



# LSVT Global® Virtual SLP Mini-Conference

**Title:                    Telepractice in Private Practice and University  
Clinics for Adults with Neurological Disorders**

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**LSVT Global's Virtual SLP Mini-Conference**

Telepractice in Private Practice and University Clinics for Adults with Neurological Disorders




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**Logistics**


- ✓ Handouts are available in control bar
- ✓ Microphones are all muted
- ✓ You can type in questions at any time, we will answer at the end

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**Polling Question: Who is joining us today?**

- SLP professional, not LSVT LOUD certified
- SLP student, not LSVT LOUD certified
- LSVT LOUD clinician with LSVT eLOUD training
- LSVT LOUD clinician without LSVT eLOUD training
- Other

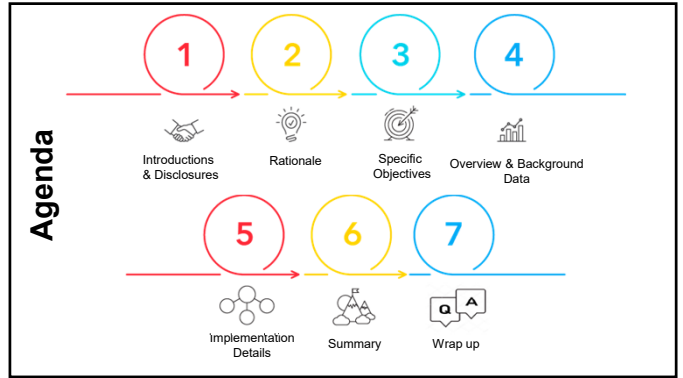


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# Telepractice in Private Practice and University Clinics for Adults with Neurological Disorders

Lorraine Ramig, Ph.D., CCC-SLP, Deborah Theodoros, Ph.D.,  
Geraldyn Schulz, Ph.D., CCC-SLP, and Jessica Galgano, Ph.D., CCC-SLP

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## Author Introductions

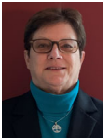


**Lorraine Ramig, Ph.D., CCC-SLP**  
Dr. Ramig is Chief Scientific Officer (CSO) and Co-Founder of LSVT Global, Inc. She is a Research Professor at the University of Colorado-Boulder and an Honorary Adjunct Professor at Columbia University-Teachers College, NYC and a Research Scientist at the National Center for Voice and Speech-Denver. Her research has been funded by the National Institutes of Deafness and Communication Disorders (NIH-NIDCD) for over 20 years. She has received ASHA Honors. Dr. Ramig and her colleagues pioneered LSVT LOUD, an evidence-based treatment for Parkinson's Disease with application to other neurological disorders.




**Deborah Theodoros, Ph.D.**  
Emeritus Professor Deborah Theodoros at The University of Queensland, Brisbane, Australia is a world leading researcher in telepractice with a focus on the development, validation, and implementation of speech pathology services via telepractice, and the education of the profession in this mode of service delivery. She has a career total of 187 publications (149 articles published in press, 38 book chapters), and three co-edited books.

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**Geraldyn Schulz, Ph.D., CCC-SLP**  
Geraldyn Schulz, PhD, is a Professor at the George Washington University and the Editor for SIG18 Telepractice Perspectives. Her research focus is on neuromotor control of speech and in evaluating various treatments in persons with neurologic disorders especially in Parkinson's Disease.



**Jessica Galgano, Ph.D., CCC-SLP**  
Jessica Galgano is Faculty Instructor at New York University Langone School of Medicine, LSVT LOUD faculty and clinical expert with LSVT Global, Inc., and executive director of Open Lines Speech and Communication, a private, medically-based free standing outpatient practice. Her research and teaching interests include neurologically based communication and motor speech disorders acquired post stroke and associated with movement disorders and utilization of brain imaging modalities to examine phonation and limbic-motor circuitry during voicing.

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## Disclosures

Non-financial relationships include a preference for the LSVT LOUD as a treatment technique.

Financial Relationships include:  
**Dr. Ramig** is employed as Chief Scientific Officer and has ownership interest in the for-profit company LSVT Global, Inc. She is in full compliance with Federal Statute 42 C.F.R. Part 50, Subpart F (see <https://grants.nih.gov/grants/policy/foi/index.htm>). She has fully disclosed any conflict of interest and her conflict-of-interest management plan has been approved by the Office of Conflict of Interest and Commitment at the University of Colorado, Boulder and she is in full compliance. Dr. Ramig reports grants from the National Institutes of Health during the conduct of the study.  
**Dr. Theodoros** receives lecture honorarium for webinars from LSVT Global, Inc.  
**Dr. Schulz** is a consultant to LSVT Global, Inc. and receives honorarium and consulting fees.  
**Dr. Galgano** is a consultant to LSVT Global, Inc. and receives honorarium and consulting fees.

**All speakers are in full compliance.**

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## Telepractice

Telepractice is the application of telecommunications technology to the delivery of speech language pathology and audiology professional services at a distance by linking clinician to client or clinician to clinician for assessment, intervention, and/or consultation.

Telepractice is an accepted model of treatment delivery recognized by a range of professional organizations globally.

(ASHA taken from: <https://www.asha.org/Practice-Portal/Professional-Issues/Telepractice/>)

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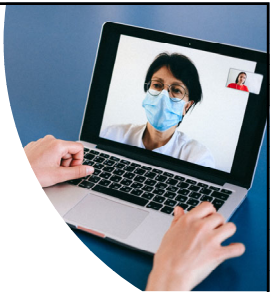


## A Critical Tool

We have recognized for years that telepractice may be a cost and time effective option when access to speech-language services can be a challenge when a client lives remotely or has physical or financial limitations.

(Brennen et al., 2011; Theodoros et al., 2016)

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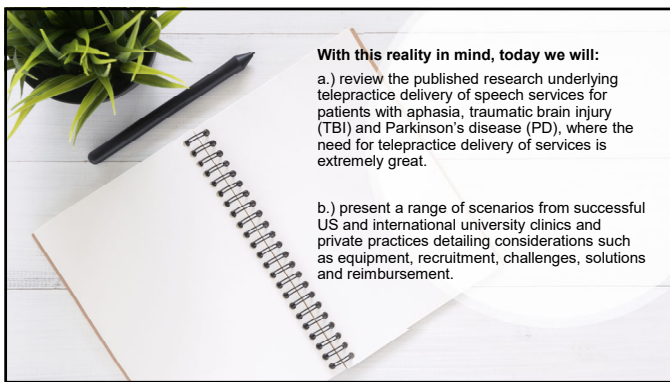
## A Critical Tool

However, the COVID-19 pandemic has elevated the need for knowledge of telepractice delivery of speech treatment to an urgent level. Today, telepractice has quickly become a critical tool in caring for patients while maintaining safety for both patients and clinicians during the COVID-19 pandemic

Dr. Bas Bloem, MD, PhD and colleagues in Movement Disorders suggested,

***“the silver lining of this crisis is that it accelerates delivery of remote care for those with chronic neurological conditions.”*** (2020)

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**With this reality in mind, today we will:**

- a.) review the published research underlying telepractice delivery of speech services for patients with aphasia, traumatic brain injury (TBI) and Parkinson’s disease (PD), where the need for telepractice delivery of services is extremely great.
- b.) present a range of scenarios from successful US and international university clinics and private practices detailing considerations such as equipment, recruitment, challenges, solutions and reimbursement.

