

## Abstract

### FIRST PAHO/WHO REGIONAL EXPERIMENT IN THE AMERICAS: USING NEW TECHNOLOGIES TO FACILITATE THE ACCESS TO SPECIALIZED CARE FOR LEPROSY PATIENTS

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**Objectives:** The Pan American Health Organization (PAHO) regional office began using a store-and-forward telemedicine platform for leprosy in October 2018, based on the Collegium Telemedicus system. The aim of the present study was to describe the experience of developing a telemedicine service allowing national programs to seek expert medical advice for leprosy.

**Methods:** We carried out a retrospective analysis of all cases referred by seven countries from the Americas included in this first six-month pilot through the PAHO telemedicine platform. We followed the Model for Assessment of Telemedicine (MAST) methodology and conducted a quantitative and qualitative analysis based on a survey sent to all referrers and specialists involved in these cases.

**Results:** During the 6 months pilot, 20 users were registered: 10 specialists from Brazil and France (4 dermatologists, 2 surgeons, one occupational therapist, one physiotherapist, two from the regional office), 8 referrers (5 from Haïti, 1 from Guyana, 1 from Trinidad and Tobago and one from Brazil) and two coordinators. A total of 14 cases were sent from Guyana and Haïti. The platform was mainly used for leprosy cases 60% (8/14), other were dermatology cases. Median time for first response was 9.9 hours. We didn't report any technical incident. Main reasons to request specialist expertise for leprosy were to confirm a diagnosis (3 cases), to discuss reactions and complication (2 cases) and reach out to specialists for management of impairments for grade 2 disability (2 cases). Outcomes for patients were overall positive with one unnecessary surgery avoided, a referral outside from the country avoided, a Dapsone hypersensitivity diagnosed and one patient who first presented with leprosy symptoms who was ultimately diagnosed with rosacea. User feedback was generally positive and more than 90% (4/14) of referrers who provided a progress report about their case stated that it was useful and that the teleconsultation provided an educational benefit.

**Conclusion:** The PAHO telemedicine service had the capacity to mobilize multilingual and multidisciplinary international network. Asynchronous consultation worked in resource and connectivity limited settings and we reported no technical incident. However, launching a telemedicine service takes time and six-month was short to implement in multiple countries. This

experience showed educational and clinical value and the pilot should be extended to implement in more countries and to bridge the gap between remote areas and national expertise centers.