



WORKING DURING THE COVID-19 PANDEMIC: AUDIOLOGY PROCEDURES AND PRACTICE IN A PEDIATRIC HOSPITAL SETTING

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— ABSTRACT —

Some audiologists have managed to be essential during the COVID-19 Pandemic. In the pediatric hospital setting described here, audiologists modified clinical services and are proactive in implementing safety measures in order to address the needs of patients.

Keywords: Audiology, COVID-19, Coronavirus, Service Delivery

Introduction

Audiology has been an area that has received little attention during the COVID-19 pandemic and, in some cases, has been deemed a profession that is non-essential (Palmer, Shoup, Christensen, & Committee, 2020). However, there are some settings in which audiological services are always needed and one of those areas is in a pediatric hospital environment. The importance of early identification of infants with hearing loss cannot be minimized as it directly affects quality of life in those with hearing difficulties or potential hearing loss. In addition, the need for monitoring hearing loss due to chemotherapy, fitting hearing aids, repairing hearing aids, and supporting the partners in otolaryngology are all critical procedures that are within the scope of practice for audiology. These procedures must be done regardless of what goes on in society but should be done with caution to protect the patient and the audiologist. While

speech-language pathologists, otolaryngologists, and many other specialties can utilize telehealth, that is not the case for audiologists. Patients cannot enter a sound booth in their homes and be remotely seen by the audiologist from another site. The range of services offered in audiology is completed in person and in proximity with the patient and in most cases their families. Given the restrictions imposed by the Center for Disease Control (CDC) for COVID-19 (Centers for Disease Control and Prevention, 2020), audiologists are challenged with how to provide audiological services and meet the CDC guidelines.

The purpose of this article is to discuss and present some of the procedures and practice of audiology in the face of the challenges presented by the COVID-19 pandemic. Audiological strategies and protections put into place in one pediatric hospital will be discussed.

Discussion

How do Audiologists stay safe?

Audiologists and their patients need to be protected during the COVID-19 pandemic. This is particularly important as the audiologist's scope of practice involves direct and sometimes prolonged contact with patients in a face to face environment within an enclosed space. This places them and their patients into a situation where the virus may easily spread. Audiologists must be extremely careful to avoid infecting themselves and the patients who are seen for services. In order to minimize the impact, audiologists need to wear appropriate personal protective equipment (PPE). The issues regarding protection and safety are discussed below:

- The hospital provided PPE, that includes masks, goggles, and gloves should be utilized during each patient encounter.
- Scrubs should be worn during the entire day. This is done to lessen the impact of transferring the virus via clothing to external environments.
- Masks must always be worn within the hospital and at all of the regional outpatient centers.
- Screening measures, such as taking temperatures of all staff and visitors should be required upon entry at all hospital facilities.
- If a patient is known or suspected to be COVID-19 positive, the audiologists must follow all procedures as stated in the hospital protocol. This includes wearing a PAPR (powered air purifying respirator), gown, gloves, and mask. It also involves cleaning clinical areas appropriately and disposing of PPE.

What are the changes that will need to be made to provide services appropriately?

Because of the nature of this disease, it was important to modify clinic operations to enhance social distancing and keep patients safe. Changes are done by implementing the following procedures that address clinic operations, the facility, clinical procedures and service delivery.

- Clinical modification
 - Schedule
 - Revise script for support staff to inform parents and guardians of changes to schedules and allow patients to reschedule when "stay at home" orders are lifted. Give them the options of being seen at a regional center or main hospital facility.
 - Implement a "no siblings allowed" policy.

- Allow only one caregiver to accompany the patient to services.
- Be sure and have parents activate Patient Portal for secure communication.
- Make sure family is aware that patient and parent will be required to wear a mask.
- Inform patients and parents they will receive a temperature screening upon entrance to the facility and above average temperatures will not be permitted.
- Create telephone screening questions for support staff that address COVID-19 exposure, illness in the home and respiratory symptoms.
- Facility Modifications
 - Extend distances between seating in waiting room.
 - Be sure and place hand sanitizer throughout the clinic.
 - Arrange for day porter to clean frequently.
 - Create space for temperature screening.
- Audiological services modification
 - Exact testing performed is up to the discretion of the audiologist depending on the patient.
 - Impedance testing, OAE, otoscopy may be deferred to follow-up appointment because cerumen is involved.
 - If only sound field responses are obtained, patient will be scheduled for follow-up to obtain additional information.
 - BAHA, Hearing aid, Cochlear Implant patients may be difficult to assess, because sign language/total communication support may be needed. Masks will affect hearing impaired patients' ability to supplement communication with lip reading.
 - With Auditory Brainstem Response testing, the audiologist may use typical preparation with social distancing, however, with inpatient testing, the operating room protocol for PPE must be followed (e.g., mask, goggles, glove, gown, etc.).
 - During Vestibular Testing the audiologist and patient parent/ guardian must keep masks on for entirety of testing. Patient will need to wear goggles as a part of the testing, but difficulties have been noted with keeping the goggles in place. The audiologist will need to postpone calorics (small amount of

cold and warm water or air delivered down the ear canal), vHiit (sudden acceleration and then deceleration of the head, completed by audiologist manipulating head), and VEMP for future follow-up evaluation (using electrodes and sound stimulus to determine vestibular function by averaging the reaction of the muscle activity in response to each sound click or pulse)). All these activities create higher potential of infection from direct patient contact and potential for emesis.

- Time allotted for patient care does not require adjustment, as each patient has a one-hour (or greater depending on evaluation type) appointment time slot. This is ample time for evaluation, counseling, and disinfecting of the room.
- Audiologists should remain present in all clinics throughout epidemic to further demonstrate the essential nature of the profession. In this way audiologists are:
 - Available to support ENT patients, oncology patients, patients with hearing impairment and their devices, as well as patients with sudden hearing loss or change in hearing, or acute vestibular symptoms;
 - Available to assist in equipment management for children throughout the community who are not typically patients; and
 - A resource for school audiologists as they practice distance learning.

Summary

Audiologists have been challenged in a variety of ways during this COVID-19 Pandemic. They have been faced with the need to highlight the vital nature of their profession, determining ways to stay essential because telehealth is impossible. What has been presented here are procedures that may be used to enhance clinical audiological services and keep patients and clinicians safe during this pandemic.

References

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