CONNECTING TO COMMUNICATE: DELIVERING FAMILY-CENTERED EARLY INTERVENTION TO CHILDREN WITH HEARING LOSS VIA TELEPRACTICE

K. TODD HOUSTON, PHD, CCC-SLP, LSLS CERT.AVT
THE UNIVERSITY OF AKRON

1

DISCLAIMERS

- Dr. Houston is currently the author or co-author/editor of three books published by Plural Publishing:
  - Telepractice in Speech-Language Pathology (2014)
  - Assessing Listening and Spoken Language in Children with Hearing Loss (2015) - with co-author/editor, Tamala S. Bradham, PhD, CCC-A
  - Telepractice in Audiology (2016) - with co-author/editor Emma Rushbrooke, MA, AuD
- Dr. Houston does not receive any monetary compensation from any of the manufacturers/companies of the technology discussed during this presentation.
- Dr. Houston is also a Partner & Founder of the 3C Digital Media Network.

2

LEARNING OBJECTIVES

At the end of this presentation, participants will be able to:
- Identify current distance technology that is impacting early intervention and the education of children with hearing loss;
- Discuss the role of parent coaching in telepractice; and
- Define the use of telepractice as a service delivery model for children with hearing loss and their families.

3

HISTORY OF TELEHEALTH

- For centuries, a strong desire & need to communicate health information over great distances.

4

HISTORY OF TELECOMMUNICATION

- Samuel Morse
- Alexander Graham Bell
  - Telephone
  - Photophone
- Radio - Marconi
- World War I
- World War II
- Television – mostly for entertainment

5

HISTORY OF RADIO NEWS

6
HISTORY OF TELEPRACTICE/TELEINTERVENTION

- Psychiatric Care - Nebraska
- NASA/US Military: 1960’s through today,
- Isolated telemedicine programs, too costly
- 1990’s: Internet ushers in the Information Age
- 2000’s: Communication Age
- 2012: Connectivity Age
- Technological evolution - cheaper, easier, & mobile

CONVERGENCE OF TECHNOLOGY, HEALTHCARE, & EDUCATION

Technology:
- Smartphones,
- Tablets,
- Notebooks
- Broadband Internet

Lowering Costs:
- ACA, Market Pressures

Social Media/Networks:
- Connections
- Increased Demand for Telehealth
- Any Service, Any Place, Any Time

DEFINING TELEPRACTICE

- American Speech-Language-Hearing Association
- The application of telecommunications technology at a distance by linking a clinician to client or clinician to clinician for assessment, intervention, and/or consultation.
- Telepractice is an appropriate model of service delivery for the professions of Speech-Language Pathology & Audiology.
- The quality of services delivered via telepractice must be consistent with the quality of services delivered face-to-face.

KEY CONCEPTS

- Informed family choice
- Decision-making process
- Range of options
- Unbiased presentation
- Dynamic process (family needs, desired outcomes, assessment guided)

TRENDS IN CHILDHOOD HEARING LOSS

- 1 - 3 per 1000 infants identified with hearing loss at birth
- UNHS has been very successful
- Lost to follow-up an issue; failing screenings but not making it to diagnosis and/or early intervention
- 95% of parents are hearing themselves; when parents know about spoken language options, nearly 90% will choose listening & spoken language (AVT) for their child with hearing loss
- Current shortages of early interventionists/SLPs who can successfully provide AVT
- Telepractice is a tool - a service delivery model - that can connect parents to appropriate, well-trained service providers.
SERVICE PROVISION GOAL

- To provide all infants and young children with hearing loss and their families with services that are:
  - Timely
  - Comprehensive
    - Frequency, duration, & consistency
  - Coordinated
  - Effective

FAMILY INVOLVEMENT: HOW IMPORTANT IS IT?

