

STANDARDS OF PRACTICE FOR AUDIOLOGY SERVICES IN THE SCHOOLS

Colorado Department of Education Exceptional Student Services

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INTRODUCTION

These Standards of Practice for school-based audiology services are intended to provide audiologists who are employed by schools in Colorado a guide for the delivery of appropriate audiology services as defined in the Individuals with Disabilities Education Act (IDEA) [Section 34 CFR 300.13 (b), & 300.303] and the Colorado Exceptional Children's Education Act.

These Standards are specifically designed to ensure that audiology services emphasize the educational components that are necessary for planning and providing services to children and youth with hearing loss. Comprehensive educational audiology services include the following activities which are identified in the document, *Guidelines for Audiology Services in the Schools* (ASHA, 1993):

- Provide **community leadership** to ensure that all infants, toddlers, and youth with impaired hearing are promptly identified, evaluated, and provided with appropriate intervention services
- **Collaborate with community resources** to develop a high-risk registry, newborn screening, and follow-up
- **Coordinate hearing screening programs** for preschool and school-aged children
- **Train audiometric technicians** or other appropriate personnel to screen for hearing loss
- Perform **comprehensive, educationally relevant, hearing evaluations**
- Assess **auditory** processing function
- Make appropriate **medical, educational, and community** referrals
- **Interpret audiological assessment** results to other school personnel
- Assist in program placement as a **member of the educational team** to make specific recommendations for auditory and communication needs
- **Provide in-service training** on hearing and hearing impairments and their implications to school personnel, children, and parents
- **Educate about noise exposure** and hearing loss prevention
- Make **recommendations about the use of hearing aids**, cochlear implants, group and classroom amplification, and assistive listening devices
- **Ensure the proper fit and functioning of hearing aids** and other auditory devices
- **Analyze classroom noise and acoustics** and make recommendations for improving the listening environment
- Manage the use and **calibration** of audiometric **equipment**
- **Collaborate** with school, parents, teachers, special support personnel, and relevant community agencies and professionals to **ensure delivery of appropriate services**
- Make **recommendations for assistive devices** (radio/television, telephone, alerting, convenience) for students with hearing impairments
- **Provide services**, including home programming if appropriate, in the areas of speechreading, listening, communication strategies, use and care of amplification (including cochlear implants), and self-management of hearing needs.

REGULATIONS GOVERNING SCHOOL AUDIOLOGY SERVICES

Colorado Hearing Screening Laws

Section 1 of 22-1-116 of the Colorado Revised Statutes, 1981

The sight and hearing of all children in the Kindergarten, First, Second, Third, Fifth, Seventh, and Ninth grades, or children in comparable age groups referred for testing, shall be tested during the school year by the teacher, principal, or other qualified person authorized by the school district. Each school in the district shall make a record of all sight and hearing tests given during the school year and record the individual results of each test on each child's records. The parents or guardian shall be informed when a deficiency is found. The provisions of this section shall not apply to any child whose parent or guardian objects on religious or personal grounds.

Exceptional Children's Education Act, 2002, 4.01 Child Find [includes]

(1)(c)(iii): Screening procedures for identifying from the total population of children ages birth to 21 years those who may need more in-depth evaluation in order to determine eligibility for special education and related services, or, in the case of infants and toddlers, early intervention services. Follow up to vision and hearing screening shall interface with the vision and hearing screenings which occur for all children in public preschool, kindergarten, grades 1,2,3,5,7, and 9 yearly in accordance with CRS 22-1-116. Appropriate educational or early intervention referrals shall be made if the child is suspected of having an educationally significant vision or hearing loss and parents shall be informed of any need for further medical evaluation.

Colorado Disability and Eligibility Criteria

Exceptional Children's Education Act, 2002, 2.02(3)

(a) A child with a hearing disability shall have a deficiency in hearing sensitivity as demonstrated by an elevated threshold of auditory sensitivity to pure tones or speech where, even with the help of amplification, the child is prevented from receiving reasonable educational benefit from regular education.

A deficiency in hearing sensitivity shall be one of the following:

1. A three frequency pure-tone average hearing loss in the speech range of at least 20dBHL in the better ear which is not reversible within a reasonable period of time¹.
2. A high frequency pure-tone average hearing loss of at least 35dBHL in the better ear for two or more of the following frequencies - 2000, 3000, 4000, or 6000 Hz.
3. A three frequency pure-tone average unilateral hearing loss of at least 35dBHL which is not reversible within a reasonable period of time.

