

The Neurological Rehabilitation - The Untouched Territory in India


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Rehabilitation is an educational process for disabled person with the final aim of assisting that individual to cope with family, friends, work, and leisure as independently as possible and to involve the disabled person in making plans and setting goals that are important and relevant to their own circumstances. Rehabilitation includes various interventions that aim to reduce disability, activity limitation, and participation restriction among individuals with health conditions in interaction with their environment. The need for rehabilitation services becomes greater in neurological disorders, some of which are incurable and/or may lead to permanent sequelae.

India is the most populous country in the world overtaking China. According to a recent study, 2.41 billion individuals globally suffer from health conditions that would benefit from access to rehabilitation services as of 2019. Thus, every 3rd individual would require rehabilitation at some point in time. Furthermore, there were more than 7 million cases of traumatic brain and spinal cord injury, 1 million incident cases of stroke, 7 lakh cases of Parkinson's disease, 1 lakh cases of multiple sclerosis, 49,300 cases of brain and CNS cancer and 25,000 cases of motor neuron disease in India in 2019. Hence, the burden of neurological disorders requiring rehabilitation services in India is huge and neuro rehabilitation services are still in an infancy phase.

The barriers to accessing neuro rehabilitation services in the health care system in India may be due to lack of enough rehabilitation professionals including the physicians and supporting staff, limited health care workforce dedicated towards rehabilitation; and <1 rehabilitation professional /100,000 population), logistical factors (including the distance to service, lack or cost of transport), poverty and non affordability, lack of knowledge regarding the existence of services, lack of funding, and lack of

political will. As a result, neuro rehabilitation services become limited to large private super specialty centres in urban areas and still remain untouched territory in tier 2 & 3 cities and rural part of India & has immense potential to grow.

Basic approaches in neurological rehabilitation

This process can be conveniently broken down into three key areas:

- Approaches that reduce disability
- Approaches designed to acquire new skills and strategies, which will maximise activity
- Approaches that help to alter the environment, both physical and social, so that a given disability carries with it minimal consequent handicap.

The Rehabilitation Process

The last point encompasses another fundamental principle of neurological rehabilitation. The process of rehabilitation is set around the establishment of goals. The first goal to be set is the long-term strategic aim. Once a realistic and achievable long-term goal has been established then the smaller steps needed to achieve that goal are determined. The goals must be precise. There is no point in setting vague and subjective goals as neither the rehabilitation team nor the disabled person will be able to monitor where they are in the process. A useful mnemonic to remember what the goals should be is SMART:

- Specific
- Measurable
- Achievable
- Relevant
- Time limited

The Rehabilitation Team

It is important to emphasise that a key principle of neurological rehabilitation is the close

working together of all relevant health professionals. The majority stakeholders are rehabilitation professionals, audiology/speech language pathology specialists, neurologists, neurosurgeons, and palliative care physicians. Other specialists and supporting staff can be added according to the requirement. So government can work in way to increase the number of these professionals to improve overall care.

WHO, in February 2017, launched Rehabilitation 2030, “A call for Action” rallying stakeholder towards concerted and coordinated global action to scale up rehabilitation. In order to achieve this, 10 priority areas for action were identified:

1. Creating strong leadership and political support for rehabilitation at sub-national, national and global levels.
2. Strengthening rehabilitation planning and implementation at national and sub-national levels, including within emergency preparedness and response.
3. Improving integration of rehabilitation into the health sector and strengthening intersectoral links to effectively and efficiently meet population needs.
4. Incorporating rehabilitation in Universal Health Coverage.
5. Building comprehensive rehabilitation service delivery models to progressively achieve equitable access to quality services, including assistive products for all the population, including those in rural and remote areas.
6. Developing a strong multi disciplinary rehabilitation workforce that is suitable for country context, and promoting rehabilitation concepts across all health work for CE education.
7. Expanding financing for rehabilitation through appropriate mechanisms.
8. Collecting information relevant to rehabilitation to enhance health information systems including system level rehabilitation data and information on functioning and utilizing the International Classification of Functioning, Disability and Health (ICF).
9. Building research capacity and expanding the availability of robust evidence for rehabilitation.
10. Establishing and strengthening networks and partnerships in rehabilitation, particularly between low-, middle- and high-income countries.

Many studies had identified the lacunae in reporting service needs, provision and outcome

monitoring. So, identifying real need for neurological rehabilitation, removing the barriers and lacunae & accelerating and expanding delivery of neuro rehabilitation services is of utmost important. An effective way for equitable delivery of services in India could be via community based rehabilitation (CBR) services. CBR can be especially useful in India where healthcare workforce is limited, and active community participation by various stakeholders (example community based health workers, family physicians, care givers, neurologists, community-based nurses, psychologists, and trained physiotherapists/occupational therapists) in terms of identifying disabled individuals, education and counselling, spreading exceptional knowledge regarding rehabilitation services, physiotherapy, and vocational training and provision of various assistance devices could be of utmost importance in integrating neuro rehabilitation services at the primary and district level. Thus multi disciplinary services at tertiary care centres can be reserved for severely disabled patients who require more resources.

To prepare the communities of similar disease individuals will help the patients to understand the disease process and improve understanding regarding the disease and treatment options with rehabilitation process like for Parkinson’s disease, Indian and International Parkinson’s and movement disorder society and brain tumor patients had National brain tumor society.

Strengthening the tele neuro rehabilitation services in India can also improve its delivery with faster pace in resource poor environment in a cost-effective way. Video conferencing can connect stake holders like nurse and physician or neurologist with one another and also tele neuro rehabilitation can be helpful in a neuro degenerative disease like Parkinson’s disease in a covid -19 pandemic or other natural calamities.

To conclude, strengthening the neuro rehabilitation services in India at primary and district level would help greater uptake of these services across the society and lead to better functional outcome and quality of life of patients with neurological disorders. To improve the services, careful attention needs to be given to the training and skills of neuro rehabilitation workforce and monitoring them at regular basis. Establishment of rehabilitation centres separately for patients who don’t require any acute hospital care and can work with community-based rehabilitation.