THE ADOPTION OF TELE-PRACTICE TO SUPPORT INTERVENTION

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Alberta Provincial Webinar
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GOALS FOR TODAY

- Review the evolution of telepractice: pros and cons
- Discuss telepractice in the context of different professionals:
  - Educational Audiologists
  - Teachers of the Deaf/Hard of Hearing
- Document the efficacy and effectiveness of telepractice
- Application of telepractice in early intervention and with the school-age population
- Practical tips as a professional launches into telepractice

TERMINOLOGY

- Telemedicine
- Tele-rehabilitation
  - Tele-psychology
  - Tele-speech
  - Tele-audiology
  - Tele-intervention
  - Tele-consultation
  - Tele-therapy
- Tele-school
- Telehealth, Telepractice, Telecare, Teleservice

MYTHS ABOUT TELEPRACTICE

- *"The technology always lets us down."*
- *"Families don't like telepractice."*
- *Telepractice is never as good as in-person sessions.*
- *"Telepractice is a good option when there are no other options."*

"It's going to happen anyway, so let's prepare for this.

Tucker, 2012

WHY TELEPRACTICE?

- Reduces travel time – *"I can move 120 miles in 45 seconds."* (Tucker, 2012)
- Increases access to services
  - kids in rural areas
  - inclement weather
  - illness
- Increases providers' enthusiasm
  - Telepractice provides *"new ways to practice"*; therapists were more animated (Hines et al 2015)
  - *"Providers have a chance to do something new! "I have had huge professional growth"; "We want to be cutting edge."* (Tucker 2012)
- Children are motivated by the technology
  - reduces the stigma of pull-out services (Lincoln et al., 2014 in Hines et al., 2015)
  - Students receive materials electronically
- Elicits more responses from students, which increases students' learning (Tucker 2012)

- Supports providers' learning
  - Review recorded sessions (e.g., document baseline and progress)
  - Coaching (Murza, 2019; Stredler-Brown, 2017)
  - Collaboration with other specialists
- Reduces wait time to begin services (Early Intervention Colorado)
- Access to interpreters

CHANGING ATTITUDES

- Providers' initial feelings about telepractice fall into 3 categories (Hines, Lincoln, Ramsden, Martinovich, & Fairweather (2015).

Which category describes you?

- Excited about the potential; while uncertain about its effectiveness
- Unsure how to conduct a telepractice session
- Mixed

- Attitudes of therapists are reported to change after therapists start conducting telepractice sessions (Hines, et al., 2015)
  - *"I'm amazed how something so different [telepractice] is so similar [to in-person therapy] at the same time."*
  - *I saw "new ways to practice."*

- The provider needs to be more flexible; this is facilitated by being very organized and prepared.

- Be prepared to work collaboratively with the parents (early intervention) and/or with the general education teacher, facilitator, or ehelper(school-age)

- Training topics prioritized by providers (Hines, et al., 2015)
  - training in technology platforms and software
  - Practice with the hardware & software
  - Observe colleagues delivering telepractice sessions
  - Get a Mentor: Discuss the delivery of telepractice sessions with professionals already doing it
  - Develop appropriate resources

COLORADO EARLY INTERVENTION TELEPRACTICE INITIATIVE

Survey results (2018) reflect the use/acceptance of telepractice in Family-centered Early Intervention (FCEI)

UPTAKE IN COLORADO

- As of March 2018 only .08% of EI Colorado families were receiving services via telepractice
- Why is implementation so low?

QUALITATIVE INVESTIGATION

- Most respondents (service coordinators and providers) reported:
  - Telepractice addresses provider shortages
  - Telepractice is appropriate for rural families
  - Telepractice offers flexibility (scheduling, weather, illness, vacations)
  - Telepractice reduces travel burden
  - Respondents like the *flexibility* telepractice offers; joining a family during daily routines
  - Report more family engagement
  - Report coaching strategies are used more
- These over-riding impressions persist:
  1. There are technology issues
  2. It is less personal
  3. Families oppose it

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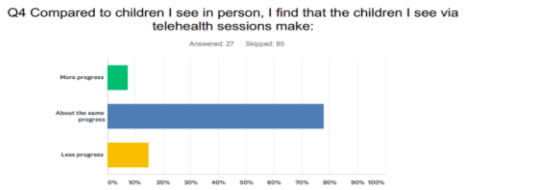
BUT, THE SURVEY SAID…..

