Welcome to this Live e-Seminar!

We will begin at the top of the hour. Thank you for joining us!

Notes For Online Events

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If you have a **Links Button** in your upper toolbar for this event, it means that the Moderators have allowed to have a copy of their slides or have including other materials for you as well. Go ahead and click on **Links Button** above and select the Handout links available to you. From here you can print or save these documents to your computer.

Habilitation Outreach for Professionals in Education

Reaching Benchmarks of Performance

HOPE Specialists: Ashley S. Garber, MS CCC-SLP and Mary Ellen Nevins, Ed.D.

Introduction

Cochlear America's Commitment to Educational Outreach

Agenda

- What are Benchmarks?
- General Expectations
- Adapting Benchmarks
- Case Examples
- Summary/Question and Answer

Benchmark Auditory Behaviors for Children with Cochlear Implants

- In the twenty years that performance data have been gathered on children with cochlear implants, trends of auditory achievement have emerged

What is a Benchmark ?

- A benchmark auditory behavior is one that, all things being equal, can be expected within a certain time period after implantation
- Benchmark behaviors don't just appear; they are skills that need to be developed

How are Benchmarks Used?

- Benchmarks are used to monitor progress of a particular child against group trends
- Challenges to meeting benchmarks are often identified at the time of candidacy
- Knowledge of benchmarks allows the speech and hearing professional to be vigilant with regard to a child's potential to maximize the benefits of the implant
- Discrepancies between expectations based on candidacy profile and actual outcomes require further investigation

Caveats on the Use of Benchmarks

- The simple use an implant alone will not guarantee a particular performance outcome
- One cannot conclude that the child is not meeting benchmark behaviors if no auditory opportunity has been provided
- Particular benchmarks will appear as a result of targeting and practicing specific auditory skills

Benchmarks for Children Implanted by Age Two

Moog, 2003

- Factors affecting a child's potential to reach benchmarks include: normal intelligence, consistent implant use, appropriate MAP, no speech/language issues
- Consider that these guidelines were developed based on a group of children enrolled in a small instruction, auditory-oral program

Almost Immediately after Activation

Moog, 2003

Children

- detect speech sounds across all frequencies
- detect the Ling 6 Sounds
- detect a variety of environmental sounds

0-4 Months after Activation

Moog, 2003

- Children seem to be intent on listening; because they are very young it is difficult to assess what they are truly understanding
- This phenomenon parallels the stages of normal development in which children process auditory input for a period of time before spoken language output is observed

4-6 Months after Activation

Moog, 2003

Children:

- identify at least 35-50 words (mostly nouns and verbs) in closed sets in structured listening lessons
- use some single words to express their needs and wants in routine and naturalistic contexts
- name most of the items or actions they understand
- produce recognizable approximations (matching syllable contour and a vowel or a consonant) of modeled words

1 Year after Activation

Moog, 2003

Children:

- identify 75-100 words (nouns, verbs, early prepositions and adjectives) through objects or pictures in closed sets of four
- produce many of the words identified in closed sets
- develop understanding of early two word combinations (noun-noun, noun-verb, verb-noun)
- produce some early two word combinations in lesson setting
- use single words and some common expressions to communicate thoughts and ideas in routine and natural settings

15-18 Months after Activation

Moog, 2003

Children

- experience an explosion in language
- learn vocabulary incidentally
  - Increase in total vocabulary to more than 250 words
- comprehend simple 3-4 word sentences
- use a variety of two word combinations across all contexts

2 Years after Activation

Moog, 2003

Children:

- possess a vocabulary of more than 500 words—too many to count
- comprehend a variety of simple sentences and questions
- use 4-6 word sentences to communicate in all contexts

Learning with a Cochlear Implant

- After a period of "learning to listen" children have sufficient skills to transition to "listening to learn"
- As they listen to learn, each child's development will become more idiosyncratic, suggesting a need for individualized goals and support

Adapting Benchmarks to Different Populations

Adapting the Benchmarks

- Children implanted at older ages
- Children utilizing sign language
- Teenagers
- Special populations

Children Implanted at Older Ages

- The extent to which auditory skills were acquired prior to implantation will influence the rate of progression toward benchmark behaviors
  - Good experience with hearing aids
  - Limited auditory access
- The richness of the child's language base may influence the ease with which the child uses auditory information to access that language
  - Visual language base
  - Limited language exposure
- Depending on previous auditory experience, habilitation may be more structured than natural

Children Utilizing Sign Language

- The relative emphasis that is given to spoken or signed communication after implantation influences the *rate* and ultimate achievement of benchmark auditory behaviors.
  - Targeting particular auditory skills will lead to benchmarks
  - Auditory skills can still be encouraged even if sign communication remains the vehicle for content instruction. Additional time to reach benchmarks and a long period of "learning to listen" should be expected

Teenagers – Auditory Background

- For these users, language development has already occurred so new auditory information can be easily applied to known concepts
- Rapid achievement of auditory benchmarks can be expected
- While teens may quickly demonstrate identification and comprehension abilities, fine discrimination skills may need to be a focus of habilitation
- Once accustomed to new auditory input, these users will continue to "listen to learn"

Teenagers – Limited Auditory Experience

- Transition to listening with the cochlear implant may be difficult
- Structured, targeted auditory practice will be necessary to facilitate auditory development in specific contexts
- It is critical for listening activities to be highly motivating and lead to immediate success
- The focus will likely remain at the "learning to listen" stage for these teens

Special Populations

- Children with cognitive delays will experience slower acquisition of auditory skills
- Children with non-cognitive delays should have equal access to the acquisition of auditory skills, but language/speech skills will be affected for those children with motor issues
- Success with the implant may be measured less by the achievement of auditory comprehension benchmarks than by improvements in sound awareness and identification
  - connectedness to the environment
  - improved interaction, quality of life

Pages From Our Case Files

Andy

- 4 year old child using an implant for 3 years
- Received amplification soon after identification at birth
- Typically developing youngster with age appropriate cognitive and motor milestones
- Participating in preschool program with hearing children

Benchmark Achievement - Andy

- Consistent use of amplification prior to implantation and intact cognitive/developmental skills suggested high expectations to be appropriate
- Achieved benchmarks faster than the pace mentioned above
- Early transition from "learning to listen" to "listening to learn"

Brittany

- 8 year old child using an implant for 2 years
- Prior to implantation, she was a steady language learner relying on sign and speech-reading to supplement the information she received from her hearing aids
- Currently in her first year in an auditory oral classroom

Benchmark Achievement - Brittany

- Consistent history of hearing aid use, but incomplete auditory access suggested that benchmark behaviors could be achieved
- Achievement of benchmarks mentioned above is expected to be slower
- Will spend more time "learning to listen" before accruing sufficient skills to rely on "listening to learn"

Summary

- Years of data collection have led to the identification of auditory trends or benchmark behaviors for children who use cochlear implants
- Appropriate consideration of the benchmarks should enable the speech/hearing professional to have high, but realistic expectations for a given child
- Challenges to success identified at the time of candidacy will influence expectations for meeting benchmarks
- Discrepancies between expectations at candidacy and actual performance signal a need for a case review by all speech and & hearing professionals involved

Other resources

- Cochlear Implant Resource Guide
  - Expectations following activation
  - Considerations for sign users
- AuSpLAN
- Children with Cochlear Implants in Educational Settings (Nevins & Chute, 1996)
  - Children with learning challenges
  - Children implanted at later ages

Online Sessions – 2006

- Visit www.cochlear.com/HOPE
- Upcoming sessions:

Monday, December 12, 2pm ET
Audiologists and Teachers (or Therapists) Working Together
Betsy Moog Brooks, MS CED and Roxanne Aaron, MA CCC-A, FAAA
The Moog Center for Deaf Education, St. Louis, MO

Thursday January 5, 3pm ET
Assessing Spoken Language, Its Role in Teaching More Effectively
Jean Sachar Moog, MA
Director, The Moog Center for Deaf Education, St. Louis MO

Thursday January 19, 4pm ET
When the Going Gets Tough: Shifting Perspectives on Performance Outcomes
HOPE Specialists: Mary Ellen Nevins, Ed.D and Ashley S. Garber, CCC-SLP
(Follow-up Chat January 31)

Would you like to participate in in-depth discussion?

- New this year, Cochlear Americas is offering live chat sessions for selected online topics
- Speakers are available for real time question and answer
- All past presentations are archived and can be accessed prior to chat for topic review
- Next up..

Monday, January 9, 3:00-3:45 pm ET
Live Q&A: Technology to Maximize Hearing in Children (archived session)
Ginger Grant, MS CCC-A Cochlear Americas

Contact Cochlear

- Cochlear's website
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