Viewpoint Article in Health Policy

Examining the unmet need for rehabilitation through a health policy lens: A focus on prevention, engagement and participation across the lifespan

Behdin NOWROUZI-KIA¹*, Amin YAZDANI²

Affiliations:
¹ Department of Occupational Science and Occupational Therapy, Temerty Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada. ORCID: 0000-0002-5586-4282
² Canadian Institute for Safety, Wellness & Performance, School of Business, Conestoga College Institute of Technology and Advanced Learning, Kitchener, Ontario, Canada. E-mail: Ayazdani@conestogac.on.ca. ORCID: 0000-0003-3479-581x.

*Corresponding Author:
Assistant Professor Behdin Nowrouzi-Kia, Department of Occupational Science and Occupational Therapy, Temerty Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada. E-mail: behdin.nowrouzi.kia@utoronto.ca.

Abstract

In many jurisdictions, the capacity to provide rehabilitation is significantly restricted or non-existent and fails to address the population's needs sufficiently. The extent and scope of unmet rehabilitation warrants an immediate and collaborative international effort and action by all stakeholders. This viewpoint article examined the promotion of equity in addressing the unmet rehabilitation needs through public policy action and the health lens that considers access to rehabilitation services as a fundamental human right. Based on the principles of access, equity, respect and human dignity, we have included four recommendations including: 1) using a multidisciplinary approach to rehabilitation; 2) preventing disability and maximizing functioning; 3) increasing the supply of rehabilitation professionals, and 4) engaging in meaningful activities. Furthermore, this paper provides recommendations to meet the World Health Organization’s sustainable development goals and discuss how health policy can address these goals.

Take-home message: Individuals around the globe have a human right to access rehabilitation services regardless of status, creed, disability, age, ethnicity and gender. Clients, practitioners, and governments must work closely to improve rehabilitation professionals' access and focus on providing care through a biopsychosocial framework like the International Classification of Functioning (ICF) and work disability prevention framework.

Key words: Access, and Evaluation; Disabled Persons; Health equity; Health Care Quality; Public Policy; Rehabilitation; Occupational Therapy.
A biopsychosocial model is widely used in rehabilitation and addresses the shortcomings of the biomedical model [1]. The World Health Organization (WHO) Constitution (1946) embodies that every human being should attain the utmost feasible health standards as a fundamental right [2]. The human rights model to health behaves as a core and is contingent upon achieving various human rights, such as food, education, shelter, employment, and information, and participation. According to WHO, the recognition of health as a human right acknowledges the obligation to ensure that the highest attainable healthcare is provided in a timely, affordable, and accessible manner. WHO emphasizes the elimination of discrimination within the accessibility and delivery of healthcare services [2]. The population's right to health should be enjoyed without discrimination. The right to health care is essential for everyone despite one's race, disability, age, ethnicity, gender, and so forth. Establishing a human rights-based approach to health provides clarity to assess and examine the principles and policies of health care services and delivery [2].

In the General Comment 14 of the Committee of Economic, Social, and Cultural Rights, the right to health is outlined and encompasses four core components. First, availability refers to the adequate quantity of health services and resources, such as the functioning of public health and health care facilities, programmes, and goods and services for all [2]. The accessibility of health facilities, goods, and services are required to be attainable all. Non-discrimination, physical accessibility, economical accessibility (affordability), and information accessibility are the interconnected domains under this component [2]. Furthermore, acceptability focuses on the needs of the population. The delivery and development of health care are required to meet diverse population groups' appropriate and specific needs. The population must accept the health care being provided, with confidentiality acting as a prominent pillar. Finally, quality is a crucial component of Universal Health Coverage [2]. Resources, goods and services must be of the utmost quality to be approved scientifically and medically. Safety, time-efficiency, effectiveness, people-centered, equity, integration, and efficiency are the seven components which comprise quality health services according to the WHO [2].

Historically, the social and medical models have underpinned the human rights approach to disability [3]. To promote the inclusion of disability in healthcare, the WHO implemented the social and medical models into a biopsychosocial framework, which has been reported in the International Classification of Functioning (ICF). The WHO developed the ICF based on dignity, autonomy, and equality. The ICF framework was endorsed by the WHO as the purpose of this model is to measure health and disability at individual and population levels [3].

