Editorial

Bridging the Gaps in Practice: Toward a Unified Rehabilitation Protocol for Musculoskeletal Disorders

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Rehabilitation is more than a clinical process, it is the essence of regaining dignity, independence, and a sense of purpose in life. Rehabilitation helps an individual to achieve the highest possible level of function and quality of life-physically, emotionally, socially and vocationally after illness, injury or disability. According to the Global Burden of Disease Study 2019, approximately 2.4 billion individuals across the globe are in need of rehabilitation services[1]. Among this large population, a significant portion is concentrated in low- and middle-income countries (LMICs), where health systems are often under-resourced, under-prioritized, and under-researched. Like many other LMICs, the landscape of rehabilitation services for persons with disabilities (PwDs) in Bangladesh remains largely undocumented, inadequately structured, and inconsistently delivered. Therefore, the urgency of reform is undeniable.

Bangladesh presents a sobering picture: there are only 6.8 rehabilitation units per 1 million people, and only 6.2% of these facilities are situated in remote areas. Furthermore, the availability of skilled rehabilitation professionals is alarmingly insufficient. The current statistics indicate that there are merely 9.4 physiotherapists per 1 million people[2]. This scarcity is not just a number; it translates into prolonged suffering, untreated impairments, increased dependency, and reduced quality of life for millions.

To understand the magnitude of the issue, it is imperative to revisit what rehabilitation truly means and why it holds a central place in human recovery and dignity. Rehabilitation is defined as "a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment" (World Health Organization. Rehabilitation. 2023). Rehabilitation is not merely a treatment modality; it is a lifeline. It is the bridge between injury and independence, illness and autonomy, trauma and transformation. Imagine a young man who, after a road traffic accident, is left sided paralyzed. Without rehabilitation, he is confined to a wheelchair, dependent on others for the simplest tasks. But through structured, consistent rehabilitation, he may regain enough strength and coordination to wheel himself outdoors, feel the breeze again, enjoy a morning walk with assistance, or even dream of returning to work. Rehabilitation gives people the opportunity to reclaim their lives, their roles in society, and their sense of self-worth. It allows individuals to once again to bathe in the rain, enjoy the twilight, walk under the moonlight, or simply rise from bed with dignity.

The concept of evidence-based rehabilitation protocol is essential in ensuring that such transformative care is standardized, effective, and widely accessible. Evidence-based rehabilitation refers to the integration of the best available clinical evidence from systematic research with the clinical expertise of professionals and the values and preferences of the patient[3]. This model provides a framework for consistent, efficient, and patient-centered care. The success of such approaches has been widely documented in various high-income countries. For example, in the United States, the American Physical Therapy Association (APTA) has developed comprehensive Clinical Practice Guidelines (CPGs) for various musculoskeletal conditions[4]. These guidelines are systematicallydeveloped statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances. Similarly, the North American Spine Society (NASS) has published evidence-based clinical guidelines for the diagnosis and treatment of spine-related disorders, relying on rigorous literature reviews and expert consensus[5]. The American Academy of Orthopaedic Surgeons (AAOS) follows a similar model, incorporating randomized controlled trials and systematic reviews to develop best-practice protocols for conditions like rotator cuff tears or anterior cruciate ligament (ACL) injuries[6]. The Cochrane Rehabilitation Group takes this a step further by performing high-quality meta-analyses and systematic reviews to inform global rehabilitation practices[7]. Their recommendations are used to update

national policies and clinical training modules in several countries. These examples demonstrate how structured, evidence-informed approaches to rehabilitation can result in more equitable, effective, and sustainable care delivery. However, despite the clear benefits and international precedent, Bangladesh currently lacks a centralized rehabilitation society or authoritative body dedicated to developing such protocols. This absence has led to disjointed practices, inconsistent treatment outcomes, and regional disparities in the quality of care. Without a national framework or professional coalition to guide practice, rehabilitation services remain ad hoc and reactive rather than proactive and strategic.

