

## *Connecting to Communicate: Serving Children with Hearing Loss & Their Families Through Telepractice*

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# + 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.



# + 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.

# + Dylan & Dad...and Butterflies!



# + Terminology



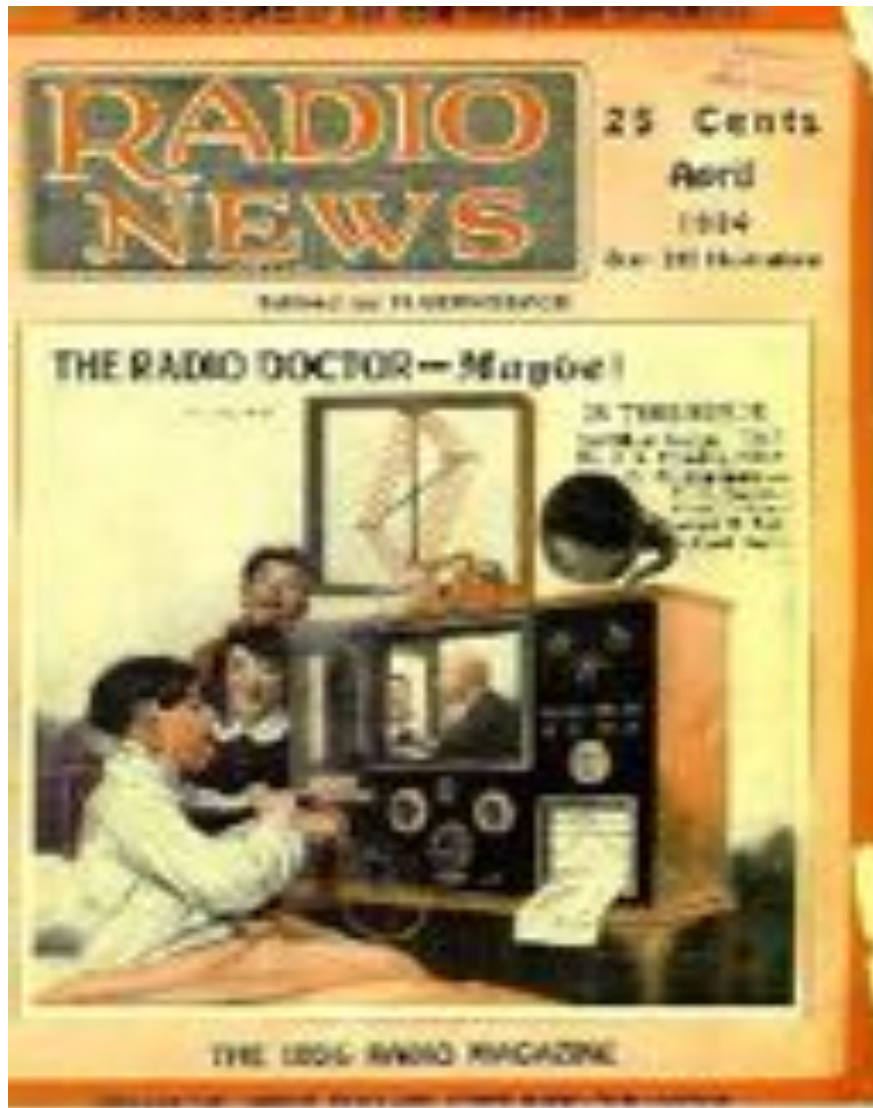
# + Defining Telepractice

- 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.



# + History of Telehealth

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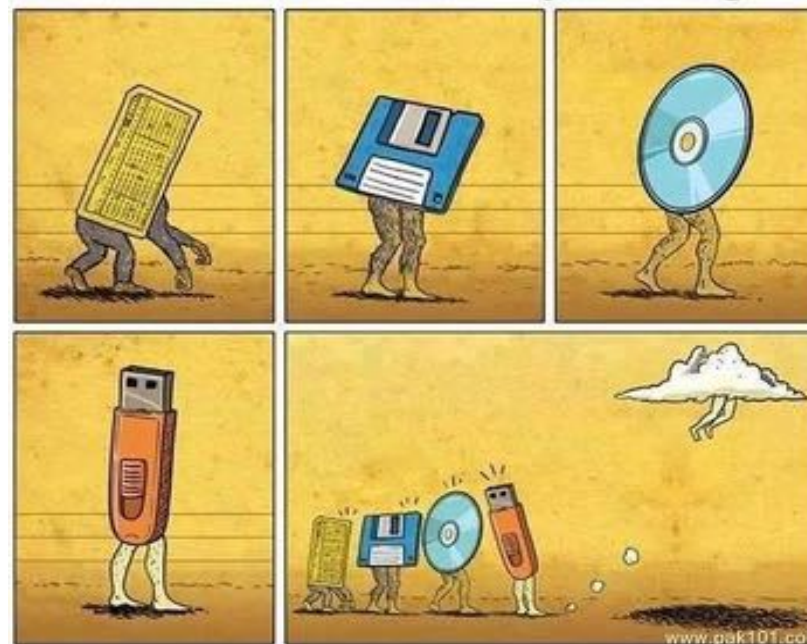
# + Evolution Leading to Revolution