The ICF uses a biopsychosocial framework in addressing unmet rehabilitation needs, including access and delivery of health services. With a focus on functioning and disability, the framework moves beyond the traditional biomedical model. It focuses on client participation in meaningful activities in promoting health and well-being and in the prevention of disease and disability. However, in many jurisdictions, the capacity to provide rehabilitation is significantly restricted or non-existent and fails to sufficiently address the population’s needs. Furthermore, there are barriers
that exist when addressing unmet rehabilitation needs such as high costs and length of training programs for rehabilitation professionals. Disparities with access to health and service providers between rural and urban communities are prevalent. Despite 20% of American living in rural areas, only 9% of service providers and physicians practice in these settings. These rural communities lack access to efficient and high-quality healthcare, which has furthered the health inequities between rural and urban communities [4]. The extent and scope of unmet rehabilitation warrant immediate and collaborative international effort and action for all stakeholders. This paper aims to examine the promotion of equity in addressing unmet rehabilitation needs through public policy action. Furthermore, it aims to provide recommendations to meet the World Health Organization’s Sustainable Development Goals and how health policy can address these goals.

**DISCUSSION**

**Rehabilitation**

Rehabilitation is a crucial element of the continuum of health care delivery that includes prevention, assessment, and treatment. Many clients with health conditions require access and availability of rehabilitation to remain functionally independent and lead fulfilling, healthy and productive lives. Furthermore, access to rehabilitation services and overall health care is a human right. These effects are not limited to a small segment of the population, given that clients with disability include racialized and ethnic minority groups, women of all races, minority men and those with lower socioeconomic status [5,6]. With an ageing population and advancements in medical care, assistive devices' development and accessibility are growing the need for rehabilitation services. Increased survival rates from injury, illness and disease allow persons to live with some form of residual disability [7]. These trends should compel health policymakers to prioritize rehabilitation services. However, a lack of policy at the national level that prioritizes rehabilitation services and addresses the funding shortfalls limits the capacity to address unmet needs especially for underrepresented groups and vulnerable populations. Health policy should focus on prevention and maximizing functioning, barriers to scaling up rehabilitation demonstrate a greater need for awareness and advocacy, increasing the supply of rehabilitation professionals, and facilitating leadership and governance structures [8,9].

Rehabilitation is a set of interventions intended to minimize disability and maximize functioning in persons with health conditions. Thus, by augmenting functioning, a person’s ability to live, work and play in their environment is improved [10]. The availability of accessible and affordable rehabilitation is critical to ensure healthy lives and promote health and well-being. The client’s ability to engage in meaningful activities is central to the human spirit, and that engagement fosters the development of personal identity and supports health [11].

**The right to rehabilitation**

Based on the notions of dignity, autonomy, self-determination, equity, and equality, the human rights model for persons with disabilities was developed [3]. The human rights approach and the ICF model share similar perspectives regarding health and disability. To understand the barriers individuals with disabilities experience, the human rights model to disability utilizes a lens which looks beyond one’s health conditions and toward societal norms, practices, and structures. Individuals living with a disability often face barriers which limit their ability to participate within society and restrict their quality of life and healthcare [3]. The human rights approach shifts the focus to analyze barriers such as social attitudinal, and physical. Development and progression in policies,
legislation, regulations, and practices at public policy and workplace systems levels is required to frame disability [3]. All elements which within society develop a responsibility in the construction of norms and functioning. Society must work towards reconstructing a new normal with the foundation of accessibility, inclusion, and belonging, despite one's abilities and disabilities [3].

**Barriers**

The Convention on the Rights of Persons with Disabilities discusses that all people should have the right to education, health, rehabilitation, employment, etc. It states that all people should have equal opportunity to the highest standard of healthcare without discrimination [12]. Rehabilitation services should be maintained and strengthened in the areas of education, health, employment, and social services and employment opportunities should be equal among all people and should be accessible and inclusive [12]. Despite this vision, people with disabilities face a difficult reality of inequality in which they endure challenges including little employment opportunities, high rates of poverty, decreased access to satisfactory health services, low educational accomplishments, and reduced access to rehabilitation services [13]. Especially within the global south, disabled peoples experience lower political and socioeconomic status. It has been found that the major barriers of disabled people's inclusion and representation are due to state policy regimes and social attitudes [13].