- Factors Predicting Language Outcomes
  - Among factors such as degree of hearing loss, age of enrollment in early intervention, nonverbal intelligence, and family involvement.
  - Two factors predicted language, vocabulary, and verbal reasoning skills at age 5.
    (Mary Pat Moeller Pediatrics 106, 3 2000)

THE TWO MOST IMPORTANT FACTORS

- Age at enrollment in EI & Family involvement
- Family Involvement explained most of the variance
  How do we facilitate Family Involvement?

Connecting families to professionals with the appropriate training...and utilizing distance technology via telepractice

EARLY EXPERIENCES BUILD BRAIN ARCHITECTURE

- Brains are built, not born.
- There is rapid growth, then the brain prunes.
- Connections that are used a lot are strengthened; those that are not, are pruned.
- This process shapes how brains are wired.

WHAT WE KNOW

- The first 3.5 years of life are the most crucial to the development of speech and language
- This is a critical window for language learning to capitalize on neural plasticity
PARADIGM SHIFT FOR FAMILIES OF CHILDREN WITH HEARING LOSS

Optimal Outcomes for Children with Hearing Loss

Listening and Spoken Language Services

Connectivity through Telepractice

Research in Brain Development

Hearing Technology

PRINCIPLES OF LSLS AUDITORY-VERBAL THERAPY

Early & Diagnosis Amplification

Guide & Coach Parents

Promote Mainstreaming in Schools

DOES TELEPRACTICE MEET PART C CRITERIA?

Part C IDEA
34 CFR 303.13 - Early intervention services.

7) Are provided by qualified personnel (as that term is defined in § 303.31), including the types of personnel listed in paragraph (c) of this section;

8) To the maximum extent appropriate, are provided in natural environments, as defined in §§ 303.26 and consistent with §§ 303.126 and 303.344(d); and

Telepractice can help facilitate a new, more efficient model of early intervention educational services across the economic and geographic spectrum.

If we discover a treatment, therapy, or educational intervention for childhood hearing loss, but only half the people have access to it when they need it, we have only discovered half the treatment or intervention.

Discoveries and innovation, no matter how good they are, are worthless if not applied appropriately to where and when they needed.

Auditory-Verbal Therapy via Telepractice:

First, Let’s Define Auditory-Verbal Practice
Promote early diagnosis of hearing loss in newborns, infants, toddlers, and young children, followed by immediate audiologic management and Auditory-Verbal therapy.

Recommend immediate assessment and use of appropriate, state-of-the-art hearing technology to obtain maximum benefits of auditory stimulation.

Guide and coach parents to help their child use hearing as the primary sensory modality in developing listening and spoken language.

Guide and coach parents to become the primary facilitators of their child’s listening and spoken language development through active consistent participation in individualized Auditory-Verbal therapy.

Guide and coach parents to create environments that support listening for the acquisition of spoken language throughout the child’s daily activities.

Guide and coach parents to help their child integrate listening and spoken language into all aspects of the child’s life.

Guide and coach parents to use natural developmental patterns of audition, speech, language, cognition, and communication.

Administer ongoing formal and informal diagnostic assessments to develop individualized Auditory-Verbal treatment plans, to monitor progress and to evaluate the effectiveness of the plans for the child and family.

Administer ongoing formal and informal diagnostic assessments to promote the development of listening and spoken language abilities and for the normalization of auditory, cognitive, and academic performance.

Promote education in regular schools with peers who have typical hearing and with appropriate services from early childhood onwards.

GUIDING & COACHING PARENTS MAKES SENSE….

- Think about the 2 year-old and the hours that we as professionals have vs. parents
  - 1 hour of therapy x 48 weeks a year = 48 hours
  - 11 waking hours per day x 7 days a week = 77 hours x 52 weeks a year = 4,015 hours

THE UNBREAKABLE LINK

Early Intervention

Adult Learning

How do adults learn in early intervention?

ADULT LEARNING THEORY & PARENT COACHING

WHAT IS LEARNING?

- A process, or a product?
- A change in knowledge, beliefs, behaviors or attitudes?
- Adaptability?

