

Case Study: Hearing Loss

Part 1: Getting to Know Ava

Ava and Her Family

Ava is a 12-month-old girl who lives in a small town with her mother, Jasmine (26), and maternal grandmother, Carol (58). Jasmine works part-time at a local bakery while Carol provides childcare during the day. The family identifies as African American and has strong ties to their church and local community. Ava is their first child, and her birth was celebrated with joy and anticipation.

Before her discharge from the hospital, Ava received the routine newborn hearing screening mandated by the state. The screening indicated a possible loss of hearing. The discharge planner advised Jasmine to schedule a follow-up evaluation at one of the pediatric audiology centers, which were at least two hours away. Initially, Jasmine was uncertain about the accuracy of the screening due to Ava's young age and the logistical challenges of traveling long distances while working.

Medical and Developmental History

Ava was born full-term following an uncomplicated pregnancy and delivery. Her Apgar scores were within normal limits, and she failed her initial newborn hearing screening. As she grew, Jasmine noticed subtle differences in Ava's responsiveness to sound. Ava did not react to loud noises, and her vocalizations were limited compared to other infants her age. Jasmine initially perceived her as a quiet, calm baby and did not suspect a hearing concern.

During a routine third-month well-child care visit, the nurse practitioner noted the failed screening and emphasized the importance of follow-up audiological testing. When asked about the reason for the lack of follow-up, Jasmine expressed concern about travel and time away from work.

By the 6-month visit, it was evident that Ava was not turning to sounds consistently and had only primitive babbling. The nurse practitioner strongly recommended scheduling a hearing evaluation.

After the visit, Jasmine communicated to her mother feelings of fear and uncertainty regarding the audiological evaluation. She was unsure how to schedule the appointment and expressed concern about arranging time off work to accompany Ava. Carol provided support by offering to attend the evaluation with them and advised Jasmine to explain to her employer the importance of the test for Ava's care. After arranging the audiological evaluation, it was confirmed that Ava had moderate bilateral sensorineural hearing loss. She was 7 months old. The audiologist conducted otoacoustic emissions (OAE) and auditory brainstem response (ABR) testing, such as non-invasive procedures designed to assess how well Ava's ears and auditory nerve responded to sound. Jasmine was significantly concerned and uncertain about the implications of the diagnosis.

The results confirmed moderate bilateral sensorineural hearing loss, with Ava's audiogram showing consistent thresholds in the 40–55 dB range. The audiologist explained that Ava would benefit from amplification through hearing aids and emphasized the importance of early intervention to support her language and cognitive development.

Following the diagnosis, Ava was referred to Georgia's Early Intervention (EI) Program under IDEA Part C. Both Jasmine and Carol reported feeling overwhelmed due to their limited familiarity with hearing loss, but were motivated to support Ava's development. They began working with the EI team, which consisted of a developmental specialist and a speech-language pathologist, to assess Ava's strengths and needs across all areas of development.

Discussion Prompts:

- What does sensorineural hearing loss mean, and how does it affect auditory development?
- What might happen if Jasmine were unable to access audiological testing due to work or transportation constraints? What additional questions would help you understand Ava's family routines and caregiving dynamics?
- How can early intervention providers support families with limited knowledge of hearing impairment?

Part 2: Assessment

Ava's diagnostic journey began with subtle signs that her mother, Jasmine, first noticed around three months of age. Ava, a quiet and observant infant, rarely startled at loud noises and didn't respond consistently to her name. Jasmine initially attributed these behaviors to Ava's calm temperament, but as she observed other babies her age beginning to babble and react to voices, her concern grew. When Ava was diagnosed with moderate bilateral sensorineural hearing loss, she was referred to the statewide Early Intervention (EI) program, and she was enrolled at eight months, as hearing impairment qualifies a child for automatic eligibility for EI in Georgia.

The EI team consisted of an early childhood teacher of the deaf and a speech-language pathologist. They conducted a home-based observation to assess Ava's communication behaviors, social engagement, and motor development. In her familiar environment, Ava was found to be socially curious. For example, she made frequent eye contact, smiled at familiar faces, and showed interest in books and toys. However, she relied heavily on visual cues and gestures to communicate. The SLP noted that Ava had not yet developed consistent babbling and did not respond to spoken language unless paired with gestures or expressive facial cues.

Despite her communication delays, Ava's motor development was within typical limits. She enjoyed crawling, pulling herself up to stand, and exploring her surroundings. Her interactions with Jasmine and Carol were warm and engaging, and she responded positively to music and rhythmic play.

The evaluation team took time to explain their findings and answer questions, ensuring Jasmine and Carol felt supported and informed. Together, they developed an Individualized Family Service Plan (IFSP) that focused on:

- Communication development, including the use of visual supports, sign language, and strategies to pair spoken language with gestures.
- Family coaching, to empower Jasmine and Carol with tools to support Ava's language growth during daily routines.
- Environmental modifications, such as reducing background noise and creating sound-rich play experiences, to enhance Ava's access to language.

The team also assisted the family in initiating the process of obtaining hearing aids and connected them with local resources, including parent support groups and early childhood hearing services. Jasmine and Carol expressed relief at having a plan and a team that understood their daughter's needs. They felt hopeful and reassured that with the right support, Ava could thrive.

Discussion Prompts:

- How can early intervention teams ensure that families like Ava's feel informed, supported, and empowered during the diagnostic process, especially when the diagnosis is unexpected or unfamiliar?
- Given Ava's reliance on visual cues and gestures, what culturally responsive strategies can be used to support her communication development in both home and community settings?
- What are the key components of an effective IFSP for a child with moderate hearing loss, and how can providers collaborate with caregivers to embed communication goals into everyday routines?

Part 3: Home-Based Early Intervention

Given Ava's age and the family's preference, early intervention services were provided in the home. The team adopted a coaching model, emphasizing family-centered practices and empowering Jasmine and Carol to embed communication strategies into daily routines.

Weekly visits from the SLP and early interventionist included:

- **Auditory Access Strategies:** Ensuring hearing aids were functional and consistently used.
- **Language-Rich Routines:** Embedding spoken language into everyday activities like mealtime, diaper changes, and playtime, using clear, slow speech and visual cues.

- **Joint Attention and Turn-Taking:** Encouraging Ava to engage in back-and-forth interactions using gestures, facial expressions, and vocalizations.
- **Environmental Modifications:** Reducing background noise, using visual supports, and positioning Ava to maximize her ability to see speakers' faces.

Jasmine and Carol were trained to recognize Ava's communication attempts and respond in ways that encouraged further interaction. The team also introduced simple sign language to support Ava's expressive communication while her auditory skills developed.

Over time, Ava began to show increased responsiveness to sound, especially familiar voices. She started using gestures to indicate wants and began vocalizing more consistently. Jasmine reported feeling more confident in supporting Ava's development and appreciated the flexibility and personal connection of home-based services.

Discussion Prompts:

- How can home-based early intervention services be tailored to meet the needs of multigenerational families?
- What are the key components of a coaching model in early intervention?
- How can providers support families in integrating communication strategies into daily routines?