Tutorial

Guidelines for successful online service delivery in orofacial myology

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GUIDELINES FOR SUCCESSFUL ONLINE SERVICE DELIVERY IN OROFACIAL MYOLOGY

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ABSTRACT

Purpose: Since the advent of COVID-19, online services within most healthcare fields have become ubiquitous. This article investigates the research regarding the feasibility and effectiveness of delivering online services and provides a tutorial of ideas and information to successfully implement online orofacial myofunctional therapy. **Method:** This article is a compilation of evidence-based results on the topic of online service delivery and perspectives and experiences shared by three service delivery providers. **Results:** It is possible to compensate for the interactive differences between in-person and online myofunctional therapy. It is believed that online therapeutic services are an efficient and effective mode of service delivery. **Discussion:** Although online service delivery is not new, the current world-wide pandemic has brought telehealth to the forefront. In a time of increased demand for distance treatment, the orofacial myologist must rapidly develop competency and comfort within the new assessment and treatment online paradigm. It is positive to know that research to date indicates that clients within associated fields benefit from the accessibility, ease, and convenience of online service delivery. This article summarizes legal considerations, technology, treatment preparation, client motivation, and the implementation of online therapy.

Keywords: Orofacial myology, telepractice, virtual health, online service delivery, service provider, ehelper, online therapy strategies

INTRODUCTION

Almost overnight online assessment and instruction has become a ubiquitous mode of service delivery. The “tele” service delivery model has changed the face of how healthcare providers—physicians, dentists, all forms of interactive therapists, and educators—provide care, currently and quite possibly, in the future. Online service delivery—telepractice, teletherapy, teledentistry, telemedicine, telehealth—however, is not a one-size-fits-all for all practitioners; there are variables. The type and extent of online preparation and implementation of assessments and treatment differ among and within medical fields, educational fields, as well as occupational therapy, physical therapy, counseling, speech-language pathology, and orofacial myology. Although telehealth is not new, the demand for its use is recent. There is limited research available that can be applied to the needs of practicing clinicians therefore, the content of

this article is approached from the perspective of experience and anecdotal evidence. This tutorial focuses on the practical details of virtual service delivery for the orofacial myologist as well as perspectives from the interrelated fields of speech-language pathology and dentistry.

Terminology: Definitions and Descriptions - Telepractice, Teletherapy, and Teledentistry

The American Speech-Language-Hearing Association (ASHA). Regarding terminology, ASHA adopted the term telepractice rather than the frequently used terms telemedicine or telehealth to avoid the misperception that these services are used only in health care settings. Other terms such as teleaudiology, telespeech, speech teletherapy, and telerehabilitation are also used by practitioners in addition to telepractice, (ASHA Telepractice Portal, 2020).

According to ASHA:

Telepractice is the application of telecommunications technology to the delivery of audiology and speech-language pathology professional services at a distance by linking clinician to client/patient or clinician to clinician for assessment, intervention, and/or consultation. The use of telepractice must be equivalent to the quality of services provided in person and consistent with adherence to the Code of Ethics, Scope of Practice, state and federal laws, e.g. licensure, Health Insurance Portability and Accuracy Act (HIPAA), and ASHA policy.

The American Dental Association's (ADA's) Policy on Teledentistry. The ADA (2020) states:

Teledentistry refers to the use of telehealth systems and methodologies in dentistry. Telehealth refers to a broad variety of technologies and tactics to deliver virtual medical, health, and education services. Telehealth is not a specific service, but a collection of means to enhance care and education delivery.

The American TeleDentistry Association (ATDA). Stated on the ATDA website (2018):

Teledentistry is the use of electronic information, imaging and communication technologies...to provide and support dental care delivery, diagnosis, consultation, treatment, and transfer of dental information and education. Teledentistry reflects a broader, changing healthcare landscape that is moving toward innovation, integration, and convenient care.

Face-to-Face vs. In-Person In the journal article, *Telehealth is Face-to Face Service Delivery* (2017), Jana Cason, DHS, OTR/L, FAOTA makes the case that use of the term "face-to-face" is an "outdated and narrow term" used to reference traditional therapy when the therapist and client are in the same room. She suggests telepractice is also *face-to-face* therapy. In fact, most often, the therapist and the client are on the screen simultaneously. She recommends the term "in-person" be used, instead. On a broader scale, several states have noted the confusion of the face-to-face term, and have passed or introduced legislation to expand their definition of face-to-face services to include telehealth in regulatory language (Iowa Department of Human Services, 2017; Kentucky Cabinet for Health and Human Services, 2016; Minnesota State Legislature, 2017a; 2017b).

Evidence-Base for Online Service Delivery

Typically, online service delivery provides assessments, interventions, and consultations. Additionally, although healthcare and educational telepractice have recently surged on the scene, it has been successfully, albeit sparsely, implemented for at least the past two decades.

As early as 1997, Duffy, Werven and Aronson (Mayo Clinic) conducted a "telemedicine" study and concluded that "evaluations can be reliable, beneficial, and acceptable to patients with a variety of acquired speech and language disorders," (p. 1116). Fifteen years later, Tucker (2012) published a survey of 1455 speech-language pathologists (SLPs) regarding the prevalence of use. At that time only 2.3% SLPs implemented telepractice. However, according to Towey (2012), telepractice was viewed by many to have the potential to revolutionize how assessment and therapeutic services are delivered. Online speech and language services had a slow, but positive and steady start.

