



AI as a Bridge: Adapting Parent Education for Diverse Needs

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Disclosures

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Learning Objectives

By the end of this session, participants will be able to:

- Describe how AI can adapt parent education materials to meet diverse language and literacy needs.
- Identify practical ways AI tools can improve family engagement and reduce barriers to early intervention.
- Evaluate opportunities and limitations of AI in supporting equitable, family-centered hearing health care.

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2026

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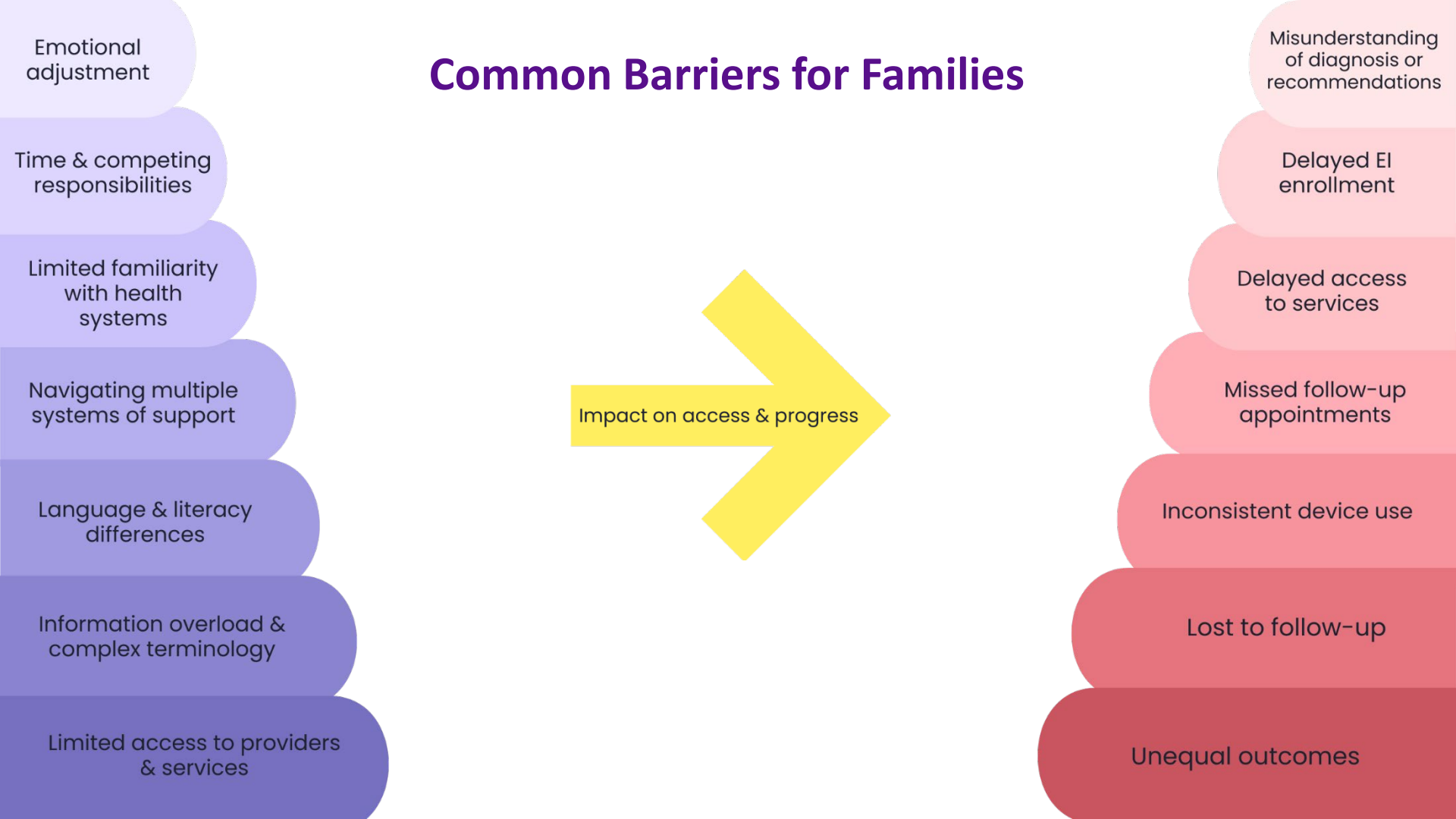


Which role best represents you today?



How are you currently using AI in your work?

