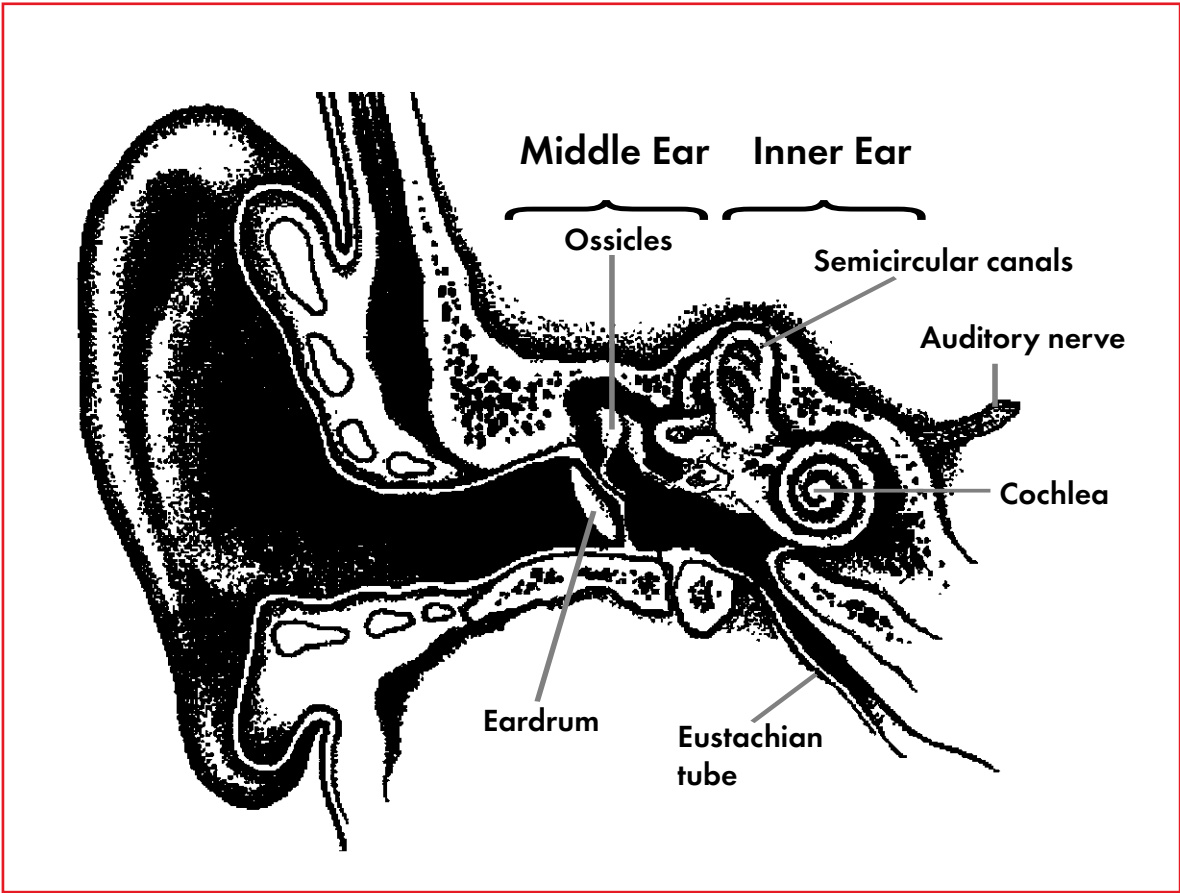


# Hearing Screening Guidelines & Requirements



2007



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Ohio Department of Health

Hearing Screening  
Requirements and  
Guidelines for  
School-aged Children

## I. Introduction to Hearing Screening Policies for Children

Hearing loss in school children may interfere with normal speech and language development and with the ability to learn. Even mild or unilateral hearing losses may be educationally significant. Regular school hearing screenings are an important method of identifying children who are at risk for hearing loss. Early detection and treatment of hearing disorders provide children the best opportunity to develop academically, emotionally and socially.

The Ohio Department of Health (ODH) stresses that hearing screening, while a valuable public health procedure, is not a substitute for a complete audiological/medical examination; however, to further ensure children with hearing disorders are detected early, programs utilizing regulated and supervised screening procedures have become essential.

The Ohio Revised Code gives ODH the authority to institute specific testing procedures, grades and forms that are used in the school hearing screening program. Appendix A contains a complete text of state laws pertaining to hearing screening programs. ODH's policies governing hearing screening programs were reviewed following a meeting with the Ad Hoc Hearing Advisory Committee in Columbus, Ohio, and their recommendations are implemented into this policy. Members of the hearing advisory committee are listed in Appendix B.

## II. Hearing Screening Goals of the Ohio Department of Health

The ODH goals of a school hearing screening program are:

- Early detection and identification of hearing loss in children.
- Access to professional care for all children suspected of having a hearing loss, regardless of financial limitations.

The activities of a school hearing screening program that are necessary to accomplish the goals as listed above are:

- Perform hearing screenings according to ODH's guidelines.
- Notify parent or guardian of a child's hearing screening results and the need for further medical/audiological examination.
- Provide referral assistance to hearing professionals.
- Inform educational staff of the student's hearing screening results.

