



Pennsylvania School Health Procedures: Conducting Hearing Screening

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Testing Site and Equipment

The testing room should be selected for its quietness. The room is considered too noisy if the tester cannot hear frequencies 250, 500, 1000, 2000, 4000, and 8000 Hz, at 20 dB in one ear with both earphones on.

Functional inspection of the audiometer and headphones should be conducted to verify equipment performance before use. The audiometer should be checked by measuring the tester's hearing in the room where testing will be done.

The audiometer should be allowed to warm up for 15 - 20 minutes prior to testing.

Calibration of the instrument should be done annually. If the audiometer has been dropped or damaged or questionable results are displayed, earlier calibration is necessary.

Arrangements for repair and calibration services should be made with the dealer at the time of purchase. After each calibration, the dealer/lab should provide the school with a Certificate of Calibration. In order to ensure reliable test results, school authorities must provide for reliable calibration and repair services on a regular basis.

Conducting a Hearing Screen

Parental consent is not required for mandated health screenings.

Refer to the manufacturer's instructions for specifics to the model being used.

Pre-testing instructions to students should include doing the following:

- Indicate the purpose of the test is to find the faintest tone that can be heard.
- Emphasize that it is necessary to sit quietly during the test.
- Indicate that the student is to respond upon hearing the tone by raising their hand or a verbal response.
- Indicate that each ear will be tested separately with tones of different pitches and frequencies.

The student should be seated in a manner to promote safety and comfort as well as valid testing.

Avoid giving inadvertent visual cues to the student.

Enable easy observation of student's responses to the tones.

Place the headphones on the student from the front. Place the center of each headphone over the external auditory canal. Align the microphone with the ear canal. The "Red" earpiece goes in the right ear.

With some students, it may be necessary to push the hair back, remove glasses, hearing aids, earrings before testing if these things interfere with proper contact between the ear canal and the headphones.

Press and hold the tone for about two to four seconds. To avoid the student detecting a rhythmic pattern to the tones, the tester should vary the interval between and length of the tones.

Sweep Check Test (Rapid Hearing Screening) Procedure

Set the frequency to 1000 Hz and the decibels to 55 dB. Turn the tone “on” briefly and then “off.” After the student responds, turn to 40 dB; test the tone once. Then turn the decibels to 25 dB; test this tone.

Leave the decibels set at 25 dB for the rest of the test. Change the frequency to 2000, 4000, then to 250 and 500 Hz, respectively, and test this tone. Repeat the procedure in the other ear.

A child not hearing two or more tones at 25 dB in one or both ears should be given a threshold test that day or within one month.

Pure-Tone Threshold Hearing Testing Procedure

Set the frequency to 1000 Hz and the decibels to 50 dB. Turn the tone “on” briefly, then turn “off.” If the student hears this tone, set the decibels at 40 dB, and repeat this procedure, decreasing the decibels by 10 dB steps until the student no longer indicates that they hear the tone. Then, increase the decibels by 5 dB steps until the student does hear the tone again.

Alternately decrease and increase the tone in 5 dB steps for frequencies at 1000, 2000, 4000 and 8000, then to 250, 500Hz until the point or level below which they cannot hear is determined. Repeat the procedure in the other ear.

A student whose threshold test shows a hearing level of 30 dB or more for two or more tones in one or both ears, or 35 dB or more for one tone in either ear, shall be referred to the family’s provider or usual source of care for a complete ear examination. A complete ear examination means otologic assessment and audiometric tests. It is the family’s responsibility to arrange this examination.

Record the screening results and if a referral is made on the student’s School Health Record and Parent/Guardian Notification form.

Sample Documents and Additional Information

Sample parent notification, provider referral letters, Audiometer and Hearing Screening Checklist, Calibration Maintenance worksheet and a sample Audiometer Calibration Certificate are located on the Division of School Health’s “Mandated School Health Program” page under the hearing screen page.

<http://www.health.pa.gov/My%20Health/School%20Health/Pages/Mandated-School-Health-Program.aspx>