Common Barriers for Families



Emotional adjustment

Time & competing responsibilities

Limited familiarity with health systems

Navigating multiple systems of support

Language & literacy differences

Information overload & complex terminology

Limited access to providers & services

Impact on access & progress

Misunderstanding of diagnosis or recommendations

Delayed EI enrollment

Delayed access to services

Missed follow-up appointments

Inconsistent device use

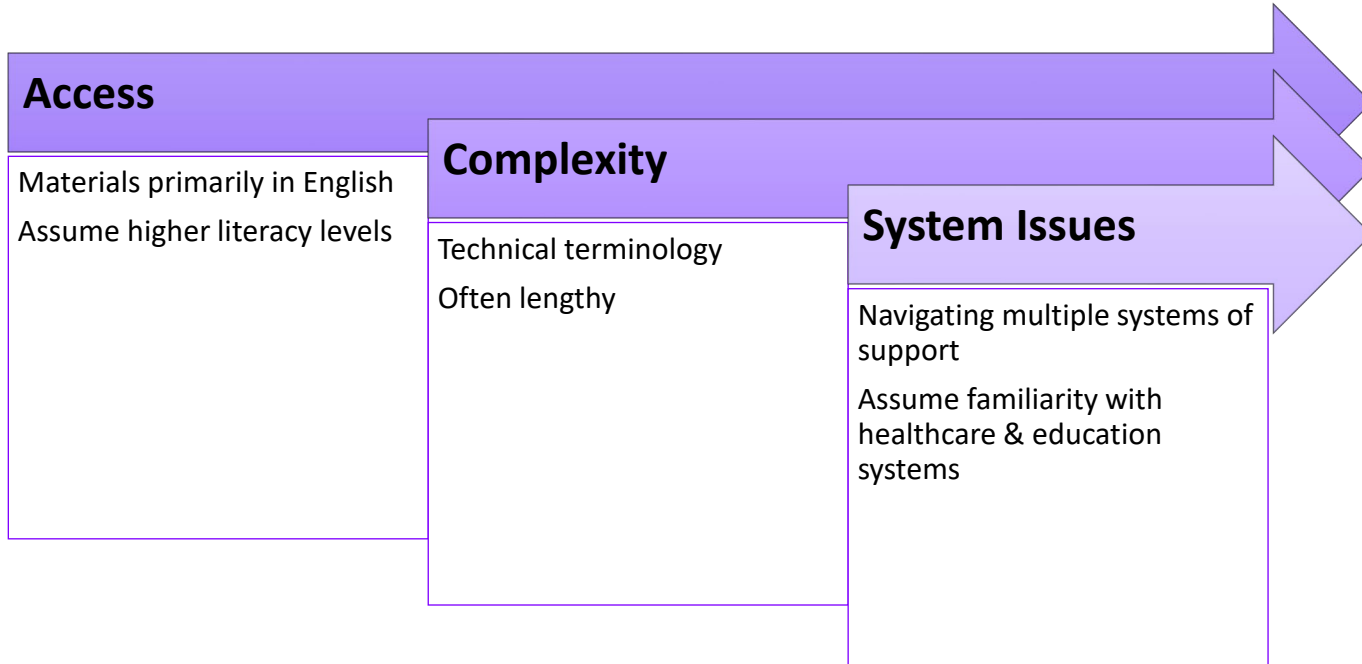
Lost to follow-up

Unequal outcomes

Current Practices for Parent Education

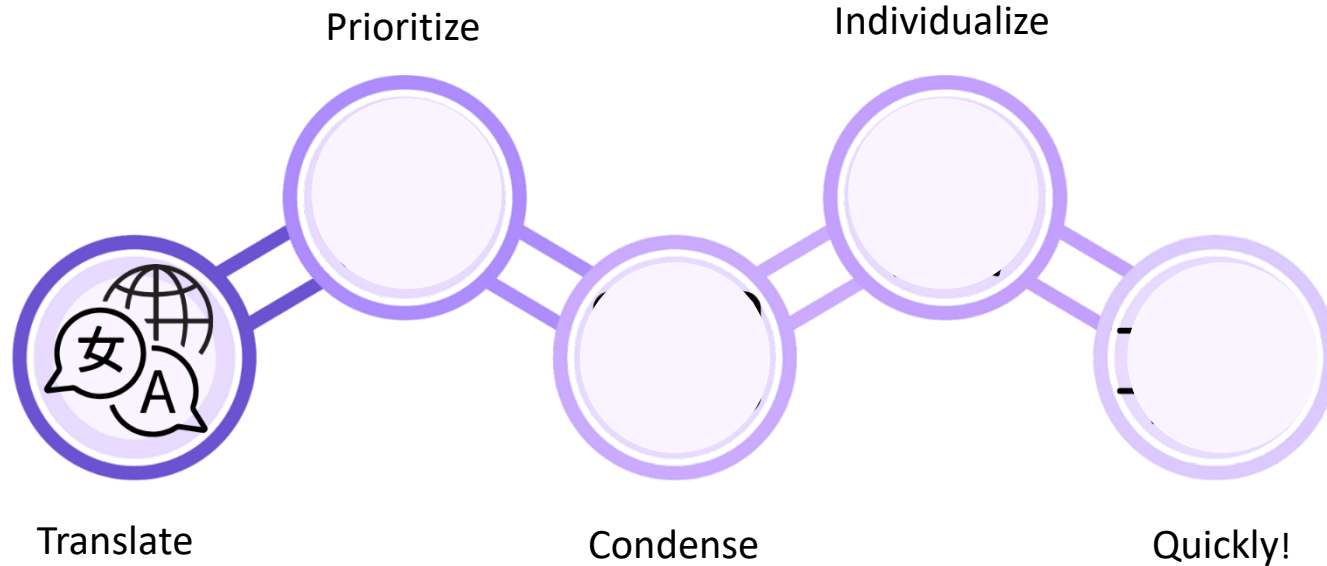


Current Practices for Parent Education - **LIMITATIONS**



AI Can Help!

You provide the clinical judgment and context; AI provides drafts and structure



! AI is a **starting point**, **NOT** a final product.
• Always **review**, **edit**, and **verify** content *before* sharing.

AI Prompts: Core Essentials

Prompts = AI Language

Prompt Formula:

Use these as a '**checklist**' - include the parts that apply

- Audience** – who it's for (age, background, language)
- Goal** – what you want them to know or do
- Key points** – must-include content
- Format** – handout, email, script, bullets, etc.
language level
- References** – model examples, links, uploads
- Human review!**

**Can request edits to output*



Ask yourself before you prompt:

- Who is this for?
- What do I want them to know or do?
- What absolutely must be included or avoided?

Safety Reminders:

- Do **not** include **PHI**
- Do **not** paste **raw clinic** or **educational notes**



How I Use AI Day to Day

Common use cases:

- Technical understanding (audiogram, devices)
- Systems navigation (EI, school, device manufacturers)
- Extending information to family / school teams
- Visuals / media

*NOT an extensive list!

A Typical Clinical Day

Time	Appointment	Patient	Notes
8:30 – 9:30	Ed consult - Pre-implant	7m	
