



# Case Study:

## Interprofessional School-based Team Helps Child Access Auditory Information and Improve Literacy

### Summary

Neel is a third-grade student with bilateral mild-to-moderate sensorineural hearing loss. He uses behind-the-ear (BTE) hearing aids in both ears and receives accommodations in the classroom setting, including the use of a remote microphone system, through a Section 504 plan. A team of professionals at Neel's school created a plan focused on helping him better access auditory information and improve literacy skills over the course of the school year.

### Student Info



**NEEL**  
NINE-YEAR-OLD

**Current Diagnosis:**  
Bilateral mild-to-moderate SNHL

### Meet The Team



Educational Audiologist



General Education Teacher



Special Education Teacher



Student's Family



School Administrator



Teacher of Deaf/Hard of Hearing (D/HH) Students



School-based Speech-Language Pathologist (SLP)



School Reading Specialist



Student

Continue for more

## Background

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Nine-year-old Neel was diagnosed with bilateral, mild-to-moderate sensorineural hearing loss at 6 months old. Records indicate that Neel did not pass a newborn hearing screening in both ears. Neel's family reported that there is no family history of childhood hearing loss. Neel has been using BTE hearing aids in both ears since he was an infant. The family uses listening and spoken language to communicate.

When the interprofessional practice (IPP) team was assembled, Neel was enrolled in third grade in his local public school. He participated in the general education environment—with academic accommodations provided through a Section 504 plan. Family members reported that Neel had no issues with oral expression or social language. They did report some concerns with (a) his grades in reading skills and (b) teacher comments on his most recent report card. His parents were concerned that Neel may need more direct support with reading skills and wanted to make sure that his hearing loss wasn't impacting his academic skills.

The IPP team recognized that Neel's case required joint communication and collaboration with the individualized education program (IEP) team, since Neel and his family are part of this team in addition to being part of the IPP team. Both teams needed to adequately share relevant information in a timely way. Team members concurred about the importance of mutual trust, respect, and support—both within teams and across teams.

## How They Collaborated

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The IPP team met to discuss and finalize the areas of assessment and mutually agreed on their roles in assessment. Each member of the IPP team met with Neel so they could assess his hearing, language, and literacy skills. Afterwards, the team met with one another to share their findings.

The educational audiologist reviewed the results of the most recent comprehensive audiologic evaluation performed by Neel's clinical audiologist. Findings suggested a stable mild-to-moderate hearing loss with good word recognition bilaterally. A check of Neel's hearing aids and remote microphone technology revealed that all devices were in proper working order. The educational audiologist performed an informal assessment of the school environment (e.g., classrooms, gymnasium, and cafeteria) to identify potential barriers to visual, auditory, and educational access. Finally, the educational audiologist conducted an observation of Neel's functional listening skills in each of his classroom environments. These observations revealed that the remote microphone system was not functioning properly in math class (e.g., the transmitter was not getting powered on). Neel indicated that this had been going on for quite some time but that he hadn't wanted to call attention to himself by speaking to his teacher.

The school-based SLP conducted comprehensive speech, language, and auditory skill assessments—including phonological awareness skills, understanding and use of vocabulary and grammar skills, auditory comprehension, and reading comprehension—which showed that some of Neel's language skills were within the average range, and others were below average. He demonstrated age-appropriate vocabulary and grammar skills on assessment measures and in language sample analysis. On tasks of auditory comprehension and reading comprehension, Neel had difficulty recalling specific parts of multi-step directions, remembering details from orally presented stories, and answering comprehension questions for a short passage that he had read out loud. Based on the results of the evaluation and school district eligibility for special education guidelines, Neel qualified for direct speech-language services.

The SLP let the school reading specialist know that when Neel read a passage out loud, he made errors decoding words, using consistent reading rate, and attending to punctuation.



Neel's parents reported that when Neel read aloud with them, he seemed to read quickly, guessed at words, and sometimes didn't pay attention to punctuation. They also said that he would restart or stop in the middle of sentences. They noted that Neel didn't like to read aloud and needed reminders to slow down and pace himself.

After reviewing the evaluation results, the IPP team recommended that Neel receive direct reading, speech-language, and audiology services through an individualized education program (IEP). Once the IEP was finalized, Neel began meeting with...

- the school reading specialist to address decoding and fluency needs;
- the school-based SLP to identify and implement strategies for oral language comprehension; and
- the audiologist to work on goals related to using his hearing technology, developing his auditory skills, understanding his hearing loss and factors that affect communication access, and proactively engaging in self-advocacy.

