SOUTH CAROLINA
DEPARTMENT OF EDUCATION

Guidance Regarding Hearing and Vision Screenings (2024)

General Overview

The ability to hear and see in young children provides a foundation for early development that is necessary for developing the skills needed for successful learning and good health. Most, but not all, children in South Carolina receive a hearing screening at birth. However, even children who are screened at birth may experience late onset hearing loss that is not identified until they enter kindergarten, unless parents or physicians make a referral prior to this time. Health issues impacting hearing in young children are common during this timeframe. These issues could significantly impact a child's school readiness and subsequent success. Research has repeatedly shown that adequate hearing and vision abilities play a role in improving reading readiness, increased graduation rates, attainment of developmental milestones, and positive social relationships (Atkinson et al., 2002; Basch, 2011; Davidson & Quinn, 2011; Maples, 2003; VIP-HIP Study Group, 2016; Wen et al., 2011). However, parents/caregivers may not be aware of when there are hearing sensitivities as well as vision concerns which may lead to difficulties in achieving developmental and academic milestones.

While hearing and vision screenings may be used to identify a child at risk for difficulties in those areas, it does not replace a comprehensive examination performed by an eye care professional and/or audiologist. These screenings should be an integral part of the coordinated school health program. Hearing and vision screenings that utilize recommended tools, protocols, and procedures are a cost-effective method to identify children in need of further evaluation and treatment. A critical aspect of any screening is the follow-up. The child who does not pass the hearing and/or vision screening should receive a professional examination.

IDEA requires that evaluation and assessment procedures (including screenings) are provided at no cost to the parents and are to be conducted by qualified personnel. [{34 CFR 303.321 (a) (2) (i); {34 CFR 303.321}]. In South Carolina, the school nurse or other trained, qualified personnel conduct hearing and vision screenings. Hearing and vision screenings are provided through the general education program and should be provided frequently in order to ensure optimal learning opportunity.

Statement of Need – Hearing:

The incidence and prevalence of hearing loss has increased significantly over the past 20 years. For individuals ages 3 years or older, the prevalence of hearing loss has increased from 24.2 million in 1993 to 30 million in 2020 (NICD). The most common cause of intermittent, mild-to-moderate acquired hearing loss in infants and young children is conductive hearing loss as a result of otitis media. However, most estimates suggest that 1 to 3 per 1,000 children are born with a hearing loss, based on screening and/or medical records (Centers for Disease Control and Prevention [CDC], 2009; National Institute on Deafness and Other Communication Disorders [NIDCD], 2010). For children and adolescents, an estimated 12.5% of U.S. children ages 6-19 are demonstrating evidence of noise-induced hearing threshold change (Niskar et al. (2001).

According to the National Information Center for Children and Youth with Disabilities, children who are hard of hearing will find it much more difficult than children who have normal hearing to learn vocabulary, grammar, word order, idiomatic expressions, and other aspects of verbal communication (2004) which will have a direct academic impact. There are approximately 70,000 students nationwide who receive special education services primarily because of a hearing impairment, under the Individuals with Disabilities Education Act (IDEA). In South Carolina, that number is approximately 900 (2019-2020).

Statement of Need – Vision:

The incidence and prevalence of vision impairments varies and may be difficult to pinpoint. Recent data indicates that about 12,000 youth aged 12 through 17 receive special education services nationwide because their primary disability is a visual impairment (U.S. Department of Education, 2007). However, it is likely that this number underestimate the incidence of visual impairment. For example, the number of children and youth with visual impairments reported to the American Printing House for the Blind is more than twice that reported to the federal government (Hueber, 2000). The discrepancy can be explained by the IDEA requirement that children receiving special education services be reported under only one disability category. This means that children with visual impairments who have additional disabilities may be categorized as having multiple disabilities or may be reported in another disability category other than visual impairment. Data on the prevalence of children with visual impairments who have additional disabilities are limited (Sacks and Silberman, 1998), but one estimate is that 50 percent to 75 percent of the children with visual impairments have additional disabilities (Silberman, 2000).

