# Providing remote ear and hearing care during the pandemic

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*Please note that our answers were collected late July and early August 2020 and do not take into account remote services that may have been developed at a later stage in the pandemic.*

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In 2005 the World Health Organization (WHO) recognised eHealth[1] – the use of information and communication technologies (ICT) to advance health – as a growing field and created the Global Observatory for eHealth (GOe), to shape and monitor eHealth especially in low- and middle-income countries (LMICs). Telehealth – the interaction between a healthcare provider and a patient when the two are separated by distance – is now seen as a way to '[improve] access to healthcare, i.e. it increases the speed of access and/or reduces the cost'[2] and, when well planned, as a way to help achieve universal health coverage.

The COVID-19 pandemic has, however, presented us with a very different situation in which to develop remote care. Many healthcare providers have been thrust into a situation in which remote consultations, in some shape or form, had to be set up. Ear and hearing care (EHC) providers, like others, have had to come up with creative ways to care for patients while drastically reducing face-to-face contact with staff.

We wanted to get a sense of the variety of these adaptive responses and record some of the solutions being used during the pandemic, so in July 2020 we reached out to seven collaborators in six different countries: international NGO CBM's country office in **Burkina Faso**, an Otolaryngology Head & Neck Surgery Department in **India**, a Department of Otorhinolaryngology in **Nepal**, the CEDAF audiology centre in **Guatemala**, the World Wide Hearing Foundation International in **Peru** and, finally, an ENT consultant and past President of the College of Otorhinolaryngologists, as well as a large private audiology firm, both located in **Sri Lanka**.

## Finding solutions to offer remote EHC services

The following were the most commonly offered solutions:

### Helping hearing aid users

Respondents mentioned that it was difficult to offer hearing aid fittings to new patients during the pandemic.

#### Remote programming

Increasingly, hearing aid manufacturers offer telecare services for certain hearing devices; it is possible for audiologists to access usage data and to fine-tune and troubleshoot a hearing device whilst remotely connecting with the user via phone or video call. One of our respondents, a private audiology firm in Sri Lanka, made use of this option during the pandemic for those clients who had high-end hearing devices.

This solution is by no means the norm in LMICs and requires not only a high-end hearing aid but also access to, and familiarity with, technology. Our respondent in Guatemala decided to offer remote programming to the few patients who had the right kind of hearing aids but this required them to first contact patients and ask them to send in their hearing aids so that the software could be upgraded. This had a limited impact, due to the age of these persons. They observed that 'older adults [...] do not like technology in general. They require someone on their side to do it, and often they do not like that either.'

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**"These people received free batteries by authorised courier during lockdown: the situation was chaotic and many parents did not want their children to leave home for any reason. In that scenario, we did not want to leave our patients alone."** PERU

#### Maintenance and repair

Our respondents found ways to deliver batteries through approved delivery services; one contacted patients by phone to ask for their needs, while another received battery orders through WhatsApp and SMS messages.

General maintenance of hearing devices, however, was a problem when face-to-face services had been suspended or patients were often fearful to use them. Our respondent in Peru tried a number of solutions. They created short videos showing how to care for hearing aids and sent them via WhatsApp. It is worth noting that their patients were children, who were naturally helped by parents more familiar with technology. Parents were also asked to mention any problems experienced with the hearings aids; the provider would then tell them (by SMS or WhatsApp video) how to solve the problem by themselves, if that was possible.

### Speech and Language Therapy sessions

Out of the five respondents who offered Speech and Language Therapy (SLT) sessions pre-pandemic, four made the transition to remote sessions because it seemed 'kind of easy'. The exception was our respondent in Burkina Faso, where mobile phone use is widespread but 'the mostly rural population has limited access to new ICT, notably the Internet.'

