THE ROLE OF REHABILITATION FOR THE REALISATION OF HUMAN RIGHTS AND INCLUSIVE DEVELOPMENT

humanity &inclusion

Global Rehabilitation Alliance

Acknowledgments

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Content

1. Introduction

This document illustrates how rehabilitation contributes to improve global health, to achieve a number of Sustainable Development Goals (SDGs) and realise human rights for all. Rehabilitation is not only beneficial for persons with disabilities but also persons with a wide range of health conditions. Rehabilitation places the person at the centre and contributes to reach the person's full potential by focusing on the abilities rather than on the limitations. The unmet needs for rehabilitation represent the failure to fulfil the human right to health and well-being. The ultimate purpose of this document is to convey evidence-based messages to key stakeholders to strengthening the availability of quality, coordinated, affordable, timely, and user-centred rehabilitation services. At the end of this document the reader can find sets of specific recommendations to the different stakeholders, which have the possibility and the responsibility to strengthen rehabilitation services and improve the health and well-being of millions of persons around the world.

2. Optimal functioning to fully participate in society

Rehabilitation is one of important health strategies in line with promotion, prevention, treatment, and palliative care. The World Health Organization (WHO) defines rehabilitation as "a set of interventions designed to optimise functioning and reduce disability in individuals with health conditions[1] in interaction with their environment".[2]

15% of the world population lives with a form of disability. **The prevalence of health conditions associated with severe disability has increased by 23% since 2005** (1)**, generating higher demand for rehabilitation services**. Primarily this is due to demographic changes, including an ageing population, increasing non-communicable diseases and injuries (2). It should be noticed that these figures do not reflect the actual scope of rehabilitation needs, as most disabilities around the world are "invisible" (for example psychosocial disabilities, anxiety, depression, autism, musculoskeletal pain), thus are often not recognised and properly addressed. The general health needs of persons with disabilities are the same as everyone else's and can be met by primary healthcare services. They can also have specific health needs that may require access to rehabilitation services and assistive technologies or devices (such as wheelchairs, prosthesis, and visual supports), as well as the support and empowerment offered by community-based rehabilitation.

Rehabilitation not only is beneficial for persons with certain disabilities but also for persons with a wide range of health conditions, including acute or chronic diseases, injuries, traumas, as well as other circumstances such as pregnancy, ageing, stress, congenital anomaly, or genetic predisposition (3). **Rehabilitation services are relevant along the continuum of care**, for the prevention of impairment and deterioration in the acute phase of care as well as for optimisation and maintenance of functioning in the post-acute and long-term phases of care (3).

[1] 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 ((WHO: Rehabilitation in Health Systems. Geneva 2017).

[2] Nas and others, 2015

Recognising that disability is an evolving concept resulting from the negative interactions between the health conditions of the individual and the attitudinal and environmental barriers, rehabilitation operates at the level of impairments, activity limitations and participation restrictions.[3] While the 2018 WHA Resolution on Improving access to Assistive Technologies and initiatives like AT 2030 and ATScale have placed strong emphasis on the access to assistive technologies,[4] it is to be recalled that **rehabilitation encompasses a broad range of therapeutic measures**: these include provision of assistive technologies and devices, but also exercise, training, education, support and counselling, and adaptation of the environment to eliminate barriers. ICTs are increasingly used as integral parts of rehabilitation programmes and in the development of assistive technology solution.

Depending on each individual's conditions, the provision of assistive technologies/devices may be more or less relevant and may require the integration of other rehabilitation measures. Rehabilitation services are offered by different professionals: physical therapists, occupational therapists, prosthetists and orthotists, physiatrists (physical and rehabilitation medicine specialist), psychologists, speech and language therapists, social workers, chiropractors, nurses and other health professionals (4) including community-based-rehabilitation workers. Rehabilitation services may be found in a variety of health care settings, from hospitals to communities.

By restoring, preventing or slowing deterioration in functioning (sensorial, physical, intellectual, mental, cognitive, or social) (4), **rehabilitation places the person at the centre and contributes to reaching her/his full potential and participate in the society**.[5] Its impact is thus not only on the individuals, but also on their families, communities, and economies.

