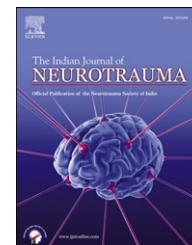


Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

journal homepage: [www.elsevier.com/locate/ijnt](http://www.elsevier.com/locate/ijnt)

## Letter to the Editor

# Unmet needs of rehabilitation centers in India

Dear Sir,

The term 'disability' indicates that health is conceptualized in terms of functioning capacity in a set of health domains such as mobility, cognition, hearing and vision. The National Sample Survey Organization (NSSO) estimated that the number of persons with disabilities in the Indian population is 49–90 million.<sup>1</sup> The number of people with disabilities is increasing due to population growth, aging, emergence of chronic diseases and increase in transportation vehicles, creating overwhelming demands for health and rehabilitation services.<sup>2</sup>

In our country, millions require hospitalization and thousands suffer from various disabilities. According to the NSSO survey, 25% of disabilities are due to motor vehicle injuries of which 9.2% is visual, 12.5% is hearing related, 16.8% relates to speech deficits, and 27% is loco-motor.<sup>1</sup> Some other sources of injuries include burn injuries, occupational injuries, poisoning, suicide and assaults.<sup>3</sup> Large-scale population based surveys in Bangalore indicate a ratio of 1:20:40 in terms of deaths, hospitalizations and injuries, respectively.<sup>3</sup> This value was projected to contribute to approximately 17,000,000 hospitalizations and about 42,500,000 persons with minor injuries and subsequent disabilities during 2005. Nearly 70% of these injuries were projected to occur among men between the ages of 15–44 years and 80% of the injuries were likely to be rampant in rural areas (70% of the Indian population lives in rural background). While survival rates are on the increase with improved medical care, the burden of the disabilities exacerbates. However, despite the increase in prevalence of disability in India, not much attention has been paid to their remediation.

Initially a traumatic patient is provided acute treatment for the presenting symptoms. Once it has been established that the patient's vitals are stable, (s)he is generally discharged from emergency services. Naturally occurring spontaneous recovery refers to the process of healing that generally takes place within the first 3 months after the injury. Some residual difficulties that may remain, include emotional disturbances, cognitive difficulties, memory problems, language impairment and alteration of sexual behavior.<sup>4</sup> Apart from these, the patient may be left with a host of physical disabilities as well. From a cohort study, 1 year following the injury, 48% of severe head injury patients, 45% moderate head injury patients and 47% mild head injury patients were found to have disability.<sup>5</sup> A majority of road traffic injuries are widespread among young adults in the productive age group.<sup>3</sup> Very little is known

about the patients who are discharged from our setup. Follow up rates are extremely insignificant. Unfortunately, many suffer from disability simply because of a lack of awareness of further remediation alternatives. Spontaneous recovery can be enhanced by rehabilitation services like physiotherapy, speech therapy, neuro-feedback, cognitive retraining as well as yoga. Vocational based rehabilitation has been found to be immensely successful, empowering the patient to become extremely successful at the work place.<sup>6</sup> In a study it was found that among the head injury population 91% had a pre injury employment rate however this figure dropped down to 36% post injury. The rate however improved to 71% after supported intervention.<sup>7</sup> However, there are very few centers providing such services in our country. Needless to say these resources of trained personnel are insufficient given the sheer extent of the population with disability.

We suggest that the solution lies first in preventive mechanisms that decrease the incidence of such injuries as well as an increase in rehabilitation services. Funding for training and research in rehabilitation and setting up of rehabilitation centers is of vital importance. This would in turn reduce the economical strain posed by survivor's of injury who cannot work, given their disability. We require more health care services aiming to improve the persisting deficits after acute conditions. Successful rehabilitation requires months of tireless effort and addresses a wide range of deficits. Physiotherapy is indicated for locomotor deficits, neuro-feedback and cognitive retraining for cognitive impairment, audio logical and speech therapy for hearing, tinnitus and speech conditions, yoga for enhancing health benefits as well as occupational therapy for improving vocational output. The use of the media as well is highly indicated to promote awareness among the general public that acquired disabilities can be reduced by providing rehabilitation at the appropriate time.

## REFERENCES

1. National Sample Survey Organization. Disabled Persons in India: NSS 58th Round. Report No. 485. New Delhi: Ministry of Statistics and Program Implementation, Government of India, 2002.
2. Srivastava DK, Khan JA. Disability needs attention now!. *Indian J Pract Dr.* 2008;5:3–4.
3. Gururaj. *Injuries in India: A National Perspective.* NCMH Background Papers Burden of Disease in India; 2011: 325–347.

4. Parker RS. *Traumatic Brain Injury and Neuropsychological Impairment*. New York: Springer-Verlag; 1990.
5. Thornhill S, Teasdale GM, Murray GD, et al. Disability in young people and adults one year after head injury: prospective cohort study. *BMJ*. 2000;320:1631–1635.
6. Macaden AS, Chandler BJ, Chandler C, Berry A. Sustaining employment after vocational rehabilitation in acquired brain injury. *Disabil Rehabil*. 2010;32(14):1140–1147.
7. Wehman P, Kreutzer JS, West MD, et al. Return to work for persons with traumatic brain injury: a supported employment approach. *Arch Phys Med Rehabil*. 1990;71:1047–1052.

M. Ashok\*

Dept of Neurosurgery, National Institute of Mental Health and Neuro Sciences, Hosur Road, Bangalore 560029, Karnataka, India

Cathlyn Niranjana Bennett  
National Institute of Mental Health and Neuro Sciences,  
Hosur Road, Bangalore, India  
E-mail address: [niranjanabennett@gmail.com](mailto:niranjanabennett@gmail.com)

\*Corresponding author. Tel.: +91 9844250897, +91 80 26995346.  
E-mail address: [ashokmphdns@gmail.com](mailto:ashokmphdns@gmail.com)

Available online 29 October 2012

0973-0508/\$ – see front matter  
Copyright © 2012, Neurotrauma Society of India. All rights reserved.  
<http://dx.doi.org/10.1016/j.ijnt.2012.10.003>