9:30 – 10:30	CI mapping – assist	4.7, bilateral	LATE ID – No language Inconsistent device use
10:30 – 12	Audio eval – assist	3.1, bimodal	3m post CI
1 – 2:30	IEP meeting – turning 5	4.9, bilateral	ASD, AAC user
2:30 – 3	Ed consult - Pre-implant FU	18m	Parents unsure Poor appt. follow up
3 – 3:30	Ed consult – College transition	17.4, SSD	
3:30 - 4	Ed consult – IEP → 504 plan	8.3, bilateral	Recent SLP eval Expressive Lang delay Progress inconsistent
4 – 5	Ed consult - No services	Adam 2.9, bilateral	CIC team concerned w/ progress Did NOT transition to CPSE Can't come to center for SLP

A Typical Clinical Day

Time	Appointment	Patient	Notes
	<p>lateral</p> <p>modal</p> <p>lateral</p> <p>SD</p> <p>lateral</p> <p>lateral</p>		

Meet Adam



AI generated



Adam



Age: 2.9 years



Identified: 1.8 years



Hearing aids: 1.10 years



Implanted: 2.5 years



Inconsistent device use



Gestures & emerging vocalizations



Listening & spoken language



French & English



Motivated but overwhelmed



Caretakers when parents work
Limited English proficiency



First experience w/ hearing loss

Adam's Family



Information
overload

Navigating EI

Understanding
the audiogram

Including
extended
family

Device use

Strategy
carryover

Case Examples: Using AI to Tackle Common Challenges

Challenge: Information Overload



Context:

- Parents receive multiple brochures and guides (EI, DIP/PIP, audiology, rights information)

Family Challenge:

- **Too much** information at once
- **Fragmented** across programs
- **No clear "start here"** or next steps



AI-Supported Solution

Condensed Cross-Disciplinary Guide

Example Prompt:

Condense these materials into a 1–2 page plain-language guide for parents of a newly diagnosed child with hearing loss. Explain what each program does, how they fit together, and list **3–5 clear first steps**. Use **short bullets** at a 5th–6th grade reading level.