3. The policy framework for rehabilitation

The **UN Convention on the Rights of Persons with Disabilities** (UNCRPD) is one of the nine core international human rights treaties. Legally binding, it was adopted by the UN General Assembly in 2006 and ratified by 177 States. While the UNCRPD operates a shift from a medical to a right-based approach to disability, this instrument gives space to rehabilitation as a key element that enables persons with disabilities to attain and maintain maximum independence and full inclusion and participation in all aspects of life. Article 26 of the UNCRPD is specifically dedicated to habilitation and rehabilitation and requires Member States to organise, strengthen and extend comprehensive habilitation and rehabilitation services and programmes. Article 20 demands taking effective measures to ensure personal mobility with the greatest possible independence, including by providing training in mobility skills and mobility aids, devices, and assistive technologies. Article 25 recognises the right of persons with disabilities to the enjoyment of the highest attainable standard of health, without discrimination on the basis of disability and responding to individual needs.

[3] Drawing upon the principles of the International Classification of Functioning, Disability and Health (ICF), officially endorsed by all 191 WHO Member States in the Fifty-fourth World Health Assembly on 22 May 2001.

[4] With the adoption of the WHA Resolution on "Improving access to assistive technologies", the commitments taken by states and organisations at the 2018 Global Disability Summit, and the launch of initiatives like AT2030 and ATscale. ATscale, the Global Partnership for Assistive Technology, aims to reach 500 million of people by 2030 with the life-changing assistive technology that they need. AT2030 is a multi-stakeholders programme that supports ATscale and aims to transform the access to assistive technologies for over 3 million people, by catalysing technologies and developing service delivery.

[5] This right is enshrined in Article 19 of the Convention on the Rights of Persons with Disabilities.

Over the years, the WHO has built political commitments around rehabilitation and assistive technologies and supported Member States to strengthen the provision of quality rehabilitation at all levels of the health system. One of the three objectives outlined in the WHO "**Global disability action plan 2014–2021**" is to strengthen and extend rehabilitation, habilitation, assistive technology, assistance and support services, and community-based rehabilitation. The WHO "**Rehabilitation 2030 Call for Action**", adopted in 2017, established joint commitments to raise the profile of rehabilitation. Based on this Call for Action WHO has developed a number of initiatives under the label "Rehabilitation 2030", thus providing additional guidance to Member States and catalysing resources for rehabilitation.[6] In 2018, the World Health Assembly adopted the "**Resolution on Improving Access to Assistive Technologies**" and launched the initiatives AT2030 and ATScale, both creating partnerships for innovation, affordability and accessibility of assistive technologies.

An additional policy support to rehabilitation comes from the 2018 WHO **"Declaration on Primary Health Care"** adopted in Astana. Forty years after the Declaration of Alma-Ata[7], this new declaration emphasises the role of primary health and reaffirms rehabilitation as a pivotal component of it.

Recognising current global health trends and their interconnections with sustainable development, the **Agenda 2030** adopted by UN Member States in 2015 envisions to promote physical and mental health and well-being and to extend life expectancy for all, via universal health coverage and access to quality health care. Rehabilitation is to be considered part of the **SDG target 3.8** about achieving Universal Health Coverage and ensure equitable access to high-quality, affordable health services. As rehabilitation is one of the elements of essential packages of care, target 3.8 can be fully and effectively achieved only if rehabilitation is there included.

By improving people's ability to live, work and learn to their best potential, rehabilitation is connected and contributes to the realisation of a broad range of SDGs (SDG 3 on health and well-being, SDG 1 on poverty reduction, SDG 4 on education, SDG 5 on gender equality, SDG 8 on employment, and SDG 11 on inclusive and resilient cities).

4. Rehabilitation for the realisation of human rights and sustainable development

Between 110 million and 190 million adults have significant difficulties in functioning (5), and 92% of the diseases in the world are related to causes that require health professionals associated with physical rehabilitation (5). However, more than 50% of persons with disabilities in many developing countries have an unmet need for rehabilitation services (6), only 5-15% of people needing a wheelchair have access to one, and 200 million people needing visual devices do not have access to them (6).