**Equity**

Equity is an “ethical concept grounded in the principle of distributive justice” [14]. Article 25 in the Convention of Rights of Persons with Disabilities states that “persons with disabilities have the right to the enjoyment of the highest attainable standard of health without discrimination on the basis of disability” [12]. Furthermore, Article 26 states that “parties shall organize, strengthen and extend comprehensive habilitation and rehabilitation services and programmes”. These Articles support the theme of rehabilitation as a human right, describing that people should have access to rehabilitation regardless of their disabilities. Rehabilitation aims to enable individuals to reach and maintain optimal levels of function abilities and helps individuals attain independence and self-determination, aspects that are important for dignity and respect [15].

**Rehabilitation as an international priority**

Internationally, there is a profound need to strengthen rehabilitation in health systems to provide high-quality, affordable services to all who need them [16]. Strengthening access to rehabilitation services can improve persons and communities' health and well-being and provide persons with social and economic benefits [17]. Moreover, emphasizing the importance of access to rehabilitation as a human right. Rehabilitation services include assessment, treatment and interventions to mitigate disability and maximize function [9]. Therefore, investment in rehabilitation increases human capacity by allowing people with a health condition to achieve and maintain optimal functioning by improving their health and increasing their participation in life. However, health systems are frequently understaffed, and professionals lack the training to efficiently meet the rehabilitation needs of the population [10,18–23]. The creation, dissemination, and uptake of rehabilitation-focused health policy, systems, and service delivery are effective mechanisms to bolster health systems' capacity to deliver appropriate, high-value rehabilitation services and provide equitable access to a growing need for these services [16,24–27].

Proponents of improving access to rehabilitation services through health policy include international and professional organizations, non-governmental agencies, and academic institutions.
supporting the ‘Rehabilitation 2030: A Call for Action’ [28], a WHO meeting report that addresses the increasing need for rehabilitation. It firmly entrenches access to these services as a human right. This initiative identifies ten key actions to strengthen rehabilitation in health systems. In the rehabilitation disciplines, including occupational therapy, promoting health policy and service delivery is a growing priority [29].

Globally, we face significant challenges in light of health and demographic shifts as populations are ageing. The number of clients living with non-communicable diseases and the consequences of illness or injuries is increasing [30,31]. Specifically, a rapid rise in the absolute number of years lived with disability coupled with a growing prevalence of severely disabling conditions has augmented the demand for rehabilitation that is mainly going unmet [31]. Therefore, rehabilitation should be part of health coverage plans and embedded into health insurance plans, along with primary prevention strategies including screening, assessment and palliation.

This can be funded through public universal health care system, employer-based health coverage, private/supplemental/additional coverage and funded out of pocket.

**Functioning and disability**

The International Classification of Functioning (ICF), Disability and Health is a framework ideally suited for structuring and organizing the relationship between functioning and disability [32]. The World Health Organization defines functioning as a “dynamic interaction between a person’s health condition, environmental factors and personal factors.” With the introduction of the ICF, a common nomenclature for disability has been established that considers a biopsychosocial framework in understanding the relationship between functioning and disability. The biopsychosocial framework considers the positive and negative aspects of functioning from a biological, individual and social perspective. The ICF provides a systematic and comprehensive basis for understanding the relationship between health and health-related states, outcomes and determinants. Moreover, the framework may be used in various settings and has been implemented by multiple governments to meet the needs of their populations, clinical practice, supporting services and income support, population statistics, education and policy, and programming. For example, the ICF elucidates the relationship between disability and health-associated policies at the macro level. The ICF is an integration of person and environmental factors in conjunction with the person’s functioning needs. For example, using a biopsychosocial approach will consider a person with a spinal cord injury where functioning will be evaluated at the individual (e.g., difficulty moving or walking) and also at the societal level (e.g., access to assistive devices, retraining or educational opportunities), including examining environmental contexts. The nomenclature of the framework fosters discourse on rehabilitation service planning and system-based data related to functioning, rehabilitation and needs assessments. Such data may be used across policy and programming areas within and across population cohorts and used in planning and resource allocation.

