

The Essentials of Working with Children with Hearing Loss

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Sunshine Cottage
SCHOOL FOR DEAF CHILDREN

Disclosure Statement

**No relevant financial relationship(s) or
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We have no relevant financial or
nonfinancial relationships in the products or
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compared in this presentation.

“Speech may be audible, but not
intelligible.” ~ Carol Flexer

[http://www.starkey.com/hearing-
loss-simulator](http://www.starkey.com/hearing-loss-simulator)

Audiology

Daily Listening Check

- Check amplification
 - Batteries
 - Cords and wires
- Ling 6 sound check
 - Detect (behaviors) or imitate
- Note any behavioral changes

Checking Amplification

- Hearing Aids /FM
 - See checklist
 - Equipment needed:
 - Listening stethoscope
 - Battery tester
 - Blower
 - Alcohol wipes
 - Refer to an audiologist





Checking Amplification

- CI Speech Processors
 - See checklist
 - Equipment needed:
 - Signal check
 - Listening headphones
 - Contact Manufacturer



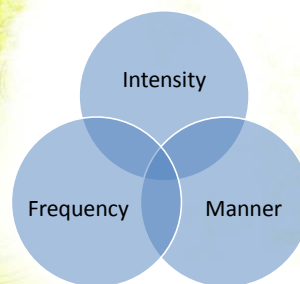
Ling Sound Check

- Developed by Daniel Ling
- Six sounds and a silent period
 - Child can look down
 - Try not to distort sound by covering mouth
- Child will detect or identify sound

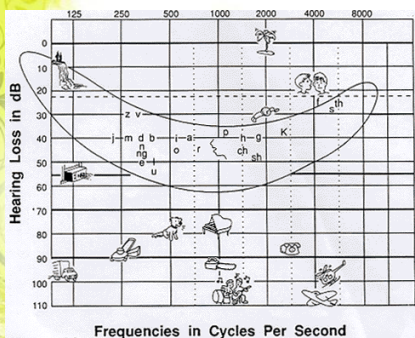
Ling Sound Check

- /a/, /i/, /u/, /s/, /ʃ/, /m/, "nothing"
- Sound randomly produced
- Period of silence
 - To allow child to recognize a sound was not produced
 - Speaker asks, "What did you hear?"
 - Child says, "Nothing!"
- Can be done in 10-15 seconds
- Should be done at 3ft, 6ft, and 9ft

Ling Sound Check



Ling Sound Check



Ling Sound Check

Sound	Detection	Imitation
/a/ "ah"		
/ʃ/ "sh. . ."		
/i/ "eee"		
/s/ "sss"		
/u/ "oo"		
/m/ "mmm"		

Ling Sound Check Video

Behavioral Observations

- Reduction in distance listening
- Increased need for repetition
- Child changes or needs changes
 - Sensitivity or volume settings
- “slushy” production of formerly mastered speech sounds

Behavioral Observations

- Change in frequency of vocalization, voice quality and/or vocal intensity
- Omission or confusion of consonants that were formerly present
- Emergence of disruptive or withdrawn behavior

Behavioral Observations Video

Environmental Acoustics



- Be aware of background noise
- Other children
 - TV/stereo on
 - Dishwasher running
- Room acoustics
- Hardwood floors – noisy
 - Area rugs – dampen sounds

Positioning

- Cochlear implant side for most benefit (if 1 sided CI only)
- 6 inches from the microphone of HA or CI
- Single CI does not allow localization of sound
- Get on the child’s level

Localization Video

Communication with Audiologist

- Is essential!
- Should occur frequently

Questions to Ask the Audiologist

SLP → Audiologist

- What kind of amplification does the child wear?
- How long has the student had hearing aid(s)?
- What CI device does this student have? When did he/she get the device(s)?
- What are his/her settings?
- May I see the student's unaided/aided audiogram?
- What kind of speech perception would you predict from these results and can we get more?
- How do I check the child's device(s)?
- Is there a history of middle ear infection?

Questions to Ask the Audiologist

SLP → Audiologist

- When was the child last tested without HAs and with HAs?
- When was the child last programmed (mapped)?
- When does the child need to be remapped?
- How often does the child need to be remapped?
- Where does this child go to be mapped?

Questions to Ask the Audiologist

SLP → Audiologist

- Do I inform you, the parent, or both of any changes in the student's behavior?
- Who is teaching the parents how to be responsible for the student's equipment?
- Who is responsible for checking the student's equipment at school?
- If I discover a problem with the student's equipment, who do I contact?

Communication with Parents

SLP → Parents

- Does your child wear his equipment ALL DAY EVERY DAY?
- Do you listen to your child's equipment?
- How often do you check your child's equipment?
- Where do you go to get your child's equipment repaired? Your child mapped?

Communication with Parents SLP → Parents

- What information have you been given regarding your child's cochlear implant or hearing aids?
- What is your child able to hear now that he or she has the implant or hearing aids?
- Has your child received any listening therapy? Where?
- What are your expectations for your child, now that he/she is implanted/aided?

Stay Up to Date!