PROVIDER RESULTS



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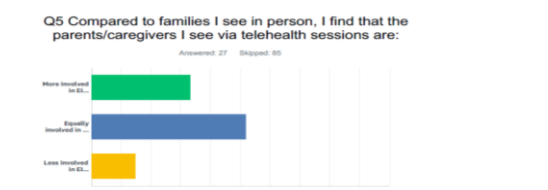
PROVIDER RESULTS



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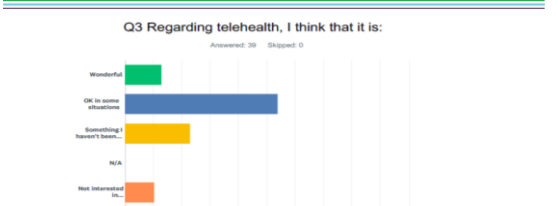
SERVICE COORDINATOR RESULTS



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A SERVICE COORDINATOR'S COMMENT

- *"Being rural, I don't want families to think they are getting a 'lesser' version of therapy."*

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WHO NEEDS TO BE INFORMED (CONVINCED?)

- School district personnel
- Students
- Families
- SLPs

"Research has also suggested that disparities exist between clinicians' and clients' perspectives on teletherapy, with therapists often displaying more negative attitudes than stakeholders."
(Dunkley, Pattie, Wilson, & McAllister, 2010)

HOW DO WE INFLUENCE OR CONVINCE STAKEHOLDERS?

- Administrators, teachers, and parents view a telepractice session — Eliminates pre-conceived ideas
- Train providers: technology; observe others; have a mentor — (Behl & Kahn, 2015; Hines et al 2015)
- Establish your credibility: *"….providers need to be able to collaborate with parents and other assistants who are physically in the presence of the child/student during service delivery."*

SOME TIPS

Getting started	As you continue	And then….
• Letter of introduction • Invitation to visit with you and/or watch a demonstration • Consider hybrid services	• Informational sessions • Demonstrations to faculty, parents, students • Checklist about intervention session (e-mail) • Report student outcomes	• Satisfaction survey: students, parents, faculty • Monthly newsletter

WHAT IS UNIQUE ABOUT TELEPRACTICE?

- Engaging clients/students
- Selecting materials
- Managing the technology

ENGAGING CLIENTS

- *"You have to establish eye contact not by looking at the web camera but by looking at the students.You have to learn how to be able to use your peripheral vision to see what you're doing on the screen and while you're looking at the student."* (Mellard, Rice, & Carter, 2018)
- *"We've learned to refine how we give direction and we're more descriptive in our directions to [students] and that can take the place of being physically present."* (Mellard, Rice, & Carter, 2018)
- **ehelpers** (facilitator at school or parent at home) – essential for elementary
  - Schedule
  - Bring student to the room
  - Help with technology glitches
  - Keep client in view

- **Giving Directions:** *"We've learned to refine how we give direction and we're more descriptive in our directions to [students] and that can take the place of being physically present."* (Mellard, Rice, & Carter, 2018)
- **A word of caution:** Some providers working via telepractice report that they are "on call" at all times. Parents or clients can just "check in" all times of day and any day of the week. This approach is not an integral nor an essential part of telepractice. Rather, it's the personal preference of the provider.

SELECTING MATERIALS

- Plan in advance
- Use what's in the child's home or readily available for the student at school. *"We really have to be good at using what's there."* (Mellard, Rice, & Carter, 2018)
- In some literature, client and provider have access to the same materials.
- Have tabs on the computer so computer-based practice materials are handy

MANAGING TECHNOLOGY

"……adequate [technology skills] are good enough, with the expectation that what is difficult today will be adequate tomorrow and eventually highly efficacious in the future." (Mellard, Rice, & Carter, 2018)

THE TECHNOLOGY

Hardware

- Screen size
- Additional mics, headsets, etc

Software

- HIPAA Compliant
- Professional version

Bandwidth

- www.speedtest.net

ONBOARDING

- Make sure all the technology works, and that it's in place
- Make sure the computer and webcams are in place

ADDITIONAL EQUIPMENT - OPTIONAL

- **Monitor**: Additional monitor
- **Camera**: Web cam
- **Mics:**
  - Student: Lapel mic
  - Provider: Noise-cancelling headphone with mic
- **Materials**:
  - Interactive white board
  - Document camera
  - Duplicate materials (if you like)
  - Fabric to reduce room reverberation