These unmet needs of rehabilitation represent the failure to fulfill the human right to health and well-being (Article 25, Universal Declaration of Human Rights) and the right of persons with

[6] Among these initiatives, the recommendations "Rehabilitation in health systems" and the "Support Package for Rehabilitation" were developed by WHO for Member States and other relevant stakeholders to provide support and guidance on how to strengthen and expand the availability of quality rehabilitation services.

[7] The Declaration of Alma-Ata was adopted at the WHO International Conference on Primary Health Care, in 1978.

disabilities to the enjoyment of the highest attainable standard of health without discrimination on the basis of disability (Article 25, UNCRPD). As human rights are interdependent, indivisible and interrelated, the violation of the right to health may impair the enjoyment of other human rights, such as the rights to education, work, independent living, participation in the life of the community, and freedom of movement.

The Agenda 2030 states that the SDGs "seek to realise the human rights of all". Indeed, the 17 SDGs directly or indirectly reflect human rights standards. The implementation of human rights is closely connected to, and mutually reinforced by, the effective implementation of SDGs. By intervening mainly on health-related aspects, rehabilitation first and foremost contributes to the realisation of the right to health and to SDG 3 on health and well-being. However, **better health outcomes have a domino effect towards fulfilling other individual's rights, as well as towards enhancing an inclusive, peaceful and prosperous society.** An individual who can enjoy the best possible standard of health is able to fully participate economically, culturally, politically on equal basis with others, with impact going beyond the individual and reaching the whole society.

The commitment to "leave no one behind", enshrined in the Agenda 2030, requires all actors involved in the implementation of the SDGs to address the exclusion and the inequalities affecting vulnerable persons, including persons with disability (80% of them living in low-income countries). Rehabilitation can benefit a large number of individuals, but it can be a real life-changer for the most vulnerable and marginalised individuals and communities, in particular persons with severe health conditions and with disabilities,[8] providing them with concrete opportunities for empowerment, inclusion, and participation in development. Thus, **rehabilitation is a fundamental element to translate the "leave none behind" commitment in reality**.

5. Rehabilitation as an essential component of inclusive health

Given the impact of rehabilitation interventions on people's lives, it is **an essential service that should be available to everyone, and in particular to persons with disabilities**. However, given that global health outcomes are still largely measured by reduction of death, rather than morbidity, disability or quality of life and well-being, rehabilitation services tend to be perceived as "luxury" and too demanding in terms of financial and human resources.

Rehabilitation is rarely integrated into health system strengthening, policy and planning, and not prioritised especially by governments with limited health investment. **As a result, rehabilitation services are insufficiently supported**. For example, according to the WHO and based on its 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 (ISPO) show that the number of

[8] The study "Early rehabilitation effect for traumatic spinal cord injury" (Sumida M, Fujimoto M, Tokuhiro A, Tominaga T, Magara A, Uchida R.) showed that rehabilitation improved physical functional independence for patients with traumatic spinal cord injury, especially in the early rehabilitation subgroups. The study "A Brief Review of Traumatic Brain Injury Rehabilitation" (Karen SG Chua, Yee-Sien Ng, Samantha GM Yap,Samantha GM Yap) demonstrated that there is promising evidence of improved outcome and functional benefits with early induction into a transdisciplinary brain injury rehabilitation programme. The study "Multiple sclerosis methods of treatment and rehabilitation" (Yuriy Lysen) proved that well–conducted rehabilitation significantly reduces the effects of disease, thus increases the effects of pharmacotherapy.

registered prosthetists, orthotists, technicians and technologists does not reach the minimum number of required personnel even in high-income countries. In the African, South-East Asia and Western Pacific regions the number of practicing professionals is one tenth of the number required (1). Poor financing also impacts on users who may face catastrophic health expenditures or avoid seeking the care they need (7).

The integration of rehabilitation services in health systems (across the continuum of care, at all stages of life, and for a variety of health conditions) is expected to result in improved coordination with medical and other health services, accountability, quality assurance and sustainability (3). On the medium and long-term, this integrated approach will result in strengthened delivery of rehabilitation services, better workforce allocation, and adequate financing.

In isolated contexts with limited resources, community-based rehabilitation has the potential to compensate these gaps and reach out to persons who otherwise would not access rehabilitation services.