## III. Summary of State Laws Pertaining to Hearing Screening

- A. If the board of education or the board of health offers services by a physician or a nurse in the school, it must provide hearing screenings for students in accordance with the requirements set forth by ODH (section 3313.69 of Ohio Revised Code).
- B. By November 1 of the year a student is enrolled for the first time in either kindergarten or first grade, the student must be given a hearing screening in accordance with the requirements set forth by ODH (Section 3313.673 of the Ohio Revised Code). The board of education may provide any of the elements of the screening program itself, contract with any person or governmental entity to provide any such elements or request that parents take the child to obtain any such elements from a provider selected by the parents.





## IV. Hearing Screening Guidelines and Referral Criteria

Hearing screening is an effective method of identifying children at risk for hearing loss. Screening programs should stress that screening is not a diagnostic hearing evaluation and will not detect all hearing problems. Screening will produce both over-referrals and under-referrals; however, for the benefit of the children being screened, errors toward false positives (i.e., over-referrals) are preferred. Parents of children screened should be informed of the **limitations of the screening**. Routinely, referrals should be made only following a second screening. In general, some children will pass the second screening, reducing the over-referral rate.

### A. Required Screening Procedures

#### 1. Observation

- a. The screener shall note on the hearing screening form any student reported symptoms:
  - 1) Not hearing well.
  - 2) Hearing better out of one ear than the other.
  - 3) Ear pain or tenderness.
- b. Direct observation of the following:
  - 1) Discharge from a child's ear canal.
  - 2) Malformation of the ear.
  - 3) Soreness or tenderness in or about the ears.
- c. Referral criteria:
  - 1) A child who has any of the conditions listed in direct observation shall be **referred immediately** and not screened on that day.

#### 2. Pure-tone Air Conduction Audiometry

- a. Screening criteria:
  - 1) Each child shall be screened at **1000 Hz, 2000 Hz and 4000 Hz, at 20 dB HL** in the right and left ear. No other frequencies or intensities are to be used.
  - 2) If the child responds at 20 dB HL to all three frequencies in both ears, the child passes the hearing screening.
  - 3) For a complete overview on hearing screening procedures, see Appendix C.
- b. Rescreen criteria:
  - 1) Any child failing the first screening (who does not respond at 20 dB HL to one or more of the three frequencies in either ear) should be rescreened immediately following reinstruction and repositioning of the headphones.
  - 2) Any child who fails both initial screenings shall be rescreened again in four to six weeks.
- c. Referral criteria:
  - 1) Any child who fails both the initial and second screenings shall be referred for a complete medical/audiological evaluation.
  - 2) Any child failing the first school screening and who failed the previous year's school screening with no documented follow-up care shall be immediately referred.





## B. Optional Screening Procedures

### 1. Tympanometry

- a. Screening criteria:
  - 1) ODH **highly recommends** tympanometry as a useful tool for screening middle ear problems. It does not measure hearing and should not be used without pure tone air conduction testing. Members attending a Tympanometry/Otoacoustic Emissions Subgroup (Appendix D) offered recommendations on using tympanometry in a school screening program. For further details on Tympanometry, see Appendix E.
  - 2) Tympanometry is highly recommended for:
    - Pre-kindergarten and kindergarten.
    - First and third graders and the difficult to test children, upon rescreen.
- b. Rescreen criteria:
  - 1) A child who passes the pure tone screening but fails tympanometry shall be rescreened with pure tones and tympanometry four to six weeks later.
- c. Referral criteria:
 

**Hearing screeners using tympanometry with pure-tone screening shall follow the referral criteria as set forth by ODH as follows:**

  - 1) A refer tympanogram is a flat tympanogram or a gradient (tympanometric width) greater than 200 daPa (see Appendix E on tympanometry).
  - 2) A child who fails the first screening (both pure tones and tympanometry) shall be referred immediately for a complete medical/audiological evaluation.
  - 3) A child who fails the second tympanometry screening with a flat tympanogram will be referred for medical evaluation.

### 2. Otoacoustic Emissions

- a. Screening criteria:
  - 1) Otoacoustic emission (OAE) screening has been approved as an alternative test for students who are unable to complete a pure-tone screening either due to young age or physical or developmental challenges. OAE testing is not a substitute for pure-tone screening for other students. Members attending a Tympanometry/Otoacoustic Emissions Subgroup (Appendix D) offered recommendations on using OAEs in a school hearing screening program. ODH has developed a comprehensive training that is recommended for nurses who have no prior experience with OAE screening of school-age children. For further details on OAEs, see Appendix F.
- b. Rescreen criteria:
  - 1) A child who passes the OAE will not be rescreened.
  - 2) A child whose test results indicate “refer” shall be retested immediately.
  - 3) A child whose test results indicate “refer” again shall be retested no later than two week from the original test date.
- c. Referral criteria:
  - 1) A child who is unable to be tested shall be referred for a complete medical/audiological evaluation.
  - 2) A child whose test results indicate “refer” on the second OAE shall be referred for a complete medical/audiological evaluation.

