sound intuition
sound practice in action

Outsmarting The Complacency Trap

Holistic Lifelong Listening in Children (and older) with Hearing Loss

Karen MacIver-Lux, M.A., Aud(C), Reg. CASLPO, LSLS Cert. AVT

Learner Outcomes

01

Describe the complacency trap and its components in early family-centered intervention for infants and children who are deaf and hard of hearing.

02

Describe the gap between technological access and functional auditory learning, and explain why age-appropriate skills at 3–4 years should not be the endpoint of intervention.

03

Remember Daniel Ling's framework and explain the neuroscience and benefits of adding holistic education and care to listening and spoken language intervention.

04

Develop practical approaches to supporting families, educators, and children in creating lifelong listening habits that foster both communication success and a healthy lifestyle.

What Is The Complacency Trap?

1. Technology Access...and More

2. Therapy Comfort Zones that Restrict

3. Evolving Neuroscience and Health Is Non-negotiable

4. Auditory-Rich Experiences Disappearing

5. Lifelong Listening is Missing

Let's take a closer look... and listen to some solutions.

1 Technology Access and More

Advances in hearing technology improve speech understanding, but limited bandwidth still restricts high-frequency phoneme development.

In addition, too many children are listening with INAPPROPRIATELY programmed hearing technology.

Many pediatric intervention professionals, including aural rehabilitation practitioners, lack the skills to identify functional auditory access and report it to audiologists to optimize auditory outcomes promptly.

Likewise, customized listening programs, which significantly improve sound quality, ARE BEING UNDERUTILIZED.

These gaps in hearing care can be considered professional neglect.

Auditory Access and the Brain

- Ontario's Infant Hearing Program and the National Centre for Audiology (Western University) have a revised Amplification Protocol that includes DSL prescriptive formulae, RECD measurements, frequency-lowering signal processing, etc.

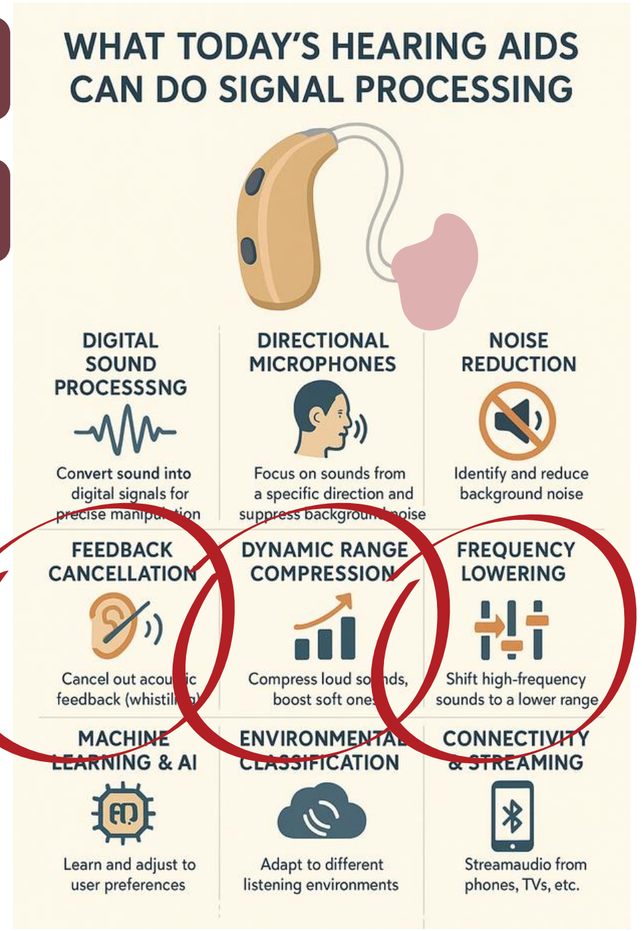
- A Canadian survey of bone conduction (BC) hearing device fitting practices showed large inconsistencies: many clinicians didn't feel confident about their fitting procedures, verification tools varied widely, and there was no consistent protocol in use across sites. This suggests that many children with BC devices may not be fitted optimally.

- A Canadian article ("Keeping Amplification Levels Safe...") found that nearly half of children in their sample were fitted below prescriptive targets, thus limiting audibility. 55% of children had at least one ear deviating by >5 dB RMS from prescriptive target (500-4000 Hz) (McCreery et al., 2013). 26% of children had aided audibility (SII) < 0.65 (McCreery et al., 2013).

There's More!

Auditory access is only ONE aspect of hearing technology that we must carefully consider. There's more!

