

# Teleconsultation during a pandemic. Experience of developmental pediatricians at Hospital de Pediatría “Prof. Dr. Juan P. Garrahan”

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## ABSTRACT

Teleconsultation is one of the components of telemedicine. Developmental pediatricians provide assessments and follow-up to children with developmental challenges. During the pandemic, due to movement and travel restrictions and the importance of continued care, pediatricians started working remotely with virtual consultations. The objective of this study was to describe the implementation of virtual care, the characteristics of patients seen, and their families' perception. A total of 122 teleconsultations were scheduled. Patients' mean age was  $40 \pm 13$  months. The most common reasons for consultation were absence of and delay in language and behavioral difficulties. Although 16% of families described some obstacles, all were grateful for the consultations. Virtual health care should be regarded as a complement to in-person care, alongside reductions in costs and travel time and the possibility of bringing developmental pediatricians to remote locations.

**Key words:** telemedicine, teleconsultation, neurodevelopmental disorders, COVID-19.

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## INTRODUCTION

Teleconsultation is one of the components of telehealth. Telehealth and telemedicine are synonyms used to describe the remote provision of medical services using information and communication technologies. They encompass 4 domains: teleconsultation, teleeducation, teleresearch, and telemanagement.<sup>1-3</sup>

In September 2019, the National Ministry of Health of Argentina approved the Recommendation for the Use of Telemedicine.<sup>4</sup> In the context of the pandemic caused by the new coronavirus disease (COVID-19), the TELE-COVID-19 Program was launched. It is an alternative to in-person consultations in the setting of the preventive and mandatory social isolation policy established by Presidential Decree No. 297/2020 for the care and follow-up of groups at risk (people older than 60 years, with chronic conditions, with a disability, pregnant and postpartum women, newborns and infants), with the purpose of reducing the excess burden on the health care system.<sup>5</sup>

The objective of this study was to describe the implementation of virtual care, the characteristics of patients seen, and their families' perception.

## POPULATION AND SETTING

The Department of Interdisciplinary Neurodevelopment Clinics (Servicio de Clínicas Interdisciplinarias del Neurodesarrollo, SCIND) cares for children with developmental challenges from across the country. It is made up of 3 clinics: developmental pediatrics, language, and educational psychology.

Developmental disorders are early onset chronic conditions. These share difficulties in the acquisition of motor, language, social or cognitive skills, which have a significant impact on the quality of life of children and their families. They are considered a continuum, and conditions go from mild to severe. Manifestations, severity, and course (spectral presentation) are heterogeneous and determine

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the supports necessary for activities of daily living.

### Implementation of virtual health care

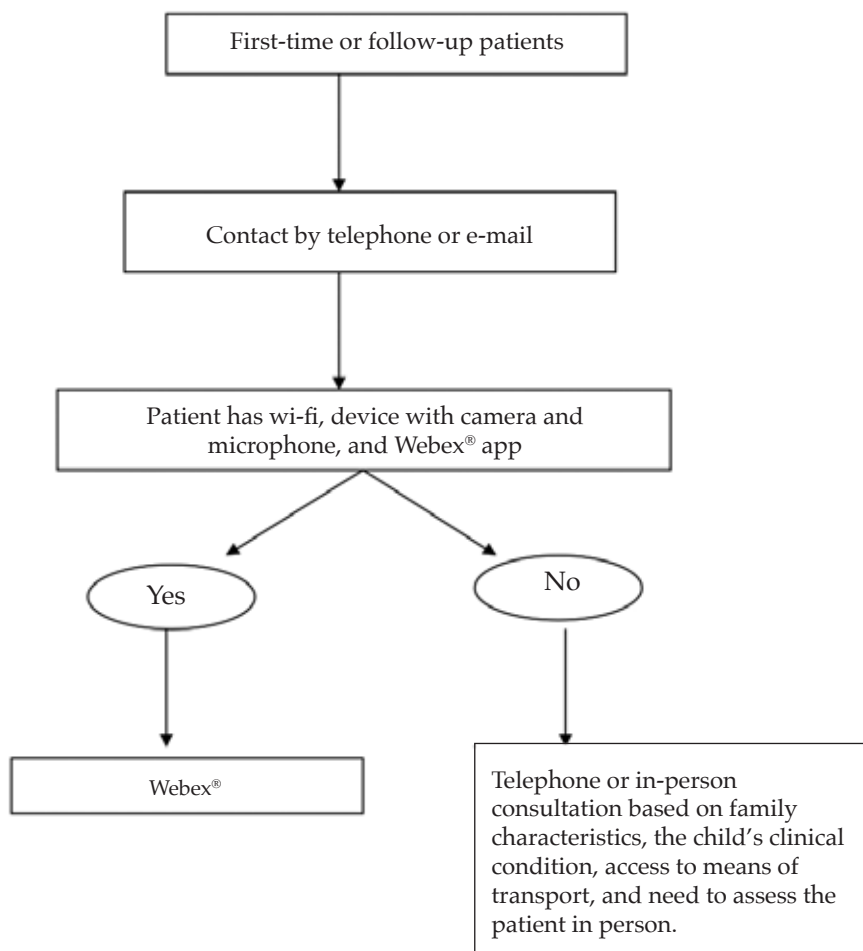
Consultations with developmental pediatrics are based on detailed clinical history, and an interview with caregivers is critical and may be conducted remotely. The observation of children's behavior or play is also part of the consultation, and virtual connections allow watching them in their natural setting without the stress caused by traveling to a hospital and being in an unknown environment.<sup>3</sup>

