

Telemedicine during COVID-19 crisis in resource poor districts near Indo-Pak border of western Rajasthan

Dear Editor,

India reported its first case of COVID-19 on 30th January 2020 and is observing a complete lockdown since 24th March 2020. AIIMS Jodhpur is a tertiary care hospital that caters to 68.6 million people living in the far flung rural regions of the state of Rajasthan, India near the Indo Pak border spread over the Thar Desert region. The districts of Bikaner, Jaisalmer, and Barmer that share their borders with Pakistan, together have a population of 9.32 million in addition to eastern districts of Nagore, Jalore, Pali, and Ajmer which have a population of 9.7 million. The region has the highest rate of population growth in the state and a population density of 200 persons/sq. km.^[1] Main source of income is agriculture and the annual per capita income is Rs. 34,042 (479 dollars per annum).^[2]

The lockdown imposed due to COVID-19 pandemic has heavily impacted the care of the children who require sub-specialty consultations. We felt the need to reach out to children with nephrotic syndrome as their immunity is suppressed and they need to avoid coming to hospitals by all means.

We considered that ‘Telemedicine’, the provision of clinical services via the use of communication technology between patient and provider, would be an effective tool to continue patient care. The use of telemedicine in a country like India has been done only on small scale until now.^[3] However, with the increasing availability and use of smartphones, webcam-enabled personal computers, and high speed internet, the implementation of telemedicine services has become progressively feasible and viable option to ensure safety of both patient and physician. The guidelines for telemedicine were issued by the Ministry of Health and Family welfare, Government of India in view of the COVID-19 pandemic on 25th March 2020.^[4]

We called out to 102 children who were registered with us with a diagnosis of Nephrotic Syndrome out of whom 67 (65%) responded. 57 (85%) of these had visited us at least once in person over last 6 months and hence qualified for teleconsultation as per guidelines. The consultations started on 2nd April 2020. They were called using a mobile phone and previous prescriptions were seen by asking the patient to send a snapshot of same on

WhatsApp. Of these 23% (13/57) needed an urgent consultation which was being stalled due to lockdown. (7 relapses, 6 others). 56% (32/57) children needed consultation as per their routine appointment of which 33% (11/32) needed modification of their drug doses. Four children (7%) required an in person visit (for IV medications, biopsy and management of Complications of Nephrotic syndrome) and were called to hospital after taking permission for movement from local authorities. Only 8/57 (14%) children did not require immediate consultation as they had an in-person visit just prior to lockdown. Three children who were on Tacrolimus complained that the same was not available at local stores due to interruption of supply chain. This was arranged after seeking help from local medical representatives and provision of alternate brands.

In a nutshell we were able to curtail a hospital visit for all but four children [Figure 1]. This method of ‘Forward triaging’ served three purposes:^[5] (1) It avoided a hospital visit and proved cost saving for the patient; (2) Provided a means of early intervention which avoided complications of delayed treatment; and (3) It proved to be an effective way of providing care while maintaining social distancing both for patient and physician.

Despite poor digital literacy, there is good availability of mobile network and internet through 4G data by various service providers in almost the entire country. This, coupled with easy availability of smartphones and applications that enable video calling/exchange of pictures instantly, have opened new avenues for instantly putting tele medicine into practice without resorting to purchase of expensive telemedicine equipment/platforms.

As the numbers of affected persons continue to rise and social distancing becomes a new way of living, telemedicine needs to be developed as an essential means of providing care to all kinds of patients, be it pediatric or adult specially for follow up. This

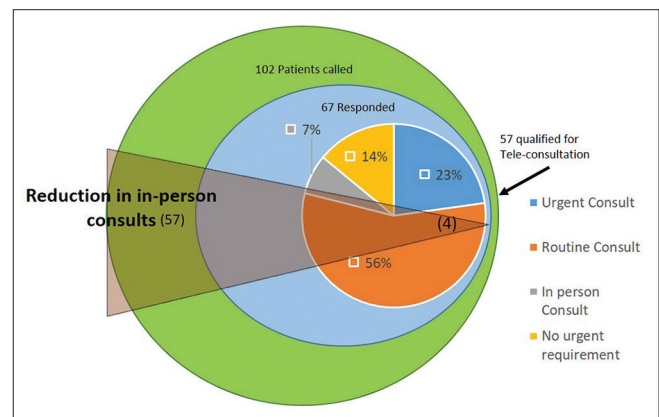


Figure 1: Diagram depicting the reduction in number of in-person visits achieved by use of telemedicine (Triangle). The pie chart depicts the percentages of children who received teleconsultations and its urgency

is of utmost importance in a resource constrained nation like India where it would be prudent to spend the resources on other purchases to fight the current health emergency.

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Conflicts of interest

There are no conflicts of interest.

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References

- GOI. Census of India 2011: Provisional Population Totals. Registrar General and Census Commissioner of India, Ministry of Home Affairs, New Delhi, India; 2011. Available from: <https://www.census2011.co.in/census/state/districtlist/rajasthan.html>. [Last accessed on 2020 May 06].
- Directorate of Economics & Statistics, Department of Planning, Government of Rajasthan: State Domestic Product 2017-18. Jaipur, Rajasthan; 2018. Available from: <http://plan.rajasthan.gov.in/content/dam/planning-portal/Directorate>. [Last accessed on 2020 May 06].
- Mishra SK, Kapoor L, Singh IP. Telemedicine in India: Current scenario and the future. *Telemed J E Health* 2009;15:568-75.
- Ministry of Health and Family welfare, Government of India: Telemedicine Practice Guidelines Enabling Registered Medical Practitioners to Provide Healthcare Using Telemedicine. New Delhi; 2020. Available from: <https://www.mohfw.gov.in/pdf/Telemedicine.pdf>. [Last accessed on 2020 Apr 03].
- Hollander JE, Carr BG. Virtually perfect? Telemedicine for Covid-19. *N Engl J Med* 2020;382:1679-81.

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