ADULT LEARNING PRINCIPLES

- bring knowledge, skills, and attitudes
- bring experience

Baker, 2014
**ADULT LEARNING PRINCIPLES**

*Adults* ......
- Like to solve problems
- Like to apply what they have learned to real problems

**ADULT LEARNING PRINCIPLES**

*Adults* ......
- Like to have choices
- Like to participate in the setting of goals and objectives

**ADULT LEARNING PRINCIPLES**

*Adults* ......
- Have a variety of learning styles & preferences

**ADULT LEARNING PRINCIPLES**

*Adults* ......
- Do best in an environment where they feel safe, accepted, & respected

**ADULT LEARNING THEORY**

*Adults* ......
- Want and need feedback
- Need to have their abilities & achievements honored

**COACHING IS....**

An adult learning strategy in which the coach promotes the learner's ability to reflect on his or her actions as a means to determine the effectiveness of an action or practice and develop a plan for refinement and use of the action in immediate and future situations.

(Rush & Shelden, 2005, p. 3; Rush & Shelden, 2011)
CORE PRINCIPLES OF COACHING
BASED ON INTERPROFESSIONAL EVIDENCE

1. The relationship is based on reciprocal communication.
2. Communication is focused on solving the problem/issue.
3. The person we are serving identifies the issues.
4. Solutions grow out of the other person’s insights.
5. Solutions are situated within authentic environments.

COACHING: FIVE COMPONENTS

1. Joint Planning - an agreed-upon plan between the coach and parent/patient as to what they will work on and in what routines or activities.
2. Observation - examination of another person's actions or practices to be used to develop new skills, strategies, or ideas.
3. Action - Spontaneous or planned events that occur within the context of a real-life situation that provides the parent/patient with opportunities to practice refine or analyze new or existing skills.
4. Reflection - analysis of existing strategies to determine how the strategies are consistent with evidence-based practices and how they may need to be implemented without change or modified to achieve the intended outcomes.
5. Feedback - Information provided by the coach that is based on his/her direct observations of the parent/patient, actions reported by the parent/patient, or information shared by the parent/patient. The interaction is designed to expand the parent/patient's current level of understanding about a specific evidence-based practice or to affirm the parent/patient's thoughts or actions related to the intended outcome(s).

COACHING: REFLECTIVE QUESTIONING

What do you know about...?
What have you tried?
What happened when you...?
What supports were most helpful?

How does that compare to what you did before?
What do you think will happen if you...?
How is that consistent with your goals?

What else could you have done?
What would it take for you to be able to...?
What might make it work better next time?

How do you plan to do it?
What supports do you need to take that step?
Where will you get the resources you need?

REFLECTIVE QUESTIONS

Avoid yes/no questions.
What would you like to focus on between now and our next visit?
Considering all that we have discussed today, what is your plan...?
What do you think worked best for you today? What didn't work well?
What was helpful for you today?
How can I (clinician) improve my service to you?

RESEARCH TO SUPPORT COACHING IN EARLY CHILDHOOD

- Caregivers are much more likely to use new skills and ideas within the context of their lives.
- Caregivers feel competent to handle new situations that arise.
- Caregivers recognize their own abilities and strengths in meeting child and family outcomes.

COACHING: REFLECTIVE QUESTIONING

AWARENESS

What do you know about...?
What have you tried?
What happened when you...?
What supports were most helpful?

ANALYSIS

How does that compare to what you did before?
What do you think will happen if you...?
How is that consistent with your goals?

ALTERNATIVES

What else could you have done?
What would it take for you to be able to...?
What might make it work better next time?

ACTION

How do you plan to do it?
What supports do you need to take that step?
Where will you get the resources you need?

HOW DOES THIS FIT WITH COACHING ON HOME VISITS/PARENT COACHING SESSIONS?

- Setting the Stage: SS
- Problem Solving & Planning: PP
- Observation & Opportunities: OO
- Reflection & Reviewing: RR

REFLECTIVE QUESTIONS

Avoid yes/no questions.
What would you like to focus on between now and our next visit?
Considering all that we have discussed today, what is your plan...?
What do you think worked best for you today? What didn't work well?
What was helpful for you today?
How can I (clinician) improve my service to you?

