

Teleaudiology Infant Hearing Assessment

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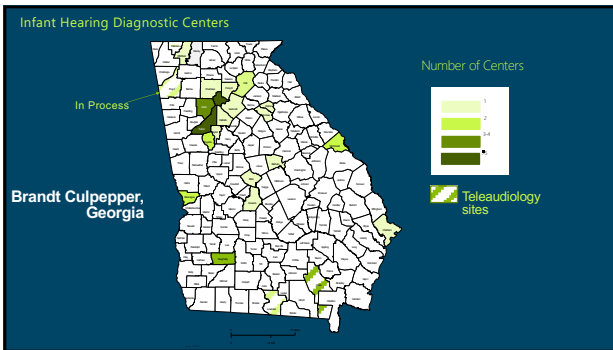


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Agenda

- Practical approaches to teleaudiology for infant hearing programs
- Establishing a standard ABR assessment protocol
- Risk monitoring via teleaudiology for delayed onset hearing loss
- Remote ABR assessment protocol demonstration

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TERMINOLOGY

Hub site:
This is where the assessing audiologist is located.
Equipment necessary for establishing the telemedicine and data connection.

Spoke site:
This is where the infant is located.
ABR, otoscope, OAE equipment location
Trained technician and intake staff



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Loss to follow up

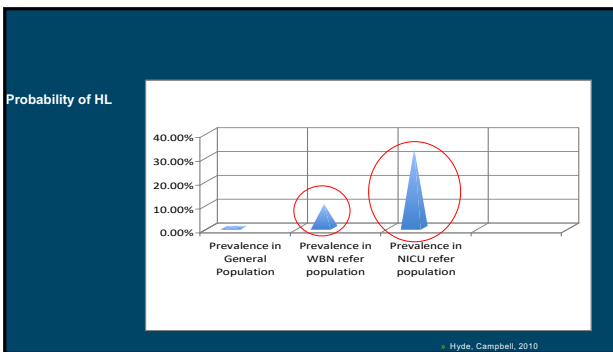
- Infants missed at hospital before discharge
- Infant who refer at Stage I and do not return for Stage II
- Infants who refer from Stage II and do not return for assessment

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Loss to follow up

- Infants missed at hospital before discharge
- Infant who refer at Stage I and do not return for Stage II
- **Infants who refer from Stage II and do not return for assessment**

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Practical approaches to tele-audiology for infant hearing programs

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HOW TO:
A Guide
Ballachanda, B., 2017

Are you ready?

- Be sure it's right for your program/clinic
- Agency mission/vision, goals
- Capital expenses
- Key people
- Identify challenges

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HOW TO:
A Guide

Reimbursement?

- How will you get paid for this service?
- Private providers vs funded providers

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HOW TO:
A Guide

IT

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Audio/Video solution Desktop Sharing solution

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200 telemedicine networks serving 3500 sites

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Software Solutions	Pros	Cons
Telemedicine Network	Encrypted, secure portal Technical support Can be feasible with PCVC Easy access from all sites	License fees, number of hub sites Bridging to other networks Can be limiting in site availability Can be complex
Netype for Business	Simple access Minimal cost Ease of use Very flexible in terms of sites HIPAA compliant	Need BA with Microsoft Need agency Office 365 license Hub site needs to be associated with agency license
WhatsApp	Claims to be encrypted, but not sure if HIPAA compliant	HIPAA compliant? Both hub and spokes need app
Zoom	Free app HIPAA compliant Large single PCVC type network	Expensive - ~\$200 annually, depending on hub sites
Other options	Can be inexpensive Vary in flexibility	Check HIPAA compliance May be expensive
Teamviewer	Minimal cost Prepackaged with Vivasonic Easy to use HIPAA compliant	Need to ensure unattended access is not enabled Frequent updates License fees IT policy restrictions
AnyDesk	Minimal cost, or free Easy access HIPAA compliant	License fees may apply
Other options	Huge array of options available	May not be HIPAA compliant License fees may vary

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HOW TO:
A Guide

Equipment

- EMDI program standard protocols
- Webcam, mic, audio
- Flexibility, technology changes!
- Shipping equipment to spoke sites
- Test, test, test

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HOW TO:
Assessment

Hub site:

- Audiologist
- HIPAA compliant space
- PC, preferably with dual monitors
- Webcam, mic, headset
- Teamviewer
- Videoconference solution

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HOW TO:
A Guide

Spoke site:

- Trained technician
- HIPAA compliant space
- Laptop or PC for ABR, with dual monitor
- Webcam, speakers, mic
- Sufficient internet connection
- Teamviewer
- Videoconference solution
- Ambient noise

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Ambient Noise:

- Electrical and Acoustic

Minimum Permissible Ambient Noise Levels for ABR testing with insert earphones.						
Maximum Permissible Ambient Noise Levels (MPNAL) if Testing to 0 dB HL (ANSI S3.3)						
Ears not covered	Insert earphones			MPNAL if Testing to 35 dB HL		
	125 to 8000	250 to 8000	500 to 8000	125 to 8000	250 to 8000	
125	24	20	29	59	67	78
250	10	10	25	53	53	64
500	11	11	11	50	50	50
1000	8	8	8	47	47	47
2000	9	9	9	49	49	49
4000	6	6	6	50	50	50
8000	9	9	9	56	56	56

• Scollie, Susan 2016

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HOW TO:
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Spoke site Technician:

- IHP uses AABR screeners
- RN, CDA, other related professional
- In person session to setup equipment and prep infant
- Training support and videos

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Working with a standard
ABR assessment protocol
in remote infant
diagnostics

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Standard Protocol

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ONTARIO IHP:

ABR protocol

- Very specific steps – efficiency
- No identifying data on ABR equip.
- Results stored in infants “home” file
- Kept as screenshots, or exported data file

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ONTARIO
IHP:

Communication of Results

- Telemedicine model allows for immediate or delayed communication
- IHP protocol prefers delayed communication, but at clinician's discretion

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ONTARIO
IHP:

Data, Data, Data

- Central database capable of tracking infant from screening to discharge


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Next Steps:



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Questions?



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