

# Language and Literacy Needs of Deaf or Hard of Hearing Student Basics

*What Every School SLP Needs to Know*

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# Presenters

## **Jacqueline D. Hall-Katter**

Jackie is a speech language pathologist at the Center for Deaf and Hard of Hearing Education. Jackie graduated with her Master of Science Degree from Purdue University in 1992. After becoming a mother of four (two deaf children and three ADHD boys), she began working in deaf education in 1997 at the Indiana School for the Deaf and continued to provide services there until her recent move in 2016 to the Center.

## **Lorinda Bartlett**

Lorinda is the School Psychologist and Assessment Team Lead at the Center for Deaf and Hard of Hearing Education. She is a nationally-certified specialist in assessing students who are Deaf or Hard of Hearing with and without additional needs. Her experiences have included working in several states within the capacity as a statewide provider. She has more than a decade of experience providing consultation and assessment services. When she is not working, she enjoys spending time with her family, getting fresh air outside, playing, and reading together.

# Financial Disclosure

*Both presenters are employed by the Indiana Department of Health and are not receiving compensation for this presentation*



# Presentation Objectives

- As a result of hands on practice, participants will be able to complete a Ling 6 sound test correctly and interpret performance
- As a result of demonstration and direct manipulation, participants will be able to identify technology and how to know when it is working
- As a result of reviewing provided information, participants will be able to locate resources for assistance with language development of DHH students

# Starting with the Basics

## Deaf or Hard of Hearing (DHH) in schools

- Low incidence
- Indiana has more than 2,000 children with hearing loss
- Only 40% of DHH children in Indiana have no other eligibilities



# Access to Instruction

The ability to get the same exact information as hearing peers:

- May be through vision and/or hearing
- Must be the SAME information
- Includes peer comments/questions
- Includes side discussions
- Incidental information

# Over 80% of learned information is incidental (overheard/overseen)

Even if a student is performing within the average range of function for academic skills, lack of access to incidental information will have a long-term impact.

# Key Language Information that is Frequently Learned Incidentally

- Figurative language
- Jokes/ sarcasm
- Social cues/information
- Problem solving
- Inferencing



# **To learn language a DHH student needs access**

Language is needed to develop literacy (this is not limited to the English language).