In light of the COVID-19 crisis, however, telepractice has become more prevalent, not

only with speech-language pathologists, but across the spectrum of healthcare and educational professionals. Online sessions with therapists (telepractice and teletherapy), dentists (teledentistry) and physicians (telemedicine) are the new norm and have emerged as a viable means to reach and service the needs of children and adult clients and patients. "With patients fully embracing the virtual era, their preference and adoption of telemedicine will spur action within the industry. Telemedicine isn't going anywhere: 83% of patients expect to use telemedicine after the pandemic resolves," (Zimiles, July, 2020).

Online service delivery studies within the field of orofacial myology are nonexistent. The following online service delivery research results are offered within the associated fields of speech-language pathology and dentistry.

Research Within the Field of Speech-Language Pathology

An exceptional telepractice case study (Malandraki, et al., 2014) revealed improvement (within four intensive weeks) by a 6-year-old child with complex issues, including pediatric oropharyngeal dysphagia, Opitz BBB/G and Asperger's Syndromes, and aerophagia. The study implies that motivated parental involvement and follow-through during treatment is a key to success. "The patient demonstrated substantial improvements in swallowing variables and quality of life. Follow-up interview analysis showed that most skills were retained or improved one-month post intervention." (p. 3).

A systematic review by Wales and colleagues (2017) indicated promising evidence to support teletherapy for delivering speech-language intervention services to school-age children. They concluded, "Both telehealth and in-person participants made significant and similar improvements when treatment effects were measured through five of the six outcome measures." (p. 55). Similarly, a comparison study of 1,331 ASHA National Outcomes Measurement Systems (NOMS) cases and 428 telepractice cases, revealed that the treatment

outcomes for the children exhibiting speech sound disorders were comparable. According to Coufal et.al (2018), "The findings provided support for the use of telepractice for school-age children."

Grogan-Johnson and colleagues, (2011) conducted a study in a rural Ohio school district comparing the results of school children with speech sound disorders. Some children received services in-person, others received services online via computer-based intervention materials. The students in both service delivery models made significant improvements in speech sound production. Another interesting study of utilizing telepractice with young children concluded, "This study verifies that telepractice can support the development of infants and toddlers who are deaf or hard of hearing, and it reinforces the use of telepractice to serve families of infants and toddlers with other special needs," (Behl, et al., 2017, p. 159).

Studies suggest that telepractice can be as beneficial and effective as in-person instruction. It increases family involvement during the online sessions as well as after and enables those who do not live near service providers to be easily and consistently served (Lincoln, et al., 2014). In addition, online service delivery has the potential to:

- Aid in the access of consulting with other professionals,
- Improve the ease of parent interactions and conferences,
- Perpetuate inclusion of family members during the sessions, and
- Enable the parent/caregiver to implement the targets, concepts, and behaviors beyond the sessions.

Oral-Oriented Assessments

Regarding the reliability of oral-oriented assessment performed online, the conclusions are not as positive. Waite, et al., (2012) examined the validity and reliability of an "internet-based telehealth system" for screening speech intelligibility, and oral-motor structure and function in children with speech

disorders. They compared judgement accuracy of the disordered speech production system when assessed via telepractice and in-person. Results indicated a high level of agreement for speech intelligibility, however, they reported low-levels of agreement regarding analysis of some of the oral-motor variables. In addition, Taylor, et al., (2014) conducted a literature review of the efficacy and effectiveness of using teletherapy for pediatric speech and language assessment. As telepractice was in its infancy, they found only five relevant articles with mixed results. Speech screening was deemed valid, but a comprehensive speech assessment was not. Also, there were significant discrepancies between the two modalities for the reliability of individual oral motor tasks.

It is obvious that research is needed to definitively determine if online oral-oriented functional assessment procedures and results are commensurate with in-person assessments. Until that time, practitioners are advised to add visual enhancement accommodations to their telepractice routines (suggestions are offered in Online Therapy Accommodations below), and if conducting a more reliable oral assessment in-person, to take exceptional safety precautions.

Research Within the Field of Dentistry

As in the speech-language pathology studies, online service delivery in dentistry is also positive, but fundamentally cautious. In a 2017 literature review Estai and colleagues stated: "There is emerging evidence supporting the efficacy of teledentistry. However, there is not yet enough conclusive evidence, particularly for its effectiveness, cost-effectiveness, and long-term use, to make evidence-based policy decisions on teledentistry." (p. 1). Specifically, out of 385 publications, 11 articles met their inclusion criteria. Many studies assessed the efficacy of teledentistry interventions rather than their effectiveness. Nine studies included some clinical outcomes; the remaining two primarily focused on economic analysis.

In their article, Sanchez Dils and colleagues (2004) predicted that "teledentistry will become

more widely seen and utilized by the increase in digital media found in dental practices." (p. 161). They cited several benefits: patient collaboration, service access for underserved populations and areas, and a decrease in time and cost for the professional. Perhaps teledentistry's time has come.

THE IMPORTANCE OF LEGAL COMPLIANCE

Legalities and Confidentiality

Legalities and confidentiality are foundational issues that must be addressed when providing online health related services. Most service providers are familiar with the Health Insurance Portability and Accountability Act (HIPAA) of 1996 and the Family Educational Rights and Privacy Act of 1974. These are federal laws that protect information and records. Early in the COVID-19 national public health emergency, however, the U.S. Department of Health and Human Services (HHS) relaxed noncompliance penalties:

The Office of Civil Rights (OCR) [within the HHS] will exercise its enforcement discretion and will not impose penalties for noncompliance with the regulatory requirements under the HIPAA Rules against covered health care providers in connection with the good faith provision of telehealth during the COVID-19 nationwide public health emergency. A covered health care provider that wants to use audio or video communication technology to provide telehealth to patients...can use any non-public facing remote communication product that is available to communicate with patients, (HHS.gov/hipaa, March, 2020).