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## Specific Objectives

-  Explain the rationale and research supporting telepractice delivery of speech treatment
-  Recognize barriers and facilitators in implementation of telepractice in a University Clinic
-  Describe key factors in a successful and sustainable private telepractice clinic

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## Telepractice for Adult Neurological Speech and Language Disorders: Research Evidence

Emeritus Professor Deborah Theodoros PhD  
School of Health and Rehabilitation Sciences  
The University of Queensland, Brisbane  
Australia




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## Overview of Research Evidence

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## Adult Speech and Language Disorders

### Assessment (Weidner & Lowman, 2020)

- Validity & reliability of online assessment established for standardised & informal assessments, & discourse analysis
- Aphasia – Boston Naming Test, Boston Diagnostic Aphasia Examination, Western Aphasia Battery-Revised
- Dysarthria – informal oromotor assessment, Frenchay Dysarthria Assessment, Assessment of Intelligibility of Dysarthric Speech
- Apraxia – Apraxia Battery for Adults
- Adults with communication disorders following:
  - traumatic brain injury, stroke, Parkinson's Disease, neurosurgery
- Overall findings:
  - Online assessments found to be comparable to face-to-face assessments



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## Adult Speech and Language Disorders

### Intervention (Weidner & Lowman, 2020)

- Evidence Levels II–IV
- Majority of studies involve treatment of:
  - aphasia
  - cognitive-communication disorders
  - dysarthria – mainly Parkinson's Disease
- Emerging research involving online group therapy:
  - TeleGAIN group therapy for aphasia
  - eLOUD and PROUD group therapy for dysarthria

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## Adult Speech and Language Disorders

### Intervention (Weidner & Lowman, 2020)

- Online training of care-givers of people with TBI has been a focus of research (Rietdijk et al, 2012)
- Variety of technologies and models of care used in intervention studies:
  - synchronous and asynchronous interactions
    - PC-based videoconferencing, mobile platforms (tablets), telephone, short messaging systems (SMS), web-based programs
  - hybrid models of care involving online and face-to-face interactions
- Overall findings: Outcomes for telepractice intervention comparable to face-to-face model of care for some interventions while others require further development and testing

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## Telepractice Applications

Aphasia

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## Word –finding treatment online

### Woolf et al (2016)

- RCT comparing FTF & remotely delivered word-finding therapy for people with aphasia (PWA) - 21 PWA post left CVA
- 4 intervention groups:
  - Remote therapy delivered from University laboratory
  - Remote therapy delivered from clinical site
  - FTF therapy
  - Attention control condition - conversation with students

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## Word –finding treatment online

### Treatment protocol

- 8 x 1 hour sessions twice per week
- Participants & Clinician used workbooks with pictures of 50 target words
- Therapy tasks:
  - Semantic verification – 'lemon' – "Can you squeeze it?" "Is it sweet?"
  - Picture naming:
    - Semantic cue
    - Sentence or phrase completion
    - Phonemic cue
    - 1<sup>st</sup> syllable cue
    - Word provided for repetition
    - Word repeated 3 times

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### Word –finding treatment online

**Technology**

- Therapy sessions - Facetime on iPads
- Self-administered practice
  - Powerpoint of target words with embedded audio files for phonemic cue & whole word cue

**Findings**

- Good compliance & satisfaction with treatment
- Online treatment fidelity high
- All participants treated improved in picture naming significantly more than control group
- Remote groups demonstrated greatest improvement on both treated & untreated words
- Naming not improved in conversation

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### TELEGAIN

- Pitt, Theodoros, Hill & Russell (2018)
- Telerehabilitation Group Aphasia Intervention & Networking (TeleGAIN)
- Online aphasia group therapy program

**Goals:**

- Create opportunities for communicative success
- Share personal life history
- Provide support for living successfully with aphasia through networking with others

- Technology – Adobe Connect – Multi-point videoconferencing

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### TELEGAIN

Week	Therapy resources	Optional activities
<b>Week 2 Family</b> Share information about family members and memories Discuss activities enjoyed with family and problem solve any participation difficulties	Photos and resources from group members e.g. Family members, important family events Pictures of families engaged in leisure activities Family related cartoons Comprehension quiz Sentence completion about family relationships Scrambled sentences of functional questions related to family	Picture description Auditory word to picture matching Sentence generation for cartoons Comprehension quiz Sentence completion Practice of conversational questions about family
<b>Week 3 Travel</b> Share travel stories, memories and photos Plan a trip or outing for a tourist or self	Maps – world, country, state, city Photos and resources from group members e.g. travel photos, postcards, souvenirs Photos of unusual items around the world Communication supports for planning a trip Photos of national icons	Picture naming (written, verbal or multiple choice)

Pitt, Theodoros, Hill & Russell (2017). The development and feasibility of an online aphasia group intervention and networking program – TeleGAIN. <https://doi.org/10.1080/17549507.2017.1369567> See supplementary materials

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### TELEGAIN

- N = 18 participants
- 10 females, 8 males
- 7 communication partners assisted partners in using technology

- 12 x 1.5 hour therapy sessions – one per week for 12 weeks
- Three to four people with aphasia in each group

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### TeleGAIN PARTICIPANTS

- 11 major city
- 5 inner regional areas
- 1 outer regional area
- 1 travelled outer regional Australia extensively during study

Pitt et al (2018)

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### TeleGAIN

Telerehabilitation Group Aphasia Intervention and Networking

**Group Therapy**  
 This is a list of what we will talk about in the teleGAIN group. If you have any photos, drawings, books or other things you would like to share, please send them to Rachelle to use online. You may need help to do this. You can email or post these to Rachelle. Rachelle will return these to you as soon as possible.

