

# What is the World Health Organization's Package of Interventions for Rehabilitation, and why should I care?

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## Abstract

**Background:** In July 2023, WHO published the Package of Interventions for Rehabilitation (PIR). It is a series of eight modules, providing evidence-based guidance for rehabilitation management in health conditions for which there is the highest need for rehabilitation. Each module is satellited by a methods document.

**Aims:** Good guidance is a prerequisite for proper and achievable care. This paper is the first of a series of eight reports communicating and discussing the WHO's PIR. It is one of the first attempts to populate the PIR outside the WHO's publications.

**Materials and Methods:** The series consists of brief communications with a critical analysis of the presented publications. They are narratives, with the use of the term "narrative" understood as a type of a communication with liberty to raise questions and stimulate discussion but formulating the opinion as balanced as possible, based on data rather than on intuition.

**Results and Conclusions:** In the series, we present and discuss the PIR in subsequent fields, from the perspective of physiotherapy, and highlight the roles and responsibilities of physiotherapies in the multidisciplinary, person-centred approach to functioning interventions, proposed in PIR. Further, we present the experience of Georgia's health system, as the first to adapt PIR at a national level. The experience gained from this process, including key challenges and implementation strategies, provides valuable insights for other countries.

## Key words

rehabilitation, WHO, evidence-based practice, clinical practice guidelines, Package of Interventions for Rehabilitation.

## Rationale and introduction to the series

### Rehabilitation

Rehabilitation is referred to by the World Health Organization (WHO) as the “health strategy for the 21<sup>st</sup> century” [1], with “human functioning” as the third indicator of health, along with the two classical public health indicators of mortality and morbidity (which, in fact, are related to disease, not health) [2]. This paradigm shift is even called as “human functioning revolution” [3].

It is estimated that one in three people worldwide need rehabilitation at some point of their lifespan. It is associated with noncommunicable diseases, population ageing, and improved survival following injuries. Unlike previous centuries, the 21<sup>st</sup> century is not defined by communicable diseases. The need for rehabilitation continues throughout the lifespan, with some health condition congenital, some age-related, and some age-independent, and will continue to rise [1,4–7].

The term “rehabilitation” may have various meanings and shapes. For the purpose of this article

series, we provide the definition of rehabilitation, as well as its natural language description of how it is understood, used and disseminated by the WHO, and, consequently, in the PIR guidance. Both are in **Box 1** below.

### The Universal Health Coverage

Rehabilitation is one of the essential health services included in WHO’s definition of “universal health coverage”. We also provide this information to better prepare readers for this series (**Box 2**).

### PIR as evidence-based Practice guidelines and recommendations

Good guidance is a prerequisite of proper, and achievable, care. This paper is the first in a series of reports communicating and discussing the WHO’s Package of Rehabilitation Interventions, PIR. The PIR consists of seven thematic modules plus an introductory module, which is presented in this paper, providing evidence-based guidance

Rehabilitation: “a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment”.

“Rehabilitation is a core health service for individuals with health conditions throughout the life course, and across the continuum of care, such as children with developmental disorders, people with chronic conditions and living with the consequences of injuries or older people.”

“Put simply, rehabilitation helps a child, adult or older person to be as independent as possible in everyday activities and enables participation in education, work, recreation and meaningful life roles such as taking care of family.”

“It is effective in shortening recovery time, preventing complications related to acute and chronic conditions, and improving physical and mental functioning and well-being. Rehabilitation can enable people to return to and engage in work, community and family life, and help to reduce social isolation. Furthermore, rehabilitation empowers people to manage their health conditions.”

**Box 1.** WHO definition and natural language description of “rehabilitation” [4,7–9].

“Universal health coverage (UHC) is defined as all people receiving quality health services that meet their needs without being exposed to financial hardship in paying for the services. UHC means every individual and community receive the full spectrum of care they need, from health promotion to prevention, treatment, rehabilitation, and palliative care.”

**Box 2.** The definition of the WHO's Universal Health coverage [4,7].

for rehabilitation management in health conditions for which there is the highest need for rehabilitation. Each module is accompanied by a methods document – appendix, providing the information on the evidence base for the recommendations provided [10].

It is one of the first attempts to populate the PIR outside the WHO's publications [11]. The first health system to adapt the PIR at national level is in Georgia [12]. Georgia was the first country to adapt PIR at the national level. The experience gained from this process, including key challenges and implementation strategies, provides valuable insights for other countries.

We take the advantage of co-authoring of this series with one of the authors of this endeavour (SG).

