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# The COVID-19 pandemic and the implementation of telehealth in speech-language and hearing therapy for patients at home: an experience report

## *Pandemia do COVID-19 e implementação de telefonaudiologia para pacientes em domicílio: relato de experiência*

### ABSTRACT

We present an experience report on the implementation of real-time telehealth in speech-language and hearing therapy for patients who were previously seen on an outpatient basis in a primary health care service. The Speech-Language Therapy (SLT) team was monitoring twenty-five users when the first cases of COVID-19 were notified in southern Brazil. Of these, it was judged that twelve patients required at least a monitoring call every two weeks. Teleconsultations were available in this first stage, on an emergency basis, during the implementation of the project in this format. The idea was to guarantee, due to the suspension of the SLT sessions, the maintenance of the care service for patients who could suffer worsening of their cases or even comorbidities. The appointments were carried out by video calls by SLT students, therapists of the extension project, and supervised by a speech-language therapist, synchronously. All conversations and orientations during the teleconsultation were conducted as calmly as possible and, in the case of infant patients, permeated by some playful activities. Telehealth has shown to be an efficient resource for the care of patients with SLT demands, enabling remote care with the same quality as face-to-face care. Besides, it has relevant potential, once there is a significant number of patients, who need SLT assessment and live in regions where there is a shortage of qualified professionals.

### RESUMO

Apresentamos um relato de experiência de implementação de telefonaudiologia em tempo real para pacientes que anteriormente eram atendidos em ambulatório em um serviço de atenção primária em saúde. No total, 25 usuários estavam sendo acompanhados pela equipe de fonoaudiologia quando da notificação dos primeiros casos de COVID-19 no sul do Brasil. Destes, julgou-se que 12 pacientes demandavam teleatendimento, pelo menos, quinzenalmente. A teleconsulta disponibilizada nesta primeira etapa, em caráter emergencial na implementação do projeto neste formato, a fim de garantir a manutenção dos atendimentos de pacientes que poderiam sofrer agravamento ou mesmo comorbidades associadas à suspensão da fonoterapia, foram realizadas por telefone, com vídeo, por estudantes de fonoaudiologia, extensionistas do projeto e supervisionadas por um fonoaudiólogo, de forma síncrona. Todas as conversas e orientações durante a teleconsulta são encaminhadas com a maior calma possível e, no caso de pacientes infantis, permeadas por algumas atividades lúdicas. A tele saúde tem se mostrado um recurso eficiente para atendimento de pacientes com demandas fonoaudiológicas, possibilitando o atendimento remoto com a mesma qualidade que o atendimento presencial. Além disso, tem potencial relevante, considerando que há um número significativo de pacientes que precisam de avaliação fonoaudiológica e residem em regiões nas quais há escassez de profissionais qualificados.

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## INTRODUCTION

The 2019 Coronavirus pandemic (COVID-19) brought challenges, previously unthinkable for the 21st century, in terms of the demand for the reorganization of individuals concerning their family, leisure, work, and their relationship with consumption, of goods, as well as services. Especially in this period, social distance is recommended worldwide and regionally due to the lack of treatment or vaccine, so far, to prevent or treat infection by COVID-19<sup>(1)</sup>.

The relationship between providers and users of health services considered non-essential also suffered an interruption during social distance. All non-urgent and emergency services are considered non-essential or elective services, which do not require assistance in a short time, as in outpatient speech therapy rehabilitation<sup>(1,2)</sup>.

Thus, users who had been undergoing follow-up or systematic rehabilitation in speech therapy outpatient clinics were unable to receive care in this period of social distance. In these cases, to prevent writing difficulties and to improve speech intelligibility, the patients included are the ones in recovery and monitoring of phonological disorders, as well as children with language delay. Also, the groups most at risk for infection and mortality because of the virus were considered. They are: adults, and the elderly with comorbidities, who after stroke, or even due to age, have complaints related to swallowing or communication<sup>(1,3)</sup>.

Approximately 50 days after the first cases were notified in Brazil and more than 30 days since some cities started making recommendations for social distance in the country, the treatments were resumed by the patients, since the demands involving communication and swallowing continued, regardless of the period. Hence, in the face of this new situation, adjusting the work carried out traditionally in an office (face to face with the patient, and, in some cases, with parents or caregivers) required adaptation and updating<sup>(2-4)</sup>.

Telehealth or teletherapy, defined as the provision of health care that is offered remotely through any telecommunication tool, such as secure telephone, video conferencing, e-mail, messages, and applications for mobile devices, with or without a video connection, are seen as a possibility for this moment<sup>(2)</sup>. The fundamental objective of using these technologies is to expand access to health care. They are usually used with patients living in areas of difficult access or with motor coordination difficulties, and can also be beneficial for adverse situations, such as the COVID-19 pandemic. Besides, they assist in expanding the actions of health professionals and agents, maintaining a continuous care mechanism for prevention, diagnosis, and treatment<sup>(4,5)</sup>.

