



# Cochlear Implant Rehabilitation for School-Aged Children

Nadine Ewanchyshyn

MS, CCC-SLP, LSLS Cert AVT

Registered Speech Language Pathologist

*BC Itinerant TDHH Conference • April 3, 2017*



SD 47 (Powell River)

## **Auditory Outreach**

Provincial Outreach for Cochlear Implants and  
Auditory Training Equipment Program



SD 47 (Powell River)

## **Auditory Outreach**

Provincial Resource Program

# AUDITORY OUTREACH SERVICES



In collaboration with schools/ districts, local audiology clinics, and provincial centres, Auditory Outreach provides assistive listening devices and support for students with peripheral hearing loss including:

## ***Equipment Loans & Support:***

- ▶ Assistive listening device [loans](#).
- ▶ Written information including [EasySheets](#) and user guides.
- ▶ Website Resources including [instructional videos](#) and [presentations](#).
- ▶ [Accessory Replacements](#) – No charge replenishment of many accessory items. *e.g. wax filters, belt clips, mic clips, audio shoes, etc.*



# AUDITORY OUTREACH SERVICES

## ***Equipment Loans & Support cont'd:***

- ▶ Technical Support – Troubleshooting by phone, email, and Skype.
- ▶ Technical Service – Equipment repairs and replacements.
- ▶ Equipment Outreach – For cases where equipment issues have not been resolved through usual processes.



# AUDITORY OUTREACH SERVICES

## ***CI Student Services:***

- ▶ In addition to equipment loans and service, we offer audiology, speech language pathology, and hearing resource teacher expertise and outreach in support of the development of local capacity, through consultation with school staff and parents, assistance with assessments, and assistance with the establishment of goals for individual education plans. [CI Outreach Request](#)

# AUDITORY OUTREACH TEAM



- ▶ **Superintendent - SD47, Powell River**

Dr. Jay Yule [jay.yule@sd47.bc.ca](mailto:jay.yule@sd47.bc.ca)  
Administration/ Policy

- ▶ **Program Manager**

Melanie Gosselin 1-866-430-4327 ext 1 [melanie.gosselin@sd47.bc.ca](mailto:melanie.gosselin@sd47.bc.ca) or [info@auditoryoutreach.ca](mailto:info@auditoryoutreach.ca)  
Equipment requests, technical service and coordination of outreach support.

- ▶ **Audiology**

Carrie Siu, M.Sc., AUD(C), RAUD/RHIP 1-866-430-4327 ext 4 [carrie.siu@sd47.bc.ca](mailto:carrie.siu@sd47.bc.ca)  
Registered Audiologist; Registered Hearing Instrument Practitioner  
Certified in Audiology by SAC (Speech-Language & Audiology  
Canada)

- ▶ **Speech Language Pathology**

Nadine Ewanchyshyn, MS, CCC-SLP, SLP-(C) 1-866-430-4327 ext 2 [nadine.ewanchyshyn@sd47.bc.ca](mailto:nadine.ewanchyshyn@sd47.bc.ca)  
Registered Speech Language Pathologist; LSLS Certified Auditory Verbal Therapist

- ▶ **Hearing Resource Teacher (Teacher of the Deaf/ Hard of Hearing)**

Rayna Rumley, M.Ed. (SPED–D/HH) 1-866-430-4327 ext 3 [rayna.rumley@sd47.bc.ca](mailto:rayna.rumley@sd47.bc.ca)

# SPEECH LANGUAGE PATHOLOGIST

## ASSESSMENT

- Observations in classroom settings
- Discussions of perceived strengths and needs with CI audiologist, parents, and educators
- Individual assessments

## FINDINGS

- Oral & written reports including summary and recommendations

# AUDITORY TEACHING STRATEGIES (Caraway 2008)

- ▶ Be a Director
  - Direct the child to listen
  
- ▶ Be a Birddog
  - Point out sound: “I hear that!”
  