- *"…. we typically have some sort of para or ehelper or facilitator with the students and often times when there are tech issues, the kids fix it a lot faster than the helper can – they know exactly what to do. They just say 'oh yeah, just click this button' and it fixes the problem."* (Mellard. Rice, & Carter, 2018)

COACHING

FAMILY-CENTERED EARLY INTERVENTION (FCEI)

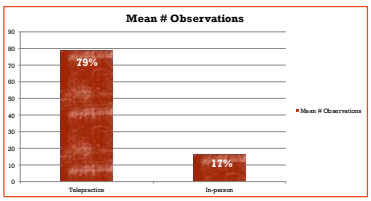
- Increased use of coaching practices
  - Parents' use of intervention strategies
  - Parents' confidence
  - Family member involvement
- Shifting skill set for therapists

http://www.infanthearing.org/flashvideos/teleintervention/Stir-Clips-Captioned.mp4

COACHING PRACTICES IN FCEI (B-36 MONTHS) (STREDLER-BROWN, 2015)

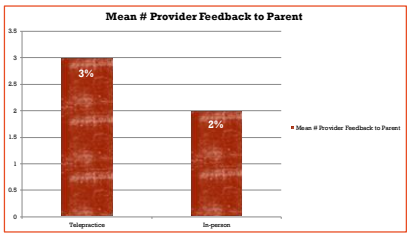
- Comparing telepractice to in-person sessions
- Children
  - DHH (bilateral; any type/degree of hearing loss)
  - Birth – 36 months
  - English as primary language
  - Any communication approach (although most children were learning to listen and talk)
- Providers
  - 1 session/provider
  - Therapy offered via telepractice
  - Each session was recorded & coded for coaching strategies

OBSERVATION



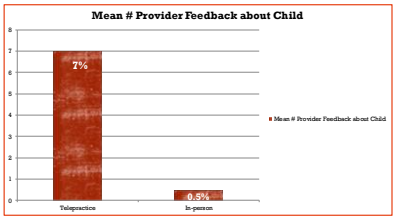
Note: 5 in-person studies (range, 6% - 36%)

FEEDBACK TO PARENT



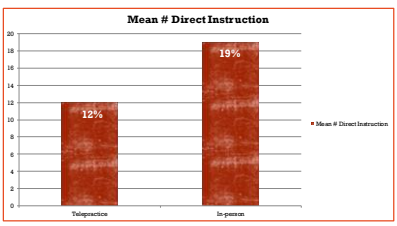
Note: 4 in-person studies (range, .36% - 6%)

FEEDBACK ABOUT CHILD



Note: 3 in-person studies (range, 0% - .36%)

DIRECT INSTRUCTION



Note: 1 in-person study

COACHING IN SCHOOLS (MURZA, 2019)

- Inform and share goals and outcomes of telepractice sessions with family members, general education teachers, special education teachers, para-professionals, and other involved service providers
  - ehelper can assist
- Help the student to "advertise" their participation in "virtual services"

RESEARCH SUPPORTS TELEPRACTICE

COMPARATIVE EFFECTIVENESS: TACIT STUDY

- CU Research: In-person and telepractice
- Deaf/hard of hearing
- Participant age: 6 months - 7 years of age

- Procedure:
  1. Baseline Testing
     - Speech/language tests
     - P1 Cortical test
  2. 6 months of treatment
  3. Follow up testing
     - Speech/language tests
     - P1 Cortical test

Funded by NIDCD
#1U01DC013529

PLS-5

Significant effect of therapy beyond the effect of normal age improvements ($p < 0.01$)

Average improvement in age-equivalence of 10.41 months over a 6-month period

No significant effect of type of therapy ($p = 0.890$)

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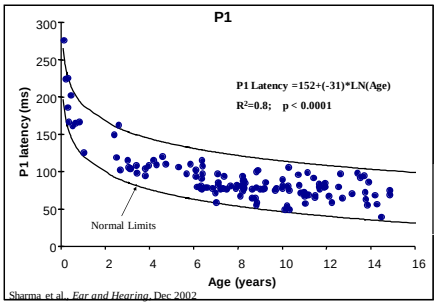
CORTICAL POTENTIALS

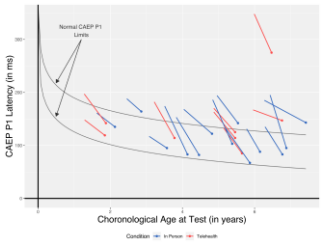
- We are now learning that the brain (temporal cortex) can mark a listening function (Sharma, Dorman & Gilley, 2002)
- Can this information be applied clinically?