The provision of rehabilitation services, as an integrated component of inclusive health, should be guided by four principles: availability (present in adequate quantity); accessibility (financially, geographically and physically accessible, without discrimination); acceptability (respectful of ethical standards, medical ethics, culturally appropriate and sensitive to gender and life-cycle requirements); quality (scientifically and medically appropriate and of good quality) (8).

Health professionals and community-based rehabilitation workers play a key role in the effective delivery of inclusive health services: their training, skill set, and the nature of their activities should accommodate the needs of persons with disabilities, including the specific needs of women with disabilities who can face intersectional discrimination (9).

Recognising the value of rehabilitation and its impact on individuals, families, and communities, **the allocation of resources to rehabilitation services should be seen as an investment, rather than a cost**. By increasing human capacity, rehabilitation strengthens the work-force, thus enabling participation and economic productivity. Rehabilitation interventions tend to be cost-effective or showed cost-saving in a variety of disability conditions (10). In addition to this, rehabilitation generates further economic benefits as it can expedite hospital discharge and prevent readmission (3).

6. The linkages between rehabilitation and “CRPD-compliant” SDGs

Not only there are explicit references to persons with disabilities in the Agenda 2030, but disability is also mainstreamed across the entire text via the principle “leave none behind”. Although largely underestimated, **rehabilitation plays a key role in both achieving global development objectives and implementing the UN CRPD**. Disability and rehabilitation must be conceptualised as determinants (antecedent causes) of the outcomes prioritised by the SDGs; in other words addressing the barriers to rehabilitation is necessary to achieve 7 SDGs outlined below.

SDG 3 - Ensure healthy lives and promote well-being for all at all ages

CRPD Art.25 - Enjoyment of the highest attainable standard of health

Rehabilitation has direct impact on the health and well-being of individuals, improving their health outcomes (11). Evidence shows that physical therapy services reduces length of stay, leads to improvements in self-care, activities of daily living, and health-related quality of life (12). Rehabilitation can prevent the deterioration of existing conditions or the development of new health conditions, subsequently reducing overall health care needs.

Rehabilitation can apply to diverse health conditions[9] and contribute to improving maternal health, child health, health of persons living with HIV/AIDS, with non-communicable diseases, and suffering from injuries and traumas.

Compared to persons without disabilities, persons with disabilities are more likely to have poor health: among 43 countries, 42% of persons with disabilities versus 6% of persons without disabilities perceive their health as poor (6).

SDG 4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

CRPD Art.24 - The right of persons with disabilities to education

In most developing countries, out-of-school rates for children with disabilities are still extremely high: 9 out of 10 do not go to school (13). These trends are reflected in the lower literacy rate of persons with disabilities: 54% of persons with disabilities compared to 77% of persons without disabilities are literate (6).

Exclusion from education is due to many reasons, including lack of accessible school facilities, lack of assistive technologies, poor individual's health conditions, prejudice and stigma. It has long term consequences, impacting social and economic development for persons with disabilities and exacerbating poverty.

Rehabilitation addresses many of these factors. For example, the provision of a prosthetic leg or functional rehabilitation may enable a child to access school and participate in classes. Rehabilitation optimises child development, with the largest gains registered when rehabilitation services are provided to children with traumatic injuries (14).

SDG 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

CRPD Art.27 - The right of persons with disabilities to work, on an equal basis with others

Persons with disabilities continue to have limited access to the labor market. The employment-to-population ratio of persons with disabilities aged 15 and older is almost half that of persons without

[9] The study "Long-term effectiveness of pulmonary rehabilitation in patients with chronic airway obstruction" (K Foglio, L Bianchi, G Bruletti, L Battista, M Pagani, N Ambrosino) reported that hospital admissions and disease exacerbations decreased significantly and patients who underwent an outpatient pulmonary rehabilitation programme maintained an improved quality of life 12 months postdischarge. The study "The long- term benefits of cardiac rehabilitation on depression, anxiety, physical activity and quality of life" (Abebaw M Yohannes Patrick Doherty Christine Bundy Ali Yalfani), carried out on patients with coronary heart disease, showed that a cardiac rehabilitation programme was beneficial in improving quality of life, physical activity status, reducing anxiety and depression; these benefits were maintained at 12 months.

disabilities and employed persons with disabilities tend to earn lower wages than their counterparts without disabilities (6). In developing countries, up to 80% of persons with disabilities of working age and that are willing to work are unemployed (15).