**Agenda:**


1. Welcome and introductions
2. Family
3. Travel
4. Your hobbies and interests
5. Photos of your family
6. Your photos
7. Your hobbies and interests
8. Photos of your family
9. Your photos
10. Your hobbies and interests
11. Photos of your family
12. Your photos

Pitt et al (2018)

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## TeleGAIN

Telerehabilitation Group Aphasia Intervention and Networking



Communication supports key to

- Allowing shared participation
- Sharing personal narratives
- Promote engagement

Pitt et al (2018)

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## TELEGAIN

Findings
Online aphasia group therapy resulted in positive changes in communication related quality of life <ul style="list-style-type: none"> <li>• Most notable changes in Participation domain</li> </ul> Group therapy online allowed for practice of a variety of different speech & discourse types
High satisfaction with TeleGAIN
<ul style="list-style-type: none"> <li>• All participants would recommend to others</li> </ul> Frequency & experience of technology breakdowns impacted on satisfaction <ul style="list-style-type: none"> <li>• loss of audio or video in some groups</li> </ul>
Conclusion
Aphasia group therapy online is feasible - results in improvements in communication related quality of life Offers an alternative to FTF therapy for people with aphasia & improves access to services

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## ACKNOWLEDGEMENT

Dr Rachelle Pitt

For slides from conference presentation at the International Aphasia Rehabilitation Conference, London, UK, 2016

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## Telepractice Applications

Motor Speech Disorders

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## Home-based LSVT LOUD Online

Theodoros, Hill, & Russell (2016)

- 52 participants
  - Non-Metro Online (N=21)
  - Metro FTF (N=16)
  - Metro Online (N=15)
- Perceptual, acoustic, quality of life (DIP, PDQ-39) & communication partner ratings

Findings

- Significant improvements in perceptual, acoustic & QoL measures pre-post Tx in both online groups
- No significant difference in mean change in monologue SPL post Tx between online
- Comparable clinical & QoL outcomes for online & FTF groups
- No significant impact of location on online Tx

Conclusion

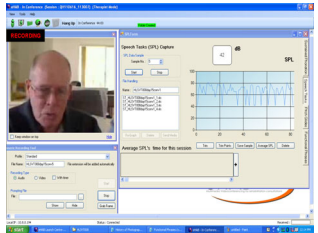
- Online intensive speech Tx for PwPD comparable to FTF intervention

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## Home-based LSVT LOUD Online

eHAB® <https://www.neorehab.com/>

- Completely controlled remotely
- Real-time videoconferencing
  - Single & multi-point
- Store & forward features
- Multi-media
  - Images
  - Written material
  - Records, plays back audio and video files
- Acoustic measurement software
  - Vocal sound pressure level & frequency

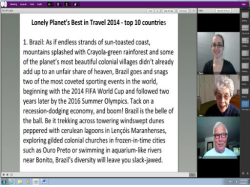


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### Group Therapy Online – eLOUD & PROUD

Quinn, Park, Theodoros, & Hill (2018)

- Group treatment online in home
- 90 mins, 2 x week for 4 weeks
- 8 PWP – Had LSVT®LOUD (6-11mths ago)
- 3 groups: 2 x groups of 3; 1 x group of 2



- Adobe Connect
  - Software installed on participant's computer by SLP at time of Ax
  - Participants provided with technology setup instruction booklet & training

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### Group Therapy Online – eLOUD & PROUD

eLOUD & PROUD

- Adapted from LOUD & PROUD (Edwards et al, 2018)
- Focus on maintaining 'loud voice'

Adaptations for online environment:

- Removed morning tea activity
- Removed writing & drawing activities due to time taken to do these online
- Move pairs of participants into online breakout rooms to practice reading & conversation tasks
- Play simulated background noise during conversation tasks to create more realistic communication environment

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### Group Therapy Online – eLOUD & PROUD

Session activities	
Introduction & home practice review	Whole group discussion online, selection of activities
Peer calibration of vocal loudness on sustained phonation & 10 functional phrases (3 x each)	Each PwPD performs tasks & peers rate/discuss success Functional phrases specific to persons communication needs
Pitch glides – 3 x each	Each PwPD performs tasks & peers rate/discuss success
Reading in pairs	2 people placed in online breakout room, Clinician able to go between rooms to monitor
Paired discussion of reading task	As above
Group conversation	Whole group discussion online
Cognitively-loaded task that challenged PwPD to use loud voice while concentrating on demanding task	Whole group online Short-term memory games, mental calculations, complex verbal explanations & word-finding tasks
Determining home practice	Completed daily home practice as prescribed post-LSVTLOUD

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### Group Therapy Online – eLOUD & PROUD

Findings

- Sig ↑ SPL sustained phonation, reading & monologue PRE-POST (3.5-5.4dB)
- Sig ↑ SPL sustained phonation & reading PRE-FU (4.3-5.1dB)
- No significant differences in psychosocial measures

- Participant satisfaction:
  - Overall high satisfaction
  - Considered it to be acceptable & cost-effective for maintenance therapy
  - Provided opportunity to meet others
  - Would participate in online therapy in future
  - Some dissatisfaction with usability of technology

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### LOUD for LIFE Class: What Happens?

Check in, discuss home practice from previous week and assign new home practice.

**Home Practice Competitions!**

**Daily Exercises:**

- Maximum Duration of Sustained Vowel Phonation (**Long Ahs**) – 6+ reps
- Maximum Fundamental Frequency Range (**High/Low Ahs**) – 6+reps each
- Maximum Functional Speech Loudness (**Functional Phrases**) – 1 rep of 10 phrases.
  - Choral, Mixed Order, Alternate sides of the room.

**Goal for all Exercises: LOUD with Good Quality!  
Drive Motor Practice!**

**Challenge:** Add Salient Motor and Cognitive Tasks while doing Daily Exercises

**Motor:** Mimic functional movement for upper body and hands while seated:  
Reaching for water bottle, buttoning, writing, walking around (if able).

**Cognitive:** Generate words by category or letter (salient topic of the day); Memory Tasks

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### LOUD for LIFE Class: What Happens?

**Communication/Cognitive Activities**  
Conversation/Cognitive Activities in a fun and motivating environment!

**Activities are:**

**Salient:** Focused on communication/cognitive goals of the class

**Intensive:** Keep everyone talking, no downtime!

**Focused on Calibration:** Reinforce effort and loudness needed in everyday life!

**Activities:**

- Plays
- Murder Mystery Parties
- Coffee House
- Impromptu Speeches
- Solve Picture Puzzles
- Poetry Reading
- Book/Movie Review
- Hobby Demonstration
- Conversation discussions of current events, common topics, etc.