The developmental pediatrics team has worked with telehealth since 2015, and holds weekly grand rounds through the hospital's Office of Remote Communication (Oficina de Comunicación a Distancia, OCD).<sup>6</sup> Since 2018 they seek to connect teams that work with children with developmental challenges to make up a network that will facilitate patient referrals and counter-referrals.

COVID-19 made it impossible to offer in-person care but, at the same time, it was necessary to provide answers during the time that the preventive and mandatory social isolation and the preventive and mandatory social distancing policies were in place.<sup>7,8</sup> Thus, synchronous teleconsultation was introduced in July 2020 to communicate patients and specialists.

They offered both first-time and follow-up consultations. Developmental pediatricians contacted families by telephone or email to invite them to have a virtual consultation (*Figure 1*). Contacted patients were those who had an appointment that had to be canceled due to the mandatory isolation and those who got in touch with the hospital or had been referred by other departments in this period. For the timely conduct and registration of these teleconsultations, the telehealth and remote communication platform and the Webex<sup>®</sup> video conference system were used, they were provided by the Telehealth

FIGURE 1. Teleconsultation requirements



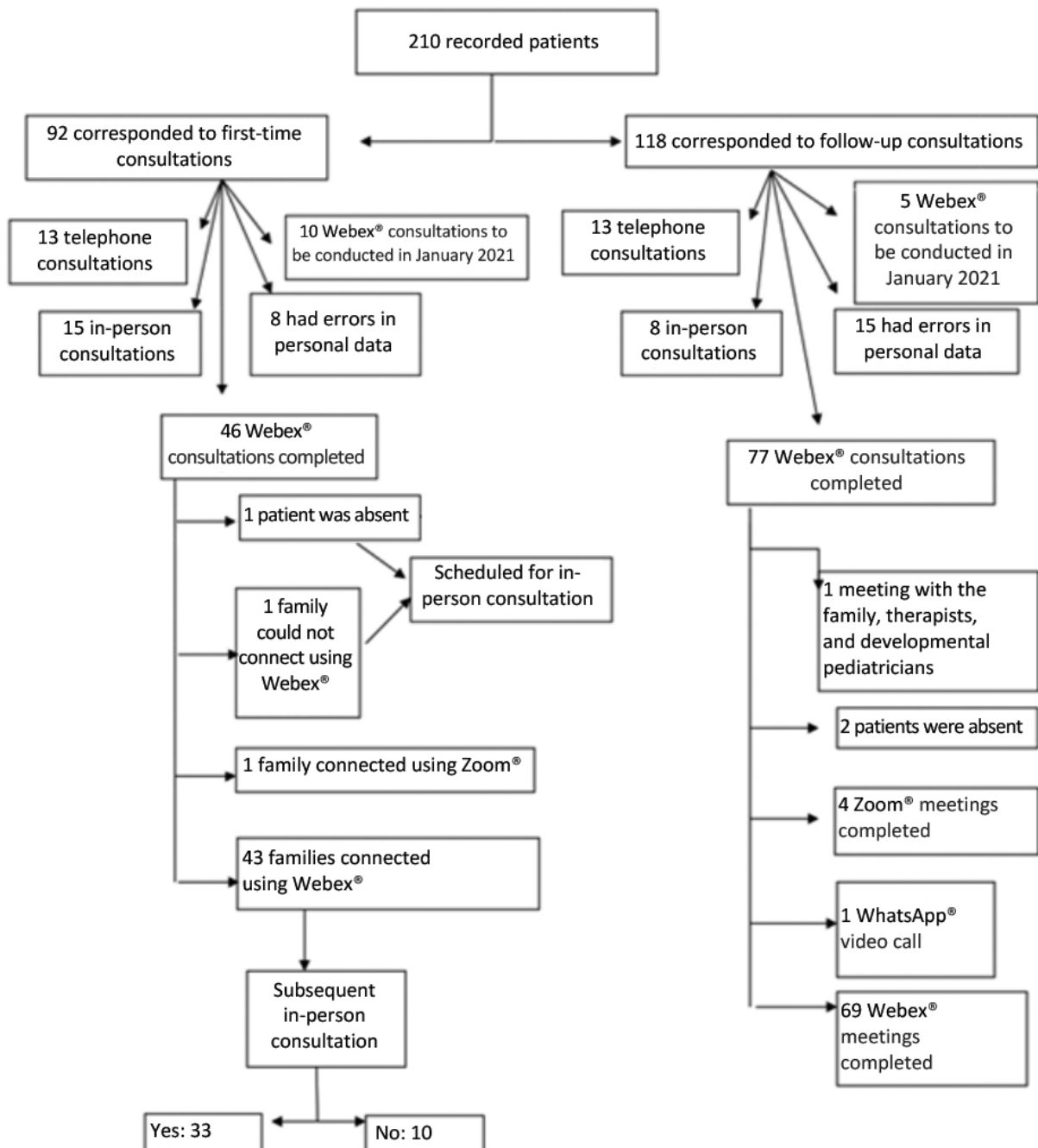
Coordination Unit of the National Ministry of Health and their access was managed by the Networks and Remote Communication Coordination Unit of Hospital Garrahan, where the OCD operates.

Most first-time consultations were complemented with an in-person visit to complete the assessment (direct observation and

physical examination, possible assessment by the educational psychology or speech therapy departments) and provide a diagnosis.