- Equipment
- Settings
- Audiogram
- Audiologist
- Parents

Speech and Language Therapy

Therapy Essentials for Working with a Child with Hearing Loss

- Individual therapy is ideal!
- Therapy without functional equipment is a waste of time
- Time is critical!
- Know your resources:
 - Collaboration with listening and spoken language specialists
www.agbell.com
 - AVT teletherapy

In Order for Therapy to be Efficient and Effective, Remember.....

- Make sure equipment is working
- Use FM System!
- Positioning
- Room acoustics
- Communication with parents and professionals

Therapy Strategy: Speaker's Voice

- Avoid using a:
 - High-pitched voice
 - Breathy voice
 - Over-exaggerated mouth movements
 - Monotonous voice
- Use parentese
 - Intonation
 - Pitch patterns

Therapy Strategy: Wait Time

- OWL
 - Observe
 - Wait
 - Listen
- At least 8 second wait time
- Limit teacher talk/explanation



Therapy Strategy: Reduce Visual Cues

- Allow students to rely on their cochlear implant(s) or hearing aid(s)
- Inhibit pointing, gesturing, tapping
 - “Close the door”
 - “Sit down”
- Don't give it away with eye gaze

Therapy Strategy: Hand Cue

- Use only when necessary
- Use to prompt for vocalization
- Use to prompt for listening
- Can substitute as a stuffed animal, toy, acoustic screen or book

Therapy Strategy: Auditory Sandwich

- Give information auditorally
- Give visual cue
 - If information is NOT understood
- ALWAYS go back to audition

Therapy Strategy: Auditory Bombardment

- Use of target frequently in therapy
- Don't miss an opportunity to use their target
- Therapy may be the only opportunity for the child to hear the target again and again

Auditory Bombardment Video

Therapy Strategies: Acoustic Highlighting

- Emphasize particular words or sounds
 - Intensity changes
 - Pitch changes
 - Duration changes
 - Repetition

Acoustic Highlighting Video

Therapy Strategy: Clarify the Message

- Reword
- Repeat
- Visual cue – deliberate use of eye gaze
- Move closer to the listener
- Direct child/ Get attention
- “Listen”
- Check background noise/ distractions

Therapy Strategy: Checking Comprehension

- Comprehension verses pleasing the listener
- Teach clarification strategies
 - “What did you hear me say?”
 - Child is obligated to respond to the question
 - Builds self-confidence
 - Check themselves

Therapy Strategy: Increasing Listener Responsibility

- Avoid rescuing
- Avoid translating
- Avoid yes/ no questions
- Avoid using a pattern of responses
- Don't overlook the child who is behaving but quiet

Student's Responsibility for Successful Communication

- Imitation
- Delayed Imitation
- Linguistic Prompting
- Specific Clarification Request
- Modified General Request
- General Request
- Vague Request

Therapy Considerations

Easiest to Hear

- Greatest acoustic contrasts
- Small set of choices (2-4)
- Distance – **close** (6") to the microphone

Hardest to Hear

- Less varied (minimal pairs...)
- Large set (4-12)
- Distance – far from the microphone

Therapy Considerations

Easiest to Hear

- No background noise
- Key word at the end of the sentence
- Slightly slower rate

Hardest to Hear

- Noisy background
- Key word in the middle of a sentence
- Normal rate

Therapy Considerations

Easiest to Hear

- Increased pitch variation and rhythm
- Clear enunciation
- Increased repetition

Hardest to Hear

- Normal rhythm
- Less clear and/or unfamiliar voice
- No repetition

Therapy Considerations

Easiest to Hear

- Simple language, short sentences
- Emphasis on unaccented words (prepositions, articles)
- Consonants when vowels are whispered

Hardest to Hear

- Complex language
- No special emphasis
- Consonants when vowels are shouted

Practice makes PERMANENT! –
not Perfect!!!

Equipment Resources

Cochlear Americas

www.cochlearamericas.com

hope.cochlearamericas.com www.phonak.com/com/b2c/en/support/eschooldesk/overview.html

Phonak

www.phonak.com

Advanced Bionics

www.advancedbionics.com

www.hearingjourney.com/Listening_Room

Oticon

www.oticon.com

Med-El

www.medel.com

Therapy Resources

- AG Bell www.agbell.com
- Cochlear Hope Online Courses
<http://hope.cochlearamericas.com/online-courses>
- Cochlear Hope Speech Sounds
<http://hope.cochlearamericas.com/audiologists/slp/speech-sounds>
- Cochlear Listening Tools
<http://hope.cochlearamericas.com/listening-tools>
- Advanced Bionics
http://www.advancedbionics.com/us/en/support/support_library.html

Therapy Resources

- Ling, Daniel. (2002). *Speech and the Hearing Impaired Child*. AG Bell.
- Ling, Daniel. (1989). *Foundations of Spoken Language for Hearing-Impaired Children*. AG Bell.
- Cole, Elizabeth & Flexer, Carol. (2007). *Children with Hearing Loss Developing Listening and Talking: Birth to Six*. Plural Publishing.

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