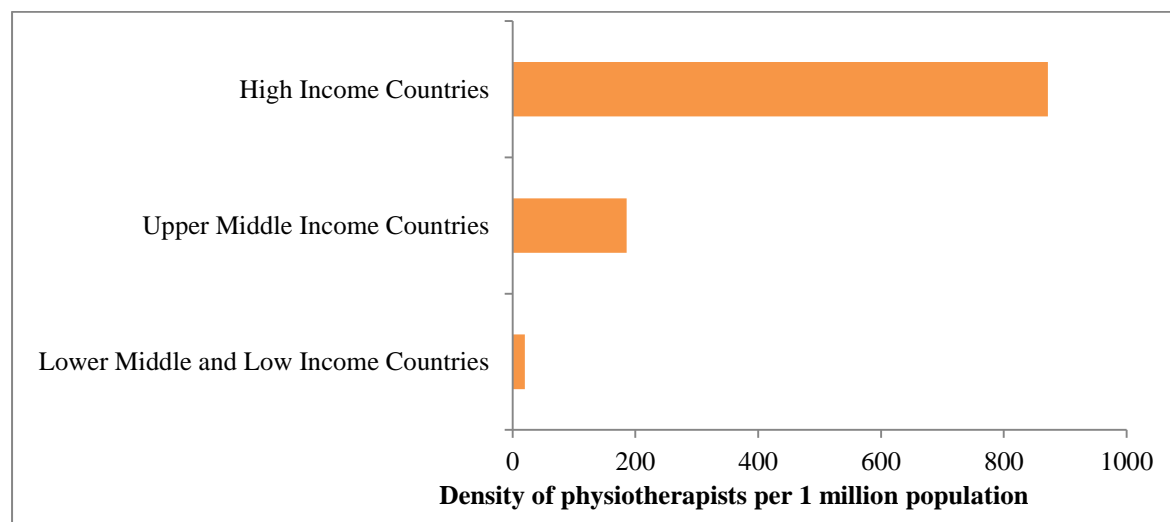
Notes: Data are from seven countries. High-income countries are those with a gross national income per capita of US\$ 12 475 or more in 2015, as estimated by the World Bank. To cover the needs of all individuals for occupational therapists, at least 750 professionals per 1 million population are needed.

Source: World Federation of Occupational Therapists

### *Physiotherapists or physical rehabilitation medicine doctors*

There is no universally agreed or recommended minimum number of physiotherapists or physical and rehabilitation medicine doctors. However, Figs. A2.4 and A2.5 show the critical shortage of these professionals in the Region. Despite the large number of people with health conditions requiring physical therapy intervention, the number of qualified personnel in many lower-middle-income countries in the Region is well below 10 per 1 million population (Fig. A2.4). The same trend applies to physical and rehabilitation medicine doctors. In countries such as the Lao People's Democratic Republic, the number of professionals is less than 1 per 1 million population.

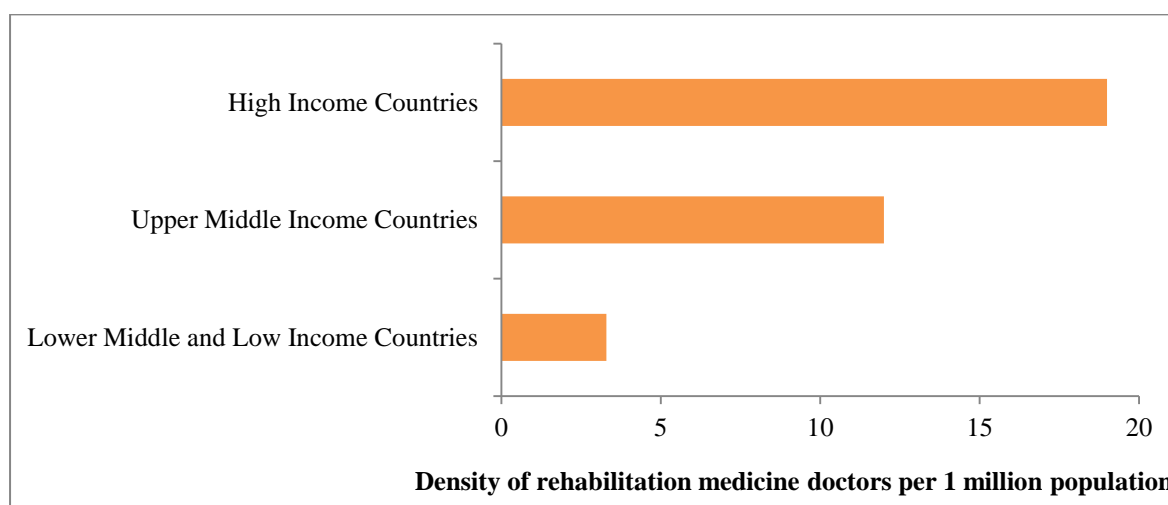
**Fig. A2.4. Density of physiotherapists per 1 million population by income**



Notes: Data are from 18 countries. High-income countries are those with a gross national income per capita of US\$ 12 475 or more in 2015, as estimated by the World Bank.

Source: World Confederation for Physical Therapy and Organisation for Economic Co-operation and Development

**Fig. A2.5. Density of physical and rehabilitation medicine doctors per 1 million population by income**



Notes: Data are from 11 countries. High-income countries are those with a gross national income per capita of US\$ 12 475 or more in 2015, as estimated by the World Bank.

Source: International Society of Physical and Rehabilitation Medicine