EARLY INTERVENTION

What is Early Intervention (EI)?

Early Intervention (EI) is a **free New York State program** for children from **birth to age 3** who have developmental delays or disabilities, including hearing loss.

Services are based on each child's individual needs and help families support their child's speech, listening, communication, and overall development.



Why It's Important

- Builds **language** and **communication** skills to address delays
- Monitors your child's **developmental milestones**
- Offers **parent coaching** to integrate skills and strategies into daily life
- Provides **hearing technology** *as appropriate*
- Connects families to specialized programs & parent support groups

Services *may include*: Special Instruction (SI), Speech Therapy (SLP), Audiology, Occupational Therapy (OT), Physical Therapy (PT), and family training.



How to Get Started

- 1 Contact Early Intervention**
If your child hasn't been referred by an audiologist or medical provider, contact EI directly using the contact info in the box below
- 2 Request an evaluation**
You can request a program that **specializes in hearing loss** – see reverse
- 3 Complete paperwork**
EI will ask for related documents (audiogram) & forms to be filled out
- 4 Develop an Individualized Family Service Plan (IFSP)**
Your team will help choose services based on your child's needs and your goals
- 5 Start services**
Services should begin **within 30 days** of your IFSP meeting



Parent-Infant & Deaf-Infant Programs

Families can build on EI by joining **specialized programs** that offer extra support & connection for children who are

This is NOT the raw AI output; this is the human-edited & finalized version.

Area	Programs	Contact info	Program	Communication	Services	AuD	Service location
Manhattan	Center for Hearing & Communication (CHC)	[Redacted]	EI DIP		TOD, SLP Groups: parent, baby/toddler	✓	
	Clarke School for Hearing & Speech		EI		TOD, SLP, OT Groups: parent, baby/toddler	✓	
Brooklyn	Strivright Auditory Oral School of New York		EI PIP		TOD, SLP, PT, OT, Music Groups: parent, baby/toddler	✓	
	St. Francis de Sales School for the Deaf		PIP		TOD, PT, OT Groups: parent, baby/toddler		
Bronx	St. Joseph's School for the Deaf		PIP		TOD, SLP Groups: parent, baby/toddler		
Queens	Lexington School for the Deaf		PIP		TOD Groups: parent, baby/toddler		
White Plains	New York School for the Deaf (Fanwood)		PIP		TOD Groups: parent, baby/toddler		
Long Island	Clary School for the Deaf		PIP		SLP, Music Groups: parent, baby/toddler		
	Mill Neck Manor School for the Deaf		PIP		TOD, SLP Groups: parent, baby/toddler		
	Nassau BOCES Hearing Services Infant Program		PIP		TOD Groups: parent, baby/toddler		

May provide hearing testing and other support services – does not provide hearing equipment through Early Intervention.



EI	Early Intervention		Listening & spoken language	TOD	Teacher of the Deaf	OT	Occupational Therapy
PIP	Parent-Infant Program		American Sign Language	SLP	Speech Language Pathology	PT	Physical Therapy
DIP	Deaf-Infant Program		Multi-modal (combination of modes)	AuD	Audiology		

Challenge: Understanding the Audiogram



Family Challenge:

- **Technical** graph, symbols, jargon
- Professional-level explanations online
- **Hard** to connect results to everyday listening



AI-Supported Solution

Parent-Friendly Audiogram Summary

Example Prompt:

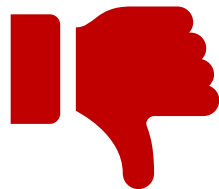
Rewrite this audiogram in a **parent-friendly** way to be shared with parents of a newly diagnosed child with hearing loss.

Include information on what he **can** and **cannot** hear and how that *may change* with cochlear implants. Give **examples** using everyday situations (speech, environmental sounds)

Adam's Hearing Test Results

A guide for Adam's family — written in plain language

A hearing aid is like turning up the volume on a broken speaker. A cochlear implant replaces the speaker with a new one that works.