The ICF supports rights-based policies [33,34] and offers a framework to foster the provision of rehabilitation needs across government, healthcare and communities’ sectors. The ICF looks at the societal context and their engagement in meaningful activity. Moreover, the ICF provides a common language, terms and concepts for use by people experiencing disability and in prioritizing and identifying rehabilitation needs. This is a significant consideration given that people with disabilities interact with different stakeholders in various systems, including government and healthcare settings.
The ICF may also support policy and program objectives. Since disability impacts many aspects of a client's health and well-being, the ICF espouses a biopsychosocial approach that shifts towards a holistic and comprehensive approach that focuses on enablement and engagement. The ICF may be used as a common approach in harmonizing different policy areas and developing comparable metrics for equitable access to rehabilitation services. For instance, it is possible to see if clients with comparable levels of disability are receiving similar levels of rehabilitation services across the lifespan in circumstances where there are different systems for older adults and children. A consistent framework such as the ICF enables a client population to examine the overall cohort and unmet rehabilitation needs to be estimated. The ICF conceptualizes human functioning and disability through a series of interactions between activities engaged by the client, participation and body functions and structure. The ICF is grounded in functioning and participation.

Figure 1. The World Health Organization developed the International Classification of the Functional Framework (ICF). Adapted from [32].

Recommendations

Recommendation 1: Utilize a multidisciplinary rehabilitation approach

Globally, there is an understanding that access to rehabilitation services is vital for realizing the right to health and functioning and a precursor for the inclusion of individuals living with disability [35]. With a thorough and biopsychosocial approach, the ICF draws different professions, assessments, and evaluations to obtain a holistic view of the client. Such a multidisciplinary client-centered collaborative practice offers a practical solution that permits the delivery of complex care that can also be individualized. A multidisciplinary team should include health care practitioners and allies, including social supports (e.g., family). Regarding rehabilitation services delivery, numerous practitioners should be involved, including physiatrists, allied health members including occupational therapists, physical therapists, speech-language pathologists, occupational physicians, occupational/physical therapy assistants and rehabilitation workers [36–38]. As part of a dedicated multidisciplinary team, each rehabilitation professional works in parallel and with unique scopes of practice, with each professional demonstrating a high degree of autonomy. For example, the team
may coordinate together towards an overall goal. However, each member may have separate goals and objectives with the client and address different aspects of their care.

However, in many regions, there is a lack of policy at the national level that prioritizes rehabilitation services. Moreover, external factors such as political instability, corruption and economic crises, or the lack of a political can hinder adequate investment in rehabilitation services [39]. Evidence suggests that nearly two-thirds of countries do not have a specific budget for rehabilitation services. The implications of this are that these regions will not have access to multidisciplinary rehabilitation teams, which is important for understanding an individual’s health in a holistic way. To evaluate the effectiveness of rehabilitation services, a logic model can be used. A proposed overarching logic model for monitoring and evaluating rehabilitation programs is presented in Figure 2. This model is adapted from [40] and includes the standard elements of input, output, outcome and impact. This adapted model also looks at “initial factors”, which include the client’s health data, sociodemographic data, information about the client’s access to rehabilitation, and their rehabilitation goals and outcomes. Since rehabilitation is person-centered, it is important for a model to look at factors that can affect the success of rehabilitation programs, such as health conditions. Furthermore, this model is relevant because it can provide evidence for policymakers to ensure the success and sustainability of rehabilitation program implementations.

Figure 2. Proposed overarching logic model for the monitoring and evaluation of rehabilitation programs at service level. Adapted from [40].

Recommendation 2: Prevent Disability -and maximize functioning

Prevention strategies are intimately related and play a significant role in addressing the unmet needs of persons with disabilities. The paradigm shifts the emphasis of service delivery and care towards preventing disability and maximizing functioning. A proposed model for the prevention of disability and maximizing function is presented in Figure 2. The individual is at the center and is considered central in the delivery and use of rehabilitation services. This proposed model is an
extension based on the ICF and considers using a preventative lens in addressing disability. This may also serve as a framework for guiding health policy in the delivery of rehabilitation services. The individual’s interaction with each of the four systems involves coordination with various stakeholders from the economic, political, personal and healthcare systems. In the economic system, the client may engage closely with their employer and other stakeholders in accessing rehabilitation services through employment benefits programs or other insurance schemes. The client interacts with the macro-level’s political system in addressing issues such as using a universal healthcare system to manage their unmet needs. The client will also interact with the healthcare system through rehabilitation professionals to deliver care through a multidisciplinary team approach. Finally, the client’s personal attributes, including their mental and physical health and social supports, will facilitate their navigation of these various systems. Overall, this model uses a strengthening-based approach to support clients with disabilities by developing strength, resilience, and endurance to maintain optimal health through strategies to mitigate disability. For example, rehabilitation professionals make personal goals for strength and functionality, and screen for improving functioning.

