Providing Stroke Expertise across India

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The vast majority of people in India live in a region with no stroke units, and no neurological expertise. Yet, stroke unit care is one of the most effective treatments for stroke, and provides the necessary infrastructure on which to build capacity for medical and neuro-intervention. Some acute stroke treatments are very cheap, and potentially available without expensive facilities, e.g., immediate aspirin for acute ischemic stroke and blood pressure lowering for hemorrhagic stroke. How should health care planners start to build stroke unit capacity in India? The article by John et al provides some new important data. These authors performed a before and after study of an implementation of a physician-based stroke unit model in a remote hospital in North East India.

Key components of the intervention included a stroke expert who was willing to provide time for mentoring and training, and identification of a local champion—a physician, who in a “train the trainer” model, helped educate the local team in basic stroke unit care. In this case, the local team includes the doctors, nurses, physiotherapist, and occupational therapist. The stroke unit care items were classed under “monitoring,” “acute management,” “team working,” and “discharge planning” and, as is the case with many important health service interventions, it consisted of doing many simple tasks comprehensively.

Their results were important. Although the study was too small to reliably estimate differences in functional outcome their processes of care clearly improved, particularly in swallow screening, use of antithrombotic therapy, and use of electrocardiograms to identify atrial fibrillation. Mobility assessment improved and every patient, post intervention, would be developing an Indian model of stroke rehabilitation following discharge from the stroke unit. Unfortunately, several low-cost models of care have not been shown to be beneficial (such as family-led rehabilitation, or nurse-led rehabilitation). Centre-based stroke support and rehabilitation may well be the best model to evaluate with some promising data from Africa on such a service.

One positive aspect of the current COVID-19 pandemic has been the enormous uptake of technology in medicine with videoconferencing becoming routine, and this, together with digital technology support with smartphones and smartphone applications could be explored to expand the basic stroke unit model as exemplified by the Tezpur model.

Once basic stroke units are established, treatment options can be advanced according to the local resources, such as consideration of thrombolysis and possible pathways to neurointervention (more feasible in areas near large urban centers). Given how common stroke has become (the main cause of death in some areas of India) the next priority would be developing an Indian model of stroke rehabilitation.

Stroke will remain a leading cause of premature death and disability for decades and the Tezpur model of basic stroke unit care provides a key example of cascading expertise to the population. Efforts to roll out this model should be a priority.
Conflict of Interest
R.I.L. reports his extensive collaboration in India and currently has a project based here.

References
1 Ganapathy K. Distribution of neurologists and neurosurgeons in India and its relevance to the adoption of telemedicine. Neurol India 2015;63(2):142–154
6 Lindley RI. Stroke prevention in the very elderly. Stroke 2018;49(3):796–802