Rehabilitation enables access or return to the labor market, prevents illness, increases well-being, and reduces disability (16), thus playing an important role towards participation, economic productivity, income, and poverty reduction.

SDG 1 - End poverty in all its forms everywhere

CRPD Art.28 - The right of persons with disabilities to an adequate standard of living for themselves and their families

Disability and poverty operate in a cycle, with each reinforcing the other, especially in low and middle income countries (17). Persons with disabilities have a 50% higher risk, compared to the population without disabilities, of facing catastrophic health care costs; disability is significantly associated with higher multidimensional poverty and higher medical expenditures (18).

Accessible and affordable rehabilitation can increase educational attainment (in connection with SDG 4), employment rates (in connection with SDG 8), and participation in life, thus enabling persons with disabilities and their households to break to poverty cycle.

It should also be recalled that financial conditions represent a major obstacle to access rehabilitation services, as health insurance protects only a minority of the population (3).

SDG 5 - Achieve gender equality and empower all women and girls

CRPD Art.6 - Full development, advancement and empowerment of women with disabilities

The intersecting forms of discrimination experienced by persons with disabilities and other exclusionary factors, like gender, often result in multiple and intersectional discrimination and significant restrictions to their access to services.

Compared with men without disabilities, women with disabilities are three times more likely to have unmet needs for health care; three times more likely to be illiterate; two times less likely to be employed (6). Even compared with men with disabilities, women with disabilities are more likely to have unmet health-care needs (6), including higher chances to be excluded from rehabilitation services (19).

Rehabilitation, accessible to everyone without discrimination and on equal basis, can have a significant impact on the empowerment of women and girls and on their participation in life. Women and girls, who are often the primary caregivers of persons with disabilities or with other health conditions, can also indirectly benefit from rehabilitation: indeed, rehabilitation can improve the health-outcomes of the person they are taking care and foster his/her autonomy, thus providing caregivers with the possibility to resume or start activities that they had to drop.

SDG 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

CRPD Art.11 - Ensure the protection and safety of persons with disabilities in situations of risk

Disasters disproportionately affect persons with disabilities, as they face barriers to mobility, to be promptly informed, and to access services. For example, the fatality rate among persons with disabilities was twice that of the rest of the population during the 2011 Japan earthquake and tsunami (20). Disasters increase the disability rate: for every 1 person killed in a disaster, another 3 are injured or left with a permanent disability (21).

Rehabilitation is crucial to increase disaster preparedness, by improving the individual's sensorial, physical, intellectual, mental, cognitive, or social functioning. Rehabilitation is also crucial in disaster response, as the rate of disability increases during and after a disaster due to trauma, injuries, and poor living conditions. It is therefore important to include rehabilitation in the emergency response, in order to avoid long-term complex effects, at both individual and society levels.

Rehabilitation has a role to play in making human settlement more resilient and inclusive, including in situations of risk.

SDG 10 - Reduce inequality within and among countries

CRPD Art.5 - Equality and non-discrimination

Persons with disabilities face persistent inequality in social, economic and political spheres and are disadvantaged in all areas covered by the SDGs. In some countries the gaps between persons with and without disabilities reach more than 20 percentage points in income poverty, 50 percentage points in experiencing good health, in literacy rates and in employment to population ratios. (6). Rehabilitation can empower persons with disabilities and lead to ensure equal opportunities and reduced inequalities. In many countries, particularly low and middle-income countries, community-based rehabilitation is crucial to enhance the quality of life for persons with disabilities and their families.[10] Besides increasing access to rehabilitation services in resource-constrained settings, community-based rehabilitation adopts a multi-sectorial approach (encompassing health, education, livelihood, social, and empowerment components) with a view to meet basic needs of persons with disabilities and ensure their inclusion and participation in community life. (22)

7. Recommendations for stakeholders

For States

- **Ensure that rehabilitation is integrated into health systems**, with a view to strengthening and expanding access to rehabilitation services for all. For effective integration of rehabilitation in health systems, adopt national health policies that align with WHO "Recommendations on rehabilitation in health systems" (3) and consider the place of

