

**Towards the future – Telerehabilitation in stroke care in Pakistan**

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*Dear Editor,* Stroke is the third leading cause of death globally. Pakistan, a low-middle income country (LMIC), reports a high prevalence of stroke, with annual incidence of 250/100000 reported a decade ago. Current statistics are unavailable due to lack of large-scale studies on stroke incidence and prevalence.<sup>1</sup>

Telerehabilitation is a fairly new branch of telemedicine, defined as the provision of rehabilitation amenities by experts to the patient using telecommunication technology. It reduces hospital stay and expense, thus proving beneficial for both the patient and healthcare provider. Its use is more common in high-income countries (HICs) than LMICs. Popular systems like the Rehab@Home<sup>2</sup> framework are examples of telerehabilitation models for patients suffering from stroke.<sup>3</sup>

There is a shortage of literature to comprehensively comment on the impact of telerehabilitation on stroke patients in LMICs. However, telehealth in neurology, termed teleneurology, has the potential for advancement in the treatment of patients with neurological diseases in LMICs, as they have the highest incidence of neurological disorders. A paper proposed that establishing a teleneurology network for Sub-Saharan Africa consisting of transcontinental, inter-regional, intraregional, and national networks will allow neurologists and neurology residents from LMICs to consult with their counterparts in HICs, thus improving the overall quality of the healthcare system.<sup>4</sup>

Pakistan only has 3.2% of the current GDP devoted to the health sector, leading to limited medical facilities nationwide. The outbreak of Covid led to an uplift in the growth of telehealth which encourages evolution in the future. However, this advancement in the use of telehealth has been hindered by several factors since its inception in 2003, including a lack of legal framework and laws for the

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establishment of new programmes, lack of sustainable support from the government, deficiency of funds and resources for the organization of infrastructure, distant rural areas with poverty, low literacy rate, limited cell phone ownership, and internet access. The scarcity of qualified doctors and trained paramedics or nurses and lack of awareness is another significant impediment as depicted by a survey, which informed that 98.2% of doctors employed in the public health sector in Karachi recorded a paucity of training workshops or conferences for telemedicine.<sup>5</sup> Hence, measures to overcome these barriers like investments from HICs, training workshops from pioneers of the field, and healthcare professionals who can offer services in multiple languages are some of the factors that can aid in effectively introducing telerehabilitation for the masses.

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