



CHALLENGES AND QUASI-SOLUTIONS FOR SPEECH SOUND PRODUCTION AND MOTOR SPEECH SERVICES DURING THE COVID-19 PANDEMIC

Stephanie M. Nixon, PhD, CCC-SLP
Alexandra Spector Stahl, M.S., CCC-SLP
Children's National Hospital, Washington, DC, USA

Tommie L. Robinson, Jr., PhD, CCC-SLP
Children's National Hospital, Scottish Rite Center for Childhood Language Disorders
George Washington University School of Medicine and Health Sciences
Washington, DC, USA

— ABSTRACT —

During the COVID-19 pandemic, speech-language pathologists have faced many challenges specific to providing appropriate services for patients with speech sound disorders including motor speech disorders. Potential challenges and quasi-solutions are discussed in this paper.

Keywords: COVID-19, Speech Sound Disorders, Motor Speech Disorders, Telepractice, Telehealth, Pediatrics

Introduction

Since COVID-19 moved to the forefront of the workplace, speech-language pathologists who work with children with speech sound disorders (SSDs) have been faced with several questions regarding service delivery. Some of these questions include:

- How do clinicians use safe best practices when providing speech therapy to patients with SSDs during this pandemic?
- What are the challenges when providing telepractice therapy while working with children with SSDs?

Working with children with SSDs require actions that may violate social distancing guidelines. Speech-language pathologists often use tactile cues, gestural cues, visual modeling of production, and other activities that require the child and the clinician to be in close proximity. The purpose of this paper is to provide speech-language pathologists with options for delivering services in an appropriate and effective manner.

Discussion

Issue 1: How do clinicians use safe best practices when providing speech therapy to patients with SSDs during this pandemic?

Challenges: Clinicians have concerns about using best practices for speech therapy for patients with SSDs via telepractice and/or in person with limitations in both modalities. While in person, wearing medical grade masks eliminates the clinician's ability to visually model speech sound production. The other concern is that both the patient and the clinician should wear a mask in person; however, often children have difficulty wearing a mask correctly for therapy duration. Although there are some masks available now (i.e., The Communicator by Safe 'N Clear) that are approved by the FDA, they are often unavailable, do not meet medical guidelines, and cannot be used by speech-language pathologists in a healthcare setting, as they will not be approved for use by the Department of Infection Disease. Hand-made masks with clear windows are inappropriate

for SSD treatment purposes as they are not health grade. However, patients can use these, but such masks are not issued by the healthcare facility. Another barrier with handmade masks with the clear window is that the window fogs, leading to difficulty seeing the patient's mouth to monitor production. Telehealth challenges start with ensuring the audio and video quality on both ends is adequate to refine speech sound production by providing the child appropriate cues and prompts.

Quasi-solution: Telehealth services are the best avenue for many children with SSDs during the pandemics. The speech-language pathologist and child can adjust their distance from the camera and even use a small flashlight to highlight oral movements. Given the amount of airborne droplets exhaled during speech production while maintaining normal speaking volume (Asadi, et al., 2019), it is likely safest for both clinician and patient to utilize a telepractice modality for services during the pandemic.

Clinicians can provide visual cues with high-quality cameras for speech production and model the tactile cues to be used by caregivers. By shaping the caregiver's tactile, verbal, and visual cues, the caregiver becomes a better asset to speech therapy services.

Issue 2: What are the challenges when providing telepractice while working with children with SSDs?

Challenges: Some families do not have access to high-speed Internet services. Lack of such services can result in uncoordinated audio and visual connections and can make it challenging to discern when a patient is achieving accurate sound placement. This poses additional challenges when using simultaneous modeling in methods such as Dynamic Temporal and Tactile Cueing (DTTC; Strand, 2020).

Quasi-solution: It can be helpful when the caregiver and child move closer to the wireless router, or in some cases connect the device directly to the router. When possible, it can help to switch to a smart phone using data instead of WiFi. Additionally, backgrounds should not be used by the clinician or family as they can contribute to uncoordinated audio and visual.

Challenges: Sound quality is an issue with some devices causing the patient to have difficulty hearing the speech-language pathologist or the speech-language pathologist to have difficulty perceiving the patient's speech sound productions accurately.

Quasi-solution: When possible, it is best for the clinician and patient to wear headphones with em-

bedded microphones. The clinician should have an appropriate device that does not distort the visual image or audio reception. It is also best for the caregiver and patient to use a quiet room during the session.

Challenges: Some platforms being used currently for telepractice and devices do not allow the patient to have control of the mouse to indicate responses during auditory discrimination tasks.

Quasi-solution: When necessary, the caregiver should stand behind the patient and indicate whether the patient responded appropriately during the discrimination task. Another option is to label the pictures as "1" and "2" and have the child hold up fingers to respond.

Challenges: There are some patients who benefit from tactile cues that cannot receive these from the speech-language pathologist during telepractice sessions.

Quasi-solution: The clinician can provide gestural cues to prompt specific placement of the articulators (Rusiewicz & Rivera, 2017). Alternatively, the clinician can coach the caregiver for provision of tactile cues when necessary by modeling the cues and refining the caregiver's use. Remind the caregiver that these cues should be faded quickly and switched to verbal and visual cues (Strand, 2020).

Challenges: Some patients become easily distracted during sessions (e.g., siblings, self-view in the session, background noise, etc.).

Quasi-solution: Distractors in the room should be minimized (e.g., ask siblings to go elsewhere if they disrupt the session, ask parent to keep television off, etc.) during the session. When possible hide the patient's "self-view" to limit distractions and ensure the clinician's face is the largest on the screen. The caregiver should be readily available to assist and redirect the patient when needed. Removing self-view encourages the patient to use the clinician's face to cue production attempts instead of their own face.

Challenges: Some patients may seem less motivated and engaged during telepractice speech therapy.

Quasi-solution: The clinician must engage the patient's attention by using an abundant personality at an exaggerated level. Additionally, the patient can be motivated by using simple slide shows to uncover parts of a picture and activities available on websites. Encourage the caregivers and child to use movement breaks that allow the clinician to see favorite toys or pets. This helps the clinician tailor speech sound production activities to include words that are intrinsically motivating.

Challenges: Usually the clinician provides printed or verbal assignments to the caregiver for practice prior to the next session.

Quasi-solution: The clinician should take a few minutes at the end of a session to review the assignment with the caregiver and then email a PDF of the assignment to the caregiver. The clinician should also provide notes about what the caregiver did well in the session (e.g., “I like how you told Johnny to look at you before providing a visual cue for the production”) and any suggestions for additional supports the caregiver can provide (e.g., “Next time Johnny uses /d/ for /g/, repeat the word to him with the correct production emphasized”).

Summary

The COVID-19 pandemic has caused clinicians to think about alternative ways to provide services to patients with SSDs. Despite the limitations of telepractice, patients with SSDs may benefit more from telepractice given the availability of a visual model for production than from in-person services provided with masks.

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Contact Information:

Tommie L. Robinson, PhD, CCC-SLP
Email: trobins@childrensnational.org