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5 Mb of Storage Being Loaded: 1956



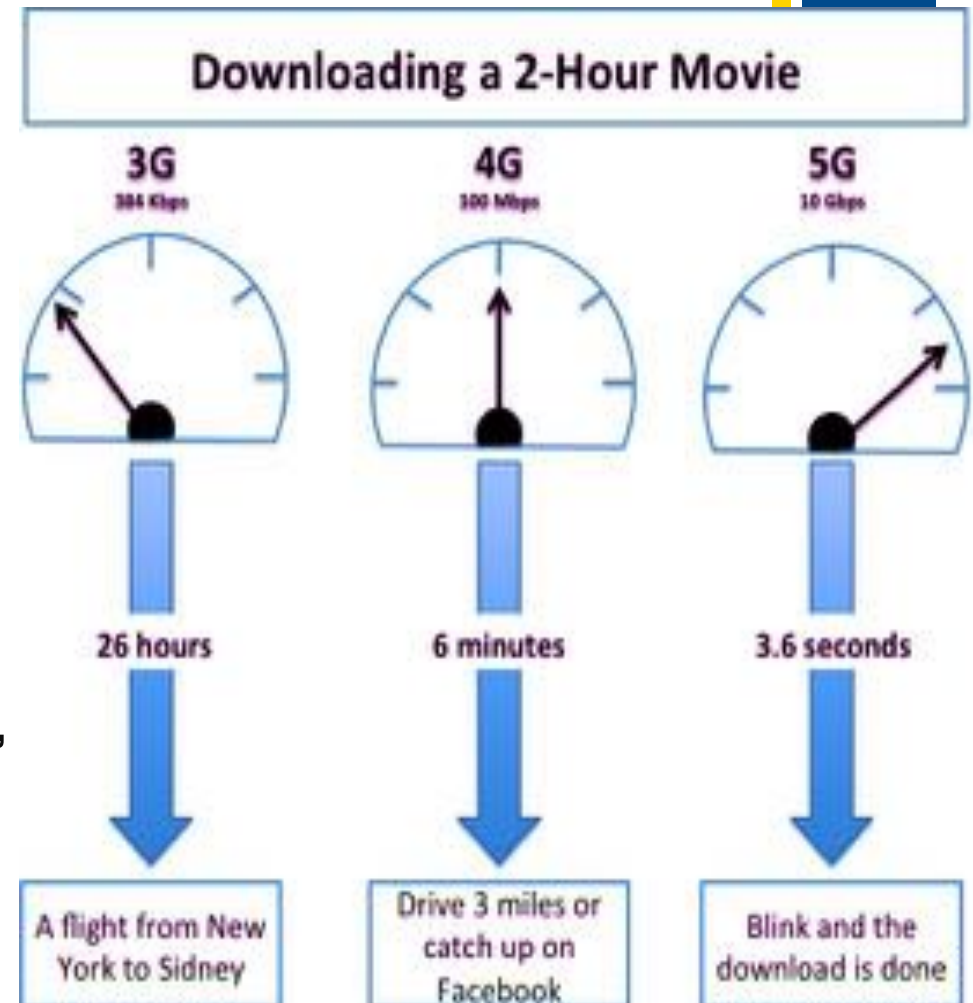
Evolution of Memory Storage





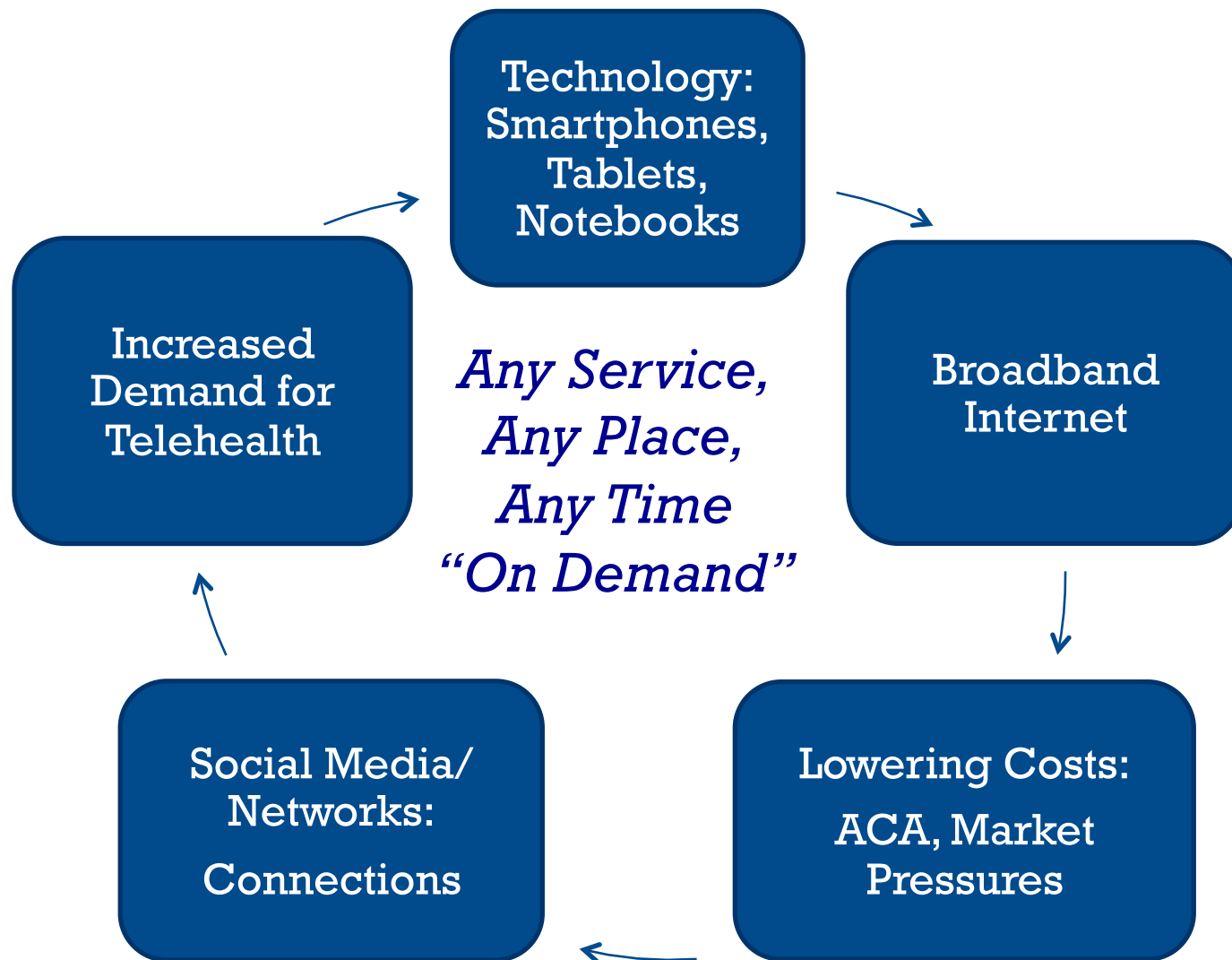
# + *The times...They are a-changin'*

- Virtual Reality = Immersive Computing
- Artificial Intelligence (AI) / Robotics
- 3-D Printing
- Internet of Things / Internet of Everything / Smart Homes
- 5G connections = 10K faster, 10 Gbits per second
- Everything On Demand = Uber, Lyft, etc.
- Quantified Self / Mobile Health
- Self-Driving cars