### **Functioning and functioning interventions**

As mentioned, the core assumption for the WHO's way of providing rehabilitation guidance is *functioning* [2,13]. The PIR provides *functioning interventions*, which are understood as follows, in accordance with the biopsychosocial model of functioning, as outlined in the International Classification of Functioning, Disability and Health, ICF [7,14]:

“Rehabilitation provides sets of interventions designed to optimize functioning and reduce disability in individuals with health conditions, in interaction with their environment. Interventions for rehabilitation comprise those that target specific aspects of functioning (body functions, body structures, activities and participation) and [contextual] aspects that have an impact of an individual's functioning (environmental functions and personal factors).

These are referred to as functioning interventions and include, for example, muscle-strengthening exercises, language training, breathing exercises, training of activities of daily living, social skills or communication skills, provision and training in the use of assistive products and environmental modifications.

Functioning interventions also address the self-management skills of the people living with the health condition (...).”

**Box 3.** Functioning and rehabilitation [2,3,13,14].

## Package of Interventions for Rehabilitation (PIR) – presentation and Module 1

In the **Box 4** below, we summarise key features of the PIR. It is the introductory material for better understanding the composition of subsequent PIR's modules, addressing key health condition in terms of rehabilitation interventions. In following

papers, in contrast with this introductory piece, we concentrate on the interventions – both diagnostic and therapeutic ones – as well as on the evidence-base for the recommendations.

### **What is the Package of Interventions for Rehabilitation (PIR):**

It is a World Health Organization (WHO) resource containing evidence-based rehabilitation interventions that is aimed to facilitate the integration of rehabilitation interventions in all service delivery platforms. The PIR is available as an open-access online resource [15].

Intended target audiences:

- ministries of health: to enable them to plan the integration of interventions for rehabilitation in their national health services;
- researchers: to enable them to identify rehabilitation research gaps;
- academics: they are informed of how to develop curricula for the training of rehabilitation professionals;
- service providers: PIR is guiding them to plan and implement specific interventions for rehabilitation in their rehabilitation programmes.

### **Why the PIR is needed and how it is intended to be impacting health systems:**

The United Nation's 2030 Agenda for Sustainable Development [5] has the overall goal to end poverty, protect the planet and ensure prosperity for all. Goal three (of the seventeen Sustainable Development Goals) aims to “ensure healthy lives and promote well-being for all at all ages”.

Goal three is about achieving of Universal Health Coverage, UHC [4] – a perspective of the WHO, defined as “all people receiving the full spectrum of quality health services (health promotion, prevention, treatment, rehabilitation and palliative care) that meet their needs without being exposed to financial hardship in paying for the services”.

The achievement of UHC is one of the strategic priority goals of the WHO. The WHO “Rehabilitation 2030” initiative was launched in 2017 to address this in terms of rehabilitation services. For that critical reason, PIR is intended to equip WHO Member States with technical guidance to establish and strengthen rehabilitation service delivery in line with population needs. This means identifying:

- the most important interventions for rehabilitation that should be firstly integrated into the health system,
- the resources needed to deliver them safely and effectively.

PIR is to strengthen health systems for rehabilitation through informing health policy, planning and budgeting.

**How the PIR was developed and what are next steps** – it was produced, and is disseminated, in a stepwise approach:

(1) Health conditions [see Table 1 for details] were selected based on:

- global prevalence estimate,
- associated disability weights,
- proposals from rehabilitation experts working in low- and middle-income countries.

(2) working groups, guided by methodological experts from Cochrane Rehabilitation and WHO Rehabilitation Programme, identified the evidence from high-quality clinical practice guidelines and Cochrane systematic reviews for the selected health conditions

(3, 4) Development Groups composed of rehabilitation experts from different world regions and different rehabilitation professions:

- confirmed identified interventions,
- defined the areas of service delivery (primary, secondary, tertiary care),
- described the required resources (workforce, assistive technologies, equipment and consumables),

(5) external Peer Review Groups reviewed the results

(6, 7, 8) the PIR was prototyped, tested in countries and published open access

Further steps:

(9, 10) Different dissemination strategies used to raise awareness on the PIR

(11) Integration of the PIR into WHO's OneHealth Tool.

**Box 4.** Main features of the WHO's Package of Interventions for Rehabilitation, PIR. Based on the PIR Information Sheet technical document [11].

### Dissemination

This series of papers are intended to facilitate the critical step: dissemination. Without dissemination, other steps are useless. For that reason, the series is enriched with the experience from Georgia – the first country which has developed a national rehabilitation service based on the PIR [15,16]. The Georgian adoption is the only national dissemination effort that was completed and is informed from the WHO's PIR website [15]. To the best of our knowledge, a single other initia-

tive that has been in process is a programme of strengthening rehabilitation services for cancer, based on the PIR [11]. WHO provides dissemination materials such as multimedia communication resources and an information sheet [15] but we are not aware of any activities or publications addressing active implementation initiatives, which could be based on an implementation theory, framework or model [16].