On March 16, 2020, an extension project carried out in a basic health unit, which works as a teaching environment next to a university hospital in southern Brazil, started a proposal for a speech therapy call center. The professor, the team of students, and speech therapists in the research group Epidemiology of Human Communication and Disorders (EPI-DCH) were responsible for the development of this proposal, and its description follows below.

## PRESENTATION OF THE CASE

In total, 25 users were being attended or monitored by the speech therapy team when the first cases of COVID-19 were notified on state of Rio Grande do Sul. Initially, all patients who were scheduled for consultation were contacted, and of these, only one was to have the first appointment. The complaints, age, and situation concerning the SLT treatment they were in that period were surveyed and classified as: “under treatment” - speech therapy service, at least fortnightly; “for monitoring” - review in up to 3 months, and “for discussion” - if there were any doubts regarding the case concerning either one of the previous possibilities.

After the initial survey, the team was composed of a SLT Professor, a scientific initiation student, and two speech therapists discussing all cases to confirm or revise the classifications described above. The exclusion criterion for the call service was adopted by users who, despite not yet being able to be discharged from speech therapy, manifested a low commitment to home exercises and low risk of aggravation in the clinical condition. Because of this, they were already in therapeutic pause, for example, older adults with vocal complaints who did not perform the recommended exercises at home, but remained with the complaint.

At this first moment, we believed that eight patients were not eligible for the call service or telemonitoring. The remaining 17 patients, eligible for tele-audiology, were distributed as follows: 12 for calls (needed assistance, at least fortnightly) and 5 for reviews (demand for at least one call in the period, to monitor the situation of the case).

Due to the pandemic and for the safety of the patients, they were individually contacted and informed that for at least two months (a period which could be extended), all face-to-face visits had been suspended. Also, they were informed that a call service would be available in the period.

In this first stage, the call service was available on an emergency basis and took place over the phone, as video-calls, if the patient agreed. Its main objective was not to interrupt the treatment of patients who could suffer aggravation or present comorbidities associated with the suspension of speech therapy.

Two elderly patients initially mentioned that they did not like using this type of technology and preferred to suspend the treatment. However, one of the speech therapists in the team contacted them again and proposed a trial for the treatment and monitoring of their cases, since, even if mild, these were cases of swallowing disorders (dysphagia). Finally, they adhered to the proposed teleconsultation model, having the support of a family member to deal with the technology.

The call service was carried out by speech therapy students, extension staff of the project, and synchronously supervised by a speech therapist. The technology used was telephone video calling because of its ease of access and handling; patients know and use the application routinely. During the service, the patient saw the intern with whom he was already used to conduct face-to-face consultations. The supervisor was off (with video and microphone turned off, following the audio, without directly interfering with the patient during the consultation).

In face-to-face appointments, speech therapy consultations at the basic health unit usually last, on average, at least 30 minutes. The teleconsultation time lasts between 20 and 60 minutes, depending on the type of case.

Especially with children, keeping them in front of the screen for a long time does not seem appropriate, so the exercises are performed directly with them, and the parents/caregivers receive practical guidelines, reviewing what should be done in the period between sessions. All conversations and orientations happen as calmly as possible, permeated by some playful activities and of interest to the child. However, the exposure in front of the screen is restricted to the minimum necessary. Moreover, in the case of some infant patients diagnosed with phonological disorders, who live in shelters or foster homes, we are implementing weekly sessions during this period, seeking to improve the effectiveness of speech therapy rehabilitation.

For adults and the elderly, the logic followed is the same. Regarding the frequency of consultations, in the outpatient routine, patients attend the clinic every fortnight or even more spaced out, depending on the case. Always (systematically), conducts consisting of exercises or maneuvers are carried out daily at home.

Immediately after the consultations, the students are also supervised by a speech therapist by video call, in which the cases are discussed, as well as the literature and appropriate therapeutic methods for each individual. As the interns do not have access to the UBS medical records system, they make and share the evolution reports in an electronic document, in which the intern writes the evolution, and the speech therapist responsible for the case reviews it. Subsequently, they are placed in the electronic medical record system of the basic health unit through the remote access provided in this pandemic period by the speech therapist teacher responsible for the project.

## DISCUSSION

In this experience, the call service for speech therapy proved to be a competent tool to overcome the adversities imposed by the COVID-19 pandemic, in terms of health service reorganization. A study carried out in the USA shows that technology is a strong ally in health care, in all phases of the COVID-19 pandemic<sup>(2)</sup>.

