



Introduction to Audiology

Audiolab Assignment: Pediatric ENT Clinic

To complete this assignment, students will need to log into Audiolab. Students and faculty with active Simucase memberships may access Audiolab for free. To request access for you or your students, complete the Faculty Audiolab Access Request Form on the Simucase website.

Note that this document references guidance provided by ASHA and AAA, but does not provide links to their sites. You may wish to provide relevant links to your students prior to assigning this task.

Audiolab Assignment: Determining Type of Hearing Loss

Instructor Information

Purpose

This assignment presents students with information about type, severity, and configuration of hearing impairment and practice with unmasked air- and bone-conduction pure-tone audiometry as well as describing audiometric results.

General Information

This assignment is appropriate for students enrolled in an undergraduate Introduction to Audiology or Aural Rehabilitation course and first-year Doctor of Audiology students. **Prerequisite skills for this assignment include understanding of the modified Hughson-Westlake technique for audiometric threshold search, how to plot audiometric data on an audiogram, and what it means to have different severities, types, and configurations of hearing loss.** Students can complete the assignment in-class or as an at-home activity. Within the Hearing Screening module, students may test five children at the Pediatric ENT clinic. Completing audiometric testing for each patient will take between 15 and 20 minutes, depending on students' comfort navigating the "down-10, up-5" (i.e., modified Hughson-Westlake) procedure, manipulating the digital audiometer, and any prior experience with audiometry, as bone conduction is required for this assignment. Though some patients require masking, students are not expected to perform clinical masking for this module.

Once logged into the Pediatric ENT clinic, there are many ways to use the Audiolab hearing screening module, including:

- Improving understanding of how to test a pediatric patient vs an adult patient (e.g., differences in test instructions and procedures/protocols).
- Manipulating typical audiometer controls (stimulus frequency dial, attenuator dial, etc.).
- Obtaining audiometric thresholds.
- Depicting audiometric data using an audiogram.
- Providing instructions to a child (role-playing encouraged).
- Counseling parents/guardians after testing.
- Determining the severity and configuration of hearing loss.
- Learning how to determine type of hearing loss.

In-Class or At-Home Activity

Instruct students to log into Audiolab, navigate to the Pure Tone Audiometry - Basic module, and select Pediatric ENT Clinic. Have the students read the instructions. Students are not able to choose their patient, so instruct them to test the first patient that appears. The student should start by reading the short case history information. You may ask them to consider additional questions to ask the child and parents/guardians and have students write these questions down. They may include them in their final report once they complete testing.

Preactivity discussions in class can include:

- The importance of early detection and intervention of hearing impairment particularly for young children in families using spoken language.
- A review of how to perform pure tone audiometry testing (down 10, up 5 technique, number of ascending responses, when to include bone conduction).
- A review of the standard test protocol (Which ear to start with? Which frequencies to test?).
- Different configurations of hearing impairment and how to describe them.
- Different severities of hearing impairment and how to describe them.
- Different types of hearing impairment and how to describe them.

If students complete this activity at home, they should come to class ready to present about each patient.

Debriefing Questions for In-Class and At-Home Activities

- Why is bone conduction not tested for frequencies above 4000 Hz?
- In certain cases you observed elevated air-conduction thresholds in both ears. You also observed unmasked bone conduction thresholds that were within normal limits. Can you determine the type of hearing loss for each ear with unmasked bone-conduction thresholds only?
- Which other audiological tests would you include and why?
- Some students are in school systems that do not have an educational audiologist to support the needs of children who are Deaf and/or hard of hearing. How could you support this clinical population in the school setting?
- How would you counsel each patient?
- What are some reasons you might observe an air-bone gap during pure-tone audiometry?

Other Instruction (optional)

You may wish to remind students that as a clinician, you should always try to treat the whole person. As an audiologist, you are diagnosing and treating auditory function and trying to improve a person's ability to communicate, connect with others, and fully engage in all aspects of their life. Invest in building rapport with your patient to better understand their communication challenges and what they want and need from your services. Simple conversations and case histories allow you to begin this process, but you should also listen carefully and use valid and reliable questionnaires.

Awarding Clinical Clock Hours

Students may earn 60 minutes of clinical clock hours in the area of hearing evaluation for completing the Pediatric ENT patient set. Faculty should follow ASHA guidelines regarding clinical simulation when awarding hours for audiology and speech-language pathology students.

Citation

Calandrucchio, L., & Ligon, E. (2024). Audiolab lesson plan: Pediatric ENT clinic (Faculty). [PDF]. Simucase LLC.