- Compression is how hearing aids handle sounds of different loudness levels.
- Non- Linear Frequency compression squeezes hard-to-hear high pitches into a range
- Feedback managers cancel out feedback caused by ill-fitting ear moulds
- Well-fitted and acoustically modified earmolds
- Customized listening programs (e.g. music)
- Bluetooth and streaming capabilities.capabilities



Why should we care?

- Research supports the importance of fitting hearing aids to meet prescriptive targets in children. Studies provide evidence that children with hearing aids who are fitted closer to target have better aided audibility (McCreery et al, 2015), better speech-perception outcomes (McCreery et al, 2017), and better language growth (Tomblin et al, 2015) relative to children with less proximal fittings. There is less research, however, on how to apply this knowledge to our own clinical-fitting practices.

To support spoken language development, we need to collect comprehensive, frequency-specific information- because if spoken language (SL) is EASY and COMFORTABLE to hear, SL will be easier to listen to, learn, speak, read, and write.

IF YOU KNOW YOU CAN DO BETTER, THEN DO BETTER

"This sounds like an AUDIOLOGY problem. I can't do their job!"

Audiologists NEED

WE WANT YOUR

FEEDBACK

sound intuition
sound practice in action

How?

Ling 6 Sounds Test																		
Sound	0.2-0.3	0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.7	0.7-0.8	0.8-0.9	0.9 1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	DB HL
/m/	/m/	/m/							/m/										35-40
/u/		/u/						/u/											50
/i/		/i/									/i/	/i/		/i/					40
/a/							/a/		/a/										55
‘sh’										‘sh’				*“sh”		‘sh’	‘sh’		40
/s/																	/s/	/s/	30

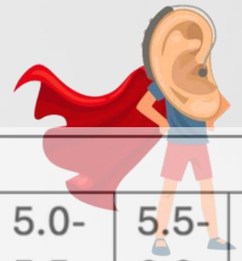
Values from published works of: Ling & Ling, 1978; Peterson & Barney (1952); Hillenbrand, Getty, Clark & Wheeler (1995); and Scollie, Glista et al., (2012).

sound intuition
sound practice in action

Ling, Madell & Hewitt																		
Sound	0.2-0.3	0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.7	0.7-0.8	0.8-0.9	0.9 1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	DB HL
/j/	/j/										/j/	/j/							36
/z/	/z/														/z/	/z/			30
/n/	/n/	/n/							/n/										37
/m/	/m/	/m/							/m/										35-40
/u/		/u/						/u/											50
/i/		/i/									/i/	/i/		/i/					40
/a/							/a/		/a/		/a/								55
/h/										/h/									32
“sh”										“sh”				*“sh”		“sh”	“sh”		40
/s/																	/s/	/s/	30

Values from published works of: Ling & Ling, 1978; Peterson & Barney (1952); Hillenbrand, Getty, Clark & Wheeler (1995); and Scollie, Glista et al., (2012).

sound intuition
sound practice in action



MacIver-Lux 15 Sounds WE CAN Hear Test

Sound	0.2-0.3	0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.7	0.7-0.8	0.8-0.9	0.9 1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	DB HL
/j/	/j/										/j/	/j/							36
/v/		/v/												/v/	/v/				31
/z/	/z/														/z/	/z/			30
/w/	/w/	/w/	/w/	/w/	/w/	/w/													
/m/	/m/	/m/							/m/										35-40
/u/		/u/						/u/											55
/i/		/i/									/i/	/i/		/i/					40
/a/							/a/		/a/										50
/h/										/h/									32
“sh”										“sh”				*“sh”		“sh”	“sh”		40
/k/											/k/								34
/t/												/t/	/t/						35
/f/															/f/	/f/			34
/s/																	/s/	/s/	30
/0/ th																		/0/	28

Values from published works of: Ling & Ling, 1978; Peterson & Barney (1952); Hillenbrand, Getty, Clark & Wheeler (1995); and Scollie, Glista et al., (2012).

2 Therapy Comfort Zones

Therapists and educators often stay within familiar intervention approaches.

Both Speech-Language Pathologists (SLPs) and Audiologists (Auds) are ethically and legally obligated to:

1. Practice only within their scope of competence – meaning they should provide services in areas where they have appropriate education, clinical training, and ongoing professional development.
2. Seek additional training/mentorship if they wish to expand their practice into a new area.
3. Refer out when a client's needs fall outside their expertise, while still ensuring continuity of care.

(CASLPO 2025; ASHA 2016)

The JCIH 2013/2017 states clearly that when working with children who are deaf and hard of hearing and their families, clinicians must demonstrate knowledge and competence in 9 Domains of Broad and Integrated Expertise.