Given these challenges, the need to develop a unified, evidence-based rehabilitation protocol in Bangladesh is not just urgent—it is crucial. This protocol should encompass a range of musculoskeletal conditions, be grounded in global best practices, and be adapted to local cultural, economic, and logistical realities. In this context, the importance of an integrated, evidence-based musculoskeletal rehabilitation protocol can not be overstated. The development of an integrated, evidence-based musculoskeletal rehabilitation protocol is essential for improving patient care in Bangladesh, where access to structured physiotherapy remains limited. In response, organizations such as the Institute for Professional Excellence & Research (IPEX), in collaboration with clinical partners including Micare Health & Research, have begun implementing protocols informed by clinical practice guidelines(CPGs), international protocols, high-quality randomized controlled trials and expert consensus. These efforts also involve the adoption of modern assessment tools such as the Muscle Meter, MAT assessment tool, Digital Lachmeter, Peripheral Neuropathy Scanner for comprehensive patient evaluation and outcome measurement. However, the reach of this initiative will remain limited without robust governmental support, especially to extend services to the remote and underserved areas of the country.

The current rehabilitation scenario in Bangladesh remains distressingly inadequate. In most cases, physiotherapy chambers are operated by medical technologists rather than qualified physiotherapists. Consequently, treatment strategies are often heavily dependent on electrotherapy modalities rather than on active, exercise-based rehabilitation. Moreover, patient education is largely absent. A striking example lies in the treatment of low back pain-while high-quality evidence strongly supports exercise-based rehabilitation for this condition, most clinics in Bangladesh continue to rely primarily on modality-based treatments.

An equally unfortunate reality is the lack of a functional referral system. Patients are rarely referred to physiotherapists after injuries, trauma, or surgeries, and in many cases, are not even informed about the importance of rehabilitation. This systemic failure can have life-altering consequences. In total knee arthroplasty (TKA) patients, studies have shown that muscular strength and power can be reduced by at least 24% in the operated limb compared to the sound limb. Researchers suggest that structured and progressive rehabilitation regimens are essential to restore strength and function post-surgery[8]. In 2010, for example, my grandfather developed left-sided hemiplegia as a result of an ischemic stroke. At the time, our family was living in a small town in Bangladesh. We had no awareness of physiotherapy, and no neurologist advised us to consult a physical therapist for rehabilitation. Consequently, my grandfather spent the rest of his life bedridden—an outcome that could likely have been prevented with timely and proper rehabilitation.

Rehabilitation services in Bangladesh are largely provided by the private sector. The government operates a limited number of rehabilitation centers, and these are largely situated outside the mainstream public health service delivery system. Rehabilitation is conspicuously absent from most of the primary and secondary health facilities, while the few services available at tertiary-level hospitals are often delivered by medical technologists. A growing concern is the emergence of non-medical individuals providing physiotherapy after attending short-term courses of six months or slightly more. This results in a severe shortage of trained personnel, an inequitable distribution of services, and high out-of-pocket costs. The cumulative effect is poor rehabilitation service uptake among persons with disabilities and chronic neglect of their health needs.

In conclusion, the creation of an integrated, evidence-based rehabilitation protocol for musculoskeletal disorders in Bangladesh represents not just a technical necessity but a moral imperative. To ensure its effectiveness and relevance, this protocol should be developed through a collaborative, interdisciplinary approach involving physiotherapists orthopedic surgeons, sports medicine specialists. These professional groups may work in synergy, combining their clinical expertise and practical experience to design a documented rehabilitation pathway that is both evidence-informed and patient-centered to bridging gaps between diagnosis, treatment, and long-term recovery, ultimately improving functional outcomes for patients. It is a call to action to bridge the gaps in our current healthcare delivery system, restore dignity to those living with disabilities, and align our national practices with international standards of care. It is time for Bangladesh to invest in the transformative potential of rehabilitation—not only to heal bodies, but also to rebuild lives, restore hope, and strengthen our national resilience.

Ipex J 2025; 1(2) : 41-43

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