Virtual consultations were carried out by an assistant physician and a training fellow (most of the times from their homes with remote access to the hospital's electronic medical records). A shared consultation facilitated the continuum

FIGURE 2. Flow chart of recorded patients



of care in case of connectivity problems and the writing of the medical record later. Once the consultation started, confidentiality was warranted to the family and they were asked to give their consent, which had to be registered in the telehealth platform and the hospital's electronic medical record. A development-oriented medical record was developed and, in some cases, specific scales were completed by obtaining the parents' answers; consultations lasted between 60 and 90 minutes. Patients were observed and interactions or conversations took place; treatment and school reports were delivered. Sometimes, families were asked to provide videos to complement observations.

Patients who did not meet the requirements for teleconsultations (wi-fi, device with camera and microphone, Webex® access) completed a telephone or in-person consultation, depending on the case and considering their mobility and accessibility, the family's concern regarding COVID-19, and the child's developmental disorder.

The study was approved for publication by the hospital's Ethics Committee.

## RESULTS

### Patients' characteristics

In the period between July and December 2020, 187/210 (89 %) of patients included in the database were contacted. *Figure 2* shows the distribution by type of consultation.

A total of 122 teleconsultations were scheduled. Patients' mean age was  $40 \pm 13$  months. The most common reasons for consultation were absence of or delay in language and behavioral difficulties. The main developmental diagnoses by category were autism spectrum disorder, overall developmental delay, language delay, and intellectual disability. In all cases, diagnosis was functional and based on each child's strengths and challenges, and supports were suggested.