## + Convergence of Technology, Healthcare, & Education

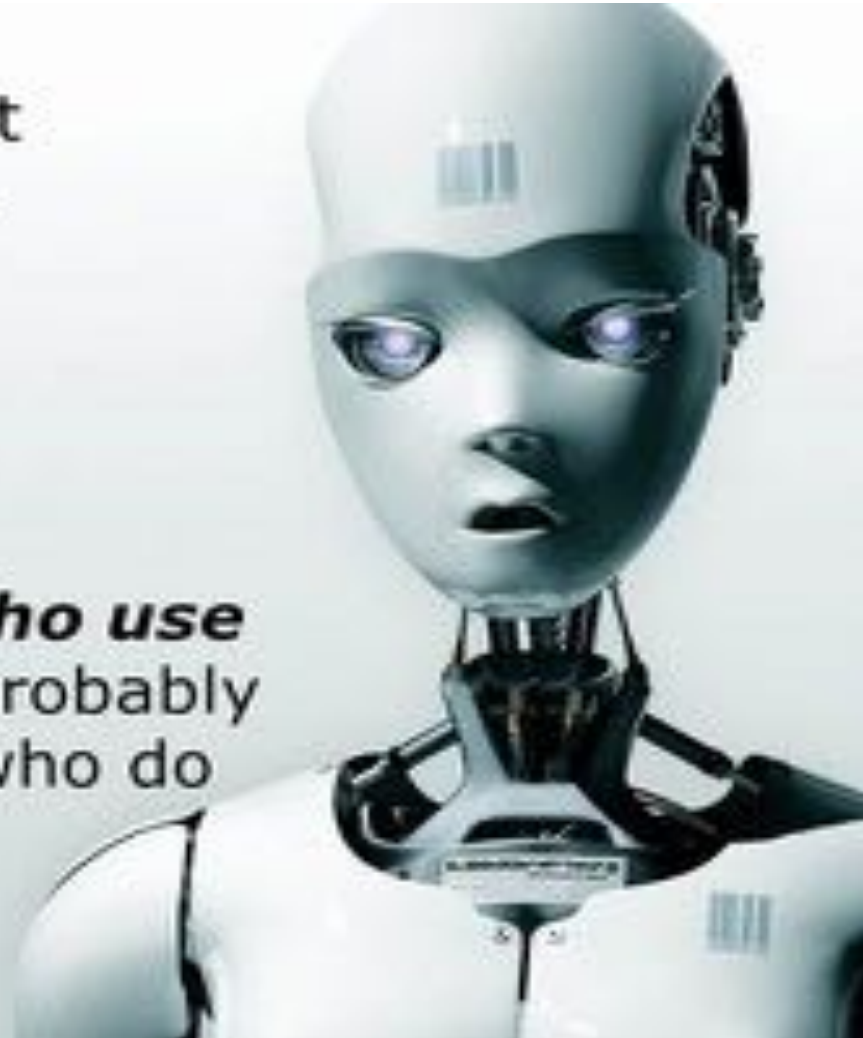
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**Technology** won't  
replace teachers...

...but **teachers who use  
technology** will probably  
replace teachers who do  
not.



...so what about early interventionists, audiologists, and  
speech-language pathologists?

## + Healthcare Access of the Future

According to the  
**American Medical Association,**  
70% of doctors visits and  
40% of ER visits  
could be avoided through telemedicine.

*Increasingly, speech-language pathologists, audiologists, and other educators are adopting models of telehealth & telepractice to serve more children with hearing loss and their families.*

## + An Audiologist's Perspective

*“Telehealth has taken many years to become an “overnight” sensation...and now we have...a convergence of telecommunications and health care finally becoming a reality.”*