- ▶ Hear It Before You See It
  - Audition first
  - Direct attention toward the object

# Auditory Teaching Strategies

- ▶ Play by Play
  - Use familiar phrases
  - Comment on what child is doing
  - Be a radio commentator
  
- ▶ It's Your Turn
  - Expect response from child
  - Pause and wait for response
  - Look expectantly – lean in
  - Use parent/peer as a model
  - Use “You could say....”
  - Use auditory closure



# Auditory Teaching Strategies

- ▶ **Make it Easier**
  - Control the listening environments
  - Move closer to the child
  - Change task from open set to closed set
  - Use acoustic highlighting (e.g. whisper, sing, vary pitch or intonation, emphasize sound or word)
  
- ▶ **Keep 'Em on Their Toes! Sabotage!**
  
- ▶ **Create a Listening Sandwich**
  - Hear. See. Hear.
  - Put it back into listening.

# Auditory Teaching Strategies

- ▶ Beyond the Here and Now
  - Model and Expand
  - Extend
  
- ▶ Help Me But Don't Tell Me
  - Label by category
  - Ask for or provide information
  - Provide rhyming words
  - Suggest opposites
  
- ▶ What Did You Hear?

# INCLUDE IN YOUR INTERVENTION

- ▶ REVIEW PROGRESS as you go along...
- ▶ LOOK at your sessions and ANALYZE
- ▶ Consider, DIAGNOSTICALLY, what is happening
  - As I continue, ...DO I need to:
  - Move forward? Go backward? Am I moving in the right direction?
  - Does anything need to change?
- ▶ Use RECORDINGS (with permissions)

# LISTENING PRACTICE - STEPS

- Needs direction to point out/ identify sound
- Use paragraph tracking
- Incorporate rate, over-learned predictive sequences
- Listen to familiar music
- Move from closed to open set
- Participate in open-set conversation
- Develop telephone skills
- AS CHILD AGE OF IMPLANTATION INCREASES, DO SAME, BUT CHANGE THE TYPE AND SEQUENCE OF ACTIVITIES.

# CI GROUPS FOR CONSIDERATION

1. IMPLANTED PRIOR TO ENTERING KINDERGARTEN
2. IMPLANTED SCHOOL AGE
3. IMPLANTED SCHOOL AGE WITH OTHER FACTORS

# 1. IMPLANTED PRIOR TO ENTERING KINDERGARTEN

A. Young Child (<12 months to 30 months)

B. Pre-K Child with Some Listening Experience (3 to 5-6 years)

# 1. A. Newly Implanted Young Child (<12 to 42 months)

- ▶ Incorporate auditory teaching strategies and techniques into daily play and social routines
- ▶ Model and expand the child's utterances
- ▶ Keep expectations high
- ▶ Use typical developmental milestones as landmarks
- ▶ Increase complexity
- ▶ *Diagnostically we see if sound has meaning... set up intervention to do so*
- ▶ *No further info today, as we are looking at K+*

# 1. B. Newly Implanted Pre-K Child (3.5 to 5-6 years)

## SAME AS ABOVE:

- ▶ Incorporate auditory teaching strategies and techniques into daily play and social routines
- ▶ Model and expand the child's utterances
- ▶ Keep expectations high
- ▶ Use typical developmental milestones as landmarks
- ▶ Increase complexity
- ▶ Diagnostically we see if sound has meaning... set up intervention as appropriate
- ▶ No further info today, as we are looking at K+



# DO K-ENTRY CHILDREN NEED ASSESSMENTS?

LOOK FOR RED FLAGS on screening for entry to kindergarten

Involve team

Read reports

PARENT EXPECTATIONS

Evaluate CA vs HA to establish if gaps exist.

*IF GAPS:* Needs assessment. Highlight now in kindergarten.

Involve in-school professionals/ outside consultants



## 2. NEWLY IMPLANTED SCHOOL AGE

- A. With Limited Listening Experience
- B. With No Listening Experience
- C. Progressive S/N Hearing Loss
- D. Sudden S/N Hearing Loss

## 2. A. Newly Implanted School Age with Limited Listening

i.e. Transfer from acoustic to electric signal. Needs access to all speech sounds.