What did the hearing test show?

Adam's hearing test — called an audiogram — measures how loud a sound needs to be before he can hear it. The results show that Adam has a severe to profound sensorineural hearing loss in both ears.

Sensorineural means the hearing loss comes from the inner ear (cochlea) and the hearing nerve. This type of hearing loss is permanent, but it can be supported very effectively with the right devices.

In practical terms, this means:

- Without hearing devices, Adam can detect only very loud environmental sounds — like a lawnmower or loud music.
- Most speech sounds — including the soft consonants 's,' 'f,' 'sh,' and 'th' — fall outside the range he can hear without help.
- Following a conversation, especially in a noisy room, is very difficult for Adam right now.

Think of it like trying to follow a conversation through a thick wall. You might hear that someone is talking, but you can't make out most of the words.

Is this serious?

Hearing loss at this level is real, and it has likely made listening and learning harder for Adam — especially in noisy settings like a classroom. However, it is not medically dangerous.

The most important thing to know is that this type and degree of hearing loss responds very well to cochlear implant technology. Many children who receive cochlear implants and consistent early intervention develop strong listening and spoken language skills and participate fully in mainstream school settings.

What is a cochlear implant?

A cochlear implant (CI) is a small electronic device — part worn behind the ear, part placed inside the ear — that does the job the inner ear can no longer do on its own.

Unlike a hearing aid, which makes sounds louder, a cochlear implant converts sound into electrical signals that go directly to the hearing nerve, bypassing the damaged part of the inner ear.

The device has two parts:

- The internal implant is surgically placed under the skin. It stays in place permanently.
- The external sound processor is worn on the ear. It can be removed, and it needs to be charged.

What happens next?

Adam's care team has a clear plan:

- **Step 1.** Candidacy evaluation:

The cochlear implant team will review Adam's audiogram, imaging, and medical history to confirm he is a suitable candidate for implantation. This involves several appointments.

- **Step 2.** Surgery:

Cochlear implant surgery is performed under general anesthesia and typically takes 2–3 hours. Most children go home the same day or after one night. The procedure is safe and well established — cochlear implants have been used in children for over 30 years.

- **Step 3.** Activation ("switch-on"):

About 3–4 weeks after surgery, the external sound processor is turned on by the audiologist. This is often called the 'activation' appointment. Adam tries his implant for the first time — this is an exciting but gradual process.

- **Step 4.** Ongoing programming and therapy:

After activation, Adam will have regular audiologist appointments and also continue with auditory-verbal therapy (listening and spoken language). He will learn to use the new signals. Consistent device use every waking hour leads to the best outcomes.

In the meantime, Adam's school can make simple adjustments — to support his surgery.

- Face Adam when you speak to him — he uses visual cues to fill in what he may not hear. You do not need to shout.
- Reduce background noise when you can — turn down the TV or move to a quieter room during conversation.
- If he looks confused, try rephrasing rather than repeating the exact same words.
- Once he has his cochlear implant, make sure he wears the sound processor every waking hour. The more he wears it, the faster his brain learns to interpret sound.
- Talk, read, and sing with Adam as much as possible. Language-rich interactions at home are one of the most powerful tools for his development.
- Let Adam know his hearing is nothing to be embarrassed about.

Questions? We are here for you.

Please reach out to Adam's team at any time. No question is too small. We know this is a lot of information, and we want to support your whole family through every step.

How can you help at home?

Families and caregivers play a huge role in Adam's progress. Here are simple things that make a real difference:

AI-Supported Solution

Parent-Friendly Audiogram Summary

Follow-up Prompt:
Reduce and simplify further

- Once he has his implant, make sure he wears it every waking hour. This is the most important thing you can do.
- Read, talk, and sing with him as much as possible — everyday language at home builds his skills.

Questions? We are here for you.

Please reach out to Adam's care team at any time. No question is too small.



Understanding Adam's Hearing Test

A plain-language guide for Adam's family



What did the test find?

Adam has a severe to profound hearing loss in both ears. This means:

- Without hearing devices, he can only hear very loud sounds — not speech.
- Soft speech sounds like 's,' 't,' and 'th' are out of his hearing range.
- Following a conversation, especially in a noisy place, is very hard for him right now.

Think of it like trying to hear through a thick wall — he may sense sound is happening, but most of the words are lost.

Is this serious?