--David Fabry, PHD



# + Telepractice & Speech-Language Pathology

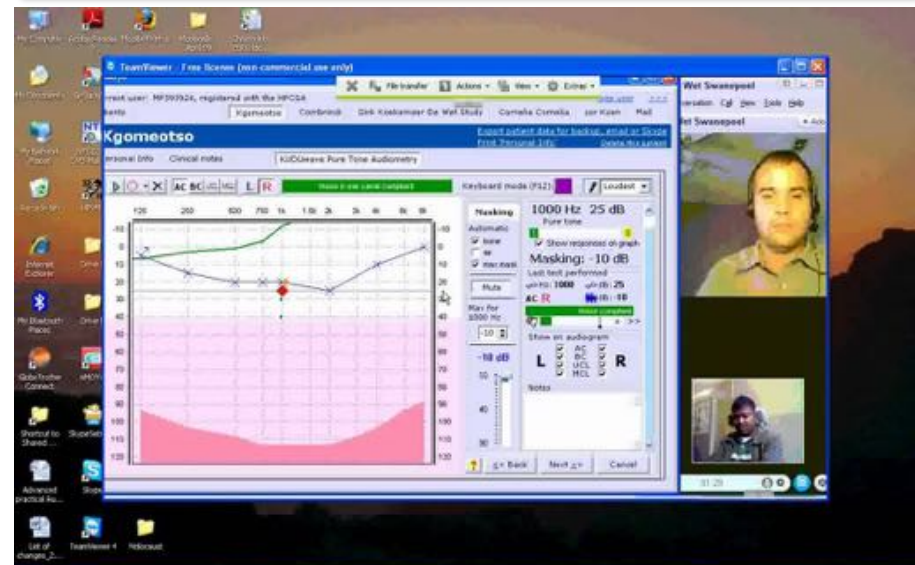
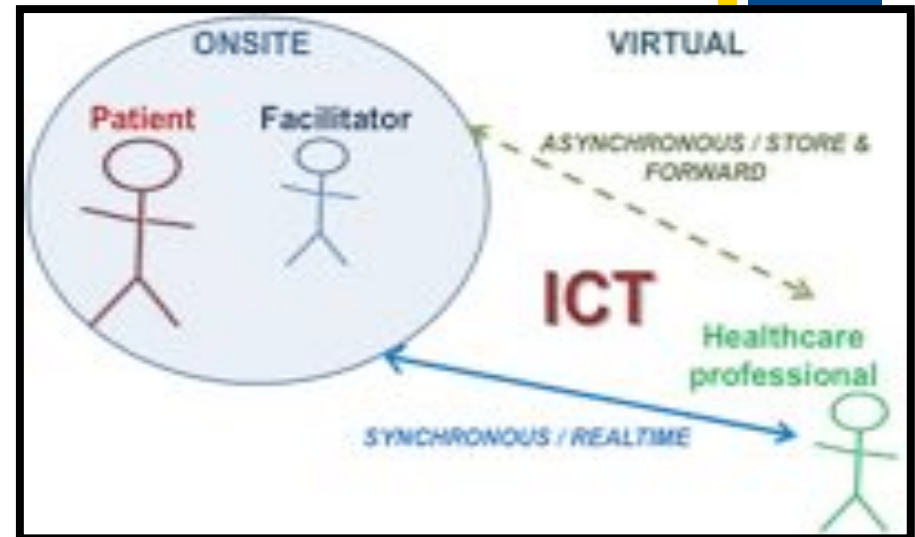
- Around the world, SLPs are using telepractice to delivery direct and indirect services for the following areas of practice:
  - Assessments
  - Speech and language delays
  - Articulation & phonological disorders
  - Voice & fluency
  - Non-verbal/AAC
  - Traumatic brain injury
  - Aphasia/Stroke
  - Auditory-Verbal Therapy/Parent Coaching
  - Adult Aural Rehabilitation
  - Supervision, mentoring, & consultation



Boisvert, M. (2014)

# + Telepractice & Audiology

- Patient Counseling
- Hearing Screenings
- Audiological Diagnostics
- Hearing Aid Fittings
- Cochlear Implant Mapping
- Teleintervention for children & Adult Aural Rehabilitation