When a service provider employee utilizes the employer's online therapy platform to deliver services, the employer is responsible for, and must comply with the legalities and regulations. However, a service provider who operates independently (i.e., does not have access to or use of an employer's online therapy platform) is personally responsible for legality and

privacy compliance. Therefore, a Business Associate Agreement (BAA) is required. The BAA is a legal document between the service provider and the contractor of a video conferencing platform/tool, such as, Zoom, Go-to-Meeting, Google Meet or Microsoft Team. This BAA is an absolute necessity as the contractor of the video conferencing tool might possibly receive access to Protected Health Information (PHI) and protected educational records and information. Most “free” video conferencing tools do not comply with these regulations.

Licensure

Licensure is another legal consideration. It is customary for the service provider to be licensed in the state where they sit and also where the client sits if the client’s state location is different. Recently, however, there has been discussion of “cross state licensing,” “states waiving in-state licensure,” “interstate compacts,” and “relaxing of licensure laws.” Because of the urgent need for online services in response to the COVID-19 pandemic, the Department of Health and Human Resources recommended actions that included licensure exemptions of disciplinary moratoriums, waiver of telemedicine practice prohibitions, relaxation of scope-of-practice requirements, and easing of malpractice liability. It is important to note these regulations vary by state. Any changes and exceptions that have been implemented may or may not be permanent. Each service provider must check their state’s licensing agency for the most up to date requirements and information. Also, many professional state and local associations are collecting and posting the latest information for their members.

Reimbursement

Reimbursement for services is an important consideration. Some states have passed laws and regulations that require state Medicaid agencies or private health plans to reimburse for services delivered via “telehealth,” if those same services are reimbursable when provided in person. Also, due to the COVID-19 public health emergency, as of March 6, 2020,

Medicare has approved doctors and other health care providers use of telehealth services to treat patients. In addition, practitioners who are not statutorily authorized Medicare providers have been added to the provider list, including speech language pathologists and audiologists. The same CPT codes for evaluation and treatment services can be used regardless the mode of service delivery. Prior to providing online services verify your reimbursement with each relevant payer.

Online Service Delivery: Teamwork

A Reality Check for the Online Practitioner

Whether you are a seasoned practitioner or new to providing online services, the following common-sense suggestions can enhance your confidence and your treatment success.

You are a Service Provider First.

Therapeutically, emphasize you and your client not the mode of service delivery. You are the professional and expert in your field, and the therapeutic guide. You bring confidence, experience and personalization to your assessment and treatment. With these key components in place, online service delivery becomes a comfortable, successful, and dependable method to provide and receive services.

Stop Searching and Focus on Building Relationships.

With the recent tsunami of distance learning accessories, for example, tools and materials, continuing education options, articles, emails, forums, and online support groups, one could easily and understandably become consumed and frustrated. To counteract the frenzy, maintain your priorities. Continue to bond and build relationships with your clients, their family and other caregivers. Your clients need *you*.

Make Connections to Optimize Attention.

Connections maximize interactions and performance — the base for learning and retention. Maintaining client connections in both body and mind is critical during online service delivery. Attention and regulation skills are executive functions that enable

connections. They involve complex brain processing. The brain must filter stimuli (to either keep or reject the stimuli), process the information, as well as maintain focus and engagement on the task. If this does not happen, especially during online interactions, instruction is mute. To maintain “body connections” allow the client to move and change positions from sitting to standing, and vice versa. If need be, permit them to use a hand-held fidget (a sensory tool), and include movement tasks and/or tangibles that can be manipulated during instruction. There are several ways to help maintain cognitive connections and focus: Provide opportunities for the client to make choices and be involved; include treatment topics that are relevant and motivating; consider using a touch-screen device, and also, the size of the screen, e.g. a television. (See Online Service Delivery: Treatment for additional options.)

Use Your Intuition.

A brief but practical definition of intuition is “quick and ready insight,” (Merriam-Webster, 2020). Believing in and using intuition are indispensable as we implement a new mode of service delivery. We as intuitive practitioners must pay close and particular attention to the client’s facial expressions, body language, vocal intonation, pitch, loudness, and oral and body movements in order to appropriately adjust our therapeutic decision making.

Know Technology.

You may need to troubleshoot when things are not working or not optimal. Having a working knowledge and understanding of how to help a client or use an ehelper quickly to resolve issues with internet connections, audio, video and/or the conferencing tool is important. Write a brief How To guide with written steps to share with the client before or during the first session. Have pertinent contact phone numbers and email addresses to use in case the internet connection is lost.

Be Comfortable and Stay Healthy.

Sitting for extended periods of time, in the same position, looking at a computer screen can be detrimental to your health and

negatively impact your competence. Have a plan to keep your body healthy.

- Consider positioning, movement, and ergonomics to combat pain and fatigue.
- Adjust the position of your screen in relation to your keyboard.
- Consider a wireless keyboard and mouse.
- Think about standing. A desk (or desk surface) that can be adjusted to a variety of heights is invaluable and encourages standing as well as sitting. Use an anti-fatigue mat when you stand.
- Use an office chair and balance ball chair interchangeably. They allow movement throughout the day and provide a variety of sitting positions.
- Add blue light technology to your online use to combat eye strain.
- If you are so inclined, do stretches and yoga at the beginning, middle and end of your day.

