EFFECTIVE COLLABORATION WITH SPEECH-LANGUAGE PATHOLOGISTS

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- Some of the information presented here is adapted and shared *with permission* from the following source: http://www.asha.org/Events/convention/handouts/2009/1431_Archer_Jamy_Claire/.

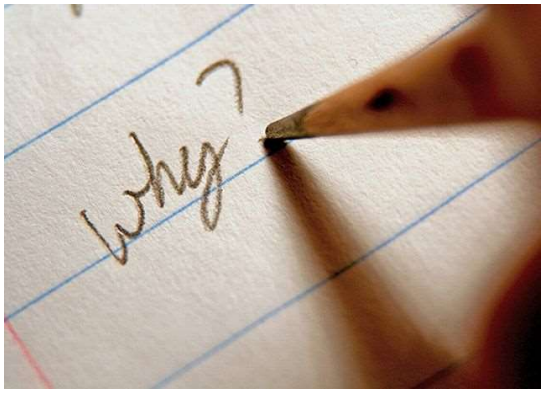
Trends

- Children are being identified earlier and fit with amplification or a cochlear implant at earlier ages.
- More children with hearing impairment are being integrated into mainstream education.

Collaboration Study (2011-2012)

- Survey results:
  - 100% of parents of children ages birth to three feel that professionals are working collaboratively.
  - 67% (2/3) of parents agree that professionals are working collaboratively once the child enters school.

Million Dollar Question



Negotiable?

- Collaboration is a non-negotiable!
- If collaboration is non-negotiable, what does it look like?
- What information do SLPs, classroom teachers, and administrators need to know in order to effectively serve children with hearing impairment?

Audiology 101?

Understanding the Audiogram

- Discuss student's audiogram and its implications
- Legend or key for audiograms
- Speech Banana
- Attend IEPs to explain nature and degree of student's hearing loss, educational impact of the hearing loss, and selection of appropriate technology.

Legend/Key Sample

From J.C. Archer & G. Crosby-Quinatoa

LEGEND / KEY

BLUE is the standard used to signify the LEFT.
RED is the standard used to signify the RIGHT.

Test Result Markings used on your audiogram:

	Right	Left
Air Conduction	O	X
/ with masking	△	□
Bone Conduction	<	>
/ with masking	[	]
No Response	↙	↘

While these symbols are the standard, they are not used by all hearing professionals. Please ask if they are right for your audiogram.

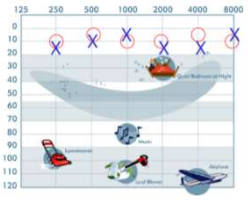
These graphs were done using a computer program for clarity. Unfortunately, sometimes the actual graph may be more difficult to read due to bad handwriting. If you can not read your audiogram, please ask your hearing professional for assistance.

Audiogram Samples

From J.C. Archer & G. Crosby-Quinatoa

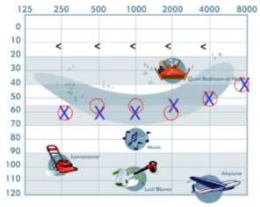
The Audiogram

Normal



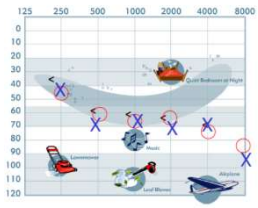
Conductive Hearing Loss Normal bone; abnormal air conduction scores

The Audiogram



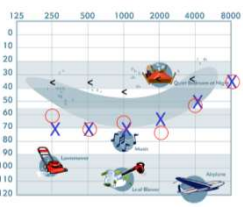
Sensorineural Hearing Loss Abnormal bone & abnormal air conduction that follows bone scores

The Audiogram



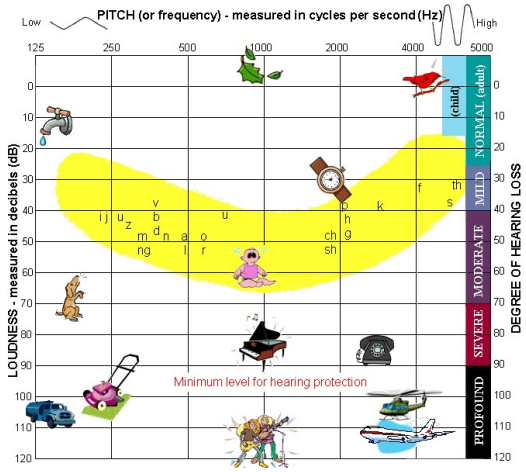
Mixed Hearing Loss Abnormal bone & abnormal air conduction at least 15dB worse than bone scores

The Audiogram



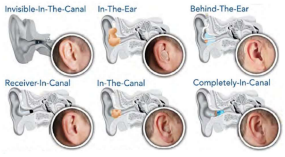
Speech Banana

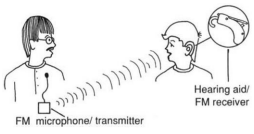
From agbell.org

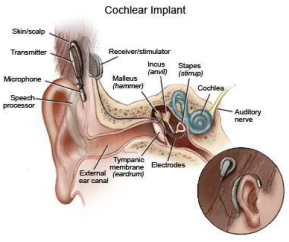


Understanding Equipment Terminology

- Rudimentary information in terms of equipment:
  - Hearing aid parts and styles (BTE, ITE, CIC, etc.)
  - How a cochlear implant works and CI components (internal and external devices)
  - FM system technology (transmitters/receivers)
- We need VISUALS!





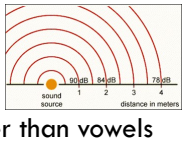


Understanding Listening Skills

- Hierarchy of listening skills
  - Detection (detect)
  - Discrimination (perceive same/different)
  - Identification (label)
  - Comprehension (understand)
- Detailed resource on hierarchy of listening skills: http://firstyears.org/c1/u5/pdfmodel.pdf

Understanding Classroom Acoustics

- Noise
  - Signal-to-noise ratio must be favorable
    - Average loudness level in classrooms is 50-70 dB
    - Average loudness level of normal conversation at 3-5 ft is 60-70 dB
    - The auditory input some children are getting is a whisper!
  - FM systems improve the signal-to-noise ratio
- Distance
  - Lose 6 dB for each doubling of distance
  - High pitch consonants (f, s, sh, p, t, th, k) are softer than vowels
- Reverberation
  - Excessive reverberation (echoes from hard surfaces) interferes with the auditory signal



Classroom Acoustics Solutions

- Are there any accessible solutions that schools/classrooms are not using?
  - Covering hard, reflective surfaces with sound absorbing material (acoustic tiling, cloth, paper, carpeting, cork).
  - Padding chair legs/feet.
  - If student desks open & close, using cork/felt to reduce noise.
  - Installing vent baffles/duct silencers and/or duct wraps/insulation in air ducts.

School Responsibility

- Schools are required to ensure that hearing aids worn by children with hearing impairment are functioning properly.
- The IEP should state who will do the monitoring, how often (daily!), and how parents will be notified of any equipment malfunctions.

Daily Checks

- Hearing aids
- Cochlear implant speech processors
- Ear-level FM system

Daily Checks (cont'd)

- Listening Check
  - Do the people responsible for daily checks know what they're checking for? Include VISUALS!
    - Loudness, consistency of signal (steady or intermittent?), quality (any static or distortion?)
- Troubleshooting
  - Do the people responsible for daily checks know solutions to common problems? Include VISUALS!

Hearing Aid Listening Check Example

- http://www.infanthearing.org/videos/featured/hearing_aid_listening_check.php
- Includes videos and handouts (English, Spanish, captioned, uncaptioned)

Expectations Guide

- For teaching independence and self-monitoring: http://successforkidswithhearingloss.com/wp-content/uploads/2011/08/SEAM-for-School-Success.pdf
- Helping children become their own advocates!

How Do We Get There?

- Joint attendance at IEP meetings
- Beginning-of-the-year inservice for classroom teachers
- Detailed step-by-step instructional handouts with pictures or simple video tutorials
- Accountability logs
- Availability for consultations

What About Kid Factors?

- Collaboration sometimes involves finding solutions when children are not cooperating with the process (e.g. refusing to wear hearing aids, losing or damaging devices, sensory sensitivities to wearing equipment).
- Solutions?

Accessible Language

- Last but not least, we must make our specialized knowledge and skills accessible to caregivers and other professionals!

SLP Example

- Analysis of a spontaneous language sample indicates that Johnny has a mean length of utterance (MLU) of 2.89, which is markedly below the expected range for his age. He also demonstrates a limited range in the pragmatic functions of language. In addition, his speech is highly unintelligible and is characterized by the following phonological processes: stopping, fronting, and cluster reduction.

Translation?

Audiology Example #1

- Auditory evoked potentials were obtained with click stimuli yielding thresholds in the 50 to 60dBnHL range bilaterally.

Translation?

Audiology Example #2

- John presents with bilateral, mild sloping to severe, sensorineural hearing loss due to enlarged vestibular aqueduct. Aided speech recognition scores are excellent at conversational presentation levels. Middle ear function is normal. Bilateral BTE hearing aids programmed to DSL targets were verified using probe microphone measures.

Translation?

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