## C. Children to be Screened

1. Preschool children:
  - a. Preschoolers attending a school-based program shall be screened each year they are enrolled in preschool. Children who cannot be screened using approved and/or optional methods shall be referred to the primary care provider or audiologist.
2. School-aged children in traditional classes:
  - a. School-aged children shall be screened at five grade levels: kindergarten, first, third, fifth and ninth grades. Students may be tested in additional grade levels.
  - b. In addition, the following school children shall be screened because they have not been screened in accordance with ODH guidelines:
    - 1) Students new to a school (and not tested within the past 12 months).
    - 2) Students referred by a teacher or other school personnel.
    - 3) Students who were referred within the past year with no documented follow-up, regardless of grade.
    - 4) Students absent during the previous hearing screening.
    - 5) Students at risk for noise exposure (e.g., band, vocational education, industrial education, automotive mechanics).
    - 6) Students who request a hearing screening.
    - 7) Students whose parents request a hearing screening.
3. School-aged children in special education classes:
  - a. Students in special education classes will be screened at the ages that correspond to the grade levels required for all students (preschool, kindergarten, first, third, fifth and ninth grade). These children should remain in the screening program due to a higher risk of undetected hearing loss and may be candidates for optional OAE testing and tympanometry screening. If the student cannot be screened, they should be referred for a complete medical/audiological evaluation.



4. School-aged children who should not be included in the school hearing screening program include the following:
  - a. Students who wear hearing aids.
  - b. Students who have a cochlear implant.
  - c. Students with known hearing loss including sensorineural and progressive hearing loss.
  - d. For children in a, b and c above, follow-up with parents is important to ensure the child is under the care of a primary care provider or audiologist. (Documentation of current hearing test within past year should be in the child's file.)

### V. Recommended Portable Screening Equipment Requirements

- A. Pure-tone equipment:
  1. Pure-tone equipment shall have a variable intensity attenuator ranging from 0 dB to 80 dB.
  2. Pure-tone equipment shall have a binaural headset. Hand-held pure-tone equipment, automatic pure-tone equipment and standardized speech (picture) testing equipment are not approved for use in school hearing screenings.
  3. Pure tone equipment shall meet the appropriate current standards by the American National Standards Institute (ANSI).
- B. Tympanometry equipment:
  1. Tympanometric testing shall be performed utilizing a 226 Hz tone and a constant pump speed of 200 daPa/sec.
  2. Tympanometric equipment shall meet the appropriate current standards by ANSI.
- C. Other:
  1. All equipment shall be calibrated annually to the appropriate current standards by ANSI.
  2. Screening personnel may contact ODH, Bureau of Child and Family Health Services at (614) 466-5332 for advice when purchasing equipment. ODH does not endorse a specific manufacturer or model.

### VI. Hearing Screening Follow-up/Referral Procedures

- A. Although not required, school screening personnel may want to inform the families of the upcoming school hearing screening (*School Hearing Screening Information Form*). This form also maybe modified in a school newsletter to the families.
- B. *The Hearing Screening Record Form* is provided for the initial screening and rescreening of children to assist school screening personnel in record keeping.
- C. Parents shall receive written notification (*Hearing Screening Referral Letter*) that their child has failed a hearing screening test and that an examination by a primary care provider and/or audiologist is recommended. No diagnostic statement about the child's suspected hearing problem shall be mentioned in the parents' notification.

- D. Along with notification, parents shall receive a copy of the *Hearing Screening Referral Report* to be completed by the examining primary care provider or audiologist and returned to the referring agency.
- E. The names of children who have failed a hearing screening shall be entered on the *Hearing Follow-up Record* and tabulation of follow-up data shall be maintained.
- F. Results of a child's hearing screening test shall be entered on the child's permanent school health record.
- G. Forms used for hearing screening and follow-up may be downloaded from the ODH Web site <http://www.odh.ohio.gov> or photocopied from the examples in the Forms section of this document. Schools may request approval for use of a form other than those available from ODH by submitting the form to ODH at the address listed in Section VIII.
- H. ODH has instituted a system of data collection (mandated by Section 3313.50 ORC) that periodically requires randomly selected schools to report their hearing screening data by school building. To simplify a school's ability to respond accurately to those requests, data from the *Hearing Screening Record Form* and *Hearing Screening Follow-up Form* can be entered onto the *Hearing Screening Annual Report Form*.

### VII. Screening by Hearing Care Professionals

- A. Hearing screenings for school children may be conducted by:
  - 1. Physicians.
  - 2. Audiologists.
  - 3. Audiology aides only under the supervision of an audiologist (Licensing Law 4753.072 of the Ohio Board of Speech-Language Pathology and Audiology).
  - 4. Speech language pathologists.
  - 5. Speech language pathology aides only under the supervision of a speech language pathologist (Licensing Law 4753.072 of the Ohio Board of Speech-Language Pathology and Audiology).
  - 6. Nurses.
  - 7. Nurses may delegate hearing screening to trained unlicensed personnel in accordance with the Standards of Delegation defined in the Ohio Administrative Code (OAC) 4723-13.

*An opinion rendered by ODH's legal counsel in 1991 concluded that professionals who provide hearing screening services to schools, whether as volunteers or contract personnel, must follow the testing requirements and methodologies which are approved by ODH.*