- ▶ LISTENING PRACTICE – STEPS (as described in above slides)
  - Needs direction to point out/ identify sound
  - As child age of implantation increases, follow the same steps but change the type and sequence of activities.
  - Some children may not be able to move on to some of the more advanced steps (e.g. topic shifts, telephone)

## 2. A. Newly Implanted School Age with Limited Listening

- ▶ Consider practice only during intervention, and designated periods at home
- ▶ Hierarchy of auditory skill development guides intervention with implementation of auditory teaching strategies to maximize use of the new signal
- ▶ What do we do with the other ear?
- ▶ *Suggestion: New ear practice only in intervention and designated times at home but at school, keep it bimodal*

## 2. B. Newly Implanted School Age with No Listening

- ▶ Use hierarchy of listening skills as a guide:
  - Detection – Discrimination – Identification – Comprehension
- ▶ Implement auditory teaching strategies, emphasize:
  - Be a Director – Be a Birddog – Hear Before You See – Listening Sandwich

Expect improvement of skills, but have realistic expectations

i.e. Comprehension through audition only, open-set conversation, talking on phone are NOT realistic expectations BUT...

## 2.B. Newly Implanted School Age with No Listening

- ▶ Realistic expectations may include:
  - Alert to inside and outside environmental sounds
  - Turn towards speech
  - Discriminate between male and female voices
  - Understand when his/her name is called
  - Understand 3-5 specific familiar commands (first at home, then at school)
- ▶ Raise auditory expectations in the classroom:
  - Transition with auditory signal (song, familiar phrase) not visual
- ▶ Follow 3-5 simple, familiar commands
  
- ▶ **NEED INTERVENTION SET IN PLACE with CLEAR EXPECTATIONS**
- ▶ **ESTABLISH AUDITORY LEARNING OPPORTUNITIES in Intervention and Classroom and All School Activities**

## 2.C. Progressive S/N Hearing Loss

Progressive Hearing Loss:

- ▶ Diagnosed by documenting ongoing decline of hearing
- ▶ Requires medical checking for a large number of possible causes

## 2.D. Sudden S/N Hearing Loss

### Sudden Hearing Loss:

- ▶ May occur instantly or over the span of days
- ▶ Requires prompt medical attention
- ▶ There are more than 100 possible causes





### 3. IMPLANTED SCHOOL AGE with OTHER FACTORS

A. English is Not the Home Language

B. Additional Special Needs

## 3. A. English is Not the Home Language

### Key Points to Consider:

- Combine auditory teaching strategies with techniques and approaches from second language acquisition
- Model strategies; turn over to parent to practice
- May use a translator or a bilingual paraprofessional for intervention sessions
- Children can be integrated into all aspects of their community

## 3.B. Additional Special Needs

### Key Points to Consider:

- Children with special needs can benefit from cochlear implants
- Rate of progress may be slower
- Incorporate auditory teaching strategies
- The ENTIRE SCHOOL TEAM (AND other staff outside the school team) need to understand how to manage the CI and maximize auditory learning skills



# TO SUMMARIZE

Who is the child? and Who are the players...?

When was the child implanted?

What were the circumstances and What are current circumstances?

How has the child responded?

Where is the child now? Where is s/he going?

Establish a PLAN.



# Requests for Outreach Support for CI Students

Nadine Ewanchyshyn, MS, S-LP, CCC-SLP, LSLS(Cert AVT)

[nadine.ewanchyshyn@sd47.bc.ca](mailto:nadine.ewanchyshyn@sd47.bc.ca) • Toll-Free: 1-866-430-4327, ext. 2

Melanie Gosselin, Program Manager

[melanie.gosselin@sd47.bc.ca](mailto:melanie.gosselin@sd47.bc.ca) • Toll-Free: 1-866-430-4327, ext. 1

▶ Email [info@auditoryoutreach.ca](mailto:info@auditoryoutreach.ca) or fax 1-604-485-2759

to request CI Outreach Support form or available, along with other program forms, under Featured Links – Request Forms at [www.auditoryoutreach.ca](http://www.auditoryoutreach.ca)



▶ *Thank You!*