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### Be Clear Online

- Intensive online treatment developed for nonprogressive dysarthria (Whelan, Theodoros et al) based on FTF version (Park et al, 2016)
- Focus on producing CLEAR speech using most appropriate strategy for client – What makes them CLEAR?
  - Reduced rate
  - Increased volume
  - Exaggerated articulation

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### Be Clear Online

- 15 participants - nonprogressive dysarthria (TBI & CVA)
- Treated online in home or community centre
- Technology – CoviU <https://www.coviu.com/>
- Outcome measures:
  - Speech intelligibility
  - Speech acoustics
  - Quality of life
  - Communication partner ratings
- Data analysis ongoing



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### Be Clear Online

- PHASE 1
  - Pre-practice session
- PHASE 2
  - Intensive sessions
- HOME PRACTICE

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### Be Clear Online

Tasks	Time	Comments
Functional phrases <ul style="list-style-type: none"> <li>• 10 phrases, 5 reps</li> <li>• "Did anyone feed the dogs?"</li> <li>• "What is happening tomorrow?"</li> </ul>	~10 mins	Blocked practice KR feedback (clear or unclear) External focus Clarity rating
Bio statements & service requests <ul style="list-style-type: none"> <li>• 10 phrases, 5 reps</li> <li>• "My name is..."</li> <li>• "I would like a ...."</li> </ul>	~ 10 mins	Blocked practice KR feedback (clear or unclear) External focus Clarity rating
Functional speech tasks <ul style="list-style-type: none"> <li>• Alternate between reading, picture description &amp; conversation</li> </ul>	~ 30 mins 3 attempts per stimulus item to achieve clear	Random practice KR feedback (clear or unclear) External focus Clarity rating


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### Be Clear Online technology selection

Task	Interaction	Stimuli	Client Response	Technical function
Phase 1 - Shaping Clear speech	Real-time	Video examples of Clear speech, text for reading, audio feedback of performance	Verbal Rating of Clear speech on rating scale (1-10)	VC, audio recording & playback, play video examples, display text, whiteboard-rating scale
Pre-Phase 2	Asynchronous	List of everyday functional phrases & service requests	Written	Client emails to clinician
Phase 2 - Intensive Tx Reading functional phrases & service requests, reading aloud	Real-time	Text Audio feedback of performance	Verbal Rating of Clear speech on rating scale	VC, display text, audio recording & playback, whiteboard-rating scale
Phase 2 - Intensive Tx Picture description	Real-time	Images Audio feedback of performance	Verbal Rating of Clear speech on rating scale	VC, display images, audio recording & playback, whiteboard-rating scale
Phase 2 - Intensive Tx Conversation	Real-time	Conversation with clinician Audio feedback of performance	Verbal Rating of Clear speech on rating scale	VC, audio recording & playback, whiteboard-rating scale
Independent home practice	Offline	Functional phrases, service requests, reading text, functional speech tasks (using phone etc)	Verbal	USB drive, recording device such as phone

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### Be Clear Online Session



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## Telerehabilitation Clinic @The University of Queensland



Emeritus Professor Deborah Theodoros  
School of Health and Rehabilitation Sciences  
The University of Queensland, Brisbane  
Australia







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## Telerehabilitation Clinic

- Opened June 2015 - Philanthropic donation - Bowness Family Foundation

**Purpose:**

- Clinical education
  - Prepare next generation allied health professionals to use leading-edge technologies in clinical practice
- Clinical & educational research
  - Evaluate clinical outcomes, student learning experiences, client opinion, technical attributes, & economic analyses
- Service provision
  - Provide greater access to audiology, occupational therapy, speech pathology and physiotherapy services

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## Technology

**eHAB** ([www.neorehab.com](http://www.neorehab.com))

- Secure, interactive platform
- Video & Audio recording capability
- Interactive whiteboard

**Zoom**  
([www.zoom.us](http://www.zoom.us))







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## Services

- Speech Pathology**
  - Speech & language therapy children & adults
  - In-home, rural public & private schools
- Occupational Therapy**
  - School readiness skills & behavior management
  - In-home, rural public & private schools
- Physiotherapy**
  - Musculoskeletal disorders
  - Cardiac rehabilitation – individual & group
  - Parkinson's Disease
- Audiology**
  - Remote testing from UQ to regional hospital

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## Student training in telepractice

**Telehealth for Clinical Practice**

- Online curriculum – edX Edge platform
- Designed for allied health professionals
- Flexible, modular format
- Practicum

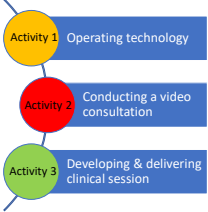





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## Practicum

- Designed to provide hands-on training for students & clinicians
- Conducted in any telehealth facility
- Approx 2.5 – 3 hrs
- 3 practical activities – to be completed consecutively
- 2 competency rating scales for feedback on performance
- Peer-partner learning model



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### Practicum

**Activity 1 – Operating the technology**

- Facilitator provides demonstration of technology in clinic
- Task 1 - Participants review online technology information/handbooks etc
- Task 2 - Participant practices operating all functions with peer
- Task 3 – Participant (clinician) works through basic trouble-shooting activities with peer (client)

*Clinician cannot see/ hear client*  
*Client cannot see/hear clinician*

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### Practicum

**Activity 2 – Conducting a video consultation**

- Initial setup with ‘client’ to optimize videoconsultation & trouble-shooting
- Interview with ‘client’
- Peer rates ‘clinician’ on Video consultation Competency Rating Scale
  - Technology competency
  - Client instruction
  - Communication skills
  - Interpersonal skills

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### Practicum

**Activity 3 – Developing & delivering clinical session**

- Task 1 - Adapt a clinical session to online
- Task 2 – Deliver clinical session
- ‘Client’ completes Clinical Session Rating Scale
  - Adaptation of session to online
  - Session delivery
  - Digital resources

Task	Interaction	Situaal	Client response	Technical function

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### Innovation to Implementation For Telehealth (I-2-I 4 Telehealth)

- Knowledge translation guide to facilitate implementation of a telehealth service
- Identifies key stakeholders
- Develops a plan for communicating & engaging with stakeholders

**I-2-4 Telehealth: 7 Steps**

1. Plan  
2. Implement  
3. Evaluate  
4. Monitor  
5. Engage  
6. Communicate  
7. Adapt

Centre of Excellence in Telehealth  
<https://cretelehealthcentre.uq.edu.au/our-work>

Theodore et al (2016). Innovation to Implementation for Telehealth: A Practical Guide to Knowledge Translation in Telehealth. CRC in Telehealth Australia.

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## Telepractice in University Clinic Settings

Geralyn Schulz, PhD, CCC-SLP  
Professor  
Department of Speech, Language, & Hearing Sciences, The George Washington University  
Editor SIG 18 Perspectives

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### Telepractice in SLP Programs: Prior to Covid-19

Survey of Telepractice in Speech-Language Pathology Graduate Programs, 2015  
Katie M. Constantine, The University Of Akron, Honors Research Projects

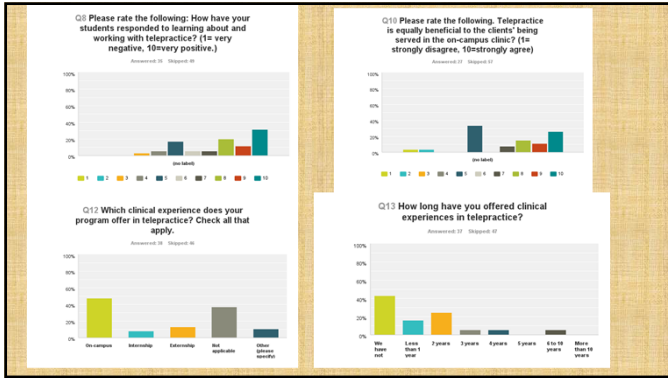
Q1 Telepractice is:

Q2 How long have you included telepractice in your speech-language pathology curriculum?