(b) Criteria for a hearing disability preventing the child from receiving reasonable educational benefit from regular education shall include one or more of the following:

1. Soundfield word recognition (unaided) of 75% or less in quiet as measured with standardized open-set audiometric word recognition tests presented at the level of typical conversational speech (50-55dBHL); interpretation must be modified for closed-set tests.
2. A receptive and/or expressive language delay as indicated below, determined by standardized tests.

Under age 3:	less than one-half of expected development for chronological age
3 to 8 years:	one (1) year delay or more

¹ Reasonable period of time refers to a condition such as otitis media or other ear problem and is defined as hearing loss exhibited for 3 months cumulatively during a school year.

9 to 13 years: two (2) years delay or more
14 to 21 years: three (3) years delay or more

3. An impairment of speech articulation, voice, and/or fluency.
4. Significant discrepancy between verbal and non-verbal performance on a standardized intelligence test.
5. Delay in reading comprehension due to language deficit.
6. Poor academic achievement.
7. Inattentive, inconsistent, and/or inappropriate classroom behavior.

or, is eligible by variance from standard criteria according to the following rationale:

Federal Disability Regulations

Individuals with Disabilities Education Act (IDEA) - Part B, [34 CFR 300.22 (b)]

Audiology includes:

- (i) Identification of children with hearing loss;
- (ii) Determination of the range, nature, and degree of hearing loss, including referral for medical or other professional attention for the habilitation of hearing;
- (iii) Provision of habilitation activities, such as language habilitation, auditory training, speech reading, (lipreading), hearing evaluation, and speech conservation;
- (iv) Creation and administration of programs for prevention of hearing loss;
- (v) Counseling and guidance of pupils, parents, and teachers regarding hearing loss;
- (vi) Determination of the child's need for group and individual amplification, selecting and fitting an appropriate aid, and evaluating the effectiveness of amplification.

IDEA-Part B, Proper Functioning of Hearing Aids (34CFR300.303)

Each public agency shall ensure that the hearing aids worn in school by children with hearing impairments, including deafness, are functioning properly.

IDEA-Part C (PL 99-457) [34CFR303.12(D)]

Audiology includes:

- (i) Identification of children with auditory impairments, using at-risk criteria and appropriate audiological screening techniques;
- (ii) Determination of the range, nature, and degree of hearing loss and communication functions, by use of audiologic evaluation procedures;
- (iii) Referral for medical and other services necessary for the habilitation or rehabilitation of children with auditory impairment;
- (iv) Provision of auditory training, aural rehabilitation, speech reading and listening device orientation and training, and other services;
- (v) Provision of services for the prevention of hearing loss; and
- (vi) Determination of the child's need for individual amplification, including selecting, fitting, and dispensing of appropriate listening and vibrotactile devices, and evaluating the effectiveness of those devices.

IDEA-Part B & Part C: Assistive technology (34CFR300.5-6; 34CFR303.12)

Assistive technology devices and services are necessary if a child with a disability requires the device and services in order to receive a free and appropriate education (FAPE); the public agency must ensure that they are made available.

"Assistive technology device" means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of children with disabilities.

"Assistive technology service" means any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device. The term includes

- (a) The evaluation of the needs of a child with a disability, including a functional evaluation of the child in the child's customary environment;
- (b) Purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities;
- (c) Selecting, designing, fitting, customizing, adapting, applying, retaining, repairing, or replacing assistive technology devices;
- (d) Coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;
- (e) Training or technical assistance for a child with a disability or, if appropriate, that child's family; and
- (f) Training or technical assistance for professionals (including individuals providing education or rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of children with disabilities.

DEFINITIONS: IDEA-Part B (34CFR300.7[b])

- [2] "Deaf-blindness" means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs solely for children with deafness or children with blindness.
- [3] "Deafness" means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, that adversely affects a child's educational performance.
- [5] "Hearing impairment" means an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance but that is not included under the definition of deafness in this section.
- [9] "Other health impairments" means having limited strength, vitality or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, leukemia, or diabetes, that adversely affects a child's educational performance.
- [10] "Specific learning disability" (l) means a disorder in one or more of the basic psychological process involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including such conditions as perceptual disability, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. (ii) The term does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

DEVELOPMENT, REVIEW, AND REVISION OF IEP: IDEA-PART B (34CFR300.346[a])

(2) Consideration of special factors.

