Teleaudiology and Early Intervention

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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.
Telehealth in Audiology
Swanepoel and Hall 2010

A Systematic Review of Telehealth Applications in Audiology

- Audiological screening
- Audiological diagnosis
- Audiological intervention
- Patient and clinician Perceptions
Components of a Teleaudiology Model

(Krumm, 2014)

Component 1
Consumer input and Administrative planning

Component 2
Teleaudiology Services

Component 3
Traditional clinical visit face to face

Screening Teleaudiology Modes Primarily Asynchronous; Possibly automated

Diagnostics Teleaudiology Modes Primarily Hybrid; Possibly: Only synchronous, automated or asynchronous

Re/Habilitation amplification & CI’s Teleaudiology Modes Primarily Synchronous; Possibly: Hybrid, automated or asynchronous

Difficult to test clients; Insufficient teleaudiology capacity; Client preference

On-going evaluation of service quality and sustainability
Ongoing Research & Clinical Practice: Teleaudiology

- Vanderbilt University
- Univ. of Colorado School of Medicine/Children’s Hospital Colorado
- University of Iowa Dept. of Pediatrics/Iowa Early Hearing Detection & Intervention (EHDI) Program
- Univ. of California at Davis
Cochlear Implant: Programming & Support Via Telepractice

Boys Town National Research Hospital
Hear & Say Centre – Brisbane, Australia
What is the Technology

Principal Components

- Equipment (dedicated & software)
- Connectivity

Two Technology Approaches

- Live Interactive
- Store and Forward
Telepractice Delivery Models

Expert Site

Clinician

Clinician or eHelper

Remote Site

Patient
Telepractice Delivery Models

Expert Site

Clinician

Remote Site

Patient
The Winter 2012 (December) issue of the *The Volta Review* focuses on current knowledge and best practices in telepractice. The issue is available through the Alexander Graham Bell Association for the Deaf & Hard of Hearing at www.agbell.org.
Clinician Competency (N=8)

- **Self-Rated Scale**
  - 0
  - 0.5
  - 1
  - 1.5
  - 2
  - 2.5
  - 3
  - 3.5
  - 4
  - 4.5
  - 5

- **Months**
  - 1
  - 6
  - 12

- **Clinicians**
  - A
  - B
  - C
  - D
  - E
  - F
  - G
  - H

Telepractice: Early Intervention
Eskridge & Houston: Pilot Study
Telepractice: Early Intervention

Eskridge & Houston: Pilot Study

Clinician Competency (N=8)

Months

Supervisor-Rated Scale

0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5

A  B  C  D  E  F  G  H

1 6 12
Telepractice: Early Intervention

Eskridge & Houston: Pilot Study

Child Language Outcomes (N=20)
Telepractice: Early Intervention
Eskridge & Houston: Pilot Study

Parent Competency & Satisfaction (N=16)
Positive Outcomes of Telepractice Services

- Reducing wait times for services
- Reducing travel time
- Minimizing caregiver stress/time off paid work
- Increased frequency of service delivery, improved consistency, fewer cancellations
- Reducing costs of delivering healthcare
- Improved adherence to treatment
Challenges & Barriers

- Privacy/Security
- Reimbursement
- Start-up Costs
- Clinician & Patient Acceptance
- Professional Development: Pre-service & In-service
Gaining Acceptance

The practitioner is:

“the most important initial gatekeeper for success with telemedicine [telepractice] interventions” …

*Whitten & Mackert, 2005*
Are you ready to take the “telepractice” plunge?