

Family Based Rehabilitation: Need of the Hour in Developing Countries

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According to recent population surveys, nearly 80% of the world's population resides in developing countries; India contributes approximately 28% of this population [1]. There has been an alarming increase in the incidence and prevalence of neurological diseases in the developing world [2]. The care of these patients grossly depends on the needs and resources of the county and also on the availability of trained neurorehabilitation specialist. Currently there is a gross mismatch between the burden of neurologic disorders and the availability of resources including health professionals [3].

In India and other developing countries, there are no health care benefits to the patients, the costs is basically borne by the patient's family and in a few cases medical insurance or government support if available it doesn't take into consideration rehabilitation and chronic care of the patients. This is usually required for patients with neurological disorders. Majority of the population resides in the semi urban and rural areas of the country, where there is no availability of such specialised health care due to poverty, lack of infrastructure, illiteracy and disbeliefs. This increases the cost of travelling to urban areas which puts burden on the family and care givers secondary to the indirect cost of the loss of earnings due to unemployment during illness and convalescence. In the large majority of these countries, there are no disability benefits [4]. In developing countries where neurorehabilitation services are available, the quality is compromised, due to a lack of a well- structured system which can provide comprehensive rehabilitation services [5].

Neurorehabilitation can be provided in three set ups, 1. Inpatient hospital-based interdisciplinary care, 2. Outpatient hospital based multidisciplinary care and 3. Community based comprehensive rehabilitation. Inpatient hospital-based interdisciplinary neurorehabilitation care is often required as a first line service to facilitate rapid recovery after neurological injury and community-based or Family based are appropriate for community re-integration in the recovery phase. Family-based rehabilitation services are the most appropriate way forward in developing countries, with tailored and culturally sensitive education for the family, to help them participate in the rehabilitation of the patient. There have, however, been repeated concerns voiced about the adequacy of the evidence-base regarding the efficacy, effectiveness and efficiency of FBR predominantly using local resource and not valuing the cultural influence in the local community [6].

In developing countries, there is a practice of staying joint families, to incorporate the rehabilitation techniques in 2 - 3 family members help in reducing the burden on a single member of the family as well as reduces the cost of care post neurological conditions. Education and counselling of caregivers to be compliant with the rehabilitation process is of utmost importance. In developing world the intimate social system and family structure helps to provide the necessary physical, emotional, spiritual support. Strong family bond help overcome the negative impact of the disability and large extended family system ensure that the physical social, economical burden of disease is equally shared among its member. The family participation ensure long term care and rehabilitation without putting burden on their travel to city

or hospital for rehabilitation, saving their finance also and not interfering in their day to day work, which reduces patients and care givers anxiety and improve quality of life of affected family. The role as therapy giver can be switched depending on the availability of family members hence we need to train all the family members to learn the skill to do rehabilitation at home and that ensures good outcome.

There is a surplus increase in the number of smart phone usage and web connectivity in the developing world, hence different model can be tried like the family members can be trained by the therapist or by web based appliance. Use of mobile phone to record the exercises shown to patient is very effective in our practice as patient can review them regularly at home also one can check if family members are correctly following them at home or not. they can bring recorded exercise pattern on phone in next visit to get rectify if any irregularity is noted, this application is most useful tool in family based rehabilitation. A recent study of family led rehabilitation of stroke in India concluded task shifting to the family did not lead to significant improvements in patient's outcomes over a period of 6 months, they further suggested investigating the effects of task shifting to health-care assistants or team-based community care [7].

In our opinion the advancement of Tele neurorehabilitation as an adjunct to family based rehabilitation will help in improving the patients' outcomes as well as reduce the burden of cost on the patients family and caregivers. This could be the future to provide low cost neurorehabilitation services in the developing countries.

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