Remote SLT sessions were attempted in a variety of formats by a same provider, depending on what patients had access to and what they were familiar with. Our respondent in India dealt with a population 'quite

conversant with online platforms'. In addition to online sessions, they started developing an app to monitor and assist with SLT at home. The other respondents had to find formats that their patients could access. Our respondent in Guatemala offered their patients several communication options (Facebook, WhatsApp, Zoom) and opted for Zoom because it was free and patients knew of it although they had never used it before. Our respondent in Peru opted for Zoom and Skype for the same reasons. However, access to these platforms 'is restricted to patients with smartphones or computers, which in many cases are too expensive and not a priority.' For those who only had access to WhatsApp, our respondent in Sri Lanka sent short videos showing how to continue SLT at home. Our respondent in Peru also asked patients to record the exercises for feedback; in addition, 'in the most difficult cases when not even a video call was available,' they offered SLT instructions by phone and follow-up by SMS.

Respondents reported several reasons (besides access) why remote SLT was challenging:

- Patients had to familiarise themselves with the means of communication used.
- Even when patients had Internet access, they could struggle to connect for a long duration of time (e.g. 45 minutes for a session).
- It was more difficult to get children's attention during a session.
- Compliance was a challenge, especially with younger children, and the speech therapist had to remain engaged with and monitor the progress of their patients to ensure continued compliance.
- When payment was required, patients had to be asked to pay in advance (which they did not like) because some patients did not pay after an online session.

There were also some positive results: our respondent in Peru reported that they feared the sessions would not be as successful because parents had to remain by their child, but found instead that because parents had to remain engaged, their commitment increased and they understood how 'their participation was tremendously necessary for the good development of the therapy.'

## ENT helplines and remote consultations

In many countries, non-urgent appointments were deferred and patients were asked not to visit hospitals unless it was an emergency. Attendance also decreased because people feared becoming infected. Three out of four respondents who offered ENT services before the pandemic set up hospital helplines for patients. Our respondent in Sri Lanka described that the telephone was the tool that they used most to communicate with patients: most hospitals had a telephone number manned 24/7 by an ENT doctor and, if medicines were needed, they were dispatched by the hospital through special post. Our respondent in India also mentioned that phone helplines were used to inform patients that video consultations were available as well using Google Meet and Microsoft Teams (for those who had a smartphone or computer/tablet). Our respondent in Nepal mentioned that, in addition to the hospital helpline, patients were also contacted on their mobile phones via Viber and WhatsApp because these platforms are used by many in the country.

CEDAF/ORBITAL

> **"At the end of most [remote] programming sessions, older adults will ask: 'This is OK for now, but when is my next appointment with you?'"** GUATEMALA

The advantage of these remote consultations were that patients with minor problems could be kept away from the hospital. The various disadvantages reported were:

- It was impossible to diagnose diseases that need to be identified by otoscopy, endoscopy or examination under a microscope.
- Postoperative care (e.g. dressings) and urgent surgeries could sometimes not be attended to on time.
- Some patients missed having a direct interaction with the doctor and 'felt underdiagnosed or not so satisfied by distant communication'.
- Doctors had to spend long hours in front of a screen.

## Communicating with the community

Before the pandemic, all of our respondents engaged in activities promoting ear and hearing health in the community at large: mass hearing screening in schools, rural or underserved communities, mass hearing aid fittings, as well as 'ear camps' offering ENT consultations and sometimes surgery.

All of these activities were suspended when the COVID-19 pandemic made it necessary to limit direct contacts. Limited actions were sometimes taken to continue raising awareness of ear and hearing health in the community: our respondent in Burkina Faso, for example, focused on radio broadcasts explaining how to take care of your ears. This was a 'no-contact' way of reaching many people in a country where 'telehealth is currently difficult to envisage'. In Sri Lanka, the college of ENT surgeons produced press releases and video clips on ear health both for mainstream media (television, radio, newspapers) and for social media (Facebook, Instagram), as well as SMS messages. In some cases, mainstream and social media were also used to advertise helplines and available remote consultations.


TONY SIRIMANNA

**Information poster on COVID-19.** SRI LANKA

## Reflecting on remote EHC solutions offered during the pandemic

The EHC practitioners who answered our questions all worked in LMICs but faced different local situations with regard to public health responses, confinement rules

and infection rates. They also worked in different health facilities and served different types of communities; for example, it would have been inconceivable to set up Google Meet consultations – such as the ones offered by our respondent in India – as a solution to care for rural patients in Burkina Faso with no Internet access.