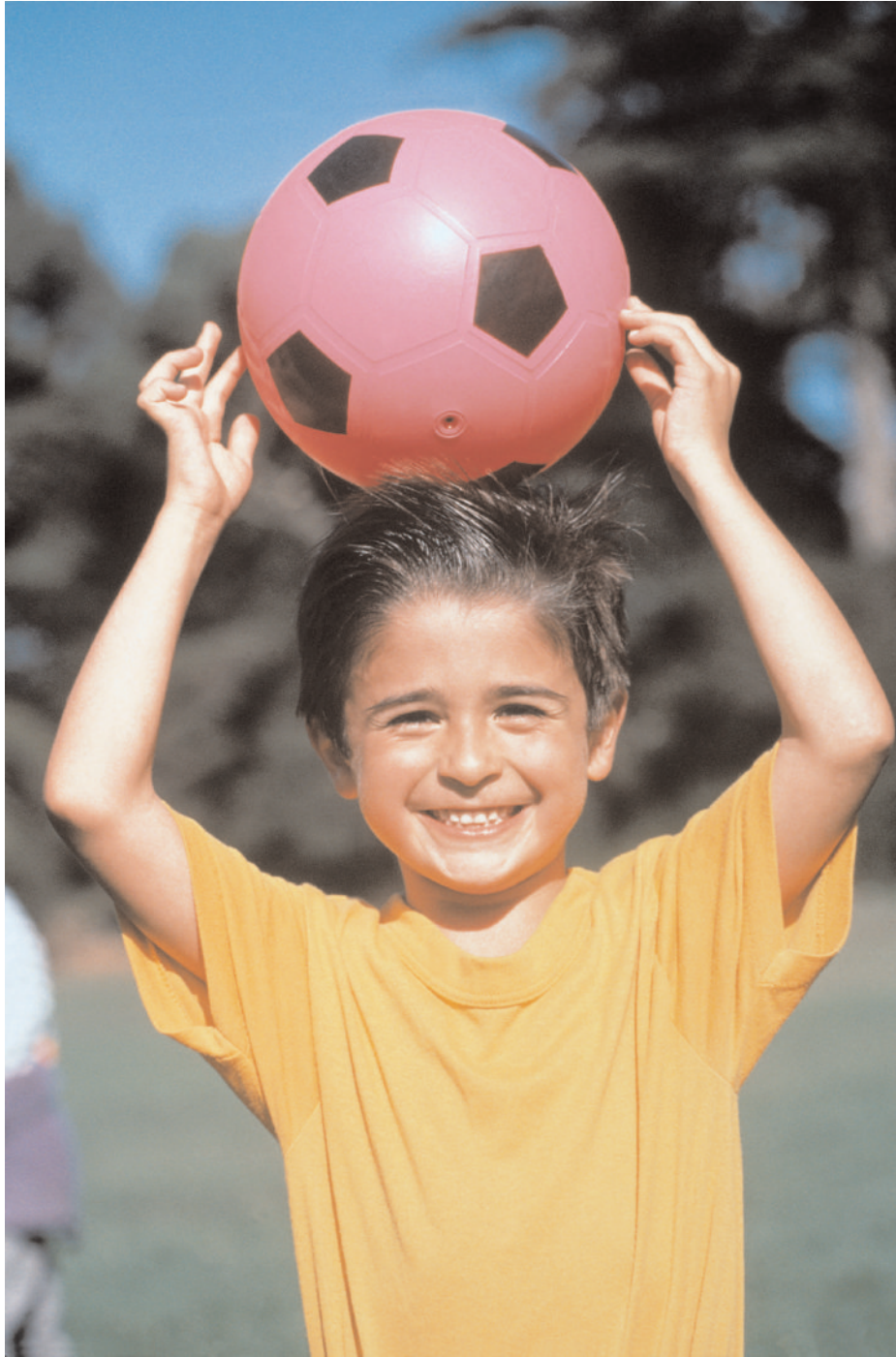
#### B. Preparation of Hearing Screening Personnel

It is required that all personnel providing hearing screening have adequate instruction. ODH's audiologists provide hearing training for screeners. Any training obtained outside of ODH must be in compliance with the requirements outlined in this document.









# Appendices

## Appendix A

### State Laws Pertaining to Hearing Screening Programs

(from the Ohio Revised Code)

#### Section 3313.50

##### Record of tests; statistical data; individual records

Boards of education and boards of health making tests for determining defects in hearing and vision in school children shall keep an accurate record of such tests and of measures taken to correct such hearing and visual defects. This record shall be kept on a form to be prescribed and furnished or approved by the director of health. Statistical data from such records shall be made available to official state and local health, education, and human services departments and agencies. Individual records shall be made available to such departments and agencies only in cases where there is evidence that no measures have been taken to correct defects determined by such tests, provided that such records shall be made available to school authorities where they are deemed essential in establishing special education facilities for children with hearing and visual defects.

#### Section 3313.673

##### Screening of beginning pupils for special learning needs.

(A) Except as provided in division (B) of this section, prior to the first day of November of the school year in which a pupil is enrolled for the first time in either kindergarten or first grade, the pupil shall be screened for hearing, vision, speech and communications, and health or medical problems and for any developmental disorders. If the results of any screening reveal the possibility of special learning needs, the board of education of the school district shall conduct further assessment in accordance with Chapter 3323. of the Revised Code. The board may provide any of the elements of the screening program itself, contract with any person or governmental entity to provide any such elements, or request the parent to obtain any such elements from a provider selected by the parent. If the board conducts hearing and vision screening itself or contracts for hearing and vision screening, such screening shall be conducted pursuant to sections 3313.50, 3313.69, and 3313.73 of the Revised Code.

B) Prior to the first day of August of the school year in which a pupil is required to be screened under this section, the board shall provide parents with information about the district's screening program. If the board chooses to request parents to obtain any screening services, it shall provide lists of providers to parents together with information about such screening services available in the community to parents who cannot afford them. Any parent requested to obtain any screening services under this division may sign a written statement to the effect that he does not wish to have his child receive such screening.