When children struggle with poor vision, blurry vision or other types of visual impairments such as amblyopia, visual field cut deficits, strabismus and other visual challenges, it can make it difficult for the child to stay focused in class, impact hand-eye coordination for skills such as handwriting, learning to read as well as reading for comprehension. Deficits in any or all of these skills will have a negative academic impact. Moreover, if a student's difficulties with vision go undetected it can lead to permanent loss of vision in the affected eye, loss of depth perception, decreased integration of visual and motor skills, potential decrease in learning ability, and other difficulties in school.

Types of Screenings

1. Mass Screenings:

   Purpose: The purpose of mass screenings is to screen every student in a specific population within a school for potential difficulties with hearing and/or vision difficulties.

   **Please note that all students, including those identified with a disability (with the exception of those served on an IEP for hearing or vision), are to be included in mass screenings.

   School-Based Mass Screening Recommendations, SC Department of Public Health

   Note: Schools should accept documentation of screening results from a licensed practitioner in lieu of the school-based screening. Parents/guardians may request that their child not be screened at school. Such requests should be submitted in writing and maintained on file.

Vision:

- All students in Early Childhood Development or Head Start programs preferably within 2 months of enrollment unless the program guidelines specify otherwise
- All students in grades K, 1, 2, 3, 5, 7, and *at least once* in grades 9 – 12
- All students who are new to the district who do not have records of vision screening within the past year, regardless of grade

Hearing:

- All students in Early Childhood Development or Head Start programs preferably within 2 months of enrollment unless the program guidelines specify otherwise
- All students in grades K, 1, 2, 3, 5, 7, and *at least once* in grades 9 – 12
- All students who are new to the district who do not have records of hearing screening within the past year, regardless of grade

2. Screenings Due to a Suspected Hearing or Vision Concern:

   Purpose: The purpose of a screening when there is a suspected concern in either hearing and/or vision is to act upon the referral of a parent, teacher or other person who has noted concerns in one or both of those areas in order to determine whether further attention is warranted.

   Timeline: This type of screening should take place immediately.

3. Screenings Due to a Suspected Disability:

   Purpose: The purpose of a screening when there is a suspected disability is to rule out hearing and/or vision as part of a suspected disability under the Individuals with Disabilities Education Act (IDEA). The IDEA requires that "students are assessed in all areas related to the suspected disability including, if appropriate, health, vision, hearing, social emotional status, general intelligence, academic performance, communicative status, and motor abilities" (34 C.F.R. 300.304 (c)(4).

   Timeline: This type of screening should take place with the coordination of the school nurse and the referral team as part of the data gathering process according to the school or district's MTSS process.

4. Screenings for Students Who are New to the District:

   Purpose: The purpose of screening students who are new to the district is to ensure that the student continues to be monitored for appropriate hearing and vision development. However, if the student has records that include hearing and vision screenings, those may be considered.

   Timeline: This type of screening should take place within the first thirty days of the student enrolling in the new school.

5. Screenings for Children Transitioning from Part C to Part B Services:

   Purpose: Hearing and vision screening for children who are transitioning from Part C to Part B services is to ensure that there have been no changes to the child's hearing or vision status as well as to collect all relevant data as part of the assessment and data gathering process when determining eligibility as required by the IDEA.

   Timeline: This type of screening should take place as part of the Child Find process according the district's policies and procedures.

Guidelines for Pure Tone Screening.

The pure tone audiometer is used in school-based screening programs and must meet the standards for screening audiometers established by the American National Standards Institute (ANSI). It should have the air conduction frequencies of 1000, 2000, and 4000 Hertz. Proper handling of these machines is required, with at least yearly calibration, in order to ensure accurate readings.

The following are general steps for using a pure tone audiometer for testing hearing:

1. The examiner should turn on the machine and listen to screening tones to ensure that audiometer is properly functioning, making sure to listen to both right and left earphones. (The recommendation is that the individual responsible for the audiometer should listen to it each day to detect gross abnormalities.) If screening is being done throughout the day, leave the audiometer on to avoid having to wait for the machine to warm up.
2. Have the student sit down positioned so he/she cannot see the examiner operate the audiometer.
3. Give clear, concise instructions. For example, "You are going to wear earphones." "You will hear beeps. They will be quiet (soft) so you will have to listen carefully. Please indicate when you hear the beep by immediately raising your hand." "Please put your hand down when you no longer hear the beep. You will hear a louder sound first to let you hear clearly what you are listening for, then the sounds will be softer for testing."
4. Have the student remove glasses and large earrings. Be sure the student is not chewing food, candy, or gum.
5. Place earphones on each ear (red earphone over student's right ear; blue earphone over student's left ear). Be sure that the earphones fit snugly and that nothing interferes with the passage of sound (remove hair from between earphone and ear).
6. Set the Hearing Threshold Level at 20 dBHL and the frequency at 1000 Hz. Note: If the location is too noisy to use 20 dBHL, a new location must be secured. Screening should never be conducted at intensities greater than 25 dBHL.
7. Present the tone 1000 Hz for one to two seconds. Right ear first. The tone may be presented twice to make sure the child hears the tone and understands what is supposed to be heard.
8. Proceed to 2000 Hz, 4000 Hz, and then 1000 Hz.
9. Repeat the procedure in the left ear. Vary the length, tone, and pauses to prevent establishing a rhythm.
10. If the student fails to hear any tone, it may be repeated at the same level.

11. If the student fails to respond in either ear to one or more frequencies, repeat instructions, reposition the earphones, and rescreen the student within the same screening period.

Note: If the second screening results do not indicate improvement, a referral should be made for additional assessments to be completed in a timely manner. Additionally, if the screening is part of the problem-solving process and suspicion of a disability under the Individuals with Disabilities Education Act (IDEA), the school should be responsible for obtaining an audiological evaluation.

Testing Procedures for Assessing Visual Acuity.

Several eye charts (or optotypes) are available for testing visual acuity in children. These include the Sloan Letters Chart (currently the gold standard), HOTV, LEA Symbols Chart, and Snellen Letters Chart. The Snellen Charts, while most commonly used in schools, are not standardized and have unequal spacing. The Tumbling E Chart is no longer recommended as it was determined that directionality skills are needed to respond correctly, and it was testing cognitive ability as well as vision which are not developed until age 8. The use of poorly designed charts can lead to over- or under-referral of children with visual deficits. For younger children who have not yet learned their letters, the HOTV and LEA charts can be used, with the LEA symbols being preferred. Stereoscopic vision screening machines, such as the Titmus vision tester, are no longer recommended.

Alternative instrument-based screening (for example, digital photo screening) is useful for children, 3-5 years of age, and for children, 6 years of age and older who cannot engage in optotype based vision screening. It is important that adequate training for testing and equipment use is obtained.

Guidelines for Use of Eye Chart.

Visual acuity may be tested at 10 or 20 feet, depending on the chart used. For young students, a distance of 10 feet may result in better compliance due to closer interaction with the screener. Care should be taken to select a room for testing that is without distractions and that has diffuse lighting and is without glare, to make sure the student stands at the appropriate distance from the chart (the distance may be marked off with a piece of masking tape or paper feet placed at the measured distance), and that the student does not “peek” with the eye that is covered and not being tested. Directions for use of an eye chart vary based on the chart being used. The screener should carefully review screening procedures for the specific chart that is used.

The following are general steps for using an eye chart for testing visual acuity:

1. Each eye is tested separately. Tell the student to keep both eyes open during testing. Test the right eye first by covering the left eye with an occluder, a card, or paper cup. Note: A student who has corrective eyeglasses should be screened wearing the glasses. However, eyeglasses prescribed for use while reading should not be worn when distance acuity is being tested.
2. Instruct the student to read the letter to which you point. (Pointing should be done below the symbol or letter.) Note: With younger students, start with a large line to assure that the student understands the directions.

3. If a student fails the practice line, move up the chart to the next larger line. If the student fails this line, continue up the chart until a line is found that the student can pass. Then move down the chart again until the student fails to read a line. To pass a line, a student must identify greater than half of the symbols or letters on the line correctly. Repeat the above procedure covering the right eye. Refer for a visual acuity of 20/40 in either eye for students 4-5 years of age, and 20/30 (or a 20/32 line) for other students.Error! Bookmark not defined.
4. Record results. Arrange a second screening for those students who did not pass within two weeks to one month. Referral should be made if the second screening results are not improved. In addition, record the name of the test administered.

Note: If the second screening results do not indicate improvement, a referral should be made for additional assessments to be completed in a timely manner. Additionally, if the screening is part of the problem-solving process and suspicion of a disability under the Individuals with Disabilities Education Act (IDEA), the school should be responsible for obtaining a vision evaluation.