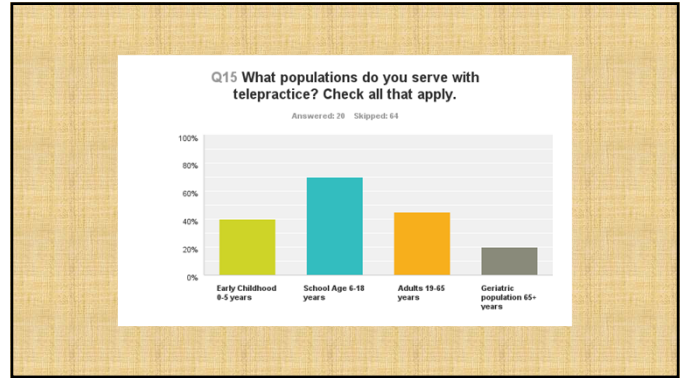
What challenges did you experience including telepractice in your curriculum?

- "Understanding licensure requirements; setting up expectations and cultural differences in how services are typically delivered."
- "Having enough time to fit it in."
- "Ongoing tech support and updating of software and hardware, ongoing staff training."
- "Making the transmission HIPAA secure; working with the computer system at the receiving site which may have insufficient band width."

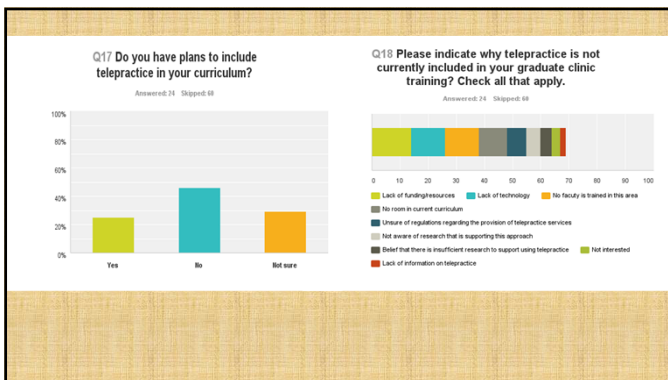
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### Telepractice in SLP Programs: Post Covid-19




- All SLP Graduate Programs had to go “tele” -- YIKES
  - CAA had to grant hours acquired via tele were “OK”
- However, there were clinical speech pathology programs that had been successfully utilizing telepractice as a service delivery model to provide services for a range of client populations and as a way to train future SLP’s (Grogan-Johnson et al, 2015).
  - For example, the University of Maine’s Speech, Language and Hearing Center, was one of the first university clinics to provide telepractice services to clients with aphasia and TBI. (<https://umaine.edu/telespeech/>). They have also created a training manual ([https://digitalcommons.library.umaine.edu/fac\\_monographs/220/](https://digitalcommons.library.umaine.edu/fac_monographs/220/)) that serves as an excellent resource for any university clinic/program that is in the early stages of setting up speech language services provided through telepractice.

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### George Washington University Speech and Hearing Center

- The SLHS Clinic started implementing service delivery via tele in 2014, both for clients in the US and abroad.
- We incorporate our training of graduate students within the context of their clinical rotations
  - the training of telepractice services is specific to the population, at the same time students receive training on the technical and legal aspects of telepractice.
- In 2017, we created a dedicated telepractice “room” & filled it with tele equipment.
- We also started the process to be allowed to use Zoom (Business) to provide service to a growing number of our clients.
  - It took took over a year to get through the GW IT folks and lawyers BUT WE SUCCEEDED!
  - Then we found out that clinical hours acquired using tele Not accepted. Then after Covid-19 they were.



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### Ingredients for Successful University Telepractice

- Technology: sufficient computing power both in the clinic and for their clients, a HIPPA compliant videoconferencing platform.
- Student Clinician Training
- Supervision: Qualified, experienced clinical supervisors
- Compliance: ASHA code of ethics (including tele-ethics), Health Insurance Portability and Accountability Act of 1996 (HIPAA).
- Assessing Outcomes: Procedures to Assess Student Clinician and Client Progress and Satisfaction

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## Ingredients for Successful University Telepractice: Technology

sufficient computing power both in the clinic and for their clients,



a HIPAA compliant videoconferencing platform.




Standard (ANSI/ISO 15926)	Implementation Requirements	Key Factors	Support in Implementation
15926-1-10-1	15926-1-10-1	15926-1-10-1	15926-1-10-1
15926-1-10-2	15926-1-10-2	15926-1-10-2	15926-1-10-2
15926-1-10-3	15926-1-10-3	15926-1-10-3	15926-1-10-3
15926-1-10-4	15926-1-10-4	15926-1-10-4	15926-1-10-4

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## Ingredients for Successful University Telepractice: Student Clinician Training

- What aspects of clinical instruction are most important when teaching SLP graduate students about telepractice service delivery?
  - academic training programs should pay increased attention to teaching students: the nuances of nonverbal communication skills; literature associated with this service delivery model; solving problems associated with the Internet; and how to address clients' fears about telepractice.
- How many hours of instruction should SLP/SLT graduate students receive in telepractice technology, confidentiality issues pertinent to telepractice and the Internet, and in telepractice role-playing?
  - students should have a minimum of two hours of instruction related to confidentiality and HIPAA. two hours of practice (via role playing) is recommended before students implement telepractice with clients.


Overby, MS & Baft-Neff, A (2017) Perceptions of telepractice pedagogy in speech-language pathology: A quantitative analysis. *Journal of Telemedicine and Telecare*, 23(5) 550-557



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## Ingredients for Successful University Telepractice: Supervision


Qualified, Experienced Clinical Supervisors  
 Certified  
 Experience in providing telepractice  
 Tech savvy  
 Matching clients w/ student clinicians  
 Supervision Provided for each Session  
 Frequent Supervisory Conferences  
 Frequent Student Evaluation  
 Supervisor Evaluation



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## Ingredients for Successful University Telepractice: Compliance

- ASHA code of ethics (including tele-ethics).
  - Use of telepractice must be equivalent to the quality of services provided in person and consistent with adherence to the Code of Ethics (ASHA, 2016a), Scope of Practice in Audiology (ASHA, 2018), Scope of Practice in Speech-Language Pathology (ASHA, 2016b), state and federal laws (e.g., licensure, Health Insurance Portability and Accountability Act [HIPAA]; U.S. Department of Health and Human Services, n.d.-c), and ASHA policy.
- Health Insurance Portability and Accountability Act of 1996 (HIPAA).
  - HIPAA compliance is adherence to the physical, administrative, and technical safeguards outlined in HIPAA, which covered entities and business associates must uphold to protect the integrity of Protected Health Information (PHI).
  - <https://www.atlantic.net/hipaa-compliant-hosting/hipaa-compliance-guide-what-is-hipaa/>



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## Ingredients for Successful University Telepractice: Assessing Outcomes

- Client Outcomes**  
 Progress in achieving individual treatment goals is measured at least weekly Standardized and informal assessments to compare Pre-post treatment to determine client's progress and benefits of the program.
- Student Outcomes**  
 Student learning outcomes should be assessed at mid-semester and at the end of each semester using an Evaluation form specifically geared toward the acquisition of knowledge and skills in telepractice services (ASHA, 2005; 2013).
- Telepractice Outcomes**  
 A Consumer Satisfaction Survey should administered at the end of each therapy program as a measure of the effectiveness of the training program. Clients, caregivers, teachers, administrators and/or other people that are involved in the client's therapy program complete the survey. The effectiveness of the training program and speech therapy telepractice is also determined by the progress that each client demonstrates in individual therapy programs.