[10] Multiple studies examined the effect of CBR for underprivileged people with disabilities on quality of life at individual, family and community levels. Quality of life, specifically physical health and functional independence, is improved under CBR guided programmes and interventions (Magallona and Datangel, 2011; Balasubramanian et al, 2012; Mol et al, 2014; Iemmi et al, 2015; Mauro et al, 2015). From 'Community-Based Rehabilitation Services in Low and Middle-Income Countries in the Asia-Pacific Region: Successes and Challenges in the Implementation of the CBR Matrix' by Roi Dennis Adela Cayetano and Jeananne Elkins.

rehabilitation services across the continuum of care, at all stages of life, and for a broad range of different health conditions.

- Recognising rehabilitation as a cross-cutting element, **integrate rehabilitation across policy areas** and foster multi-stakeholders dialogue, synergies, and commitment (for example, across different governmental branches in charge of education, social protection, employment and gender equality policies). In particular, recognise and strengthen the role of education in raising public awareness about disability, stigma, isolation and discrimination, and the unmet needs for rehabilitation.

- Adopt and/or reform rehabilitation policies, laws and delivery systems in order to **meet the "leave no one behind" imperative** of the Agenda 2030 and to **ensure compliance with the UNCRPD** (in particular, with reference to articles 19 on independent living, 25 on health, 26 on habilitation and rehabilitation, and 20 on personal mobility)**.** At this effect, implement commitments taken via the WHA Resolution on Improving Access to Assistive Technologies, and apply WHO standards and guidelines on rehabilitation.[11]

- **Develop sustainable funding mechanisms to adequately finance access to rehabilitation services and to community-based rehabilitation.** This requires allocating dedicated financial resources to support and sustain quality rehabilitation services, including at the community-level. Rehabilitation should be part of essential packages of care and covered by financial risk protection mechanisms (i.e. more robust and more inclusive health insurances), in line with the objective of achieving **universal health coverage**.

- **Increasing and strengthening human resources for rehabilitation**, across all rehabilitation disciplines and with a view to respond, with no discrimination or stigmas, to the needs of the population. Besides addressing the workforce shortage by increasing the number of rehabilitation professionals, it is crucial to expand and improve training opportunities, recognition and retention of personnel (both health-system workers and community-based rehabilitation workers). Recognising the status of community-based rehabilitation workers and promoting their career development can ensure higher retention rates and maximise the impact of their work on individuals and communities.

- Taking into account the growing needs for rehabilitation, **expand and decentralise service delivery**, especially in remote and rural areas. For this purpose, adopt a two-pronged approach that allows to offer **essential rehabilitation services via Primary Health Care** and via adequately-supported **Community-Based Rehabilitation programmes**. If possible, rehabilitation specialists should be accessible at the primary care level. In other cases and when resources allow, primary health workers could be trained to perform basic rehabilitation services (23). In general, all primary health care staff should be adequately prepared to diagnose health conditions that require rehabilitation and refer patients to specialists.

[11] Including the "Support Package for Rehabilitation" (2018), the "Standards for Prosthetics and Orthotics" (2017), the "Minimum Technical Standards and Recommendations for Rehabilitation in Emergency Medical Teams" (2016), and the "Community-Based Rehabilitation Guidelines" (2010).

Community-based rehabilitation and community-based workers should be recognised for their crucial role in improving the effectiveness of service delivery, especially in rural areas.[12]

- **Expand and strengthen the collection of disaggregated data** (by age, disability, gender, income and geography) on the rehabilitation needs, access, cost-effectiveness, and impact, for better informed and adapted policies and actions. The framework of the Washington Group Short Set of Questions is an important tool to understand the diversity of disability in communities in developing countries.
- **Ensure that persons with disabilities, patients, rehabilitation professionals, as well their representative organisations and other NGOs, are systematically consulted and actively participate** in the planning, monitoring and evaluation of policies and programmes. Participatory planning, building on the decades of experience of community-based rehabilitation programmes, is the only way to develop rehabilitation services for all.
- **Promote and support initiatives that enhance research on rehabilitation and assistive technologies, and catalyse innovation and partnerships.**[13] Focus should be placed on making rehabilitation and assistive technologies accessible to those most in need, in particular in low-income countries. For this purpose, States should join and support the recently-launched initiatives like AT2030 and ATscale, engage in multi-stakeholder partnerships, and harness investments in research and testing.