COACHING: REFLECTIVE QUESTIONING

AWARENESS

What do you know about...?
What have you tried?
What happened when you...?
What supports were most helpful?

ANALYSIS

How does that compare to what you did before?
What do you think will happen if you...?
How is that consistent with your goals?

ALTERNATIVES

What else could you have done?
What would it take for you to be able to...?
What might make it work better next time?

ACTION

How do you plan to do it?
What supports do you need to take that step?
Where will you get the resources you need?

REFLECTIVE QUESTIONS

Avoid yes/no questions.
What would you like to focus on between now and our next visit?
Considering all that we have discussed today, what is your plan...?
What do you think worked best for you today? What didn't work well?
What was helpful for you today?
How can I (clinician) improve my service to you?

COACHING: REFLECTIVE QUESTIONING

AWARENESS

What do you know about...?
What have you tried?
What happened when you...?
What supports were most helpful?

ANALYSIS

How does that compare to what you did before?
What do you think will happen if you...?
How is that consistent with your goals?

ALTERNATIVES

What else could you have done?
What would it take for you to be able to...?
What might make it work better next time?

ACTION

How do you plan to do it?
What supports do you need to take that step?
Where will you get the resources you need?

REFLECTIVE QUESTIONS

Avoid yes/no questions.
What would you like to focus on between now and our next visit?
Considering all that we have discussed today, what is your plan...?
What do you think worked best for you today? What didn't work well?
What was helpful for you today?
How can I (clinician) improve my service to you?

COACHING: REFLECTIVE QUESTIONING

AWARENESS

What do you know about...?
What have you tried?
What happened when you...?
What supports were most helpful?

ANALYSIS

How does that compare to what you did before?
What do you think will happen if you...?
How is that consistent with your goals?

ALTERNATIVES

What else could you have done?
What would it take for you to be able to...?
What might make it work better next time?

ACTION

How do you plan to do it?
What supports do you need to take that step?
Where will you get the resources you need?

REFLECTIVE QUESTIONS

Avoid yes/no questions.
What would you like to focus on between now and our next visit?
Considering all that we have discussed today, what is your plan...?
What do you think worked best for you today? What didn't work well?
What was helpful for you today?
How can I (clinician) improve my service to you?
WHAT PARENTS WANT…
- Establishing a relationship
- Mutual respect
- Being non-judgmental
- Feeling supported

PERSONAL (PARENT) PREFERENCES
- Learning something new
- Receiving information
- Processing information

THE FOUR E’S (MCWILLIAM, 2010)
- Ears & Eyes (Active Listening)
- Elicit (Ask)
- Empathize
- Encourage

EMBEDDED COACHING
- The act of providing support through suggestions and reinforcement while the parent is engaging in an activity with the child
- Coaching occurs /before/during/after the activity

CONFIDENCE-BUILDING FEEDBACK
- Parent says...
  - Expresses feelings out loud
  - Says, “I’m scared.”
  (Brandwein, 2010)
- We respond...
  - You could have kept that inside; it takes a strong person to say important things out loud.
  - That makes sense, doesn’t it? This is important to you…you don’t know what will happen, and you obviously care about your child.

STRATEGIES FOR BUILDING PARTNERSHIPS
- Active Listening
- Seeks understanding before teaching
- Provide affective support
- News Commentator role (objective feedback)
- Collaborative experiments - joint discovery
- Negotiating about interpretations & joining perspectives
- Parent in driver’s seat
- Summarizing (I hear…)
COACHING SKILLS: COLLABORATIVE EXPERIMENTS

- A process of using discovery to figure out what works...what strategies are a "good fit"
- Partners "try in out" & evaluate - both partners contribute expertise
- Jointly discover what is typical (can you show me?...how does that work for you?)
- Any question can be addressed as an experiment
  - "I wonder what would happen if we..."