**Scope of the PIR and what is addressed in the article series**

What the PIR covers is twenty health conditions which are categorized under seven disease areas. Eight publications (modules) address specific health conditions. Details are in **Table 1** below.

**Table 1.** PIR modules, covered health conditions, and disease areas [7,10,15].

PIR Module / Disease area	Health conditions
1. Introduction	<i>(Background information, addressed in this paper)</i>
2. Musculoskeletal conditions	low back pain
	osteoarthritis
	rheumatoid arthritis
	sarcopenia
	fractures
	amputation
3. Neurological conditions	stroke
	Parkinson disease
	dementia
	cerebral palsy
	traumatic brain injury
	spinal cord injury
4. Cardiopulmonary conditions	ischemic heart disease
	chronic obstructive pulmonary disease
5. Neurodevelopmental disorders	autism spectrum disorder
	disorders of intellectual development
6. Sensory conditions	vision impairment
	hearing loss
7. Malignant neoplasm	cancer
8. Mental health conditions	schizophrenia

### How the health conditions were listed

Many health conditions, adequate to rehabilitation, are not addressed in the PIR. Selection of health conditions for the PIR was based on following assumptions, with the assumption that they have the highest needs for rehabilitation [7]:

- they have the highest prevalence and/or
- are associated with the highest levels of disability.

The issue of life course and the need for rehabilitation was considered as follows:

- birth-related conditions (such as cerebral palsy),
- age-related conditions (such as dementia),
- age-independent conditions (such as injuries or cancer).

### Conclusions and take-home messages

This is the first, introductory paper addressing the WHO Package of Interventions for Rehabilitation. It is different than the upcoming papers in the series, as it introduces the specific PIR modules. In each next paper, we will address – describe and comment on – modules 2 to 8, from musculoskeletal disorders, to mental health conditions. We will present the core of each module – especially the recommendation for rehabilitation

interventions – diagnostic and therapeutic ones. We will not limit our papers to physiotherapy, but will present the whole spectrum of interdisciplinary rehabilitation, as it is highlighted in the PIR.

We will also come up with some discussion on the recommendations and on how they were formulated, with reference to the evidence base provided. The package is a matter of discussion, especially as regards the palette of health conditions, rather than functioning and disability, used by the authors of the PIR as the starting point of the document [10,17,18]

Below (**Box 5**) you can find a first summary of a module – this specific one addressing the Module 1 Introduction [7]. Following ones will have similar structure of the headings, but will contain information specific for each module.

The PIR is about holistic, multidisciplinary rehabilitation. We will acknowledge this presenting and discussing subsequent modules and health conditions. However, considering both the scope of this Journal and the extensive content of the modules, we will highlight physiotherapeutic assessment and physiotherapeutic interventions.

We aim for this series to support the dissemination of these important guidelines.

#### What is the Package of Interventions for Rehabilitation, and Why Should I Care?

The "**Package of Interventions for Rehabilitation: Module 1 – Introduction**" by the WHO is the entry point to a comprehensive series of documents focusing on essential rehabilitation services. This series, known as the "**Package of Interventions**", covers a wide range of health conditions, including musculoskeletal, neurological, cardiopulmonary, neurodevelopmental, sensory, cancer, and mental health conditions. Each module provides evidence-based strategies aimed at improving patient care and overall quality of life.

#### Why is it Important?

Rehabilitation is crucial for recovery, helping individuals regain function and independence following illness or injury. This series is particularly significant as it addresses the often unmet need for rehabilitation services in low-resource settings, ensuring that people worldwide have access to high-quality care, regardless of their location or economic status.

### **What Does it Include?**

This introductory module outlines the general framework for integrating rehabilitation services into health systems. It offers guidance to healthcare planners and policymakers on the necessary interventions, equipment, and workforce required to deliver effective rehabilitation across a range of conditions.

### **Who is it For?**

This module is tailored for healthcare leaders, policymakers, and providers, as well as educators and researchers focused on improving access to rehabilitation services. It is an essential resource for those responsible for planning and integrating rehabilitation into wider healthcare systems.

### **How Does it Benefit Patients?**

By standardising approaches to rehabilitation, patients benefit from receiving comprehensive, high-quality care, personalised to their specific needs. This enables them to regain physical, cognitive, and social functions more effectively, thereby enhancing their overall well-being and quality of life.