For Donors

- **Include rehabilitation in their strategic planning** related to health and/or to disability inclusion, both in development and emergency contexts, with a view to contribute to the implementation of the UNCRPD and of SDGs (directly to SDG 3, and indirectly to a broader range of SDGs).
- **Dedicate an appropriate share of funding to rehabilitation**, taking into consideration the growing demand for rehabilitation services at all ages and in relation to many health conditions (i.e. non-communicable diseases, maternal and child health, trauma and injuries).
- **Require health and disability related grants to include rehabilitation** as part of the package of health services to be delivered, thus providing adequate recognition to rehabilitation and expanding its accessibility.

[12] The Report of the Office of the United Nations High Commissioner for Human Rights 'Habilitation and rehabilitation under article 26 of the Convention on the Rights of Persons with Disabilities' recognises that 'a third level of training that helps improve access to rehabilitation in rural areas is for community-based workers who can work at the intersection of health and social services to provide basic rehabilitation' (page 14).

[13] The paper "Technologies to Support Community-Dwelling Persons With Dementia: A Position Paper on Issues Regarding Development, Usability, Effectiveness and Cost-Effectiveness, deployment, and Ethics" highlights that many challenges remain such as including the target group more often in development, performing more high-quality studies on usability and effectiveness and cost-effectiveness, creating and having access to high-quality datasets on existing technologies to enable adequate deployment of technologies in dementia care, and ensuring that ethical issues are considered an important topic for researchers to include in their evaluation of assistive technologies. (Franka Meiland, Anthea Innes, Gail Mountain, Louise Robinson, Henriëtte van der Roest, J Antonio García-Casal, Dianne Gove, Jochen René Thyrian, Shirley Evans, Rose-Marie Dröes, Fiona Kelly, Alexander Kurz, Dympna Casey, Dorota Szcześniak, Tom Dening, Michael P Craven, Marijke Span, Heike Felzmann, Magda Tsolaki, Manuel Franco-Martin).

- **Support research programs and the collection of data** regarding rehabilitation and rehabilitation services and provide technical assistance in this regards. In particular, stronger evidence is needed on the cost-effectiveness of rehabilitation in low and middle income countries.
- **Ensure the consultation and participation of persons with disabilities, patients, rehabilitation professionals and relevant NGOs** at all stages of the program's cycle (design, implementation, monitoring, and evaluation), including via their representative organisations.
- **Invest in innovative technological solutions**, including community-led and public-private solutions, to increase access to quality rehabilitation services and devices for those who are the most in need.
- **Support research and the production of evidence** on the barriers to and the cost/gains of rehabilitation, and the effects that it can have on the inclusion of marginalised groups.
- Recognising the need to complement regular rehabilitation services, **support community-based rehabilitation programmes**, designed to enhance the quality of life for people with disabilities through community initiatives encompassing rehabilitation, equalisation of opportunities, poverty reduction and social inclusion of people with disabilities.

For Civil Society Organisations (CSOs) and Disabled Persons Organisations (DPOs)

- **Advocate for improved access to rehabilitation services**, including financial affordability, accessibility of information related to rehabilitation, physical accessibility of health infrastructures, language accessibility, culturally-sensitive approach, quality and timeliness of care.
- **Enable the participation of persons with disabilities, patients and rehabilitation professionals** in the planning, implementation, monitoring and evaluation of policies and programmes on rehabilitation, both by facilitating their direct involvement and by representing their voices.
- **Contribute to the effective and independent monitoring** of rehabilitation facilities and programmes, in order to assess their availability, accessibility, acceptability and quality, and to prevent all forms of discrimination, exploitation, violence, and abuse of persons with disabilities (8) and patients.
- **Advance research and the production of evidence** on the barriers to and the cost/gains of rehabilitation, and the effects that it can have on the inclusion of marginalised groups. Integrate research and evidence in policy work across different disciplines.
- **Promote and implement community-based rehabilitation programmes**, in line with the WHO Community-Based Rehabilitation Guidelines. Apply a multi-sectoral, cross-disability, rights-based approach that supports community stakeholders to access the full range of mainstream and disability-specific services and opportunities (in health, education, livelihood and social welfare). Place the empowerment of persons with disabilities and their families at the centre, as the foundation to accessing benefits across all these domains. (24)