2 Therapy Comfort Zones

Therapists and educators often stay within familiar intervention approaches.

Both Speech-Language Pathologists (SLPs) and Audiologists (Auds) are ethically and legally obligated to:

1. Practice only within their scope of competence – meaning they should provide services in areas where they have appropriate education, clinical training, and ongoing professional development.
2. Seek additional training/mentorship if they wish to expand their practice into a new area.
3. Refer out when a client's needs fall outside their expertise, while still ensuring continuity of care.

(CASLPO 2025; ASHA 2016)

The JCIH 2013/2017 states clearly that when working with children who are deaf and hard of hearing and their families, clinicians must demonstrate knowledge and competence in 9 Domains of Broad and Integrated Expertise.

Therapy Comfort Zones

The majority of SLPs in the Infant Hearing Program
who provide Listening and Spoken Language intervention:

a) are not LSLS Cert. AVT/AVEDs;

b) have not received sufficient training in 9 domains of
Broad and Integrated Expertise for early intervention with children
who are deaf and hard of hearing and their families; and

c) must serve children with other communication disorders/needs.

This is NOT a criticism. It's an observation that we must be prepared to work together to change.

3 Evolving Neuroscience and Health

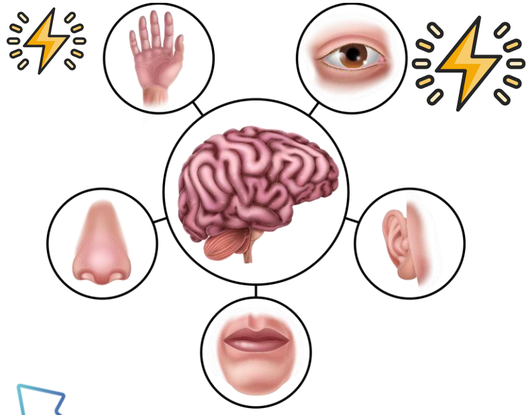
We've all heard it! We listen with the brain! But our listening is only as good as the health of the brain.

Let's talk about the brain and the AB Change.

The Auditory Brain Change is the process that the brain goes through when adjusting to electrically evoked auditory signals provided by the CI or new hearing technology. It's a time when a hurricane storm of fear and confusion visits the brain. Just like the mess that a hurricane storm leaves, sounds of life and speech sound completely distorted and messy. With listening success and education, the brain eventually calms down and the "brainstorm" settles. Eventually, the brain and the listener sort out the mess, resulting in speech and sounds of life that's recognizable and more natural sounding. This is why hearing age is important.

and Stress...

When hearing loss is present, families experience higher stress... uncertainty, financial barriers, depression, less talking, and increased exposure to controversies surrounding hearing loss. Stress is one of the most difficult toxins for the brain to manage and growth with. Stress is also contagious, and negatively impacts pediatic brain development indirectly.



My experience...and research shows that we have to nourish the brain (and families and children) in a holistic manner...not just listen.

The brain is incredibly adaptable and will learn BEST in healthy and positive conditions in meaningful conditions, with repetition and practice.

- Focus on gut health; it's the second brain of the body.
- Exercise...cause the bones and muscles release fertilizer for the brain.
- Find an activity you and the child (with the child's preferences being prioritized) enjoy.
- Focus on what the brain hears and cherish every sound whatever it might be.
- Listen, breathe, and smile. Breathing and smiling releases more fertilizer for the brain.
- Think about which listening skills to develop and what activities promote these.
- Start easy (90% success) and work your way to harder listening tasks-fertilize the brain!
- Be flexible for neuro-diverse needes. Be creative. Be respectful and responsive and set the stage properly.
- Pay attention to body structure, balance (vestibular) and gross and fine motor development.
- Encourage emotional hearing wellness....emotional wellness....self-identity and self awareness- fertilizer 4 the brain!
- Stop testing to reassure thearpist or families-if it's contrived and testlike- forget it. Don't kill with drill.
- Be a LSL strategist. Be a great model. Respect parent choices. And...listen.

What is Emotional Hearing Wellness? (EHW)

Emotional hearing wellness refers to the individual's mental state when listening. Emotional hearing wellness can be influenced by auditory access, hearing technology functioning, history of auditory experiences, and situational factors, and knowledge.

(MacIver-Lux, 2019)

HELLO
darling

The child's journey to positive emotional hearing wellness begins with the parents...

Good vibes

"In moments of shared time, the parent(s) and child(ren) share their delight in hearing, listening, and communicating for the purpose of establishing a human connection and a sense of importance to each other."

https://www.circleofsecurityinternational.com/2019/11/20/delight-in-me-the-origins-of-self-worth/

Parents must model listening excellence and healthy listening attitudes.

