

The Evolving Role of Physiatrist in Modern Health Care

P C Muralidharan¹

The field of Physical Medicine and Rehabilitation has witnessed a remarkable transformation from the traditional role of disability management and functional restoration after illness or injury into a dynamic specialty forming central component of comprehensive health care. The core of this transformation is the responsibility of the Physiatrist who has to respond to the challenges imposed by the changing disease patterns and disease burden, technological advancements and health priorities. Modern healthcare is witnessing an unprecedented rise in chronic diseases such as stroke and spinal cord injury, musculoskeletal disorders, trauma, pain, neurodegenerative conditions and life style diseases. The advancements in acute care and technology has brought about an increase in survival after critical illness and trauma, but has contributed to a proportionate increase in long term impairments and functional limitations. The rising prevalence of non-communicable and life style diseases, chronic painful states and age-related conditions has brought about a paradigm shift in the clinical profile of illnesses in the community.

Rehabilitation 2030 initiative

The call for Rehabilitation for all by 2030, rooted in the momentum of WHO'S Rehabilitation 2030 initiative and reinforced by World Health Assembly Resolution WHA 76.6 is a testimony to this effect. Rehabilitation is no longer seen as an optional or specialized service, but one essential to achieve Universal Health Coverage. This can be effectively achieved by integration of rehabilitation into all levels of health care, including primary care.

¹Dr P C Muralidharan MBBS MD PMR DPMR
National President IAPMR
 Professor in PMR,
 Govt Medical College, Kozhikkode, Kerala
 muralipc@yahoo.co.in

By incorporating rehabilitation services, health systems can ensure comprehensive, continuous & individual centred services. Community based models supported by digital health services also contribute to achieve this end. This resolution becomes more significant in the Indian scenario as we face a significant increase in the burden of communicable and non communicable diseases alongside increasing instances of trauma and an aging population.

Core Concept in Rehabilitation

Earlier, rehabilitation was conceived as a service delivered after completion of acute medical or surgical treatment. This is now replaced by an integrated approach initiated early in the acute phase and continues across different phases of care extending into long-term community reintegration. This ensures physical recovery, optimization of function and independence, return to work and community participation. This transition from fragmented care to continuum of care is one of the most significant advances in modern physiatry.

Integration of rehabilitation is significant in each of the following phases:

Acute Phase: Early rehabilitation initiation within 24–48 hours

Subacute Phase: Intensive interdisciplinary rehabilitation

Chronic Phase: Community-based rehabilitation and long-term follow-up

This continuum of care is essential for ensuring continuity, coordination, consistency of goals and patient centred progression. Physiatry today is no longer confined to post-acute care; it is deeply embedded in:

- Intensive care units (early mobilization)
- Acute stroke units
- Oncology and cardio pulmonary rehabilitation

- Geriatric and palliative care
- Life style disease management
- Interventional physiatry for pain, spasticity
- Disability management

The specialty has thus transitioned from a supportive service to a central, coordinating discipline. The interventions include multidisciplinary programs with Physiatrist as the team leader. This transforms rehabilitation from a time limited intervention into a coordinated life long process focused on function, independence and enhanced quality of life.

Broadening Scope

The scope of physiatry has broadened to include interventional and procedural skills . This includes performing ultrasound and C-arm guided injections, nerve blocks, spasticity management, hyperbaric oxygen therapy, prolotherapy, radio frequency ablations, transcranial magnetic and direct current stimulations etc. This blending of rehabilitation with interventions represents significant expansion of the clinical domain of the specialty. Our involvement in cardiac rehabilitation and life style disease management is noteworthy. The expanding horizons in Prosthetics and Orthotics will add on to our armamentarium.

Physiatrist as an anchor

The Physiatrist forms an anchor across all phases of rehabilitation. Rehabilitation is a multidisciplinary intervention and the patient care is continuous, goal directed and function focused. The role of Physiatrist is to establish realistic, patient centred goals, monitor progress using functional scales and modify plans according to the responses. The Physiatrist integrates medical management and functional training. He/she conducts frequent case conferences involving other members of the rehabilitation team. Without the central anchor, care becomes fragmented, goals inconsistent and outcomes suboptimal.

Structured Rehabilitation Pathways

These are standardized and evidence-based care plans which are important for the successful implementation of the Continuum of care plans in each settings. This identifies the journey of the patient from acute care through inpatient, outpatient, home based care into the community. This defines timelines, interventions, referrals and discharge and ensures continuity and coordination across all levels. Structured rehabilitation pathways provide a systematic coordinated framework and ensures that patients receive right rehabilitation at the right time and place. This also ensures smooth transitions without loss to follow up. Late rehabilitation can lead to complications and poor outcome. The existence of a structured pathway mandates early referral and initiation of rehabilitation. In addition, it promotes standardization based on evidence-based practices, efficient and cost-effective practices and

timely referral and transition protocols. It is also essential to facilitate alignment with schemes like Ayushman Bharath.

Technological advancements in Rehabilitation medicine

Technologic innovations are transforming rehabilitation medicine from the earlier concept of therapist driven service into a precision based, data driven and patient engaging specialty with improved accessibility. These innovations reshape rehabilitation into a high intensity, patient centred discipline with enhanced precision, increased reach and improved outcomes. They also compliment clinical expertise and enhance recovery by promoting intensity, repetition, feedback and personalization which are the key principles of modern rehabilitation.