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Annex 1. Table - Linkages between rehabilitation and "CRPD-compliant" SDGs

SDG	CRPD	The impact of rehabilitation
SDG 1 – *End poverty in all its forms everywhere*	CRPD Art.28 – *The right of persons with disabilities to an adequate standard of living for themselves and their families*	Accessible and affordable rehabilitation can increase educational attainment (in connection with SDG 4), employment rates (in connection with SDG 8), and participation in life, thus enabling persons with disabilities and their households to break to poverty cycle.
SDG 3 – *Ensure healthy lives and promote well-being for all at all ages*	CRPD Art.25 – *Enjoyment of the highest attainable standard of health*	Rehabilitation has direct impact on the health and well-being of individuals, improving their health outcomes. Rehabilitation can prevent the deterioration of existing conditions or the development of new health conditions, subsequently reducing overall health care needs.
SDG 4 – *Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*	CRPD Art.24 – *The right of persons with disabilities to education*	Rehabilitation addresses many education's exclusion factors (e.g. lack of accessible school facilities, lack of assistive technologies, poor individual's health conditions, prejudice and stigma).
SDG 5 – *Achieve gender equality and empower all women and girls*	CRPD Art.6 – *Full development, advancement and empowerment of women with disabilities*	Rehabilitation can have a significant impact on the empowerment of women and girls and on their participation in life. Women and girls, who are often the primary caregivers, can also indirectly benefit from rehabilitation: indeed, rehabilitation can improve the health-outcomes of the person they are taking care and foster his/her autonomy, thus providing caregivers with the possibility to resume or start activities that they had to drop.
SDG 8 – *Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all*	CRPD Art.27 – *The right of persons with disabilities to work, on an equal basis with others*	Rehabilitation enables access or return to the labor market, prevents illness, increases well-being, and reduces disability, thus playing an important role towards participation, economic productivity, income, and poverty reduction.
SDG 10 – *Reduced inequalities*	CRPD Article 5 – *Equality and non-discrimination*	Rehabilitation can empower persons with disabilities and lead to ensure equal opportunities and reduced inequalities. In many countries, particularly low and middle-income countries, community-based rehabilitation is crucial to enhance the quality of life for persons with disabilities and their families
SDG 11 – *Make cities and human settlements inclusive, safe, resilient and*	CRPD Art.11 – *Ensure the protection and safety of persons with disabilities in*	Rehabilitation is crucial to increase disaster preparedness, by improving the individual's sensorial, physical, intellectual, mental,

sustainable	***situations of risk***	cognitive, or social functioning. Rehabilitation is also crucial in disaster response, as the rate of disability increases during and after a disaster due to trauma, injuries, and poor living conditions.

Annex 2. Table - Recommendations for stakeholders

For States

- Ensure that rehabilitation is integrated into health systems and across policy areas
- Ensure compliance with the UNCRPD
- Develop sustainable funding mechanisms to finance access to rehabilitation
- Increase and strengthen human resources for rehabilitation
- Expand and decentralize service delivery, with recognition of the crucial role of CBR
- Expand and strengthen the collection of disaggregated data
- Ensure consultation and participation of persons with disabilities, patients, professionals, and CSOs
- Promote and support innovations and partnerships

For Donors

- Include rehabilitation in their strategic planning
- Dedicate an appropriate share of funding to rehabilitation
- Require health and disability related grants to include rehabilitation
- Support research programs and the collection of data
- Ensure the consultation and participation of persons with disabilities, patients, professionals and CSOs
- Invest in innovative technological solutions
- Support research and the production of evidence
- Support community-based rehabilitation programmes

For CSOs and DPOs

- Advocate for improved access to rehabilitation services
- Enable the participation of persons with disabilities, patients and rehabilitation professionals
- Contribute to the effective and independent monitoring of rehabilitation facilities and programmes
- Advance research and the production of evidence
- Promote and implement community-based rehabilitation programmes