Sharma et al., *Ear and Hearing*, Dec 2002

Significant effect of therapy ($p < 0.001$)

No significant effect of the type of therapy ($p = 0.451$)



SCHOOL-AGE OUTCOMES

- Children made similar progress in articulation (GFTA-2) during the study regardless of treatment method (Grogan-Johnson, et al., 2010)
- Children made similar progress in speech/language therapy according to ASHA's K-12 Schools National Outcomes Measurement System (NOMS) (in person) and telepractice (Gabel, et al., 2014)
- Children with speech sound disorders had comparable outcomes in-person and telepractice according to ASHA NOMS (in-person) and telepractice (Coufal, et al., 2018)
- Phonological awareness with students 4-9 years of age show no difference in outcomes based on in-person and telepractice service platforms (Lee, Hall, & Sancibrian, 2017)

BARRIERS TO TELEPRACTICE

- Technology failure
- ehelper/assistant
- Training
- Environment
- Attitudes

TECHNOLOGY FAILURE

Problem	Fixes
▪ no or interrupted internet access ▪ modem stopped working ▪ computer crashed ▪ no audio ▪ microphones did not work ▪ No or frozen video, connection ▪ delays in sound transmission ▪ no tech support	▪ IT person on hand (at least at first) ▪ Therapist training on equipment and procedures

EHELPER/PARENT

PROBLEM	FIXES

▪ did not set up equipment properly
▪ did not get student to therapy on time
▪ could not effectively manage student behavior
▪ therapy materials not ready
	▪ Train ehelpers on roles/responsibilities
	  ▪ Operate cameras
	  ▪ Computer games
	  ▪ Shared windows
	  ▪ Student settings
	  ▪ How to reboot, log on, optimize home computer settings
	▪ Complete a "tech check" to make sure everything is working prior to the first real session
	▪ Tell students and ehelpers about possibility of technical/equipment failures and have, procedures in place to repair the problem

PROVIDER TRAINING

PROBLEM	FIXES

▪ Lack of training before starting telepractice	▪ Create opportunities to work with peers - **mentors**
	▪ Practice delivering descriptions and explanations to the client in light of not having any physical contact
	▪ Expand use of visuals
	▪ Maintain contact to support relationships
	  ▪ Call
	  ▪ Email
	  ▪ send speech practice postcards home

ENVIRONMENT

PROBLEM	FIXES
▪ Unfamiliar environments	▪ Offer auditory + visual feedback to students – describe how things look and sound ▪ Rely on ehelper to adjust the session ▪ Select your students purposefully (e.g., type and severity of disability) ▪ Plan to contact the general ed. teacher(s) by e-mail and/or utilize ehelper to convey information about the student & therapy goals

PRACTICAL TIPS

- **Introducing telepractice** : For children under 3 years of age, explain to parents that they will be the focus of the intervention. For the "older" child, have the parent (or a facilitator at school) present during the entire session. The roles of this person are:
  - to report observations to you (e.g., what the child says that you may not have heard, accuracy of what the child says, etc)
  - to focus or refocus the child's attention
- **Before you start your first telepractice session**: Establish text or e-mail communication with the family.
- **Before each telepractice session**: Identify props the parent or ehelper can collect to use during the session. You may do this planning via e-mail, text, or on the phone. (Note that many young parents don't prefer to use the phone.) Consider if you want to have a duplicate set of materials in your office for the upcoming session.

- **Communication**: Set up a plan for reinitiating the video call (e.g., restart the telepractice session, use of texting, use of phone) if connectivity were to be interrupted.
- **Alternative modeling strategies**: Be prepared with alternative ways to model an activity (e.g., use of props, use of pictures, pre-record a short video).
- **After the telepractice session**: Text or e-mail "homework" for practice.
- **Establish and utilize text or e-mail communication:** utilize before and, if needed, during the session

MYTH BUSTERS

The technology *could* let you down, but there are resources and increasingly easy-to-use software platforms.

Providers and service coordinators may be less comfortable with telepractice than families.

Telepractice may not demonstrate any differences in outcomes.

Telepractice may be the *best* option, even when there are other options.

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