**Section 3313.68**

**Employment of medical and dental personnel; delegation of duties to board of health or offices.**

The board of education of each city, exempted village, or local school district may appoint one or more school physicians and one or more school dentists. Two or more school districts may unite and employ one such physician and at least one such dentist whose duties shall be such as are prescribed by law. Said school physician shall hold a license to practice medicine in Ohio, and each school dentist shall be licensed to practice in this state. School physicians and dentists may be discharged at any time by the board of education. School physicians and dentists shall serve one year and until their successors are appointed and shall receive such compensation as the board of education determines. The board of education may also employ registered nurses, as defined by section 4723.01 and licensed as school nurses under section 3319.22 of the Revised Code, to aid in such inspection in such ways as are prescribed by it, and to aid in the conduct and coordination of the school health service program. The school dentists shall make such examinations and diagnoses and render such remedial or corrective treatment for the school children as is prescribed by the board of education; provided that all such remedial or corrective treatment shall be limited to the children whose parents cannot otherwise provide for same, and then only with the written consent of the parents or guardians of such children. School dentists may also conduct such oral hygiene educational work as is authorized by the board of education.

The board of education may delegate the duties and powers provided for in this section to the board of health or officer performing the functions of a board of health within the school district, if such board or officer is willing to assume the same. Boards of education shall cooperate with boards of health in the prevention and control of epidemics.

**Section 3313.69**

**Hearing and visual tests of school children; exemptions.**

The board of education or board of health providing a system of medical and dental inspection of school children, as authorized by section 3313.68 of the Revised Code, shall include in such inspection tests to determine the existence of hearing and visual defects in school children. The methods of making such tests and the testing devices to be used shall be such as are approved by the department of health.

Any child shall be exempted from a dental inspection if he has been examined for dental defects by a regularly licensed dentist, from a hearing test if he has been examined by a regularly licensed physician, and from a visual test if he has been examined by a regularly licensed physician or optometrist upon presentation to the school authorities of a certificate to the effect that he has been so examined during the twelve months immediately preceding the date of such inspections.



**Section 3313.73**  
**Board of health to make examination; report; recommendations to parents.**

If the board of education of a city, exempted village, or local school district has not employed a school physician, the board of health shall conduct the health examination of all school children in the health district and shall report the findings of such examination and make such recommendations to the parents or guardians as are deemed necessary for the correction of such defects as need correction. This section does not require any school child to receive a medical examination or receive medical treatment whose parent or guardian objects thereto.

**Section 3709.22**  
**Duties of board of city or general health district.**

Each board of health of a city or general health district shall study and record the prevalence of disease within its district and provide for the prompt diagnosis and control of communicable diseases. The board may also provide for the medical and dental supervision of school children, for the free treatment of cases of venereal diseases, for the inspection of schools, public institutions, jails, workhouses, children's homes, infirmaries, and county homes, and other charitable, benevolent, and correctional institutions. The board may also provide for the inspection of dairies, stores, restaurants, hotels, and other places where food is manufactured, handled, stored, sold, or offered for sale, and for the medical inspection of persons employed therein. The board may also provide for the inspection and abatement of nuisances dangerous to public health or comfort, and may take such steps as are necessary to protect the public health and to prevent disease.

In the medical supervision of school children, as provided in this section, no medical or surgical treatments shall be administered to any minor school child except upon the written request of a parent or guardian of such child. Any information regarding any diseased condition or defect found as a result of any school medical examination shall be communicated only to the parent or guardian of such child and if in writing shall be in a sealed envelope addressed to such parent or guardian.





## Appendix B

### Members Attending The AD HOC Hearing Advisory Committee

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Rachel Nadal, MA, Infant Hearing Program

Reena Kothari, MA, Infant Hearing Program

## Appendix C

### Basic Guide for Screening Children Audiometric Screening Procedures

#### Screening Preparation:

1. Plug the audiometer into an outlet making sure it does not cause a tripping hazard.
2. Turn the power switch to the “on” position.
3. Place the tone switch in the “pulse” position if available.
4. Verify annual calibration of the audiometer.
5. Check the audiometer to see if it is working properly. If it is not, do not use it until it has been repaired.
  - a. While wearing the ear phones, the tester (or a person known to have normal hearing) should be able to hear the tones at the screening levels.
  - b. All levers and controls should operate smoothly and be free of any extraneous noises. With the earphones on, listen for a smooth increase and decrease of the sound.
  - c. The earphone cords should be free from breaks. To check for breaks in the cords, shake the cord and listen for interruptions in the signal. Do this for each earphone separately.
  - d. When checked, the signal should switch properly from the right earphone to the left earphone.
  - e. The earphone cushions must be free of cracks and splits.
6. Seat the child where they cannot view the audiometer controls while testing.
7. Instruct the child to raise their hand

when the tone is heard and to put their hand down when tone is no longer heard.

#### Screening Procedure:

1. Select the right earphone.
2. Place the earphones over the child's ears with the right earphone (red) over the right ear and the left earphone (blue) over the left ear. Make sure the diaphragm of the earphone is directly over the ear canal.
3. Turn the intensity dial to 50 dB at 4000 Hz for a practice tone. If the child responds, you are ready to begin the screening.
4. Present the following tones to the right ear:
  - 4000 Hz @ 20 dB
  - 2000 Hz @ 20 dB
  - 1000 Hz @ 20 dB
5. Present the following tones to the left ear:
  - 1000 Hz @ 20 dB
  - 2000 Hz @ 20 dB
  - 4000 Hz @ 20 dB
6. Any child who fails the screening (i.e., who does not respond at 20 dB to all six of the test tones) shall be rescreened immediately after the screener has reinstructed the child and repositioned the earphones.
7. The screening test is now completed. Record your results.
8. A second screening must be done in approximately four to six weeks for those who fail the screening.