- (iv) Consider the communication needs of the child and in the case of a child who is deaf or hard of hearing, consider the child's language and communication needs, opportunities for direct communications with peers and professional personnel in the child's language and communication mode, academic level, and full range of needs, including opportunities for direct instruction in the child's language and communication mode; and
- (v) Consider whether the child requires assistive technology devices and services.

DEFINITIONS: SECTION 504: SUBPART D-Preschool, Elementary and Secondary Education

The Section 504 regulation defines a "handicapped person" as follows (Section 104.3(j)):

- (1) "Handicapped persons" means any person who (i) has a physical or mental impairment which substantially limits one or more major life activities; (ii) has a record of such an impairment, or (iii) is regarded as having such an impairment...
- (2)(ii) "Major life activities" means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

HEARING AWARENESS AND PREVENTION OF HEARING LOSS

School Audiologists:

- Ensure that information concerning hearing and hearing loss is provided to the public on an ongoing basis. Components of this information program should include:
 - Community awareness about hearing and hearing loss
 - Information on normal auditory, language, and speech development
 - Where and how to obtain hearing screenings and audiological evaluations
 - Available services for children with hearing loss in the community
 - Available resources for children with hearing loss and their families within the state
 - Information regarding prevention of hearing loss.
- Collaborate with community newborn hearing and high-risk screening programs to ensure that families who have a child identified with possible hearing loss, have access to appropriate assessment, management, and intervention services.
- Collaborate with existing school health education programs to develop and support hearing conservation programs for the prevention of hearing loss for individuals in schools and other settings administered by the school district. Hearing conservation education for students should occur at elementary and secondary levels.
- Collaborate with the medical community and audiologists in non-public school settings to familiarize them with these *Standards of Practice* and to foster communication between school and community-based services.

IDENTIFICATION OF HEARING LOSS

NOTE: *As part of routine health care, all children, birth to seven years of age, should receive an annual hearing screening.*

School Audiology Screening Services comprise:

- Supervision:** ■ Supervision of the hearing identification program by a Colorado Department of Education licensed audiologist

The *Hearing Screening Training Checklist* (page 21) should be used to validate whether an individual is appropriately trained to perform hearing screening.

Screening Procedures:

- An on-going program that includes:
1. An individual pure tone air-conduction screening or other appropriate screening procedure [e.g., otoacoustic emissions (OAE), auditory brainstem response (ABR)] that is appropriate to the age and developmental abilities of the child.
 - More detailed infant and early childhood hearing screening procedures are described in the CDE/CDPHE *Early Childhood Hearing Screening Guidelines* (2002) and the *Colorado Infant Hearing Advisory Committee: Guidelines for Infant Hearing Screening, Audiological Assessment, and Early Intervention* (2004)
 2. A more comprehensive screening for children who are at risk (see below) which includes visual inspection of the ear and acoustic immittance (tympanometry) measurement.

The at-risk population includes all infant, preschool, kindergarten, and first-grade children; children with a history of ear infections; and individuals receiving special education services who do not respond to pure-tone screening measures.

3. Test frequencies and screening levels:
 - 500 Hz - 20dB for preschool through 5th grades; (tympanometry may replace 500 Hz for PS-3rd grade); 25dB is acceptable if ambient noise levels are high; 500 Hz is optional for 6-12th grades if negative history of HL
 - 1000 Hz - 20dB
 - 2000 Hz - 20dB
 - 4000 Hz - 20dB
 - 6000 Hz - 25dB for 6-12th grades; (optional for all other grades)
4. Calibration standards:
 - Audiometers used for screening are calibrated to ANSI S3.6 1996 specifications, are checked for calibration at least annually, and are recalibrated when necessary; listening checks are performed daily.
 - Acoustic immittance instruments are checked against manufacturer specifications at least annually and recalibrated when necessary; calibration is verified daily.

Target Populations:

- Screening for the following populations:
1. All students in grades kindergarten, one, two, three, five, seven, and nine, or comparable secondary levels
 2. All transfer students entering without current screening records, within two months of school enrollment
 3. All students who have failed the previous year's screening and who were not cleared by an audiologist

4. All students receiving special education and/or related services (students who are being assessed for special education services should have been screened within the preceding twelve months)
5. All children enrolled in public-funded early childhood programs
6. All infant and preschool children upon referral through existing community Child Find processes.