Working with an eHelper, aka Support Person

An ehelper at the side of the client can be an essential member of the online assessment and treatment team. The ehelper can be a parent or caregiver, an older sibling or family member, or if conducted at a facility, an ehelper may be a professional or non-professional assistant. If you, as a practitioner, have frequently worked with or routinely communicated with parents/caregivers and others, the concept of an ehelper (virtually, a third team member) *within* your assessments and therapy sessions will be welcomed. The presence of an ehelper can add an extra dimension to your treatment. Fundamentally, the ehelper has two non-optional tasks during online services: child safety and assistance with technology. Any involvement beyond these two duties, such as, managing the child’s behavior and attention or tactile therapeutic involvement and assistance, is at your discretion.

Quite often, a family member ehelper is eager to be involved, but is unsure how to help. In addition, they may be ultra-sensitive to being

visibly online, in front of you and the child. At first, they may over-help or explicitly direct the child to *do it right*. These responses naturally come from a place of good intentions but can impede the flow and consistency of the therapy sessions. The goal of all those involved must be to enable the client to perform at his or her optimum and learn as independently as possible. To arrive at this consensus, and to maintain the integrity of the therapy sessions, the ehelper must be informed of the goals and their role, i.e. what to do, and what not to do. The most supportive ehelper is knowledgeable and trained. Take into consideration the existing type and amount of knowledge of the ehelper, as well as the characteristics and capabilities of the client; variables exist on all fronts. Quite possibly, your type of interaction with each ehelper will be unique.

Begin Training Prior to the First Session.

Communicate your expectations tactfully and clearly, and include the rationale. Consider the request to allow children to speak and do for themselves. If they need extra time, allow them time to reflect and answer and not volunteer answers or offer corrections. Emphasize the importance of learning and doing for themselves. You may want to ask for their permission to give them feedback the first few sessions. If they agree, tactfully guide and redirect them. Encourage them to put themselves in the children's situation.

Ask Them to Follow Your Lead. Successful online practitioners train their ehelpers to follow their lead, i.e. to be observant of them, and the child. Since treatment is an ongoing adjustment process based on the needs and responses of the child, we as practitioners must discern if the client understands, or not. If not, appropriate therapeutic adjustments must be made. Consider asking the ehelper to follow your lead if you change therapeutic directions, and to stay observant, vigilant and not voluntarily redirect the child. Establish a mutually agreed upon cue. For example, during therapy, when you say the ehelpers name that is their cue that their direct assistance is needed.

Ehelper Training is Ongoing. Keep in mind, the ehelper may hear your directions, but until they experience the situation, they may not fully understand their role. They may take several sessions to fully comply with your requests; be patient.

Therapy vs. Teaching, an Important Distinction. In education, teaching content is typically explicit, and provides information a student needs to know. Conversely, in therapy, interactions between the practitioner and client may be as overtly obvious. For example, as an essential part of the therapeutic process the child may be required to focus intra-orally and frequently self-monitor their own productions. This type of introspection and self-analysis is strictly between practitioner and child. The ehelper must know not to become involved and interject questions and answers during these times.

Online Service Delivery: Technology

Because of the urgency and the numerous unknown factors regarding technology, it is only natural that telepractitioners grapple with how to select, set-up and implement online services. Technology can be daunting for some but inviting for others. No matter your predilection, video technology for therapy is an entity with multiple variables.

Those variables must involve accommodations to generate quality client-practitioner interactions. There is much to consider regarding technology issues. A session may merely be interrupted or delayed, or ultimately, ended. It is important to have access to a client's phone number or email to troubleshoot lost connections or if technology fails in some way. This section provides practical, need-to-know information and ideas about technology.

Video Conferencing Terminology

As the tools for telehealth advances, the vernacular refines and changes. Therefore, professionals must be aware of the similarities and differences within the following "conferencing" terms: video conferencing tool, virtual classroom, and online platform.

Similarly, each one is a software tool that is used by two or more individuals to communicate via live audio and video. There are, however, significant differences.

Video Conferencing Tool. This is the most basic form of live conferencing. The video conferencing tool supplies the options of live audio and video conferencing, recording, screen sharing, and a whiteboard that can be annotated by both parties. The most popular examples currently include: Zoom, Google Meet, Microsoft Teams, GoToMeeting, WebEx, VSee and DoxyMe.

Virtual Classroom. In addition to the features that conferencing tools provide, virtual classrooms have the option of archiving lessons for flexibility, audio-video back up, options for synchronous group projects and classroom management tools such as live chat, hand raising and attendance taking. Commonly used virtual classrooms are Adobe Connect, Blackboard, LearnCube, WizIQ, Top Hat, Seesaw and Google Classroom.

Online Platform. Platforms include the features of the previous two, plus profession-specific interactive materials, such as applications (apps), games, articulation pictures, and stories. Speech language pathologists often choose the following online platforms for teletherapy: BlinkSession, Theraplatform, TheraV, eLuma, PresenceLearning and SideKick Therapy.

Thoroughly acquaint yourself with your chosen conferencing tool. It may be helpful to enlist a colleague, friend, or family member in a practice session prior to using it professionally. Keep technology as simple and familiar as possible, especially the therapy visuals and any games you use. High tech activities are widely available and plentiful. Sometimes, however, the more elaborate the technology, the higher the chance for something to go wrong. A sophisticated website or app, for example, may take extra time to load, thus reducing the amount of time for therapy, or, it may not look or function the same on both the practitioner's and client's sites, or, it may be

too difficult and frustrating for the client to navigate.