**Figure 3.** Model of an individual’s interaction with the four systems: economic, political, personal and healthcare.

**Recommendation 3: Increase the supply of rehabilitation professionals**

The need for rehabilitation services is closely related to the workforce supply. As demand rises, the unmet needs increase. The unmet needs will increase for those with physical, mental, cognitive, and developmental impairments, resulting in decreased functioning related to self-care, leisure and work activities of daily living [7].
Accessing rehabilitation services is mired by challenges and barriers. First, in lower-income countries, where most people with disabilities reside, rehabilitation providers are not available [7,41–43]. Moreover, as with other healthcare professionals, including nursing [44] and medicine [45,46], rehabilitation professionals are often concentrated in urban centers and thus not accessible to those living in rural and remote areas [42,43]. For instance, in low-income countries with a low supply of rehabilitation professionals, people in need of rehabilitation services are hampered by access due to transportation, physically inaccessible locations, inadequate mobility equipment, and services cost [47,48]. Furthermore, some countries lack access to rehabilitation services because of a lack of universal health coverage for these services [49–51].

Examining the human health resources of the rehabilitation workforce and its utilization is under investigated by policymakers and scientists [52–54]. Rehabilitation professionals include many practitioners, such as those in medicine (e.g., physical medicine and rehabilitation), allied health, and related support staff (e.g., rehabilitation assistants). There is a reported shortage of professionals, including occupational therapists [55], physical therapists [52–56], and speech-language pathologists [57]. Making matters worse, the current pandemic (Coronavirus disease 2019) will increase the strain on the rehabilitation workforce and lead to recruitment and retention issues. In addition to the workforce complement, the existence, practices, education attainment and competencies of these rehabilitation professionals vary widely with and across jurisdictions [58].

**Recommendation 4: Engage in meaningful activities**

This recommendation is based on the Sustainability Development Goal (SDG) 3 by the United Nations. This goal aims to “ensure healthy lives and promote well-being for all at all ages” [59]. Illness and disability usually have negative ramifications for life satisfaction, and engagement in activity promotes health and meaning, and can also increase life satisfaction [60,61]. Numerous studies have shown relationships between engagement in leisure activities and improvements in physical and mental health [62–64] across the lifespan, including children [65–67], clients with intellectual disabilities [65,68] and older adults [69,70]. Across the lifespan, the focus should be maximizing functioning, social engagement through interpersonal relationships, and participation in activities that promote physical, mental and emotional well-being.

**CONCLUSION**

There is a rising global need for rehabilitation services to address clients’ unmet needs across the lifespan. Through a human rights lens, policymakers, governments, health care professionals, and clients must work closely to improve rehabilitation professionals’ access and focus on providing care through a biopsychosocial framework such as the ICF and work disability prevention framework. Using an approach that is grounded in the principles of human dignity, civility, respect and equity will support our four recommendations in addressing the unmet needs of individuals. Fundamental to our approach is that the individual’s rights to health should be relished without prejudice to one’s creed, disability, age ethnicity and gender. Using a human rights-based approach to health provides great transparency to assessing and examining the principles and polices of health care services and delivery. Practitioners should espouse a holistic client-centered approach in the delivery of care. Governments must work closely in developing policies that provide or increase access to rehabilitation services and help streamline the education and qualification of these professionals.

**Author Contributions:** Conceptualization, study design, writing- original draft: BN-K. Writing- review & editing: AY

**Funding:** None
Acknowledgments: None
Conflicts of Interest: None
Data Availability Statement: Some or all data and models that support the findings of this study are available from the corresponding author upon reasonable request.
Publisher’s Note: Edizioni FS stays neutral with regard to jurisdictional claims in published maps and institutional affiliation.

References


52. Sykes C, Bury T, Myers B. Physical therapy counts: counting physical therapists worldwide. BMC