

# Expanding Primary Care Access: A Telehealth Success Story

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## THE INNOVATION

Our challenge was to structure a telemedicine framework that is capable of expanding access to services and testing while increasing the quality of the services provided. In this report, we describe the development of a telemedicine project in Brazil and its impact on increasing access to specialist consultations, diagnostic testing, and specialized medical advice to physicians.

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## WHO & WHERE

In early 2005 the Ministry of Health of Brazil convened experts in telemedicine and primary health care with the aim of implementing telemedicine nuclei in 9 of the 26 states of Brazil. TelesaúdeRS-UFRGS, a project developed by the Graduate Program in Epidemiology at the Universidade Federal do Rio Grande do Sul (UFRGS) School of Medicine, is one of these nuclei. It was created in 2007 and financed by the Ministry of Health as a pilot strategy to foster the development of telehealth in Brazil.

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## HOW

A team of family physicians with broad experience in primary health care and little knowledge of telemedicine, housed in a small classroom, took the first timid steps toward supporting health care professionals via telecommunications. Initially this project was intended to support physicians in 42 municipalities of the state. Over the years, the project has grown to unforeseen dimensions. Since 2013, with support from the Ministry of Health, we have provided teleconsulting via a free telephone hotline to physicians from all over country. Teleconsulting involves discussion of clinical cases between patients' physicians

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and general practitioners or specialists, with the aim of resolving problems in primary health care faster, more easily, and, where possible, without direct, face-to-face specialty consults. By December, 2016, more than 83,000 hotline teleconsultations had been provided, with user satisfaction rates close to 95%. Specialist consultation was rendered unnecessary in 2 out of every 3 cases discussed.

The state of Rio Grande do Sul struggles with large waiting lists in various medical specialties. The wait time can in many cases exceed 3 years. We worked with the Rio Grande do Sul State Department of Health to improve the quality of specialist referrals through development of referral protocols and clinical discussion of waitlisted patients. This has been implemented for 13 medical specialties, with protocols developed for 147 health conditions. As a result, the backlog of specialty appointments was reduced from 190,000 to 68,000 in just 2 years (July 2014 to Dec 2016). We had no problem adding specialists because we created a new field of work for them within the project.

We have also expanded our portfolio with teleradiology and tele-education initiatives. Tele-education actions include the provision of health apps (230,000 downloads so far), distance learning (15,000 students), a YouTube channel, (more than 1 million views) and a website where all our services are centralized. In 2013, we added a telespirometry service, which has already provided 13,000 tests using 9 spirometers distributed across the state of Rio Grande do Sul, enough to cover 100% of the state population of 11 million. This alone has sharply reduced wait times for pulmonary medicine consults (See the Supplemental Appendix).

Brazil's medical residency programs are expected to encourage residents to use our tools, which are also promoted through contact with coordinators and presentations at national congresses. In our university, all 140 medical students in their final year are required to make at least 2 teleconsultations in the 3 months of internship.

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## LEARNING

Through this project, we have learned that effective information and communication technologies can be extremely valuable in health care. Telehealth represents the future of primary health care, and there is no way back.

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**Key words:** telemedicine; primary care; health care quality and access

**Author affiliations and a supplemental appendix are available at** <http://www.AnnFamMed.org/content/15/4/383/suppl/DC1/>.