Audio & Video Considerations

Consider several technological factors for both you and your client: the internet connection speed, your primary device, the video device/camera, audio device/microphone, and device updates. It is wise to schedule an online meeting with the client prior to your first meeting to do a technological test-run.

Internet Connection Speed. Experts recommend that both the practitioner and the client have internet download and upload speeds of at least 3.0 mbps (megabits per second). Your computer's internet speed can be tested on several websites for free: speedtest.net (by Ookla), speedtest.net, and fast.com, etc. For home-based offices, consider a direct "wired" connection from the computer to a modem (versus using wireless Wi-Fi). Also, during conferencing, close selected apps; larger apps may slow down your internet connection. Resetting/restarting your modem will not permanently yield a faster internet, but it may temporarily improve the speed.

Primary Device. Online service delivery can be conducted successfully with phones, tablets, laptops, and desk top computers, via Windows and Mac operating systems. The size of the screen and the quality of the audio of the computers is preferred over the smaller devices.

Video Device. Newer phones, tablets, laptops, and all-in-one computers have integrated webcams built into the equipment and provide adequate visual clarity for most users. However, many experts recommend a higher-end external camera or webcam with better resolution for viewing and audio quality, and flexibility in placement. Practitioners will need to accommodate whatever camera and quality their client has. As part of the set-up test-run process, work with the helper or client to establish the best height and distance of the camera in relation to their face and neck. The position and closeness of the person, as well

as viewing clarity will no doubt be critical factors in your therapy interactions.

Audio Device. Similar to the camera, newer phones, tablets, laptops, and all-in-one computers come with built in microphones and yield adequate sound quality for most users. Some telehealth professionals wear a headset complete with audio and a microphone. This choice may, or may not be appropriate for you, the practitioner, or for the client. In fact, some clients resist wearing a headset due to age, sensory issues, or comfort. In addition, both the client and the ehelper need to hear the practitioner. A personal headset only on the client eliminates the ehelper's involvement. For oral-oriented therapy, not only is it important to hear the client clearly, they need to hear you and *see your mouth clearly*. In the case of a headset, the microphone blocks the oral view. In addition to using the computer's microphone, consider a table-top or a USB lapel microphone.

Operating System and Device Updates. It is critical to keep both your operating system and your device updated for optimum use and speed. Having your devices automatically update is a good option; choose the time of day the updates occur. Consider scheduling updates during non-office hours as they can take a considerable amount of time.

Online Technological Tools

The conferencing tool and the quality of equipment one uses are fundamental. How they are implemented can increase the client's interest and motivation and make learning more accessible and successful. Many online technological tools and applications are available to supplement your conferencing.

Recording sessions. Record the evaluation and/or therapy sessions. A video of the evaluation provides an extra opportunity to review and analyze the client. It also provides a baseline of cranio-facial-oral-respiratory structures and functions. A recorded therapy session is extremely beneficial for the client and parents/caregivers. Re-watching the session encourages greater understanding of

what was said and done, as well as a visual examples and explanations of how to correctly complete homework tasks. It is also an excellent way to verify and document progress.

If the conferencing tool you are using does not have recording capability, do know that Windows and Mac have a gaming bar in their operating systems that allows the user to record the audio and video that is on the screen. To access this tool in Windows press Windows Key + G, in Mac press Command + Shift + 5. It is easy and free.

Although not an exhaustive list, Vimeo, YouTube, smart phone or tablet camera/video apps, Adobe Spark, iMovie and VideoPad are additional options for creating videos. To share a video, consider Cloud/Shareable Link, Dropbox, or a Messaging Application. Please remember to consider confidentiality. As you create your videos, be aware that mirrored images of text appear backwards to the viewer. Mirrored images of writing on clothing or in the background can be disconcerting and distracting to the viewer. As you set up your video system, be sure *not* to check "show in mirrored image" in the video preparation settings.

Second Camera. A second camera can be a smart phone, tablet, another desk-top computer or laptop, or external camera, document camera or webcam. There are two primary reasons to use a second camera, or a document camera:

- It can be connected to your primary device and displayed through your conferencing tool. It is helpful for showing materials not available online, such as pictures, therapy tools and manipulatives, games, and even books. Also, when either the practitioner or the client uses a second camera, the face and mouth can be projected and viewed more clearly.
- An ehelper who logs into the session with a separate device can provide feedback and hear the session. This

prevents the child from having to remove their headset, hand it to the helper, and listen to the practitioner re-explain the information.

Mirroring. Online “mirroring” enables the user to display the screen image on a separate device onto the primary screen being used for conferencing. This is an excellent method for showing oral exercises and functions up close during a therapy session. In addition, apps/software on your phone or tablet can also be mirrored. Following are examples of web-based mirroring software: Reflector (Reflector Teacher), AirServer, Mirror 360, and Apower Mirror. These options are similar to Android’s “cast” and Apple’s “airplay.”

Dual monitors. The use of multiple monitors has recently become more prevalent; they perpetuate increased productivity. Having two (or even three) monitors allows the option to have you and your client on one screen and additional reference items on the other screen. For example, it gives immediate access to such things as your evaluation form, the daily lesson plan, a report, your data collection tool, or email. A television screen can also be used as a monitor. It increases the size of your client’s image and therefore enhances the image details. In particular, a large TV screen allows young children or toddlers to stand and move freely, while remaining in your field of vision. They are especially impressed to see themselves on TV. An HDMI cord is the most common way to connect a device to a TV.