## Appendix D

### Members Attending Subgroup Meetings

### Tympanometry and Otoacoustic Emissions

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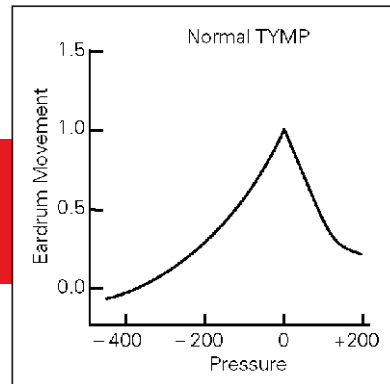
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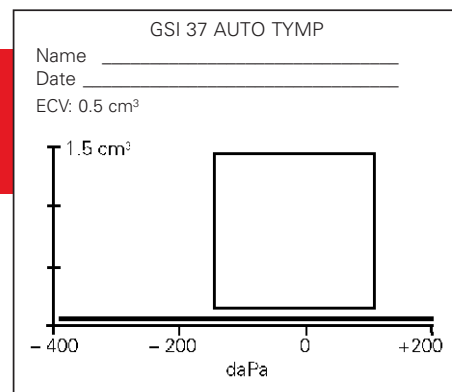
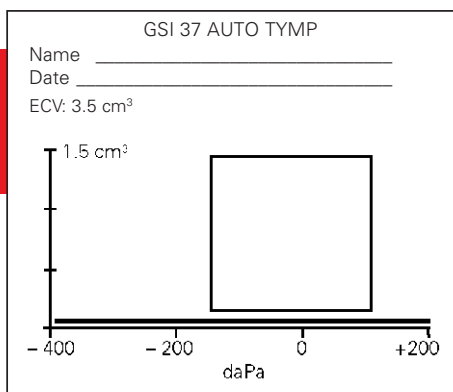
**Figure 1.**

- (1) Example of a normal tympanogram that indicates maximal absorption of sound energy at atmospheric pressure
- (2) Implies normal middle ear function



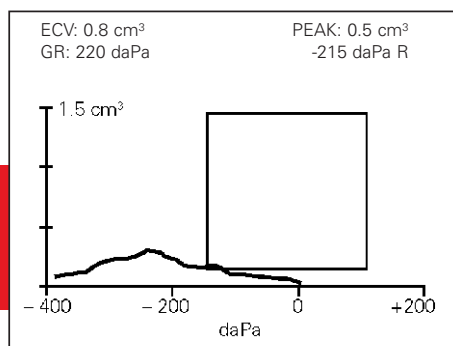
**Figure 2.**

- (1) Example of a flat tympanogram that indicates lack of normal absorption of sound energy across the pressure continuum
- (2) Implies outer or middle ear obstruction to sound conduction i.e. fluid, perforation, wax obstruction or PE tubes



**Figure 3.**

- (1) Example of a tympanogram that the gradient is more than 200 daPa. Gradient is the tympanometric pressure width at 50 percent of the compliance peak
- (2) Normal tympanometric width ranges from 50 to 200 daPa



## Appendix F

### Otoacoustic Emissions (OAEs)

Otoacoustic emissions (OAEs) are low-intensity sounds produced by normal, healthy ears. These sounds are produced either spontaneously or in response to an acoustic signal. The OAE originates in the inner ear (cochlea) from the outer hair cells in the cochlea. The response also requires normal or near normal middle ear functioning. A small probe (foam or rubber) is placed in the child's ear. A soft sound is presented and the ear produces an emission or echo response. This response is measured with a small microphone that is in the probe. Otoscopy and tympanometry should be used in conjunction with the OAE screening.

It is important to document why the child was not tested with pure tone screening. OAEs are approved as an optional test procedure. *They are not required.* Some school districts with large preschool and/or special education populations may want to consider utilizing OAE testing.

#### What is a pass?

No interpretation is required. The OAE equipment will display a *pass* response. A pass OAE means the child has normal outer hair cell function. OAEs do not assess hearing acuity. The child will pass if their hearing is at least 30 dB or better. This means a child with a very mild hearing loss (20-25 dB) can still pass this test. Do not state the child has normal hearing because of a pass result on OAE screening. In rare cases a child will pass OAEs and have a condition called *auditory neuropathy* (auditory dsynchrony). In auditory neuropathy, normal outer hair cell function is present while inner hair cell or neural function may be abnormal. If a child is not developing normal speech and language, does not respond to sound or responds inconsistently to sound, they should be referred for a complete audiological evaluation.

#### What is a refer OAE?

There are many reasons why a child refers on an OAE test.

- The child is vocalizing, moving.
- Wax (cerumen) in the ear canal.
- Fluid in the middle ear space (otitis media).
- Perforation in the eardrum.
- Noisy environment.
- Hearing loss.

*If not done properly, OAE screening will produce over-referrals.*



## Appendix G

The following table shows the amount of hearing loss that impact on the educational needs of the child.