The integration of technology has revolutionized rehabilitation practice. Some of the areas where technology has provided impetus to improved outcome are worth mentioning here.

- Robotics and Exoskeletons: Enhancing gait training and motor recovery
- Virtual Reality (VR) and Gamification: Improving patient engagement and neuroplasticity
- Neuro modulation techniques like Transcranial Direct Current Stimulation, Functional Electric Stimulation
- Tele-rehabilitation: Expanding access to care, especially in resource-limited settings
- Artificial Intelligence (AI): Enabling personalized rehabilitation protocols
- Assistive Technologies: Advanced prosthetics, orthotics, Smart wheel chairs and communication devices

These innovations are not replacing clinicians but augmenting the capabilities of physiatrists and other rehabilitation personnel, enabling precision rehabilitation.

Interdisciplinary and Patient-Centred Care

Modern physiatry thrives on team-based care, involving physiotherapists, occupational therapists, speech-language pathologists, psychologists, nurses, and social workers. The focus has shifted from impairment-based treatment to participation and quality of life, aligning with the International Classification of Functioning, Disability and Health (ICF) framework. Patient-centred care, shared decision-making, and individualized goal setting are now fundamental principles.

Community Based Rehabilitation and Inclusivity

CBR plays a vital role in addressing social, economic and environmental barriers to participation in rehabilitation as a continuous program. Without strong community participation the goal of Rehabilitation for all will remain a distant dream. In addition, rehabilitation must be inclusive of vulnerable

populations, like persons with disabilities, older adults and those living in poverty. The policies and programs have to be directed at these targets also.

Rehabilitation in a Global Health Perspective

The recognition of rehabilitation as a fundamental component of universal health coverage marks a historic milestone. The World Health Organization's *Rehabilitation 2030: A Call for Action* emphasizes:

- Integration of rehabilitation into all levels of healthcare
- Strengthening workforce capacity
- Improving accessibility and affordability

India, with its vast and diverse population, faces unique challenges. The role of Indian Association of Physical Medicine and Rehabilitation is crucial in advocacy, training, and policy development to ensure "Rehabilitation for All."

The Expanding Role of the Physiatrist

The modern physiatrist is:

- A clinician managing complex disability
- A team leader coordinating interdisciplinary care
- A technologist leveraging advanced rehabilitation tools
- A policy advocate promoting disability-inclusive healthcare
- A researcher and educator advancing evidence-based practice and contribute to growing base of rehabilitation.

This expanded role positions physiatry at the intersection of medicine, technology, and social integration. This recognizes the modern physiatrist as a clinician, proceduralist, team leader, technologist and a public health advocate.

Challenges and the Way Forward

Despite significant progress, several challenges remain:

- Inadequate rehabilitation infrastructure
- Workforce shortages
- Limited awareness among healthcare professionals and the public
- Variability in access between urban and rural areas
- Limited accessibility to insurance for PMR patients

Addressing these requires:

- Policy-level commitment
- Standardized rehabilitation pathways
- Integration into primary healthcare
- Capacity building and training programs

For IAPMR, this opens avenues to

1. Develop national guidelines
2. Partner with Government bodies or NGOs or similar associations
3. Strengthen academic and training programmes
4. Promote technologic adaptations
5. Advocate for strengthening national rehabilitation policy
6. Promote CBR models
7. Foster interdisciplinary collaboration

Physiatry has evolved from a niche specialty into a cornerstone of modern healthcare. Its emphasis on function, independence, and quality of life makes it uniquely positioned to address the growing burden of disability worldwide. As we move forward, the vision is clear: rehabilitation must be accessible, affordable, and integrated across the continuum of care. The Physiatrist has to take up the challenges and ensure that appropriate rehabilitation is delivered to the patients at the right time and at the right place.

Under the aegis of Indian Association of Physical Medicine and Rehabilitation, and aligned with global initiatives, the specialty is poised to play a transformative role in achieving holistic healthcare. The future of physiatry lies not only in restoring function but in enabling lives with dignity and participation

References

1. 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. *Lancet*. 2021;396(10267):2006-2017
2. World Health Organization. *World Report on Disability*. Geneva: WHO; 2011
3. World Health Organization. *Rehabilitation 2030: A Call for Action*. Geneva: WHO; 2017.
4. World Health Assembly. Strengthening rehabilitation in health systems. WHA Resolution 76.6; 2023.
5. World Health Organization. *Package of Interventions for Rehabilitation*. Geneva: WHO; 2023
6. Needham DM. Mobilizing patients in the intensive care unit: improving neuromuscular weakness and physical function. *JAMA*. 2008
7. World Health Organization. *Community-Based Rehabilitation: CBR Guidelines*. Geneva: WHO; 2010
8. Stucki G, Bickenbach J. Functioning: the third health indicator in the health system and the key indicator for rehabilitation. *European Journal of Physical and Rehabilitation Medicine*. 2017.
9. Negrini S, Arienti C, Kiekens C, et al. Rehabilitation: Background, goals and future directions. *European Journal of Physical and Rehabilitation Medicine*. 2022