"It's ok! I didn't hear it either!"

"I wonder what she said. Let's ask her!"

"It's not ok for someone to say, 'Never mind!' Persist!"

Children with hearing loss need to be reminded that EVERYONE mishears information. It's what we do about it that counts.

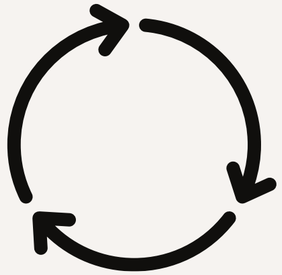
The cycle of Stress...on EHH

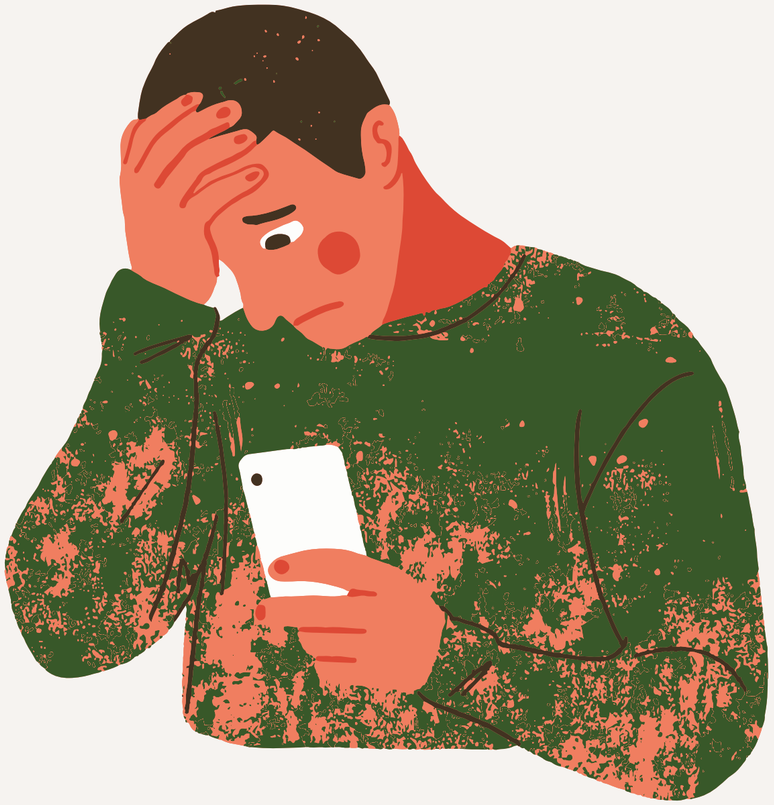
I'M STRESSED BECAUSE I CAN'T HEAR.

VS.

I CAN'T HEAR (LISTEN TO UNDERSTAND) BECAUSE I'M STRESSED.

(MacIver-Lux, 2019)





To break the cycle...

Take a deep breath.

Stretch your arms/body.

Start with 90% success and then adjust to scaffold auditory learning.

Repeat.

Aural Rehabilitation is the business of growing Super Brains.

4 Auditory Rich Experiences...Disappearing?

Arts, drama, music, and movement are fading from therapy, even though these activities build critical auditory neural connections. They also support appreciative listening, which enhances emotional wellness, human connection, and resilience.

We have got to find rich listening experiences in unexpected places. And to recognize which experiences (and devices- hint noise cancellation earphones) which promote auditory deprivation.





5 Lifelong Listening is Missing

It takes 12–15 years to develop the full complement of auditory processing skills, but most children are discharged from therapy by age 3–6. Without intentional and adaptive use of strategies and conditions to maximize daily listening opportunities and auditory brain strengthening, auditory processing skills weaken which negatively impacts cognitive fitness.

Children need to learn these strategies and conditions, not just their parents. Children must learn to independently manage their hearing technology and lifelong listening needs. Children need to know what they need to do to keep their listening skills sharp over the span of their lifetime.

Intentional Listening Experiences are like nutrition, hydration, and excersise for physical health and wellness.

Let's do better.

We have the opportunity to help children who are deaf and hard of hearing to create stronger brains and human connection. What are some missing gaps you can fill...to stay out of the complaceny trap?

?

Eat fruits and vegetables that are rich in vitamins and minerals because this helps to maintain good brain health.

If you said it once, it's good enough to say again. Help me help you get your point across.

Don't tell me what I can't hear. Tell me what I can hear. My brain loves that kind of talk.

Thank You!

for Listening.

wonderears71@aol.com

647-884-8466