### Families' perception

In December 2020, a survey developed by the authors was e-mailed to the 112 families who had taken part in a virtual consultation (some consultations corresponded to families with more than 1 individual with developmental challenges) to get their feedback (see *Annex*). In total, 64 % (72/112) responded. This had been the first virtual consultation for 87 % of cases (63/72). A mobile phone was used in 83 % of consultations (60/72). In addition, 84 % of respondents (61/72) indicated

feeling comfortable and 61 % (44/72) stated that the main advantage was avoiding travel.

Also, 44 % of families (32/72) said that it was important that their children were able to be in their natural environment and 25 % (18/72) stated that it allowed them to save money. More than half of families (39/72) described the process as easy and adequately guided. In addition, 70 % of families (50/72) said they would continue follow-up remotely, although 48 % (34/72) expressed that they missed in-person visits. An obstacle to conduct the virtual consultation was described by 16 % of families (12/72), including the need of telephone help to connect, difficulty downloading the app or technical problems during the consultation.

## COMMENT

COVID-19 and both the preventive and mandatory social isolation and the preventive and mandatory social distancing policies forced us to look for new working modalities in order to continue providing care and reduce the movement of people.<sup>9</sup>

There is international experience on the use of teleconsultations so that developmental pediatricians can provide their services from a hospital or school in remote places without the need to travel there,<sup>10,11</sup> and there are also published articles about telephone consultations performed during the COVID-19 pandemic.<sup>12</sup>

In Argentina, although several departments of Developmental Pediatrics were forced to adapt themselves and introduce telemedicine during the pandemic, there are still no publications about the experience with teleconsultations and patients with developmental disorders.

Although families expressed that they were greatly pleased with teleconsultations, some facilitation strategies may be taken into consideration: organizing the consultation in advance, suggesting the camera position and how to observe the child, and e-mailing a questionnaire about the child's history and developmental milestone achievement before the consultation. Based on the obstacles mentioned here, the connection could be tested before the synchronous consultation.

Consultations for children with developmental challenges may not be considered essential in the middle of a pandemic. However, children with special needs are particularly vulnerable and face changes and interruptions in their daily routines (cancellation of or changes in school and therapy

modalities) and the implementation of new habits (wearing a mask, being away from people, and using alcohol-based hand sanitizers, etc.). Restricting developmental pediatrics services for prolonged periods may result in potentially losing the chance for an early intervention.<sup>8,12,13</sup>

Synchronous remote consultations are critical to continue providing good-quality services to patients with developmental challenges during the pandemic because they allow conducting assessments and follow-ups in remote places when few health care providers (developmental pediatricians) are available, thus avoiding unnecessary travel for patients and their families.<sup>3,14,15</sup> An inherent limitation of this practice is the need for connectivity and a device with a camera. In addition, in some cases, like the need to examine a patient, in-person consultations cannot be replaced. For all these reasons, both modalities should be complementary. ■

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## ANNEX

### Survey on families' perception (developed by the authors)

1. What type of consultation was this?
  - a. First time with this department.
  - b. Follow-up consultation (already knew the health care providers).
2. Have you ever taken part in a remote consultation before?
  - a. Yes
  - b. No
3. What device did you use for this virtual consultation?
  - a. Mobile phone
  - b. Computer
  - c. Tablet
4. Select a number to indicate how you felt during the virtual consultation, where 1 means uncomfortable and 5, very comfortable.

Uncomfortable				Comfortable
1	2	3	4	5
5. Could you mention the advantages of a virtual consultation?  
(You may select more than one answer).
  - a. I avoided traveling.
  - b. My child was in their natural environment and was not stressed.
  - c. I spent less money (transportation, meal at the hospital).
  - d. I did not need to ask other people to look after other family members.
  - e. My child was accompanied by other family members who would have not been able to participate otherwise.
  - f. None.
  - g. Other:
6. What did you think of the access to the virtual consultation?  
(You may select more than one answer).
  - a. It was easy.
  - b. It was adequately guided.
  - c. It was difficult.
  - d. We needed step-by-step telephone guidance on the day of consultation.
  - e. We thought we would not be able to complete it.
  - f. We were not able to complete it.
  - g. Other:
7. Would you agree to have remote follow-up (teleconsultation)?
  - a. Yes, but I miss in-person consultations.
  - b. I would rather go to the hospital.
  - c. It is all the same to me.
  - d. This modality was a big help, I would like to go on with it.
8. Remarks: