

MARCH 20, 2018

Cochlear Implants and Community Collaboration

Jennifer Kolb Drohosky, Au.D., CCC-A
Cochlear Implant Program
Coordinator
Children's Hospital Colorado



Challenges from an audiologist's perspective

1

"New"
expectations
after
surgery

2

Changing
candidacy
criteria

3

Management
of (residual)
hearing

4

Unanticipated
outcomes

5

Staying
current
with rapid
changes in
technology





Goal: Ensure families are well informed, have appropriate expectations, and have trust in their team

- Consistent terminology
- Unbiased language
- Accurate information regarding procedures and technologies, specific to where the child will be seen
- Information delivered by the “experts” for each aspect of the process



Challenge 1: Changes in electrode arrays and surgical techniques leading to new outcomes for residual hearing after surgery

- Focus on the preservation of residual hearing
- Never a guarantee, but certainly a possibility, as well as a goal
- Why is this important?
 - Future technologies may rely on natural, acoustic residual hearing
 - Current candidates have significant residual hearing
 - Significant benefit from acoustic hearing in conjunction with a cochlear implant
- Language used can affect decision making for families



Challenge 2: Changing candidacy criteria

- FDA guidelines
 - No updates since 2000 for children
- Adult criterion is evolving
- Current candidacy practice
- Residual hearing
- Progress in speech and language development
 - 3 months progress in 3 months
- Speech perception and the Pediatric Minimum Speech Test Battery (PMSTB)



Challenge 3: Management of (residual) hearing after surgery

1

Let's talk
about the
terminology

2

Bimodal
options

3

Accessories



Consistent terminology

These devices may be used when residual hearing could be or has been preserved to provide acoustic + electric hearing.

Combining these technologies provides many benefits.

FDA approval or guidelines - let's clarify!

Advanced Bionics

Acoustic Earhook™

Cochlear

Acoustic
Component™

Medel

Electro Acoustic
Stimulation (EAS)™





Bimodal hearing (hearing aid + cochlear implant) options

- Benefits of binaural hearing and combination of acoustic and electric hearing
- Are specific hearing aids necessary?
- What are the current options?
 - Advanced Bionics
 - Cochlear
 - Medel
- Monitoring hearing and hearing aids as well as cochlear implants



Accessories

- FM systems
- Wireless accessories
- Phone connectivity
- Waterproof options



Challenge 4: Unpredicted or unexpected outcomes

1

No imaging modality can guarantee an outcome

2

“Deaf Plus”

3

Other diagnoses that occur *after* a cochlear implant

4

Auditory Neuropathy

5

Preparing families for unanticipated outcomes



Challenge 5: Staying current while technology rapidly changes

- In addition to electrode designs, bimodal hearing, bilateral hearing, wireless accessories, etc.,
- Singled sided deafness and cochlear implants
- MRI compatibility with implants
- Decision making re: unilateral vs. bilateral
- Equipment provided to families
- Full time job for audiologists to keep up with technology updates
- Confidence to refer back to the managing audiologist for these types of questions





Moving forward

- Complexity of technology is not going away nor slowing down
- Practices, outcomes and technologies from even 10 years ago have changed significantly
- Each pediatric team or center will have their own practices, counseling and outcomes
- Our goal is to empower and enable families to have trust in the technology and the providers
- Increased collaboration in order to foster trust between providers and families in their providers

Thank you!

Jennifer.Drohosky@childrenscolorado.org