## Outcome

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The school-based SLP and the school reading specialist work closely together to identify and use the same or similar reading materials in their sessions—to target Neel's reading fluency and comprehension needs. They regularly share Neel's progress toward IEP goals with each other and with the larger team. Data show that Neel is making steady progress toward literacy and language comprehension goals and is beginning to apply skills in the classroom and at home.

The educational audiologist provided an in-service training for Neel's teachers and support staff to ensure that they know how to use his remote microphone technology properly. The educational audiologist and Neel's teachers came up with a plan for Neel to leave classrooms 1–2 minutes before his peers—this gives him time to check the functioning of his hearing technology with the teacher of his next class before instruction begins. He also practices restating key pieces of directions and asking for repetition when unsure of what he heard.

## On-Going Collaboration

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The IPP team sends monthly emails among team members and Neel's family to coordinate ongoing services. In these emails, the team and the family share what is working and what needs adjustment to meet Neel's academic needs. In addition, the IPP team checks in regularly with Neel's IEP case manager to ensure that he is making progress toward meeting goals and objectives.





# Case Rubric:

## Interprofessional School-based Team Helps Child Access Auditory Information and Improve Literacy

### Student Info



**NEEL**  
NINE-YEAR-OLD

### Current Diagnosis:

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### Meet The Team



Educational Audiologist



General Education Teacher



Special Education Teacher



Student's Family



School Administrator



Teacher of Deaf/  
Hard of Hearing  
(D/HH) Students



School-based  
Speech-Language  
Pathologist (SLP)



School Reading  
Specialist



Student

### History and Concerns

(Share key information gathered from team)

Nine-year-old Neel was diagnosed with bilateral, mild-to-moderate sensorineural hearing loss at six months old. Records indicate that Neel did not pass a newborn hearing screening in both ears. Neel's family reported that there is no family history of childhood hearing loss. Neel has been using behind the ear hearing aids in both ears since he was an infant. The family uses listening and spoken language to communicate.

When the interprofessional practice (IPP) team was assembled, Neel was enrolled in third grade in his local public school. He participated in the general education environment—with academic accommodations provided through a Section 504

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## Case Rubric continued

### History and Concerns continued

plan. Family members reported that Neel had no issues with oral expression or social language. They did report some concerns with (a) his grades in reading skills and (b) teacher comments on his most recent report card. His parents were concerned that Neel may need more direct support with reading skills and wanted to make sure that his hearing loss wasn't impacting his academic skills.

### Assessment Plan

(Discuss, reflect, and modify recommendations to develop a coordinated plan)

The team recognized that Neel's case required joint communication and collaboration with the individualized education program (IEP) team, since Neel and his family are part of this team in addition to being part of the IPP team. Both teams needed to adequately share relevant information in a timely way. Team members concurred about the importance of mutual trust, respect, and support—both within and across teams.

#### The IPP team met to discuss and finalize the areas of assessment and mutually agreed on their roles in assessment:



**Student's Family:** Report on strengths and concerns; participate in developing goals and plans for Neel's communication and self-help skills; request information about community resources



**Student:** Share his thoughts and opinions on his academic skills, strengths, goals, and needs



**Educational Audiologist:** Evaluate hearing; fit appropriate technology; counsel family on communication options; stress the importance of access to communication



**School-based Speech-Language Pathologist (SLP):** Assess speech and language skills in the academic setting for curriculum-related and social communication



**General Education Teachers:** Share informal and formal data on Neel's performance in the classroom setting and in specific academic subjects



**Special Education Teacher:** Provide information on types of special education programs and supports from which Neel may benefit

Continue for more

## Case Rubric continued

### Assessment Plan continued



**School Reading Specialist:** Conduct reading assessments to determine Neel’s strengths and areas of need in decoding, reading fluency, encoding, and reading comprehension skills



**Other Teachers and School Staff (as appropriate):** Share feedback on Neel’s performance in art, music, and physical education (P.E.), behavior in the school cafeteria, and performance/behavior in other school settings



**School Administrator:** Guide family and team in making determinations for special education services and supports for Neel

### Assessment Results

(After assessing Neel, three IPP team member shared their findings)



**Educational Audiologist:** Reviewed the results of the most recent comprehensive audiologic evaluation performed by Neel’s clinical audiologist. Findings suggested a stable mild-to-moderate hearing loss with good word recognition bilaterally. A check of hearing aids and remote microphone technology revealed that all devices were in proper working order. Informally evaluated school environment (e.g., classrooms, gymnasiums, and cafeteria) to identify potential barriers to visual, auditory, and educational access. Conducted an observation of Neel’s functional listening skills in each of his classroom environments. These observations revealed that the remote microphone system was not functioning properly in math class (e.g., the transmitter was not getting powered on). Neel indicated that this had been going on for quite some time but that he hadn’t wanted to call attention to himself by speaking to his teacher.