Online Video Environment

Just as your appearance and office-area set the stage for your in-person professionalism, they are just as important during your online service delivery. Following are a few standards to consider as you project your competence and confidence during your online services.

Lighting. If you have one light source, light our face from the front — never behind. When the light source (e.g., a window or lamp) is behind the person on camera their head becomes a silhouette and facial and oral details are not visible. Choose a spot with

plenty of light. Natural light is good, but can be variable, depending on the weather and the time of day. Be sure to do a dry run to view just yourself on your conference tool.

Background. Aim for a pleasing, appropriate, non-distracting background to your video. Your image—the professional practitioner is paramount. The client **MUST** be able to see your facial expressions and your mouth and be able to effectively see inside. Be mindful of your video’s background—visually and auditorily. Take care that the surrounding area is professional, or if at home, close to professional. If at home, the home-office or library is preferable. Avoid the kitchen, or a room that is obviously a bedroom, or an unkempt room, no matter where it is. Scattered items behind you will distract the client. In addition, reduce background noise, as much as possible. Again, at home, this means no obvious foot-traffic, TV audio, loud talking, or barking dogs. Even instrumental music can be unintentionally loud and distracting to your client. If your microphone is sensitive, take note of a possibly distracting air conditioner or nearby fan.

Position on the Screen. Position yourself centrally on the screen, and close enough to see your face, facial expressions, and the oral mechanism. Keep in mind that positioning too close will distort the image.

Online Service Delivery: Treatment

Initial Preparations

Currently, the amount and degree of in-person contact in our society has changed. No longer does a client walk into an office, shake hands, sit down, share their case history, and open for an oral exam. In-person face-to-face interaction and literal contact is minimal at best, and we must be aware of the consequences of these differences, and plan for them. So, how can business be conducted during the initial phase to compensate for physical distancing? Following are nine suggestions.

1. Appointments. Online appointments can be entirely scheduled via an online calendar booking tool (such as GetJobber.com or AcuityScheduling.com) or by phone, email, or text. It is good policy to either call, email, or text the client the day prior to the initial appointment as a reminder and to verify their intent to attend.

2. Obtain All Necessary Information. Gather all information prior to scheduling the appointment, including the method of payment to avoid possible collection difficulties after the appointment. Investigate online payment options, such as, PayPal.com, WaveApps.com, PopMoney.com, or GetJobber.com. Most of these services enable invoices to be created and sent to the client. In addition, determine your cancellation or no-show policy for online services.

3. Email Their Packet. Send all information and forms to the client/parent/caregiver prior to the evaluation appointment. Such forms and information could include, intake and case history forms, medical information, HIPPA forms, consent to treat form and cancellation policy. Convert your current PDF forms to fillable forms using online tools (such as pdffiller.com). This enables the client to easily and quickly type in their (or their child's) information and email it back to you.

4. Share a Brief Overview. At the conclusion of the evaluation, share a brief overview of online therapy, for example, therapy takes place online via their computer, one time per week for 45 minutes, the parent is asked to sit in, the child will be expected to do the activities and exercises, and a few minutes of homework will be given.

5. Communicate in Greater Detail. Prior to the first therapy session, communicate once again (by phone or email) with the parent/caregiver and supply additional details. Educate them with specifics of online therapy: Alert them that they will receive a link in their email to join the online therapy session and discuss the technology and meeting requirements (such as computer needs, Wi-Fi needs, and equipment). To instill confidence, assure them that online service delivery is effective.

6. Provide Information About Their Packet.

Alert them that therapy materials will be used during almost every therapy session. Compile a packet of materials (e.g., tongue depressors, disposable oral swabs, cups, and spray bottles), and ship it to them prior to the first meeting.

7. Schedule a Test-Run: Schedule a trial video conference appointment to allay any technology concerns. Also, if appropriate, share ehelper expectations with the parent or caregiver.

8. Printing the Lesson: Inform them that every week, they will receive the current weeks lesson in their email for them to print and have ready when the lesson starts.

9. Online Conferencing with Professionals and Others. The ease and time-efficiency of online conferencing with either individuals or meeting as a team allows for real-time collaboration with other professionals. With planning and client written permission, invite the family physician, dentist, orthodontist, or otolaryngologist to an online client assessment or therapy session. Online service delivery also offers unique opportunities to bring extended family (grandparents, aunts, uncles, or friends) into sessions as needed for explanations, support, and treatment guidance.

Online Therapy Accommodations

If you are an engaging, informative, and effective therapist when doing in-person therapy, most likely you will be an engaging, informative, and effective tele-practitioner, as well. Online service delivery, however, gives rise to new interactive challenges during analysis and therapy with a myofunctional client. The specific type and amount of required tactile interaction and physical proximity are unique to each professional specialty. For example, to assess, diagnose, and treat in general telemedicine, a medical doctor may use verbal question-and-answer collaboration, and consider symptoms submitted verbally and visually by the patient. In comparison, the assessment and treatment by the orofacial myologist necessitates detailed and intricate cranio-facial-oral-respiratory observations, analysis, and interactions that are frequently more covert than overt. In many

cases, the child or parent are unable to recognize underlying issues, or describe details of their oral functions, i.e. their swallowing, chewing, and speaking.