### **In Summary**

The "**Package of Interventions for Rehabilitation**" is a vital resource that supports the global goal of universal health coverage. This introduction sets the stage for more detailed modules, each addressing specific health conditions.

**Box 5.** Summary and take-home messages from PIR Module 1 introduction [7].

## **Declarations**

**Ethical Consideration:** Ethical clearance was not obtained for this study as it does not include any human or animal participants. This paper forms part of a series on the WHO's Package of Interventions for Rehabilitation evidence-based guidance to support the Rehabilitation 2030 initiative and the global need for rehabilitation.

**Clinical Trials:** This study was not registered as a clinical trial as it did not involve investigational products or interventions that would classify it under clinical trial regulations.

**Conflict of Interest:** The authors declare no conflict of interest. The study was conducted independently and without any influence from external organizations or entities.

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## References

1. Stucki G, Bickenbach J, Gutenbrunner C, Melvin J. Rehabilitation: The health strategy of the 21st century. *J Rehabil Med.* 2018; 50: 309–316.
2. Stucki G, Bickenbach J. Functioning: the third health indicator in the health system and the key indicator for rehabilitation. *Eur J Phys Rehabil Med.* 2017; 53: 134–138.
3. Bickenbach J, Rubinelli S, Baffone C, Stucki G. The human functioning revolution: implications for health systems and sciences. *Front Sci* [Internet]. 2023; 1. Available from: <http://dx.doi.org/10.3389/fsci.2023.1118512>
4. Universal health coverage (UHC) [Internet]. [cited 2025 Mar 16]. Available from: [https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-\(uhc\)](https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc))
5. Transforming our world: the 2030 Agenda for Sustainable Development [Internet]. [cited 2025 Mar 16]. Available from: <https://sdgs.un.org/2030agenda>
6. Cieza A, Causey K, Kamenov K, Hanson SW, Chatterji S, Vos T. Global estimates of the need for rehabilitation based on the Global Burden of Disease study 2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet.* 2021; 396: 2006–2017.
7. Package of interventions for rehabilitation: module 1: introduction [Internet]. Geneva: World Health Organization; 2023 [cited 2024 Dec 11]. Available from: <https://www.who.int/publications/i/item/9789240067097>
8. Rehabilitation 2030: A call for action [Internet]. Geneva: World Health Organization; [cited 2024 Dec 8]. Available from: <https://www.who.int/publications/m/item/rehabilitation-2030-a-call-for-action>
9. Rehabilitation [Internet]. Geneva: World Health Organization; [cited 2025 Jan 3]. Available from: <https://www.who.int/news-room/fact-sheets/detail/rehabilitation>
10. Rauch A, Negrini S, Cieza A. Toward strengthening rehabilitation in health systems: Methods used to develop a WHO package of rehabilitation interventions. *Arch Phys Med Rehabil.* 2019; 100: 2205–2211.
11. Hart NH, Stout NL, Haywood D, Ashbury FD, Chan RJ, Fitch MI, et al. World Health Organization package of interventions for rehabilitation for cancer: a MASCC-endorsed resource for global action to address unmet rehabilitation needs of people affected by cancer. *Support Care Cancer.* 2024; 32: 417.
12. World Health Organization. Using the package of interventions for rehabilitation in Georgia. Geneva: World Health Organization; 2024. Licence: CC BY-NC-SA 3.0 IGO.
13. Jespersen E. The International Classification of Functioning, Disability and Health (ICF): a holistic oriented model for rehabilitation. Biała Podlaska: Akademia Wychowania Fizycznego Józefa Piłsudskiego w Warszawie Filia; [year not provided].
14. Stucki G, Ewert T, Cieza A. Value and application of the ICF in rehabilitation medicine. *Disabil Rehabil.* 2002; 24: 932–938.
15. Package of interventions for rehabilitation [Internet]. Geneva: World Health Organization; [cited 2024 Jan 27]. Available from: <https://www.who.int/activities/integrating-rehabilitation-into-health-systems/service-delivery/package-of-interventions-for-rehabilitation>
16. Wang Y, Wong EL-Y, Nilssen P, Chung VC-H, Tian Y, Yeoh E-K. A scoping review of implementation science theories, models, and frameworks – an appraisal of purpose, characteristics, usability, applicability, and testability. *Implement Sci.* 2023; 18: 43.
17. Kirby RL. WHO Package of Rehabilitation Interventions: Some concerns about methodology. *Arch Phys Med Rehabil.* 2020; 101: 1095.
18. Rauch A, Negrini S, Cieza A. Author response to “WHO package of rehabilitation interventions: Some concerns about methodology.” *Arch Phys Med Rehabil.* 2020; 101: 1095–1096.