Hearing Level	Probable Handicaps and Needs
-10 to 15 dB Normal Hearing	A student with hearing sensitivity in this range will detect the complete speech signal even at soft conversational levels. However, good hearing does not guarantee good ability to discriminate speech in the presence of background noise.
16-25 dB Minimal loss (Borderline)	A student may have difficulty hearing faint or distant speech especially in the presence of background noise. May need favorable seating in the classroom and soundfield amplification if the classroom is noisy.
26 to 40 dB Mild loss	A student can miss 25 percent to 40 percent of the speech signal; needs favorable seating and may benefit from hearing aid use and classroom amplification.
41 to 55 dB Moderate loss	May understand conversational speech within five feet; needs hearing aids, favorable seating, auditory training, speech reading and may require a special class for hard of hearing or special help in a regular classroom.
56 to 70 dB Moderately severe loss	Conversation must be loud to be understood; great difficulty in group and classroom discussion; needs full-time use of amplification; needs auditory training, speech reading and vocabulary and language development; and may require a special class for hard of hearing or special help in a regular classroom.
70 to 90 dB Severe loss	May hear a loud voice near the ear; may identify environmental noises; may distinguish vowels but not consonants; needs special education for deaf children with emphasis on speech, auditory training and language; mainstreamed into regular classroom.
More than 90 dB Profound loss	May hear some loud sounds; does not rely on hearing as primary channel for communication; needs specialized education/tutors; many of these children can be expected eventually to enter regular schools.
Unilateral One normal ear and one ear with at least a permanent mild hearing loss	May have difficulty hearing faint or distant speech and usually has difficulty localizing sounds and voice. May benefit from a personal FM system or soundfield system. May be at risk for educational difficulties.

Adapted from: Bernero, R.J. & Bothwell, II (1966). Relationship of Hearing Impairment to Educational Needs. Illinois Department of Public Health & Office of Superintendent of Public Instruction. Developed by Karen L. Anderson, Ed.S & Noel D. Matkin Ph.D. (1991)

## Appendix H

### Screening Preschool Children and Special Populations

Pure tone hearing screenings can be administered to most children aged 3 and above. It may be more difficult, however, to test younger children and those who are mentally or developmentally delayed. With these children, the tester may use any technique which yields consistent responses to the pure tone stimuli. Some examples follow:

1. Dropping blocks in a box;
2. Stacking rings on a cone;
3. Putting a peg in a peg board;
4. Giving the tester five;
5. Giving the tester small pieces of paper or game chips;
6. Pointing to an ear (not necessarily the test ear);
7. Squeezing the hand or the finger of the tester (effective with children who have limited control of their limbs);
8. Telling the tester to “STOP” the beep;
9. Saying “I hear it” or “beep”;
10. Nodding the head;
11. Hand clap.

The tester may help the children learn one of the above responses by physically taking them through the movements of the task. After a few repetitions the child may attempt the response without any cues from the tester.

The practice tones can be presented at a 40 dB or 50 dB level. After the task is learned, the tones can be reduced until the testing level of 20 dB is reached.

Younger children do not always respond when the tone is presented. If a child responds consistently when the tone stops, that response can be considered a valid one.



## Appendix I

### Resources for Hearing

For more information on the anatomy and physiology of the ear, visit the following Web sites:

- <http://hope4hearing.org/anatomy.htm>
- <http://www.neurophys.wisc.edu/h&b/auditory/fs-auditory.html>
- <http://facstaff.uww.edu/bradleys/radio/hlsimulation>
- <http://hyperphysics.phy-astr.gsu.edu/Hbase/sound/ear.html>
- <http://www.kidshealth.org/kid>

For additional information about hearing:

AAA - American Academy of Audiology  
8201 Greensboro Dr., Suite 300  
McLean VA 22102  
<http://www.audiology.org>  
800-AAA-2336

ASHA - American Speech & Hearing Association  
10801 Rockville Pike  
Rockville MD 20852  
<http://www.asha.org>  
800-638-8255

H.E.A.R. - Hearing Education and Awareness for Rockers  
P.O. Box 460847  
San Francisco CA 94146  
<http://www.hearnet.com>  
415- 409-3277

Hearing Loss Association of America (formally known as SHHH)  
7910 Woodmont Ave., Suite 1200  
Bethesda MD 20814  
<http://www.shhh.org>  
301-657-2248





# Forms



# School Hearing Screening Information

To: Parents

From: \_\_\_\_\_, School Nurse

Hearing screenings will be administered on \_\_\_\_\_ to all preschool and students in grades \_\_\_\_\_.

## Why is it important to have your child's hearing screened?

- Hearing is important for speech, language development, reading and learning.
- A hearing screening can detect if your child needs further hearing testing.
- Even if your child has passed a hearing screening previously, their hearing can change.
- Hearing problems can be related to medical problems.

## Hearing screening will consist of one or both of the following tests:

Tympanometry: Screening of middle ear function to determine presence/absence of middle ear fluid and/or wax which could interfere with normal hearing.

Audiometry: Screening of hearing acuity.

If your child passes the hearing screening, you may not be contacted by the school nurse. A hearing screening only provides a snapshot of how your child performs on the day the test was administered and is not a substitute for a complete hearing evaluation by an audiologist.

If your child fails either part of the screening, a re-test and/or referral will be made by the nurse. You will be informed of test results and necessary follow-up **only** if your child fails the re-screen.