COACHING SKILLS

- News Commentator Strategy
  - Provision of objective, descriptive feedback
  - Identifies what both parties are seeing
  - Clarifies what's working
  - Models how observation guides us
  - Helps to pinpoint areas of strength & need

EMPATHIC RESPONSES

- Reflecting back: "It sounds as if..."
- Extending & clarifying: "Tell me more..."
- Questioning - open ended: "What did you think"
- Summarizing, synthesizing: "It appears that..."

EMPATHIC RESPONSES, CON’T

- Checking perception: "You seem to be..."
- Acknowledging: "I can appreciate that."
- Encouraging expression: "How did you feel?"
- Being quiet!

PROMOTING STRENGTHS IN FAMILIES & PROFESSIONALS

- Listen...Don’t tell!
- Think with them...Not for them!
- Give information...Don’t insist they use it.
- Develop options...Not ultimatums!
COACHING SKILLS: SUMMARIZING

- Identifies what is important
- Validates... *Am I in the ballpark?*
- Clarifies what we (the parents & clinician) want to focus on together

---

TELEPRACTICE & ELEARNING LAB (TELL)
SCHOOL OF SPEECH-LANGUAGE PATHOLOGY & AUDIOLOGY

- The University of Akron serves children with hearing loss and their families as well as adults with hearing loss
- Pediatric therapy focuses primarily on listening and spoken language & Auditory-Verbal Therapy
- Adult aural rehabilitation with a direct, patient-centered focus
- Training of future SLPs in telepractice service delivery models

---

Sequence Of Therapy Preparation

1. Referral to Clinic
2. In-person visit for full evaluation
3. Completion of home inventories
4. Technology test session
5. Lesson plans emailed at least 48 hours prior to session
6. Parent gathers materials and prepares by collaborating with clinicians by email or phone
7. Session begins

---

Conducting A Session

1. Reviewing goals and activities
   - Reviewing goals from previous week, new updates, review goals for current session, check hearing devices
2. Conducting the lesson/activity
   - Demonstration of new strategies/techniques, coaching the parent or adult, discuss integration of goals into daily home routines, strategies for improving/controlling communication opportunities (adults)
3. Debriefing
   - Allow questions from parents, discuss continuation or selection of new goals, summarize session and goals for the coming week
A Parent's Perspective on Telepractice

FUTURE DIRECTIONS

- Launching a telepractice program requires careful planning, involving a range of stakeholders.
- Technologies continue to evolve and opportunities for telepractice will continue to expand.
- In the near future, telepractice will become a standard of care for an increasing number of our patients.
- Technology WILL NOT replace speech-language pathologists, but speech-language pathologists who master telepractice & other digital technologies will replace those SLPs who don't!
REFERENCES


RESOURCES

- American Telemedicine Association
  - www.americantelemed.org
- American Speech-Language-Hearing Association
  - www.asha.org/telepractice
  - SIG 18: Telepractice
- BroadbandUSA
  - http://www2.ntia.doc.gov/iowa
- Check with your professional organization for additional white papers, position statements, & preferred practices
TELEPRACTICE RESOURCES: TELEPRACTICE PORTAL

- Asha’s code of Ethics
- Scope of Practice
- State Telepractice Requirements
- International Considerations
- FAQs on Reimbursement and Licensure
- Barriers
- Trends
- Client/Patient Selection
- Practice Areas
- Videoconferencing Equipment
- Connectivity Suggestions

http://www.asha.org/Practice-Portal/Professional-Issues/Telepractice

THANK YOU FOR LISTENING!

Contact Information:
K. Todd Houston, PhD, CCC-SLP, LSLS Cert. AVT
Professor
School of Speech-Language Pathology & Audiology
College of Health Professions
The University of Akron
Akron, OH 44325
Office: (330) 972-6141
Mobile: (330) 905-0609
eMail: Houston@uakron.edu
todd@3cdigitalmedianetwork.com
I’m also active on Facebook, Instagram, LinkedIn, & Twitter.
Connect with me!

Assistance Is Available!
Federally Designated
Telehealth Resource Centers

THANK YOU FOR LISTENING!