The field of orofacial myology continues to mine and excavate typical and atypical hard tissue, soft tissue, and oral-nasal functions within the cranio-facial-oral-respiratory components, (Boshart, 2017). Several factors within these components are external and easily visible and viewed in-person or online. For example, the cranio-facial shape, jaw-to-jaw structural relationship (lateral view), and even labial positioning at rest and during swallowing can be easily observed. On the other hand, intra-oral and nasal functions are partially or completely hidden, and not easily viewed. For example, accurate analysis of dentition and occlusion, the size and state of the tonsils and the oropharynx, the lingual and labial frenulae, the size and shape of the hard palate and dental arches, and the intra-oral swallowing process. Fortunately, if the client is age-appropriate and compliant, many of these factors can be accommodated and identified online with the assistance of an open mouth, an adequate light, and a trained or knowledgeable ehelper. Client verbalizations and the use of still-shot pictures and/or videos add visual information for the telepractitioner and the ehelper.

Sensory input is the cornerstone of myofunctional therapy.

As orofacial myologists, it is important to note and therapeutically apply tactile sensory input based on the reality that oral functions involve an elaborate neuromuscular mechanism induced by nerve impulses transmitted by sensory receptors from the tongue and lips, (Maspero, et al., 2014). Intra-oral sensory perception is referred to as the *oral somatosensory system* and researchers in several disciplines, including neurophysiology, strongly acknowledge the presence and importance of the oral somatosensory system, (Tremblay, et al., 2003). According to Haggard and DeBoer (2014), the mouth is one of the most densely innervated parts of the body. Its

sensory richness is linked to the key role of oral sensorimotor control in eating, drinking, and speaking and refers to the feedback these sensations provide about the state and structure of the mouth itself, as well as the presence of, for example, foods and intra-oral tools.

Acknowledging that the mouth is the only body-part that interacts with itself meaningfully via intra-oral tactile and proprioceptive feedback, awareness techniques as part of the therapeutic process can potentially increase how individuals perceive their mouth and mouthparts. A heightened level of oral awareness — whether encouraged therapeutically online or in-person — is a potential key to improved self-monitoring and functional success (Boshart, 2017).

Sensory Input Accommodation Techniques.

Online service delivery for the orofacial myologist creates a conundrum of how to provide the various forms of sensory input – auditory, visual, tactile, proprioceptive, and even taste -- given the lack of physical proximity between practitioner and client. Calculated sensory input adjustments must be made. Following are techniques to help accommodate and compensate for sensory

input differences during therapy:

- Ask the client to close their eyes and focus intra-orally to increase proprioceptive awareness.
- Encourage them to think about their tongue; focus and feel.
- Ask the client oral-oriented questions to encourage them to focus intra-orally: What is your tongue touching? Tell me what you feel. Is your tongue on the bottom, in the middle, or on the top? Do you feel your tongue pressing firmly against the top of your mouth? Do you feel suction

pulling your lips back against
your front teeth?

Intensify the use of auditory and visual sensations. Clearly explain step-by-step tasks and what you expect them to do. Demonstrate the desired positions and movements with your own mouth, make sure the lighting is appropriate; use a Throat Scope®, or a penlight. Have the child do the task independently or enlist the ehelper to observe and guide. Consider asking the ehelper and client to use a hand-over-hand approach, i.e., as the client holds the therapy tool, the ehelper gently supports their hand and the therapy tool. Demonstrate the desired positions and movements on a large mouth model with your hand-tongue. Also, prior to therapy, consider doing a video on your cell phone or touch-screen tablet of yourself doing the desired positions and movements. Then use Reflector Teacher to project the small screen onto the primary screen; add your live narration to the video. Another option is to use still picture shots with arrows, dots or other markings; use the indicators as a reference as you explain and prompt.

Methods to Maintain Client Attention, Focus, and Cooperation.

Verbally interactive, educationally oriented online myofunctional therapy competes, so to speak, with passive television watching and playing electronic games, not only for time but interest. Video games are colorful, exciting, and present stimulating and competitive challenges. They require focus and quick, instantaneous thinking and action. They yield a sense of immediate pleasure but, quite possibly, may be addictive. The research on video gaming addiction is probable, but inconclusive (Watkins, 2020). Swing and colleagues (2010) share another potential downside. They allude that viewing television and playing video games are associated with increased subsequent attention problems in childhood and late adolescence.

Attention and focus are crucial components during an ongoing therapeutic exchange. Unlike in-person instruction, online therapy

requires dedicated viewing of a narrow visual field and requires, quite literally, eyes on the screen. A child's eyes and attention will naturally veer off-screen; it is unrealistic to think otherwise. Therefore, during online therapy, the *attention goal* is to increase the amount of time and number of times the child's eyes remain on the screen. Regarding focus, it is common sense that even if the child's eyes happened to be glued to the screen 100% of the time, their cognitive focus will not be 100% of the time. *Focus* involves not only eyes, but ears, and thoughts.

Myofunctional therapy is a process that occurs over a matter of weeks to months to change existing oral sensory-motor behaviors, into new ones. It involves attention, focus, cooperation, cognitive involvement, and motor repatterning. In therapy, the practitioner must capture and maintain the child's attention, and constantly monitor their attention, behavior, and task compliance. In addition to the following suggestions consider adding the phrase, "Listen, Look, and Think" to direct and redirect the child during therapy. To adjust for the slower pace of a regular therapy session, as well as its minimal entertainment value and educational content that necessitates verbal interaction, myofunctional practitioners must consciously consider *how* to share information and instructions to motivate, shape, and maintain the client's interest and involvement.

Create a Verbal Cue.

Create a mutually agreed upon word-cue for eyes upon the screen. The expectation is that when said, the child alerts, looks at the screen, and focuses and thinks about what is being said.

Use Visual Aids in Your Examples.