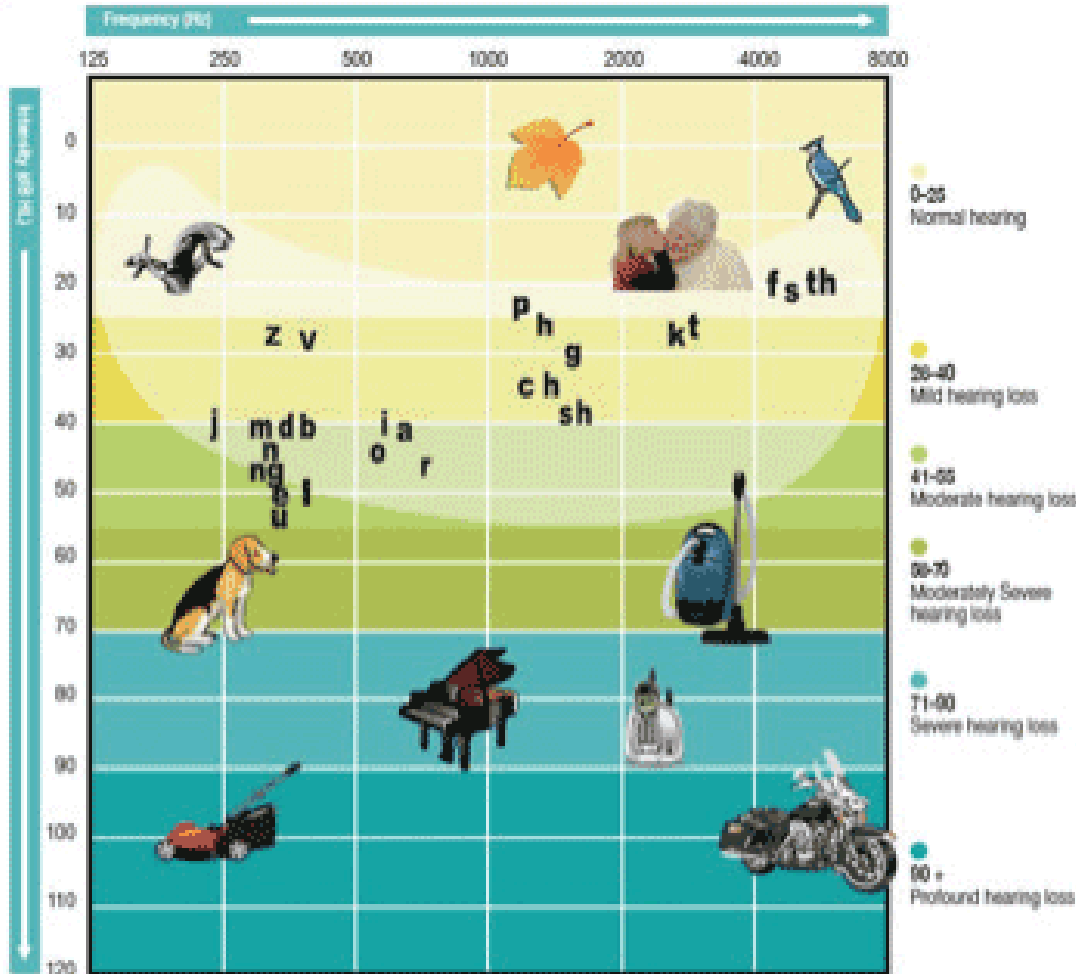
# Start with Terminology



# Types of Hearing Loss

- Conductive – problems in outer ear or the middle ear
- Sensorineural – problem in the inner ear (cochlea or nerve pathway)
- Mixed – combination of conductive and sensorineural

# Audiogram



Be cautious not to base any decisions solely on looking at an audiogram; the whole child needs to be considered

<http://helpmehear.ca/index.php?id=112>

<https://successforkidswithearingloss.com/wp-content/uploads/2019/01/MAKING-SENSE-OF-THE-AUDIOGRAM.pdf>

# Hearing Levels

- Unilateral (Single Sided Deafness)
- Slight
- Mild
- Moderate
- Severe
- Profound

<http://www.uww.edu/comdis/radio/hlsimulation/>

# Unilateral or Single Sided Deafness

- Locating source of speech
- Hearing in background noise
- Hearing soft sounds (s, f, th, ed, ing, er)
- Auditory fatigue
- Maintaining attention in noisy situations
- Following group discussions

# Slight/ Minimal

- Hearing faint speech or at far distances
- Hearing small differences between words (her vs. hers)
- Hearing in background noise
- Auditory fatigue

# Mild

- Hears but misses parts of information
- Misses unstressed information (syllables, words)
- Struggle with letter/sound association
- Impacted by distance and background noise
- Auditory fatigue



# Moderate

- Can miss 50% of speech signal with 40dB loss and 80% with 50dB+ loss
- Hearing aids make things louder not clearer; Cochlear Implants have different sounding signal
- Struggle in background noise; following peer conversation; incidental information missed
- Auditory fatigue

# Severe and Profound

- Without amplification cannot access speech
- With amplification, access varies greatly- still miss some auditory information especially in challenging listening situations
- Auditory fatigue
- Misses incidental information
- Often needs visual supports

# Qualifying for DHH

<https://www.in.gov/isdh/files/Guidelines%20for%20Assessment.pdf>

## Article 7:

- Academic testing
- Language testing
- Hearing testing
- Social history
- Adaptive behavior



# Qualifying for DHH

- Professionals involved with eligibility decision/assessment
- When student should be referred
- Waiting to fail model
- Impact of early identification and services

# Red Flags When to Refer for Additional Testing

- Not retaining information
- Language gap not closing with intervention
- Academic delays that are not responding to typical available supports
- Behavioral differences from typical peers
- Attention struggles
- Sadness or withdrawal
- Isolation from class and peers
- Growing gaps from age appropriate levels

# Unique Considerations

- A student needs to be able to access information to acquire new information and participate in discussion
- Amplification does not guarantee complete access to information
- Signing and talking simultaneously does not ensure access

**We expect deaf or hard of hearing students to perform at the same level as their hearing peers**

Expectations should not be lowered for this population



# MYTHBUSTER

*Deaf and hard of hearing students  
only achieve  
fourth-grade reading level*



**Regularly monitoring student language/performance levels is essential to literacy development**

Literacy cannot develop past a student's language level

# **Involving professionals knowledgeable with DHH students will prove beneficial**

Since the eligibility is low incidence, seek resources available to you will help with the task