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## Roles and Responsibilities for audiologists and SLPs in the provision of services via telepractice

(ASHA, [https://www.asha.org/practice-portal/professional-issues/telepractice/#collapse\\_1](https://www.asha.org/practice-portal/professional-issues/telepractice/#collapse_1))

- understanding and applying appropriate models of technology used to deliver services;
- understanding the appropriate specifications and operations of technology used in delivery of services;
- calibrating and maintaining clinical instruments and telehealth equipment;
- selecting clients who are appropriate for assessment and intervention services via telepractice;
- selecting and using assessments and interventions that are appropriate to the technology being used and that take into consideration client and disorder variables;
- being sensitive to cultural and linguistic variables that affect the identification, assessment, treatment, and management of communication disorders/differences in individuals receiving services via telepractice;
- training and using support personnel appropriately when delivering services;
- being familiar with the available tools and methods and applying them to evaluate the effectiveness of services provided and to measure outcomes;
- maintaining appropriate documentation, including informed consent for use of telepractice and documentation of the telepractice encounter;
- being knowledgeable about and compliant with existing rules and regulations regarding telepractice, including security and privacy protections, reimbursement for services, and licensure, liability, and malpractice concerns; and
- collaborating with physicians and other practitioners for timely referral and follow-up services.



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### ASHA SIG 18 TELEPRACTICE

- It is the mission of SIG 18 to provide education, leadership, and advocacy for issues in telepractice for audiology and speech-language pathology.
  - Provides resources and education related to telepractice.
  - Promotes the development and dissemination of research in telepractice.
  - Advocates for professionals who wish to engage in telepractice, including adequate provider reimbursement.
- Perspectives of the ASHA Special Interest Groups is the online peer-reviewed scholarly review journal of the SIGs. SIG 18 offers new self-study CE activities through Perspectives each year.
- SIG 18 has an online community where affiliates can discuss topics related to telepractice.

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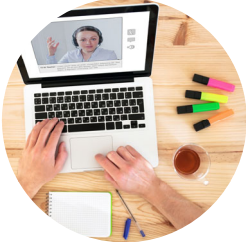
### Implementation of Telepractice in Private Practice

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### TELEPRACTICE in Private Practice

- Supported by a variety of rapidly growing individual and societal needs
  - e.g., access to specialists; inequity of access to quality services (Wales, et al., 2017)
- Reimbursement of online services has previously been a barrier (Ben Aharon, 2018)
- Has temporarily and may permanently shift towards coverage due to current demand and need
- Increasing demand moving forward




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### TELEPRACTICE in Private Practice

- Research regarding online services specifically from this sector is needed
- Research conducted specifically within this setting is promising
  - has the potential to improve access to speech treatment services for many individuals living
    - in the current time of social isolation and distancing
    - in geographically remote areas

**WHY IT WORKS**

- Increases access to services
- Reduces burden of travel
- Reaches more individuals with communication needs
- Alleviates the damaging effects of communication disorders on HR-QOL, social participation and carepartner burden



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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice

**Challenges and Solutions: Technology/Equipment**

**Challenges**

- Connection difficulties
- Video/audio quality issues

**Solutions**

- Optimize success by setting up equipment and troubleshooting internet connection or online platform use
- Address sound dampening issues in advance
- Consider sound dampening on side of clinician and client

*Brianna Rogers, MS, CCC-SLP  
Open Lines S&C*

*Ensure adequate audio quality and reduce any dampening. This will also reduce interruptions, so you do not waste your or your client's valuable time.*



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### Video Demonstration: Measuring Microphone to Mouth Distance and Adjusting Audio Settings to Reduce Dampening



*Jessica Galgano*

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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice


**Challenges and Solutions: Technology/Equipment**

**Challenges**

- Connection difficulties
- Video/audio quality issues

**Solutions**

- Preparation is key



*“Being prepared with materials ahead of time so clients can print off activities and having contingency or back-up activities in that you can draw on immediately are important to ensure saliency and maintain participation and motivation.”*

Olivia Kelly, MS, CCC-SLP, Open Lines Speech and Communication

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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice

**Challenges and Solutions: Technology/Equipment**

**Challenges**


- Connection difficulties
- Video/audio quality issues

**Solutions**

- Be flexible and adaptable
  - Use any opportunity to target goals, add load, and facilitate generalization.

*“Adapt when necessary, this pandemic has taught us and our clients how to do so, whether we have liked it or not! Clients participating in telepractice in their home can lead to more opportunities to target calibration so skills are generalized. Dual-motor tasks can easily be incorporated within hierarchy practice, such as having your client perform activities of daily living, such as chores or speaking with a family member who calls during the session.”*

*“It is important to be flexible throughout your sessions; there is always an opportunity to target goals! For example, it may take time to help an individual connect to the online platform, but you can capitalize on this time by encouraging your client to use their louder voice while they communicate with you on the phone until they can get online. It is a great opportunity to calibrate your patient and target functional, real-life practice with cognitive load!”*



Brianna Rogers, MS, CCC-SLP, Open Lines Speech and Communication

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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice

**Challenges and Solutions: Lack of Training & Support about continuously changing rules and regulations**

**Challenges**

- Continuously changing rules, regulation, and policies regarding laws and ethics on online professional service provision, security regulations, financial considerations, and reimbursement policies

**Solutions**

- Provide continuous support and training at all levels
  - Executive Level
    - Legal
    - Financial
    - Healthcare management (e.g., reimbursement)
  - Clinical Level
    - Safe and ethical use of technologies, wifi management, online platforms, and apps



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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice

**Challenges and Solutions: Lack of Online Training & Support**

**Challenges**

- Lack of online experience, training and support

**Solutions**

- Continuous support and training at all levels
  - Clinical
    - Regular Check-ins
      - Professional satisfaction
      - comfort with application & use
      - ability to securely and effectively collect, record, store and transmit data
      - confidence with technological application of online dx and tx protocols
    - Patient satisfaction



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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice

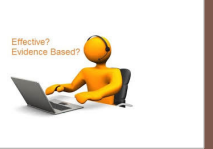
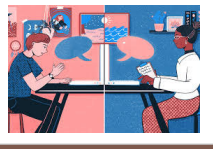
**Challenges and Solutions: Effective Online Service Provision**

**Challenges**

- Limited but emerging research available in online assessment and treatment of individuals with NCD
- Limited experience with online clinical service delivery

**Solutions**

- Refer to the available and emerging research
- Provide continuous training, supervision and support for:
  - Effective, evidence-based online clinical administration of assessment measures (e.g., WAB-r, BNT, OME, motor speech examinations, ABA (Weidner & Lowman, 2020) and online treatment protocols (e.g., LSVT LOUD; CILT; vNEST)
  - Online data collection
    - Objective measurement of outcomes to monitor progress and measure effectiveness of online tx

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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice

**Challenges and Solutions: Recruitment**

**Challenges**

- Difficulty recruiting people for services
- Occasional concerns about the use of online platforms, programs or apps

**Solutions**

- Fortunately, the vast majority of adult clients with neurogenically based communication disorders are grateful for the opportunity to receive online tx, especially when not able to be seen FTF.
- Increased practice with and training for navigating the online world is resulting in increased acceptance of telepractice and use of online platforms since the pandemic
  - greater ease, comfort, access to technologies and apps



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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice

**Challenges and Solutions: Recruitment**

**Challenges**

- Occasional concerns about the use of online platforms, programs or apps

**Solutions**

- Problem-solve concerns and both in advance and throughout the diagnostic and therapeutic process

**“ BE CAREFUL AND THOUGHTFUL ABOUT YOUR EDUCATION AND TRAINING**


*Really being thoughtful about how I coach / deliver instructions to patients and carepartners is important. Because I'm not in person to control the evaluation or session space, I often need to rely on carepartners for carry-through of tasks if a patient is more significantly impaired. Before I start an evaluation/session, I do a brief overview of the exercises we are going to do and how I need them involved. I let them know that I will instruct them exactly how I want them to do something.*

Kelly, MS, CCC-SLP, Open Lines Speech and Communication

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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice

**Challenges and Solutions: Reimbursement**



Learn more through ASHA's Practice Portal on telepractice, the Center for Connected Health Policy, and the American Telemedicine Association.

- Clinical, Ethical, and Legal Considerations
  - ASHA guidelines state the use of telepractice must be equivalent to the quality of in-person services and must adhere to the ASHA Code of Ethics and speech-language pathology scope of practice, state and federal laws, and ASHA policy.
- Clinicians must also consider their own skill/experience and the patient's needs and capabilities before beginning telepractice services.
  - To ensure compliance, follow best practice and legal requirements for telepractice, including using Health Insurance Portability and Accountability Act (HIPAA)-compliant technology

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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice

**Challenges and Solutions: Reimbursement**



- In response to COVID-19, the Centers for Medicare & Medicaid Services (CMS) now allow speech-language pathologists to provide telehealth services to Medicare Part B (outpatient) beneficiaries, retroactive to March 1, 2020, and for the duration of the public health emergency, which was extended for an additional 90 days, effective July 25, 2020.
- Medicare Advantage plans, private health insurance carriers and plans, and other government plans may also reimburse for telepractice services provided by SLPs during the public health emergency.
- Check with each individual's plan directly for coding and billing guidelines.

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### Challenges and Solutions: reimbursement



**Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice**

- Medicare's temporary expansion of telepractice services means SLPs may no longer enter into private pay arrangements with Medicare beneficiaries for those services that are now included on Medicare's telehealth list (i.e., 92522, 23, 24, and 92507 and 08)
- For codes that are not authorized telepractice services, SLPs can continue to accept private payment from Medicare beneficiaries.

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### Telepractice in Private Practice: Videos and Feedback from SLPs and Patients

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### Elements that Contribute to the Success and Sustainability of Telepractice in Private Practice



**Don't Forget: Patient Consent**

- During the public health emergency, a patient must consent to receive services via telepractice at least once annually.
- You or your administrative staff can obtain and *should document verbal or written (preferred) consent* prior to or at the same time of providing the service.


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**Feedback from SLPs in Private Practice**

**Online Assessment: Be Prepared!**

“While the information I am able to obtain through online assessments is comparable to information I can obtain from in-person assessments, the way in which I obtain this information has to be carefully thought out. Whether it is emailing materials in advance of the session or analyzing how the computer may interfere with my stated objectives, thorough planning has been key for my online assessments....Bridget Murray, MS, CCC-SLP




...If I'm using materials that require me to share my screen (e.g., pictures to elicit language samples), I like to email these materials in advance to the client or have hard copies to hand to be able to show them in the event there are technological issues that prevent screen sharing functions or produce poor visual quality.  
Grace Tsang, MS, CF-SLP

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**Feedback from SLPs in Private Practice**

**Online Treatment: Create online social experiences to increase salient, functional communication opportunities**

“One important feature of therapy that has been difficult to recreate online is using functional language in everyday life. For example, pre-COVID I was able to take clients to coffee shops or stores and speak with multiple conversational partners of my clients to understand their communication and progress in different settings. However, because many of these clients are in the “high risk” category and because of the general social distancing protocols, many of my clients are not going out into the community. We have tried to troubleshoot this by setting up FaceTime “dates” with family members and friends and preparing for these communication interactions during therapy sessions.  
Bridget Murray, MS, CCC-SLP


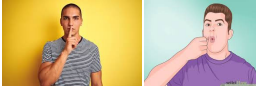


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**Feedback from SLPs in Private Practice**

**Online Treatment: Teach your client to use tactile cues**

“In place of tactile cueing that was possible pre-covid, I'm now modeling tactile cues on myself and having clients perform these tactile cues on themselves. In these situations, we continue to practice good hygiene by both frequently sanitizing our hands throughout the session. This is especially important for clients who have medically complex conditions!”



Grace Tsang, MS, CCC-SLP

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**Feedback from SLPs in Private Practice**

**Online Treatment: Take advantage of natural, real-time opportunities to add load**


“Sometimes the background noise at a client's home is distracting, but it can also be an opportunity to promote generalization given the real-world situation this mimics. If there is a lot of environmental noise, I encourage my client to practice using healthy, calibrated loudness when conversing.”

Grace Tsang, MS, CCC-SLP

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**Online LSVT LOUD therapy**





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**Feedback from SLPs in Private Practice**

**Online Maintenance: Regular Check-ins**

“Checking in about progress during each session and allotting time to review progress and deficits with caregivers have been successful strategies for me and my clients.”