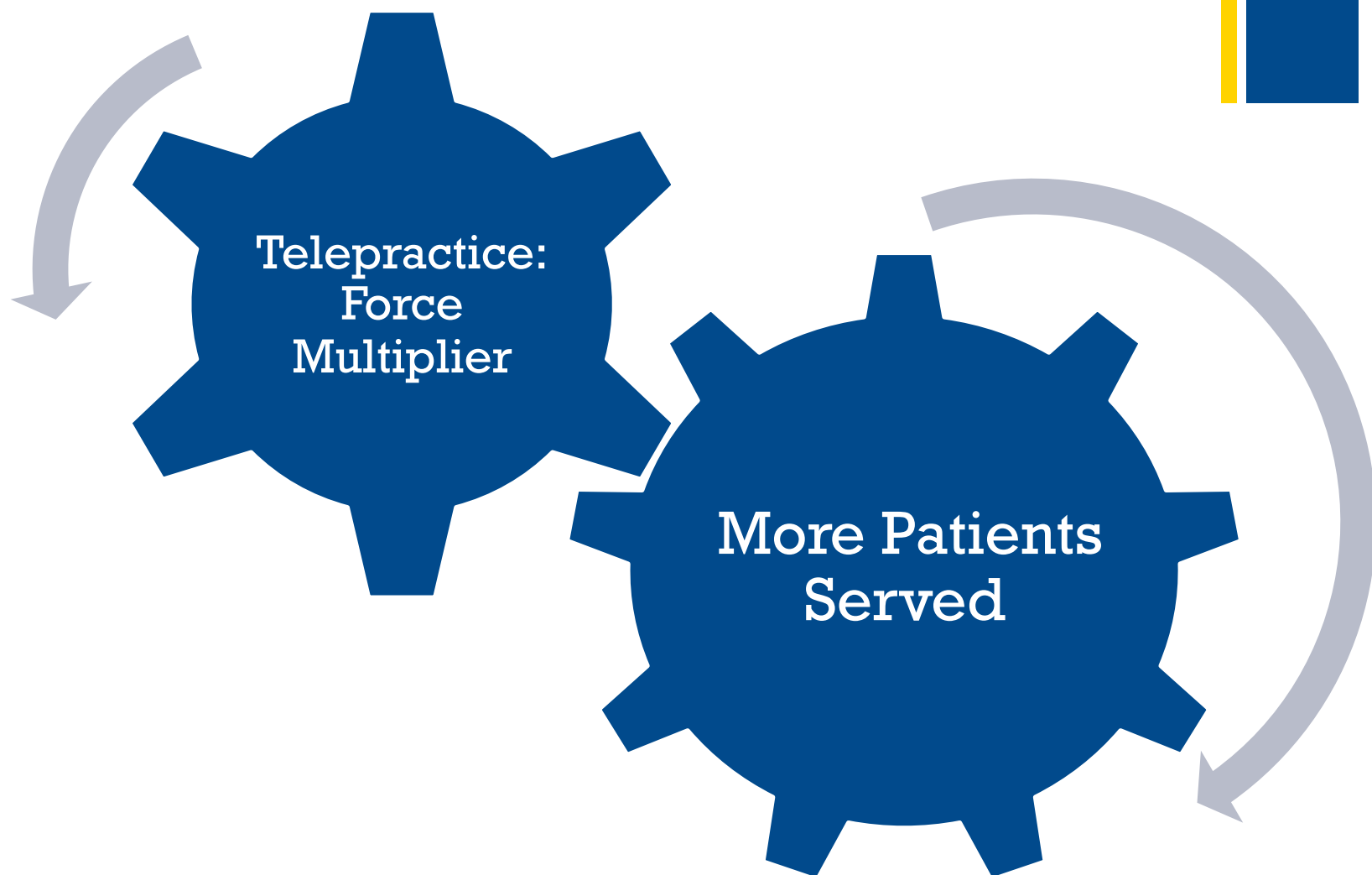


*Telepractice is not a different service  
but rather a different method of service  
delivery.*

-- Janet Brown, 2010

## + Benefits of Telepractice

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Boisvert, M. (2014)

# + The Need for Telehealth/Telepractice

- Clinician/specialist shortages
- Misdistribution of providers
- Rural/urban underserved
- Travel time, cost & hardship
- Delayed treatment, intervention or rehabilitation





## + Telepractice Benefits

- Reduces barriers to access
- Reduces travel, time constraints
- Reduces overall healthcare costs
- Reduces delays in care
- Improves quality of care, collaboration, & coordination

**More consistent therapy & intervention leads to improved speech, language, and learning outcomes for the children and families served.**

## + The Question for the Day

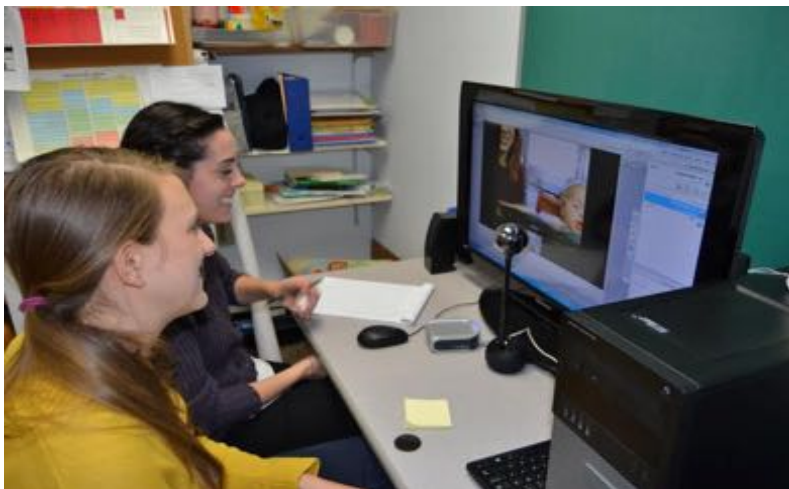
With the convergence of communication technology and healthcare, how will telepractice service delivery models impact the provision speech-language intervention to children with hearing loss & their families?