# Vocabulary

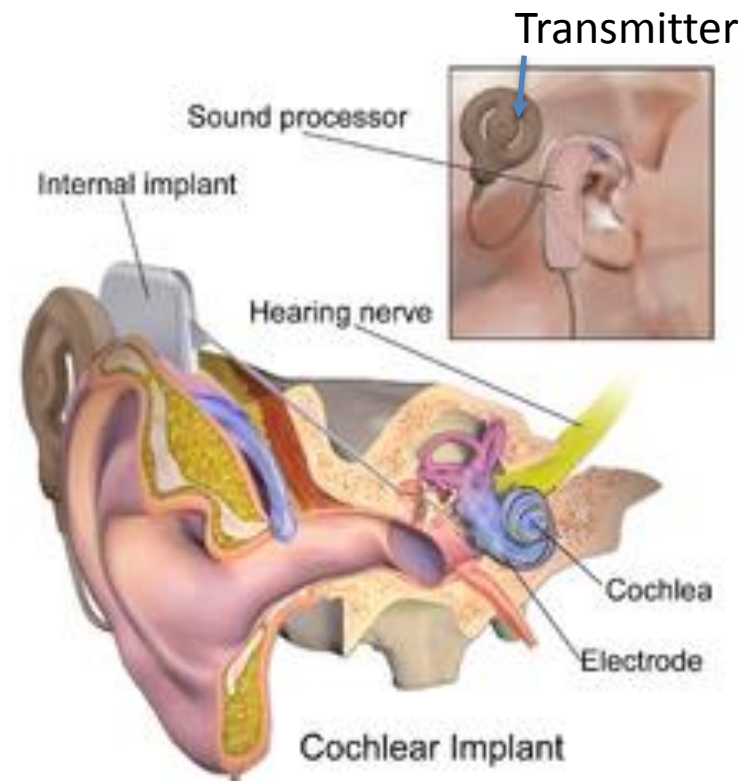
## Hearing Aid

Behind-the-Ear (BTE) Device



<https://successforkidswithhearingloss.com/for-professionals/hearing-aids/>

## Cochlear Implant



<https://successforkidswithhearingloss.com/for-professionals/cochlear-implants/>

# More Important Basics

- FM/DM systems  
<https://successforkidswithhearingloss.com/for-professionals/fm-systems/>
- Ling 6-sound test <https://cid.edu/2016/09/28/ling-sound-test-every-day-easy-way-determine-childs-access-sounds/>
  - Ah, ee, oo, m, s, sh, silence
  - Auditory hoop
  - Each device
  - distance
- Wear amplification all waking hours

# Why Check Devices?

LING SOUN D	1 <sup>ST</sup> FORMANT	2 <sup>ND</sup> FORMANT	3 <sup>RD</sup> FORMANT	4 <sup>TH</sup> FORMANT
OO	200-500	650-1100		
AH	525-775	825-1275		
EE	150-450	2300-2900		
SH			1500-2000	4500-5500
S				5000-6000
TH				6000
M	250-350	1000-1500	2500-3500	

# Troubleshooting

- Different for each type of device
- Suggest you have a binder ready to consult – consult each company website
- Self-Advocacy

<http://www.clarkeschools.org/uploads/files/mainstreaming/CompensatorySkillsChecklist.pdf>

# Your DHH Student

- Student needs:
  - Access
  - Appropriate intervention to address areas of need
  - IEP and adequate accommodations to ensure access
  - Regular skill monitoring/ amplification checks
  - Self-advocacy
- SLP role?
- Who should monitor?
- What if our school doesn't have a DHH teacher?



# If a Student Cannot Hear, How Can He or She Learn to Read?

- Children who have auditory access will often use phonics techniques for reading decoding
- Deaf children using ASL can map words using ASL signs
- Some schools use visual phonics
- Use of verbalizing and visualizing techniques
- The key, regardless of technique, is age-appropriate language skills



# MYTHBUSTER:

*Signed Exact English helps literacy development*



# Best Practice

For every year of delay,  
students should receive one hour  
of focused service daily

# SLP Role with DHH and Literacy

- ASHA Scope of Practice

<https://www.asha.org/policy/SP2016-00343/>

- International Dyslexia Association position statement

<https://dyslexiaida.org/dyslexia-assessment-what-is-it-and-how-can-it-help/>



# IEP Elements

- Accommodation options
- What should include
- Team members

# Collaboration

- DHH teachers
- Center for Deaf and Hard of Hearing
  - Consultation
    - Phone
    - ZOOM
    - On-site
  - Assessments



# Questions?



# Contact Information

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# Resources

- [American Speech-Language-Hearing Association – Causes of Hearing Loss in Children](#)
- <http://www.healthyhearing.com/help/hearing-loss/children>
- <https://successforkidswithhearingloss.com/>
- <https://cid.edu/professionals/>
- <https://advancedbionics.com/us/en/home/support/tools-for-schools.html>