In addition to modeling therapy tasks with your own mouth and hands, consider using a large, captivating hand-held mouth/dental model (e.g., AjaxScientific.com) to demonstrate your examples. Ask the child to watch and determine if you did it right or wrong; then it is their turn.

Add Vocal Variations.

Speak loudly then softly, vary your pitch, or use a sing-songy voice to capture the child's attention and add joy to the session.

Use the Child's Name.

Say the child's name at appropriate times throughout the session. This improves the attention factor because everyone loves hearing their name (Page, 2008).

Gain Frequent Eye-Contact.

This suggestion is powerful but tricky during online interactions. From the practitioner's perspective, eye-contact is established by looking into the camera lens. By doing this, one may miss the child's responses and subtle facial expressions. Therefore: ensure your camera lens is near the image of the child's face on your screen.

Use Appropriate and Pragmatic Facial Expressions and Body Language.

Maintain a pleasant look on your face but be expressive. Ensure your body and head are facing the camera to indicate your interest in what the client is saying and doing.

Alleviate Attention-Fatigue.

Ask everyone to take a stand-up break or, stand for part of the session.

Practitioner-Client Interactions, from the First Session.

The following strategies can help to generate connections between you and your client.

Be Present, Personable, and Professional.

If your in-person interactive style includes humor, continue to be humorous online; if not, just be yourself. Connect with the child personally and use your best "website manner."

Be Prepared, and Focused.

Be ready and prepared. Have easy access to materials and tools and have screen-shot items you plan to share uploaded and organized. Demonstrate to the child you are focused on them and their needs, and not the technology. Be mindful of ethnic and sociocultural beliefs

and customs of the client and ehelper, (Hilty et al., 2020).

List the Agenda for the Day.

At the beginning of therapy, after reviewing and doing the homework tasks, briefly go over the agenda and what is going to take place during the session. Remind them that when both of you stay on track and focus on the tasks, we get done on time, and playtime starts.

Explain Your Expectations and Ground Rules.

Explain your expectations and ground rules to both the child and the ehelper and repeat them periodically.

- Expect everyone to be on time, online, and ready. That means all are present and the lesson and materials are nearby. Otherwise, valuable minutes are lost.
- Share your attention and interactive expectations with the child and the ehelper. These may be different for each client and ehelper.
- Let them know you have high expectations for them; you expect to see progress every time you meet (Wright, 1995).
- Emphasize that improvement happens through practice (Maas, et al., 2008). Consider using an example: Learning to move the mouth in a new way, is like when you were learning to print. Each letter had to be practiced many times before your hand was able to do it successfully and consistently. Consistent practice yields results. If their practice-time is inconsistent, surprise them with a mid-week check-in to encourage them.
- Let the client know that if they did not hear you, or understand what you said or what to do, they are to let you know. How the child alerts you must be mutually

agreed upon by both you and the client. Here are some suggestions: choose a non-verbal signal, e.g. thumbs down or they wave their hands, or the client says your name, or forcefully says the word *stop*.

Give the Child the Power to Choose.

Present two or three options as to which task to do first and let them choose. Ask them which one they would like to do first; this one, or that one. The rationale behind this is that the child is more encouraged to do the task when they select it.

Include Participation Opportunities.

Include opportunities for the child to share their thoughts, ask questions, explain what their mouth is doing, and generally contribute. Shape the therapy session to inspire and instill client cooperation. Encourage the child to be verbally involved.

Emphasize and Encourage Self-Discovery and Self-Monitoring.

Resist being the mouth-police; encourage the child to notice what they are doing and determine if it is correct. If it is not correct, they help determine what to do to change it.

As during in-person therapy, endeavor to structure your online therapy so the content and instructions are understandable and doable by the client. Ensure the content is relevant to the child (Sousa, 2017), and share the rationale regarding the tasks. The rationale explains *why* they are doing the tasks and the *benefits* of doing them. Keep the rationale short and provide examples to which they can relate. Use vocabulary they can understand and, avoid sharing too much information during the session; we only remember a portion of what we hear. It is a balancing act.

Apply therapeutic adjustments just as you would in-person, i.e., simplify the task according to the child's needs and never give a child a task to practice unless they can do it. If

a child diligently practices a task incorrectly, the child is at risk of establishing incorrect patterns, not to mention frustration for all. Last, but certainly not least, online therapy is about pacing. Pace the therapy session commensurate with the child's attention and oral capabilities. This determines the therapy tasks you choose to do, how quickly you move through the material, and how much and in what way you share the rationale with the child.

CONCLUSIONS

This dissected and detailed view of online service delivery reveals a multi-faceted mode of delivery for the orofacial myologist. Although the essence of online service is the same as in-person, the preparations and considerations for online service goes beyond turning on a computer and doing therapy. Most would agree, there is a significant learning curve to adjust to the technology issues and learn how to generate innovative methods to compensate for the lack of in-person connectivity.

There is no doubt that as a result of the COVID-19 pandemic, online health services have quickly become an essential way of life. This urgency has caused practitioners to scramble for helpful information, from legal issues and confidentiality, to licensing, to technology and ehelper training, to seeking evidence-based support. Then, there is the challenge of blending it all together to provide consistently successful

Previous research has provided support for online service delivery in speech-language pathology and dentistry. However, we are aware of no studies on this topic specifically targeting the field of orofacial myology. This tutorial, written by three experienced orofacial myologists, provides a compilation of our clinical experience based on published evidence for online service delivery. With the many suggestions provided, it is our hope that this article will support online clinical practice and stimulate research to support its efficacy.

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