In spite of these differences, however, the answers we received hint at questions we might want to ask ourselves about remote consultations during the pandemic.

## Which patients are being helped by remote EHC?

WHO's Global Observatory for eHealth mentioned in a 2016 report that 'Telehealth can contribute to achieving universal health coverage by improving access for patients to quality, cost-effective health services wherever they may be. It is particularly valuable for those in remote areas, vulnerable groups and ageing populations'.[3] Indeed, in LMICs, telemedicine is often seen as a means to offer services to underserved and underprivileged communities. For example, two of our respondents, in India and Sri Lanka, mentioned using mobile vans before the pandemic, to offer rural communities access to care. In the case of those services, although an EHC specialist analysed data remotely, a mobile team had direct contact with patients.

The pandemic presented us with a different situation: in the absence of direct contact, both patient and provider were required to have access to some form of ICT and the question of 'who' could be helped was very much limited by the 'how' of remote services. Remote services once used for the underprivileged were now best able to help the most privileged patients. For example, one of our respondents in Sri Lanka started advertising video consultations in the search for new clients, when their experience of telemedecine before the pandemic had focused on mobile vans in rural areas.

## How should we approach 'connectivity' in remote EHC?

Even with new ICT, the world is not connected by a single 'Internet' or even by 'mobile phones'. These terms encompass a variety of connections and devices. A recent report by the International Telecommunication Union maps out variations in access to ICT between regions, as well as the type of ICT (such as simple mobile phone, mobile or fixed broadband). In 2019, almost 87% of people used the Internet in developed countries, whereas only 19% of individuals were online in the least developed countries.[4]

Access to the Internet is limited by infrastructure, location, and cost. These factors are often connected; the absence of local fixed network infrastructure means that Internet traffic takes a more circuitous and expensive route[5] and broadband is most expensive in the least developed countries.[6] There is also the question of available bandwidth, which limits remote services patients have access to.

It is very clear from our respondents that, even in the same country, thinking about 'connectivity' as a homogenous obstacle to overcome in telehealth is not particularly helpful. If a patient had a mobile phone, it did not mean that they had 'internet access': if a patient could make a WhatsApp video call, it did not follow that they could take part in a long Zoom session.

Faced with a spectrum of access and connections, our respondents adapted by offering different remote services tailored to their patients' access to ICT. It may be that, going forward, planning a 'menu' of remote EHC options will be a good way to help as many patients as possible.

CBM-BURKINA FASO

> **"Telehealth would be difficult to set up in Burkina Faso right now. The vast majority of the population uses mobile phones, but Internet access is limited."** BURKINA FASO

## What is the impact of remote EHC on services?

All of our respondents reported that the pandemic had increased their use of technology to provide care in small and big ways, from providing instructions by SMS to developing an app. Providers had to become more familiar with technology and many patients found themselves using means of communication they had not used before.

Sometimes the use of technology led to suggestions for improving practice, such as increased parental involvement in SLT sessions in the case of our respondent in Peru, or the use of WhatsApp to communicate results and reduce waiting times for audiology patients in Burkina Faso. In other cases, the effect was less positive; e.g. in Guatemala, our respondent reported that patients saw remote programming sessions as 'making do' until a real appointment could take place. As months go on and the pandemic evolves into second or third waves, it is likely that some form of these remote services will remain when normal life resumes. It will then be necessary to monitor how these EHC services compare with their face-to-face versions, and how best to use them – something which was difficult to do when trying to adapt to the pandemic.

## Conclusion

The Broadband Commission for Sustainable Development has highlighted that half of the world's population is not connected to the Internet and has set accessibility targets for 2025.[7] Although there have been several recent innovations that could facilitate telehealth in ear and hearing care, such as tele-otoscopy and tele-audiometry, their use in underserved populations is still limited by what has been termed the 'digital divide'.

We hope the examples mentioned here showcase the ingenuity and dedication of EHC providers in maintaining some level of care in adverse circumstances. In its simplest form, remote EHC during the pandemic was a way of communicating with patients at a time when many were experiencing anxiety and isolation.


**References**

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