## Telepractice & eLearning Laboratory (TeLL)

## + 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

# + Adult Learning Theory:

## *Adults [Parents] like to...*

- bring knowledge, skills, attitudes
- bring experience
- like to solve problems
- like to apply what they learn to real situations
- like to have choices
- like to share in the setting learning objectives
- have variety of learning styles/preferences
- do best in an environment where they feel safe, accepted, and respected
- want and need feedback
- need to have their abilities and achievements honored



# + Coaching and Adult Learning Theory

Joint Planning



```
graph TD; A[Joint Planning] --> B[Observation]; B --> C[Action]; C --> D[Reflection]; D --> E[Feedback]
```

Observation

Action

Reflection

Feedback

Generalizing knowledge and applying to other situations

# 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

# + Nancy & Alex

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# + Nancy & Alex

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# + Nancy & Alex

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# + Nancy & Alex

30



# + Alex – the Super HEAR-O

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# + Alex...getting ready for school





- Technology continues to evolve; professionals must do the same. New service delivery models and the technological tools to support them – *are inevitable*.
- Telepractice is *a viable solution* to meet the increased demand for listening & spoken language services for children with hearing loss & their families.
- Telepractice service delivery models will continue to expand & will be *regular fixtures in healthcare, early intervention services, and educational settings*.





# *Questions Comments Ideas*





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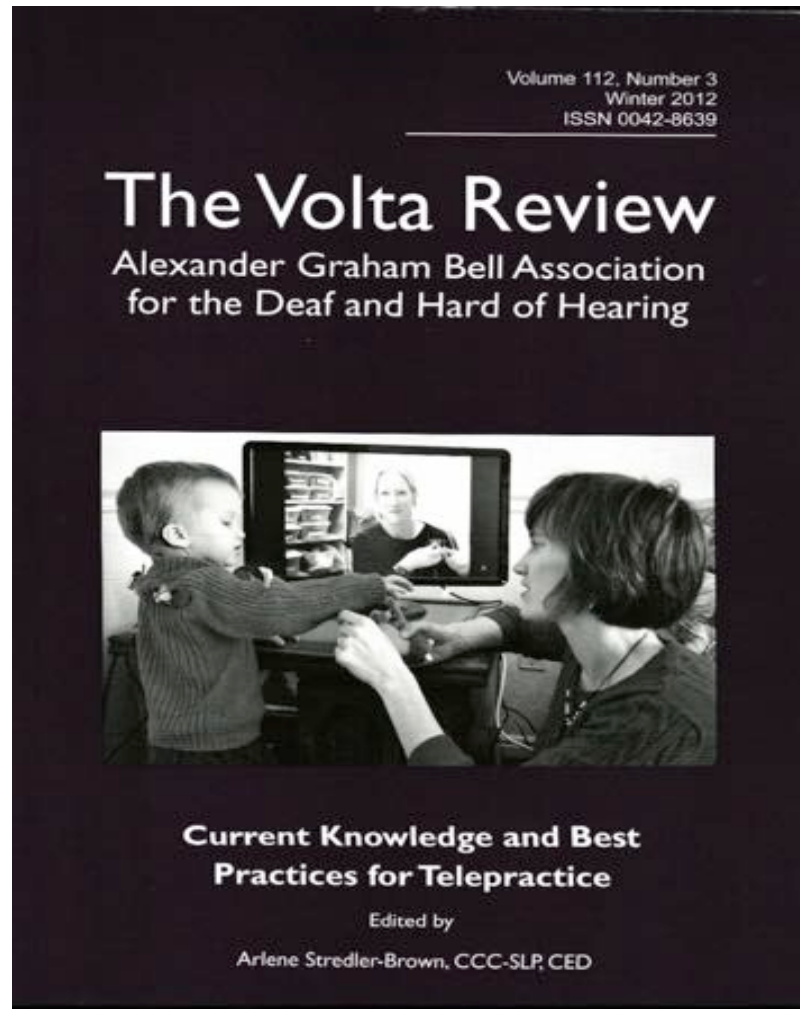
# + Resources

- American Telemedicine Association
  - [www.americantelemed.org](http://www.americantelemed.org)
- American Speech-Language-Hearing Association
  - [www.asha.org/telepractice](http://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

