

Neurorehabilitation: A Holistic Approach



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Introduction

Neurorehabilitation is a complex process that aids in recovery of patients from various nervous system disorders. Nervous system disorders cause various disabilities for which rehabilitation is of utmost importance. Patients suffering from neurological and neurosurgical illness may suffer from various levels of functional, cognitive and psychological disabilities that affects their activities of daily living and independent functional status. This can lead to impairment in their functional roles at family, workplace and society. These disabilities also contribute to increased complications, unfavorable outcome, poor quality of life, poor prognosis, lengthy hospital stay and socio-economic loss.

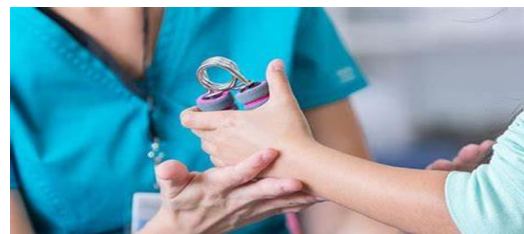
Rehabilitation is essential for helping patients to regain lost skills, relearning task and works to be independent again. But rehabilitation services are not utilized by patients with disabilities in developed countries like India due to multiple reasons. Nurses have a great responsibility in promoting the utilization of available rehabilitation services by the patients during their hospital stay and post-discharge.

Aspects of neurorehabilitation

Neurorehabilitation mainly include physical rehabilitation, cognitive-behavioral rehabilitation, and occupational therapy.

Physical rehabilitation:

Physical rehabilitation or physiotherapy aims to improve the functional status of the patients by improving various functional disabilities developed during the disease process. They include deep breathing exercises, chest physiotherapy, range of motion exercises, dysphagia training, speech therapy, early mobilization and ambulation, muscle strengthening exercises, balance and gait training



etc. Physical rehabilitation is initiated in hospital as early as possible to aid in better recovery of patients.

Cognitive-behavioral therapy:

It includes various cognitive and behavioral interventions focused to improve the specific cognitive and behavioral dysfunctions identified in the patients. Our experience with patients with neurological and neurosurgical conditions shows that cognitive impairment and behavioral symptoms which are part of the disease are often neglected by the healthcare providers.

Cognitive-behavioral rehabilitation is mandatory to enhance the entire rehabilitation process holistically. The process includes early identification of the specific type of cognitive deficits and behavioral symptoms using appropriate tools and providing individualized intervention. Cognitive-behavioral rehabilitation is important for



the individuals to improve their functional status and independence as impairment in cognition and various behavioral symptoms seen in the patients are reported to affect their functional role in the society.

Occupational therapy:

Occupational training programs are designed to improve patients' physical condition and stamina and training in the specific professional skills required in the patients' workplace is often essential. Patients are trained with appropriate vocational or professional skills based on their capabilities and disabilities.



Phases of neurorehabilitation

1. Intermediate Care (IMC): The effects of acquired neuronal damage is usually severe in the early stages. The main problems facing patients undergoing this phase of rehabilitation are impaired consciousness with a limited ability to communicate, dysphagia and immobility. During this phase, the focus of neurorehabilitation is on maintaining and improving the basic bodily functions. This primarily involves stabilizing the circulation, respiration and nutrition, preventing spasticity and self-injury, and counteracting the distressing effects of restlessness and anxiety.

2. Acute Rehabilitation: In addition to improving patients' physical and mental capabilities, therapy during the acute rehabilitation phase focuses on enabling patients to regain their independence in daily life. Physical rehabilitation and cognitive-behavioral therapy are intensively provided during this phase. The first steps towards subsequent occupational

reintegration are also initiated during this phase. At this stage, patients become increasingly aware of the impact of their injuries on their health and they require compassion and good motivation from the treatment team.

3. Occupational Rehabilitation: Once people with brain injuries are able to cope with everyday activities, their next challenge is to return to work. The occupational rehabilitation team provides support to help with this. Specially organized workshops are arranged for this purpose. At the end of the treatment program, patients are provided with a specific plan for occupational reintegration. Continued outpatient care is also provided to ensure that the patients' reintegration is successful.

Role of nurse in neurorehabilitation



Nurses as health team members have important role in promoting effective and efficient utilization of rehabilitation services by the needy patients in hospital and community. Major focuses of nurses include early initiation of rehabilitation, assessment of specific disabilities, collaborating with multidisciplinary team during hospital stay of patient, initiating nurse led brief interventions and

telephonic follow up, empowering patients and caregivers and improving public awareness.

Nurses are involved in research related to neurorehabilitation. A study conducted by us in North India shows that patients with stroke are not utilizing rehabilitation services adequately. Nurses are yet to improve the awareness on neurorehabilitation. They must motivate and counsel the patients and family caregivers to utilize rehabilitation services consistently and efficiently. We are developing patients or caregiver friendly mobile applications to enhance the rehabilitation therapy by patients at home. We are also testing the effectiveness of various innovative strategies of neurorehabilitation such as mirror therapy on patient outcome. We have significant role in implementing various evidence-based strategies of rehabilitation services.

A multidisciplinary team including nurse, physiotherapist, psychologist, doctor, speech therapist and occupational therapist must work in collaboration to achieve optimum benefits of neuro rehabilitation to the patients and their family.

Conclusion

Neurorehabilitation is an important component of holistic as well as patient and family centered care that helps to improve their recovery and quality of life. Health care professionals and government has got much responsibility and need to take efforts to improve the awareness and utilization of neurorehabilitation services by the survivors of nervous system disorders.