Impact of COVID-19 on Patient Care, Training, and Research in Movement Disorders in MDS-AOS Region

The COVID-19 pandemic has caused disruptions in movement disorder clinical services and education.[1-5] The Movement Disorder Society-Asian and Oceanian Section (MDS-AOS) is a subsection of the MDS comprised of 41 countries and territories, with diverse socioeconomic backgrounds, health care systems, and varied exposure to prior pandemics.

To determine the impact of the pandemic on clinical, training, and research activities of movement disorders, a structured questionnaire was developed with expert consensus during a conference call organized by the MDS-AOS. Fifteen months into the pandemic, that is, March 2021, members of the MDS-AOS were invited to participate in an online survey. The impact of the pandemic was graded from zero to five (zero: "no impact," five: "total disruption"), and responses were recorded over five time points. Seventy-four responses were received from 20 countries, with the majority (36%, n = 27) from India (Supplementary Material).

Almost complete (76%–99%) disruption in clinical services occurred for 3 months (April–June 2020), with total disruption (100%) in the domains of outpatient and inpatient care and physiotherapy for 3 months (April–June 2020) and botulinum toxin therapy and deep brain stimulation for 6 months (April–September 2020) (Fig. 1, Supplementary Material). Although the impact gradually declined, nothing reverted to a pre-COVID-19 state, and all participants predicted a persistent mild impact. Training and research activities were completely disrupted (100%). Clinical bedside sessions and training of PhD candidates were completely disrupted for 6 months (April–September 2020), whereas fellowship training was least affected. Both clinical and basic science research were impacted due to difficulties with patient recruitment and initiation and sanction of new projects. Among countries that responded, a consistent relatively low impact, that is, 25%–50% disruption, was reported from China, Japan, South Korea, and Taiwan.

Disruptions in clinical services could be secondary to a shift of focus to COVID-19, designation of health care professionals to COVID-19 facilities, and travel restrictions. Social distancing, cessation of in-person meetings, and prioritization of COVID-19-related activities probably contributed to the disruption of teaching and research activities. Significant impact

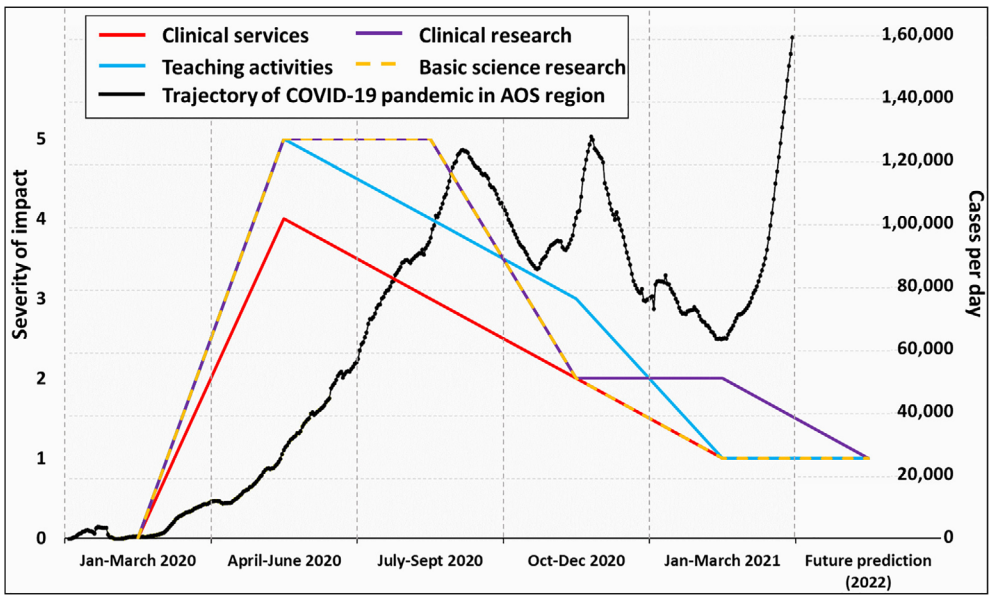

FIG. 1. Impact of the COVID-19 pandemic on clinical, training, and research activities of movement disorder in the MDS-AOS (Movement Disorder Society-Asian and Oceanian Section) region. *Y*-axis: *left*: impact of COVID-19; *right*: daily number of new confirmed COVID-19 patients.*Source*: Johns Hopkins University CSSE COVID-19 data. [Color figure can be viewed at wileyonlinelibrary.com]

*__Correspondence to:__ Dr. Pramod Kumar Pal, Department of Neurology, National Institute of Mental Health & Neurosciences (NIMHANS), Hosur Road, Bengaluru 560029, India; E-mail: palpramod@hotmail.com; or palpramod@nimhans.ac.in

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was observed during the initial 6–9 months when maximal restrictions were imposed, after which although the severity of the pandemic increased, the impact appeared to decline. This could be attributable to the reduction in general restrictions and the implementation of numerous adaptive measures such as online clinical discussions and virtual training programs that permitted resumption of routine activities albeit in a different format. The differential impact and rate of resumption of activities could be due to the baseline preparedness for pandemics, socioeconomic status, and structure of the health care systems across countries.

A key limitation was the low number of responses, with the majority from a single country. Although it is difficult to predict the long-term implications on movement disorders–related services, it is certain that a pre-COVID state of functioning may not be achieved, and adaptive measures assumed to be temporary may be more permanent than anticipated.[6] This survey demonstrates that AOS countries are constantly learning to adapt to this challenging situation, and the MDS-AOS will continually support this endeavor with the ultimate aim of benefiting patients with movement disorders.

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Data Availability Statement

The data that supports the findings of this study are available in the supplementary material of this article.

Shweta Prasad, MBBS,[1,2] Hrishikesh Kumar, MD, DM,[3] Roongroj Bhidayasiri, MD, FRCP,[4,5] and Pramod Kumar Pal, MD, DNB, DM, FIAN, FRCP[2*]

[1]*Department of Clinical Neurosciences, National Institute of Mental Health & Neurosciences, Bengaluru, India,* [2]*Department of Neurology, National Institute of Mental Health & Neurosciences, Bengaluru, India,* [3]*Department of Neurology, Institute of Neurosciences, Kolkata, India,* [4]*Chulalongkorn Centre of Excellence for Parkinson's Disease & Related Disorders, Department of Medicine, Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Bangkok, Thailand, and* [5]*The Academy of Science, The Royal Society of Thailand, Bangkok, Thailand*

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Supporting Data

Additional Supporting Information may be found in the online version of this article at the publisher's web-site.