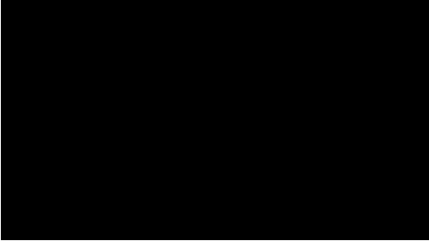



Bridget Murray, MS, CCC-SLP

- Consider group exercise and therapy options, such as LSVT LOUD for LIFE, teleGAIN, Aphasia Communication Groups, support groups, etc.

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**Feedback from the Client Perspective: Post-Stroke Aphasia**



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**Feedback from the Client & Caregiver Perspective: Post-Stroke Aphasia**

*"Telepractice with you is great during the pandemic! It's easy to get online with Zoom on my iPad and I like only having to commute to the back room of my house where I can have a quiet space. It's so easy to schedule and I'm comfortable in my own home. My wife can also join sessions and listen in (and then we practice together later)... Even when sessions are three hours long and we see each other five days a week, I still like coming every day because we cover many different tasks and you help keep them engaging. You are persistent and motivating even when it gets challenging, which helps me want to try my best. The breaks between activities are also good, and it's even better when I can go to the pantry and grab some cookies mid-session. My access to words keeps improving, and throughout all this, it's somehow become easier to talk. I look forward to getting to talk with you each day and can't wait to keep going! For anyone considering telepractice, I'd recommend scheduling sessions during daylight, making sure everything runs on time, and keeping the platform simple with a good wifi connection. Anyone can do it!" - Kevin, 68*


*"Well first I have to say you have been incredible—there is a high level of engagement that you achieve where you are persistent and can keep him going. It's been very encouraging to Kevin to really get involved and it's in a place where he feels very comfortable. The progress we have seen has really been remarkable and it's taught me how to engage better with him as well. So I learn through the process along with him."- Gloria (Kevin's wife)*

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**Summary: Telepractice in Private Practice**

- It has been shown to be effective in the assessment and treatment for individuals with neurogenically based communication disorders
- Prepare for challenges with technologies and clinical adaptations for the online environment, and
- Be armed with solutions! There are many!
- Be on the lookout for advancements in technologies, online platform capabilities, and research to support effective assessment and treatment approaches in this quickly changing climate
- Advocate for sustainability of telepractice across settings to reach more people in need!

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**Summary: Telepractice Evidence**

- There is now a large body of evidence to support the use of telepractice in the management of clients with acquired neurological conditions such as aphasia, TBI, and PD (Speech Pathology Australia, 2014).
- Research has demonstrated the feasibility and validity of the assessment of motor speech (Constantinescu et al, 2011; Hill et al, 2009), language (Theodoros et al, 2008), and cognitive-communication (Turkstra et al, 2011) disorders via telepractice.
- Similarly, studies have demonstrated comparability between treatment via telepractice and in-person treatment for these communication disorders (Theodoros et al, 2016; Woolf et al, 2016).

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**Summary: Telepractice Evidence**


- Early studies have identified the feasibility of group therapy online for clients with aphasia and PD (Pitt et al, 2018; Quinn et al, 2018).
- Importantly, the research has shown that clients and their caregivers are very positive about telepractice as a mode of service delivery with the majority of studies reporting satisfaction rates of greater than 70% (Orlando et al, 2019).



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**Summary: Telepractice Implementation in University Clinics and Private Practice**


- Recognizing the need, University Clinics have developed training programs for graduate students which are being implemented successfully in the US and internationally.
- Speech clinicians in private practice have developed successful delivery models to serve patients using telepractice. One example is LSVTeLOUD.



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## Our Goal

To ensure that telepractice remains sustainable beyond the urgent pandemic time, with an emphasis on utilizing this service delivery for patients with neurologic communication disorders.




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## Our Goal

*"We hope that the telemedicine and remote monitoring advances will persist after the crisis has passed. Telemedicine for chronic neurological disorders should become part of the new normal rather than the exception. Governments, health care systems, and payers should be encouraged to continue to embrace the new age of access from home, even after the pandemic passes."*

– Bloem et al 2020

[takeaction.asha.org/asha/coronavirus/COVID-19 updates](http://takeaction.asha.org/asha/coronavirus/COVID-19%20updates)




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## How to Ask Questions

1. Type in the question box on your control panel
2. Raise your hand!
  - Click on the hand icon
  - Your name will be called out
  - Your mic will be unmuted,
  - Then you can ask your question out loud
3. Email [info@lsvtglobal.com](mailto:info@lsvtglobal.com) if you think of questions later!



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**Join us for our virtual SLP mini-conference**  
**November 18-21, 2020**

Date	Time (EST)	Title	Presenters
11/18	6:00-6:30 PM EST	Telepractice in Private Practice and University Clinics for Adults with Neurological Disorders <a href="https://www.asha.org/ce/2020/11/18/190302485111394">Register: https://www.asha.org/ce/2020/11/18/190302485111394</a>	Scott Manning, PhD Justine Gagliano, PhD Gerrylee Schmitt, PhD Deborah Trautman, PhD
11/18	6:00-7:00 PM EST	LSVT LOUD® Applied to Adults with Cerebral Palsy: Two Single-Subject Studies <a href="https://www.asha.org/ce/2020/11/18/190302485111394">Register: https://www.asha.org/ce/2020/11/18/190302485111394</a>	Terrence Moya-Gale, PhD
11/18	7:30-8:30 PM EST	Beyond Parkinson's: Use of Evidence-based LSVT LOUD® for Other Movement Disorders, Aging and Children <a href="https://www.asha.org/ce/2020/11/18/190302485111394">Register: https://www.asha.org/ce/2020/11/18/190302485111394</a>	Sybilah Fox, PhD Angela Hayden, MS
11/20	12:00-1:00 PM EST	Enhanced Solutions for Voice and Mobility Maintenance Classes: Virtual Discoveries in PD Care! <a href="https://www.asha.org/ce/2020/11/20/190302485111394">Register: https://www.asha.org/ce/2020/11/20/190302485111394</a>	Angela Hayden, MS Laura Rowe, SLP Cynthia Fox, PhD
11/21	10:00-11:00 AM EST	Improved Verb Use Following Intensive Voice Treatment in Individuals with Parkinson's Disease <a href="https://www.asha.org/ce/2020/11/21/190302485111394">Register: https://www.asha.org/ce/2020/11/21/190302485111394</a>	Amy Ramagge, PhD
11/21	11:30-12:30 PM EST	Building a data base for automatic speech recognition in Parkinson's disease <a href="https://www.asha.org/ce/2020/11/21/190302485111394">Register: https://www.asha.org/ce/2020/11/21/190302485111394</a>	Scott Manning, PhD Neil McDonald, PhD

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## Thank you!

# LSVT GLOBAL

[info@lsvtglobal.com](mailto:info@lsvtglobal.com)  
[www.lsvtglobal.com](http://www.lsvtglobal.com)

**Live viewing: Please complete the survey that will launch when you close the program.**  
**Survey is required for ASHA CE Registry Reporting.**

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