Yes — but it is treatable. This type of hearing loss responds very well to cochlear implants. Many children who get a cochlear implant and therapy go on to develop strong spoken language and attend mainstream school.

What is a cochlear implant?

A cochlear implant is a small device — part worn on the ear, part placed inside the ear during surgery — that sends sound signals directly to the hearing nerve.

Unlike a hearing aid (which just makes things louder), a cochlear implant works around the damaged part of the ear entirely.

What happens next?

- The team will review Adam's results to confirm he is a good candidate for surgery.
- Surgery takes about 2–3 hours. Most children go home the same day.
- About 3–4 weeks after surgery, the device is turned on and programmed — this is called activation.
- After activation, Adam will attend listening therapy regularly to help his brain learn to use the new sounds.

How can you help at home?

- Face Adam when you talk to him. You do not need to shout.
- Reduce background noise — turn off the TV when having a conversation.
- If he seems confused, try saying it a different way instead of repeating.

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Challenge: Device Use



Family Challenge:

- Caregivers unsure about “do’s and don’ts”
- Manufacturer manuals **long** and **technical**
- **Critical safety details** (water, batteries) easy to miss







AI-Supported Solution

Cochlear Implant 101 for Caregivers

Example Prompt:

Create a 1-page, very simple **'cochlear implant 101'** for teachers and babysitters of a 3-year-old new cochlear implant user. **Include** daily checks, wear time, what to do about water, and what the battery light means. Use **short bullets** and clear headings.



	Do not let sand or dirt get inside Sand can damage the device. Be careful at the playground or beach.
	Do not try to fix it yourself If something seems wrong, call Adam's parents right away. Do not take it apart.
	Do not make him sleep with it on Take the device off at bedtime and put it in a safe, dry place.
	If you have a question — call! Adam's parents: _____ NYU Cochlear Implant Center: nyulangone.org/cochlear-implant

Adam's Cochlear Implant


A simple guide for caregivers





Adam wears a cochlear implant. It is a small device that helps him hear. He wears it on his ear every day.


 Outside part Worn behind the ear. You can see it and touch it. Take it off for baths and swimming.	 Inside part Placed by a doctor during surgery. It stays inside. Never touch the area behind his ear.
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EVERY DAY — PLEASE DO THIS


	Put it on when he wakes up Adam needs to wear it all day — every waking hour. The more he wears it, the better he hears and learns.
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	Check the battery light A green light means it is working. If the light is off or red, the battery may be low. Put it on the charger or change the battery.
---	---

	Watch that it stays in place If it falls off, gently put it back. The magnet will hold it on. If you are not sure how, ask Adam's parents.
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	Talk to him face to face Get his attention first. Face him when you speak. Use a normal voice — you do not need to shout.
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IMPORTANT — DO NOT DO THIS

	Do not get it wet Take the device off <u>before</u> a bath, shower, or swimming. Water will damage it.
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Raw AI output

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Follow-up Prompt:

Simplify and add **more visuals** so its quick-at-a-glance (scannable)

Raw AI output

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LOOKING AFTER THE DEVICE



Put it on every morning

He needs to wear it all day. It should go on when he wakes up.



Check the battery

If Adam is not responding to sounds, check the battery. Change it if it is flat.



Keep it dry

Take the device off before a bath or shower. Do not get it wet.



Swimming — take it off

Remove the device before he goes in the water.

IMPORTANT — DO NOT DO THIS



Do not drop or hit the device

It is delicate. Handle it carefully. Store it safely when not in use.



Do not try to fix it yourself

If something is wrong, call Adam's parents or the hospital team.

Challenge: Home Carry-Over / Practice Routines



Family Challenge:

- “What exactly should we do this week?”
- Written plans feel **long, clinical, and hard** to follow
- Caretakers with **limited English**



Clinician Need:

- Turn clinical session note into a print-ready family handout
- Plain language, routine-based, w/ examples of what to say
- Usable by all caregivers; no therapy background required



AI-Supported Solution

Simplified Home Plan

Example Prompt:

Turn this session note into a 1 pg take-home parent handout. Plain language, **1-2 goals**, **3-4 routine-based** activities with **examples** of what to say

Adam's Home Practice Plan 🗣️

After your session — take this home!

Date: _____

Clinician: _____



★ This Week's Focus

1. Help Adam **listen for his name** — so he learns that sound means something!
2. Encourage Adam to **use his voice** — any sound counts right now!