Initially, the patients were contacted by the project interns, who were also adapting to this new type of session. That may have contributed to the initial non-adherence of the two patients. After being contacted by a professional with more experience, they adhered to the teleconsultation model. It is relevant to have a conversation script for the contact at all stages. There is evidence that the way to approach patients has repercussions on the adherence to the call center proposal, as well as on the adherence to treatment<sup>(4,6)</sup>.

Studies show that communication is a fundamental component for patients to feel secure in adhering to the new type of care. Communication needs to be clear, dynamic, and easy to understand, as it can create a distance between therapist and patient, therefore generating non-adherence to teleconsultation, due to insecurity, questions, and conflicts<sup>(4,7)</sup>. The ideal is to conduct training in communicative skills to obtain the expected return<sup>(8)</sup>.

Another factor contributing to the fact that patients are not receptive to technology is the assumption that this type of service will not play the same role as the face-to-face consultation. This perception negatively drives the distance or even a bad experience of this modality, making it challenging to demystify the teleconsultation and its real benefits<sup>(4)</sup>. A procedure was adopted to offer greater reliability in the service so that the patients adhere to this modality; they were attended by interns who already had face-to-face contact. They were supervised by the speech therapist that had already done it in practice, explaining that the care would take place in the same way as face-to-face, in search of the same prognosis.

Eikelboom et al.<sup>(9)</sup> studied patients' commitment to the use of resources at a distance and the factors that influence decision making. It was observed that 75% of the individuals were unfamiliar with the topic; their motivation referred to a reduction in costs and time. In contrast, the preference for conventional care (face-to-face) is very present, especially in women over 55 years old.

Despite being considered elective, outpatient speech therapy, in some cases, can be essential in preventing disorders that would lead users to tertiary care as in cases of dysphagia, which can cause respiratory conditions due to aspiration and laryngotracheal penetration, which in addition to overburdening hospitals, subject patients, already weakened, to a higher risk of contamination<sup>(1,10,11)</sup>. In addition, it is worth mentioning that the possibility of a second formative opinion in cases with swallowing disorders can be considered of great importance in a country with large territorial dimensions such as Brazil, in which the number of specialists in oropharyngeal dysphagia by region is scarce and heterogeneous.

We believe that the wide variety of time between consultations is due to heterogeneity in both age groups and the demands met. In the case of children, shorter consultations are usually held, as maintaining their attention during the call is a disadvantage of this form of service, since, in the home environment, there are more distractors than in the office. With the elderly, we consider a more significant adaptation regarding the use of technologies, in addition to requiring more time to understand the guidelines and, consequently, a higher consultation time.

The guidance of parents and caregivers has a positive impact on teleconsultation, both in assisting in the use of technologies and managing home exercises<sup>(3,12)</sup>. Furthermore, it is clear that social distance has provided more family time, and in some cases, better organization for carrying out the recommended daily exercises, with a positive impact on the user's prognosis.

In ethical aspects, there is a need, as well as in face-to-face sessions, that all patient rights are maintained<sup>(2,13)</sup>. Offering efficient and confidential service and always keeping record of the cases is the duty of the speech therapist.

In this way, in order to offer a fair and competent service, as well as in the routine in the basic health unit, we chose to perform the services with techniques supported by scientific evidence<sup>(5,10)</sup>. A research carried out in Australia evaluated orofacial motor skills in dysarthric patients using the following parameters: videoconference and traditional. Both methods had high levels of agreement for most aspects assessed<sup>(14)</sup>.

The call service enabled a higher frequency of consultations than the face-to-face routine since it does not involve resources such as transportation, the need for physical space for the health service (shared with several teams) and the offer of more flexible hours, which also contributes to a better therapist-patient relationship, especially in the case of users with psychosocial demands. However, it presented some limitations, such as difficulties in the quality of sound and video during the calls, in addition to the adaptation of the user and the therapist for this type of service<sup>(15)</sup>. In order to minimize these challenges, we opted to use platforms that are already known and easily accessible to the patient, in addition to guaranteeing a better internet signal, seeking to provide care at times with less use of the network and better internet stability, as well as, whenever possible, perform the service without video.

## FINAL CONSIDERATIONS

These first 30 days of telehealth experience for patients previously seen in a primary care service have shown to be an efficient resource for the care of patients with speech therapy demands, enabling remote care with the same quality as the face-to-face service. It is worth mentioning that all cases must be evaluated as to the feasibility of assistance in this modality, but even so, in case of social distance, it can be an appropriate tool to provide the necessary assistance to users. In addition to that, it highlights the importance of telehealth for the field of speech therapy, considering that there is the possibility of expanding access to speech therapy for patients living in regions where there is a shortage of specialized professionals.

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## Author contributions

*LST and BNGG were responsible for the conception of the manuscript; NAD, NCS and BNGG lead the writing of the manuscript. All authors revised the final version submitted.*