# + Resources

- National Center for Hearing Assessment and Management (NCHAM). A Practical Guide to the Use of Tele-Intervention in Providing Listening and Spoken Language Services to Infants and Toddlers Who are Deaf or Hard of Hearing. Available from: <http://www.infanthearing.org/ti-guide/index.html>
- American Telemedicine Association's *A Blueprint for Telerehabilitation Guideline*. Available from: [http://www.americantelemed.org/files/public/standards/ATA%20Telerehab%20Guidelines%20v1%20\(2\).pdf](http://www.americantelemed.org/files/public/standards/ATA%20Telerehab%20Guidelines%20v1%20(2).pdf)
- Center for Telehealth and E-Health Law (Ctel):  
<http://www.telehealthlawcenter.org/>
- International Journal of Telerehabilitation: <http://telerehab.pitt.edu/ojs/index.php/telerehab>
- Journal of Telemedicine and Telecare: <http://jtt.rsmjournals.com/>

# + Telepractice & Listening & Spoken Language



Monograph  
available from the  
Alexander Graham  
Bell Association for  
the Deaf & Hard of  
Hearing





# Telepractice in Speech-Language Pathology

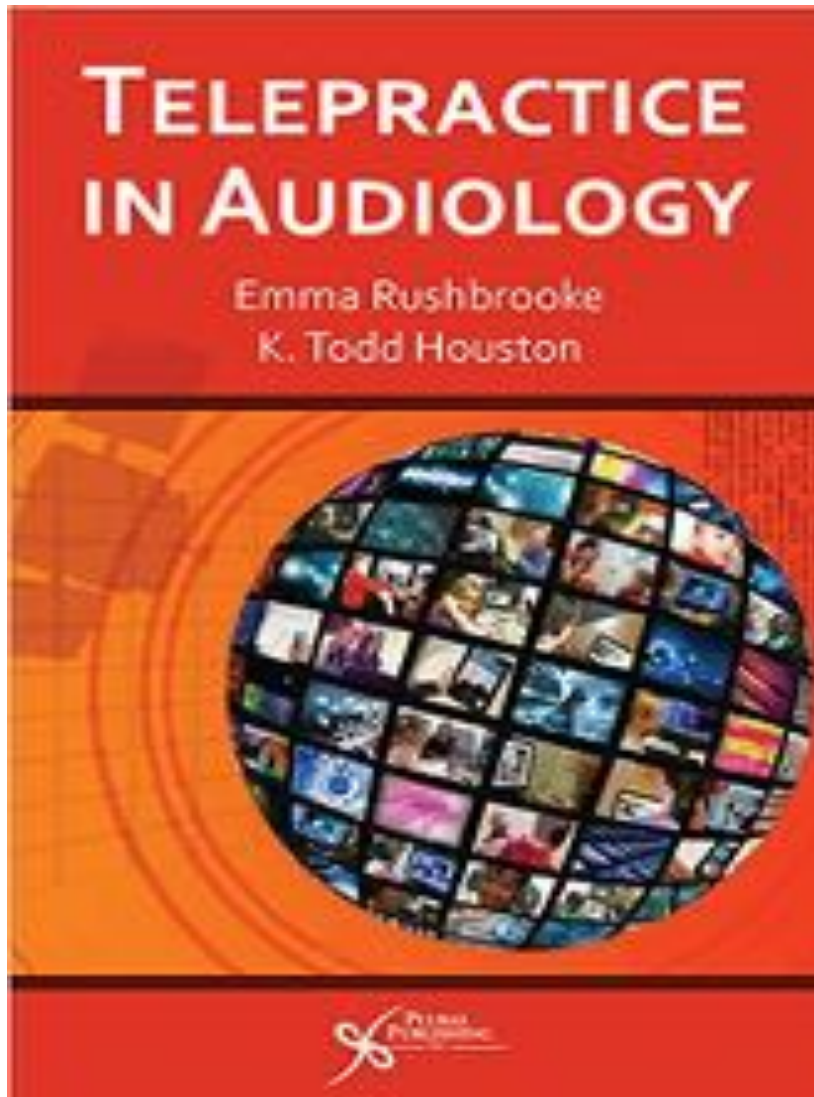
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# Assistance Is Available!

## Federally Designated Telehealth Resource Centers





# *Thank You for Listening!*

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LinkedIn Groups:	6 Sound-Off Telepractice In Speech-Language Pathology Telepractice In Audiology