Please direct any questions to the school nurse at \_\_\_\_\_.

# Hearing Screening Referral Letter

Date \_\_\_\_\_

Address \_\_\_\_\_

City, \_\_\_\_\_ State \_\_\_\_\_, Zip \_\_\_\_\_

Dear Parent:

The School Health Services program routinely screens students for possible hearing problems in order to identify any barrier to learning that might be corrected. Screening programs are important for these reasons:

- They identify students with possible hearing problems.
- Temporary hearing loss causes students to miss crucial instructions in the classroom.
- Parents may not be aware of a child's mild hearing loss in every day home situations.
- Even mild losses may interfere with learning new vocabulary, which is critical for success in reading.
- Hearing loss is invisible and the child may be blamed for not paying attention.
- Hearing loss may be sign of ear disease.
- Children with very mild losses or loss in only one ear may be experiencing school failure.

Your child failed our screening and rescreening for hearing problems. It is important to your child's school success to have a professional evaluation. If a problem is found and corrected, it may help your student do better in his or her school work. Enclosed is a referral form to take to your physician or audiologist.

It is important to us to know the outcome of the professional examination, so please return the form to us with the results of the exam.

Sincerely,

*School Nurse*

# Hearing Screening Referral Report

Date: \_\_\_\_\_

To the Parents of \_\_\_\_\_ D.O.B. \_\_\_\_\_

School \_\_\_\_\_ Grade \_\_\_\_\_

Hearing screening was recently conducted at your child's school. The results of the hearing screening indicate that your child may have a hearing problem. Hearing problems can place your child at risk for learning difficulties. It is recommended that you take your child to his/her primary health care provider for further evaluation. If you have any questions concerning the screening results, please contact the school nurse. Please let the school nurse know if your child is already under a doctor's care for hearing problems or if you need assistance in finding a medical provider. **Please return the completed form to the school.**

## Pure Tone Hearing Screening Results:

	1000	2000	4000	Observation/comments
<b>R</b>	Pass___(20dB) Not Pass_____	Pass___(20dB) Not Pass_____	Pass___(20dB) Not Pass_____	
<b>L</b>	Pass___(20dB) Not Pass_____	Pass___(20dB) Not Pass_____	Pass___(20dB) Not Pass_____	

## EVALUATION RESULTS (to be completed by the healthcare provider):

Diagnosis: \_\_\_\_\_

Treatment Plan: \_\_\_\_\_

Comments: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please return form to: \_\_\_\_\_

## Content and Release of Information

I, \_\_\_\_\_ (parent/guardian) of the above named child, hereby authorize the provider completing this report to return this completed form to:

\_\_\_\_\_  
\_\_\_\_\_

for the specific purpose of notifying the school of any specific hearing problems, recommendations and instructions for teachers related to the child's hearing problems. This authorization expires upon submission of the completed form to the above named school.

I understand that I may refuse to sign this authorization and that my refusal will not affect my ability to obtain treatment, payment for services or eligibility for benefits for my child; however, if this form is not submitted to the school, I understand that the school may not have sufficient information to address special hearing needs for my child.

\_\_\_\_\_  
(Signature of parent/guardian)

\_\_\_\_\_  
(Date)



# Ohio Department of Health

## Hearing Screening Record

School Year

School	Date
Grade	Screener

**For Pure Tones**

Put a "P" (pass) under the column marked "R" (right) if the child hears all three test tones in the right ear. Put a "F" (fail) under this column if the child does not hear all three test tones. Do the same for the left ear.

**For Tympanometry**

Put a "P" (pass) under the column marked "R" (right) if the child passes. Put a the amount of negative pressure or flat if the child fails. Do the same for the left ear.

Name of Student	1st Screening				2nd Screening				Date of 2nd Screening	Referral Letter Sent
	Pure Tones		Tympanometry (optional)		Pure Tones		Tympanometry (optional)			
	R	L	R	L	R	L	R	L		



**Ohio Department of Health**  
**Hearing Follow-up Record**

School Year

School

Date

The names of children failing the hearing screening test should be listed below. A check mark should be placed under the appropriate column for each child.

Name	Status of Case		Type of Referral		Follow-up Results						
	New Case	Previously Known Case	Med.	Aud.	No Medical Finding	Medical Treatment Obtained	Aud./Exam	No Information	Further Action	Case Closed	

# Ohio Department of Health Bureau of Child & Family Health Services

Hearing Screening Annual Report  
July 1 to June 30, \_\_\_\_\_

Grade	Number Screened	Number Rescreened	Number Referred	Follow-Up Results	TOTAL
Preschool				Number of Completed Medical	
1st				Number of Referrals Not Completed	
2nd				<b>TOTAL</b>	
3rd				<b>Diagnosis</b>	
4th				1. Conductive Losses	
5th				a. Canal Obstruction	
6th				b. Otitis Media	
7th				c. Other	
8th				2. Non-Organic (Malingering)	
9th				3. Sensorineural	
10th				4. Mixed	
11th				5. Normal Findings	
12th				<b>TOTAL</b>	
SP ED					
<b>TOTAL</b>					

School Name \_\_\_\_\_ Submitted By \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ ZIP Code \_\_\_\_\_

County \_\_\_\_\_ Phone Number \_\_\_\_\_

Ohio Department of Health  
246 N. High St.  
Columbus, Ohio 43215

This institution is an equal opportunity provider