**School-based Speech-Language Pathologist (SLP):** Conducted comprehensive speech, language, and auditory skill assessments—including phonological awareness skills, understanding and use of vocabulary and grammar skills, auditory comprehension, and reading comprehension—which showed that some of Neel’s language skills were within the average range, and others were below average. He demonstrated

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## Case Rubric continued

### Assessment Results continued



age-appropriate vocabulary and grammar skills on assessment measures and in language sample analysis. On tasks of auditory comprehension and reading comprehension, Neel had difficulty recalling specific parts of multi-step directions, remembering details from orally presented stories, and answering comprehension questions for a short passage that he had read out loud. Based on the results of the evaluation and school district eligibility for special education guidelines, Neel qualified for direct speech-language services.



**School Reading Specialist:** Performed informal and formal assessments of Neel’s reading decoding skills, including (a) accuracy reading real and nonsense words; (b) reading fluency skills, including his rate and accuracy reading words, sentences, and passages; and (c) reading comprehension skills—such as the ability to answer factual and inferential questions about short passages that he had read.

### IPP Treatment Plan

(Discuss, reflect, and modify recommendations to develop a coordinated plan)



**Educational Audiologist:** Provided an in-service training for Neel’s teachers and support staff to ensure that they know how to use his remote microphone technology properly. The educational audiologist and Neel’s teachers came up with a plan for Neel to leave classrooms 1-2 minutes before his peers—this gives him time to check the functioning of his hearing technology with the teacher of his next class before instruction begins.



**School-based Speech-Language Pathologist (SLP):** Because Neel qualified for an individualized education program (IEP), the SLP meets with him in one 30-minute weekly small-group pull-out session and one 30-minute in-class session. In the pull-out session, Neel learns and practices strategies to follow multi-step directions—such as rehearsing key words, using visual cues to recall important items, and asking for repetition. He also works on identifying key details in oral and written curriculum-related content using strategies that include jotting notes,

Continue for more

## Case Rubric continued

### IPP Treatment Plan continued

highlighting and circling key words and phrases, and drawing pictures. In the classroom, the SLP works with Neel to generalize skills and strategies from individual sessions—including counting steps and underlining key words in directions, highlighting main ideas, circling key vocabulary words, and writing short notes to put key concepts and written content into his own words.

The SLP meets once weekly with the school reading specialist. They discuss skills and strategies that they are working on with Neel individually, share data on his accuracy, inform one another of breakthroughs in his performance, and share materials.

The SLP and the educational audiologist meet with other teachers and school staff—including school food services staff, cafeteria attendants, and P.E. teachers, on an as-needed basis—to share strategies and cues that they can use in their respective settings, including rehearsing key pieces of directions, referring to visual aids and signals and restating key pieces of directions and asking for repetition when he's unsure of what he heard.



**School Reading Specialist:** Through his IEP, Neel receives direct reading intervention in a small group. Twice weekly, he and a group of four students meet with the reading specialist to learn and review consonant blends, long vowel sounds, suffixes, and how to chunk multisyllabic words. Neel also works on increasing his rate and accuracy reading sentences and paragraphs from classroom-related materials.

### Treatment Outcomes

(Discuss results of treatment)

Data—such as reports from speech-language therapy sessions; results of reading instruction quizzes, tests, and probes; and quarterly IEP progress monitoring—demonstrate that Neel's auditory and language comprehension as well as his reading skills and vocabulary show steady growth. Also, he is participating more in class discussions and letting teachers know when he has hearing technology issues.

Continue for more



## Case Rubric continued

### Ongoing Collaboration

The IPP team sends monthly emails among team members and Neel's family to coordinate ongoing services. In these emails, the team and the family share what is working and what needs adjustment to meet Neel's academic needs. In addition, the IPP team checks in regularly with Neel's IEP case manager to ensure that he is making progress toward meeting goals and objectives.

## Acknowledgments

ASHA extends its gratitude to the subject-matter expert(s) who were involved in the development of the original version of this IPP case:

- Aruna Hari Prasad, MA, CCC-SLP
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## Citations

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