How You Can Help at Home

Adam is still very new to hearing with his cochlear implants — he has only been listening for a few months. Right now, the most important thing is **lots of practice in everyday moments**. You don't need special activities — just use what you already do!

📍 Say it before you show it

Call Adam's name or say a word **FIRST** — then wait a few seconds before pointing or showing him.

💡 Make the key word stand out

Say the important word a little **louder** or **slower**. Example: "That's a **BIG** dog!"

Try This in Your Daily Routines

🚿 Bath Time

- Before you start, say "Adam!" and wait 5 seconds — watch his face for any reaction.
- Name things as you wash: "This is your **EAR**. Ear!" (say it a little louder).
- If he makes any sound during bath, copy it back to him — this teaches him voice is powerful!

🍽️ Meal Time

- Try: "Ready... set... **EAT!**" — pause before the last word and wait for a sound or big smile.
- Hold food near your mouth when you name it so he sees your face **AND** hears the word.
- When he reaches or vocalizes for more, say "More? **MORE!**" and give it right away.

🚗 Car / On the Go

- Sing a short familiar song — even 2 lines. Pause before the last word and wait.
- Say "Adam!" from the back seat. If he looks around or reacts — celebrate!
- No TV or music while practicing — he needs quiet to learn to listen.

🔔 Device Reminder

Adam needs his cochlear implant on **all waking hours** — even 30 minutes off means missed listening practice. Each morning: say "ah... oo... ee... sh... s... mm" one at a time. Does he react to any? Write it down and tell us!

You are doing a great job. ❤️

Every time you talk to Adam, sing to him, or wait for him to respond — you are building his brain's **map** and you are already helping him every single day.

AI-Supported Solution

Simplified Home Plan

Example 2 – w/ adjustments to prompt

Follow-up Prompt:

Simplify and add **more visuals**. May be shared with grandparents, **English is not their first language**



Adam's Home Practice

What to practice this week

Week of: _____

Therapist: _____

Questions? _____

This Week's Goals — What We Are Working On

1 Follow 2-step directions — for example: "Get your shoes and put them by the door."

2 Expand phrases — encourage Adam to use 2–3 word sentences instead of single words.

Strategies to Use — How to Help Adam

Auditory first: Say it before you show it. Give Adam a chance to hear the word before pointing or gesturing.

Pause and wait: After you speak, wait 5–10 seconds. Give Adam time to process and respond.

Acoustic highlighting: Slow down and say the important word a little louder or with more expression — "Get your **SHOES**."

Try It at Home — Everyday Moments



Mealtime

Try this: Give 2-step directions at the table
Say: "Get your cup and sit down."



Bath Time

Try this: Name body parts and actions



Car / Ride

Try this: Ask open questions — no screen
Say: "What did you do today?"



Play Time

Try this: Follow his lead, then add a word
Say: "The car goes FAST. Now what?"

Listen for: Does he do both steps?

Say: "Wash your HANDS, then your face."
Listen for: Does he point or repeat words?

Listen for: Does he use 2+ words to answer?

Listen for: Does he copy or expand?

Remember: Short sessions work best. Even 5–10 minutes in a routine counts. You do not need special materials — your everyday conversation is the most powerful tool Adam has.

Notes from today's session:

Raw AI output

Not all AI platforms will create it into a ready-to-print handout

Limitations, Risks, and Responsible Use

Limitations

- **Cannot** replace clinical judgement
- **Requires provider oversight** & time to review
- Output **limited by prompt quality**
- May miss nuance or context, needs to be “taught”

Risks

- **Privacy & data-security** concerns
- **Inaccurate** or outdated **information**
- **Over-simplification** or loss of important detail
- Perception that AI will “replace” clinicians
 - In reality, **can help maximize provider time** given workforce shortages

Responsible Use

- Use as a **guide**, **not a final product**
- Always **review, edit, and verify** *before* sharing with families
- **Avoid PHI** & follow (*your*) institutional privacy policies
- Be **transparent** with families: “This was created with AI and reviewed by our team.”

Summary

What AI is (in this context)

- A **tool** to adapt content for different languages and literacy levels

What AI is NOT

- **Not a replacement** for clinical judgment, counseling, or therapy

What I can do next as a clinician

- **Always review** for accuracy, tone, and family-specific details before sharing



Thank you

Hia.Abdelqader@nyulangone.org



NYU Cochlear Implant Center





Audience Q&A

① The Slido app must be installed on every computer you're presenting from