Referral Criteria:

- A hearing screening referral results from any one or more of the following:
 1. Pure tone referral criteria: any designated frequency in either ear
 2. Acoustic immittance screening includes tympanometry, static admittance, and equivalent ear canal volume measurements. One of the following constitutes a referral:
 - Flat tympanogram and equivalent ear canal volume outside the normal range on two successive occurrences in a 4- to 6-week interval.
 - Low peak admittance ($Y_{TM} \leq .2$) on two successive occurrences in a 4- to 6-week interval.
 - Abnormally wide tympanometric width (gradient) ($TW > 200$ daPa) on two successive occurrences in a 4- to 6-week interval.
 3. Visual inspection includes otoscopy and/or a cursory observation of the ear. Either of the following conditions constitutes a referral:
 - Structural abnormalities of the outer ear, ear canal, or eardrum
 - Ear canal drainage

Follow-up Procedures:

- Follow-up and/or rescreening procedures that include:
 1. Rescreening for all pure tone referrals within the same session or within two weeks of the initial screening using the same frequencies, levels, and referral criteria.
 2. An optional threshold screening, conducted by an audiologist or person specifically trained in threshold audiometry, may be performed. *Acoustic immittance measurements for all students who refer from the first two screenings are added at this time if not previously conducted.*
 3. Audiologic assessment for all students who are referred by the rescreening and/or threshold screening with consideration for the following exceptions:
 - Individuals who have known hearing problems which are stable and neither medically nor educationally significant.
 - Individuals identified with abnormal middle-ear function (including ear canal obstruction) who may be referred for medical treatment without an audiological assessment.
 4. Referral for an otologic examination by a physician for individuals with abnormal immittance measurements and/or abnormal visual or otoscopic inspection, when the condition persists with hearing loss following a 4- to 6-week interval
 - For school-age individuals with *no hearing loss*, a longer interval may be appropriate.
 - For preschool children with *no hearing loss*, the 4- to 6-week interval is suggested.
 - The audiologist should work with the school health personnel to assist with monitoring and work with their local medical community to develop medical referral guidelines.
 - The medical referral may occur sooner at the discretion of the audiologist.
 - Threshold screening results should always accompany the medical referral.
 5. Additional follow-up procedures to ensure that individuals who are referred for

audiologic assessment, medical treatment, or who need annual monitoring of their hearing status receive the recommended service.

6. Additional follow-up for individuals who were referred for medical treatment which include follow-up hearing and acoustic immittance measurements to determine if further medical intervention is warranted. Students with persistent medical conditions may require additional educational monitoring.
7. Notification to teachers regarding individuals who are referred for audiologic assessment or medical treatment.

Record Keeping:

- Documentation procedures that include:
 1. Screening results recorded on each individual's cumulative health record and/or student database.
 2. Filing results of audiological assessment in the individual's cumulative record and/or health records.
 3. Documentation of individuals referred for medical evaluation in order to encourage parental support and response to the medical referral.
 4. Documentation of all individuals with non-medically, non-educationally significant hearing loss (e.g., a mild loss at a single frequency) in order that those individuals may be tested and monitored in subsequent school years.

AUDIOLOGICAL ASSESSMENT

School Audiology Assessment Services comprise:

Audiologic Assessment Procedures:

- Audiologic assessment including the following components as appropriate:
 1. Case history
 2. Otoscope inspection
 3. Acoustic immittance measurements (tympanometry, static admittance, acoustic reflexes, equivalent ear canal volume)
 4. Pure tone audiometry (air and bone conduction)
 5. Otoacoustic Emissions
 6. Speech reception threshold (SRT) or speech awareness threshold (SAT)
 7. Word recognition in quiet and in noise
 8. Optional tests: most comfortable loudness level (MCL), uncomfortable loudness level (UCL), and/or other special tests
 9. *Classroom Participation Questionnaire* for students with educationally significant hearing loss (5th-12th grades)

For all individuals with Educationally Significant Hearing Loss (ESHL), soundfield unaided word recognition (open-set) must be assessed @50-55dBHL. Procedures should be modified to accommodate the language and developmental abilities of the child.

- Functional measures which reflect the student's abilities in the student's school environment
- Assessment of auditory processing function upon referral (see Colorado Department of *Education Auditory Processing Disorders: A Team Approach to Screening, Assessment, and Intervention Practices*)

Determination of Need for Amplification:

- Assessment to determine the need for individual and/or assistive hearing technology; medical or audiological referral for hearing aids, cochlear implants or other personal hearing devices; selecting and fitting assistive hearing technology,
- All assistive hearing technology must be prescribed and fit by an audiologist.

Amplification Assessment Procedures:

When adjustments (e.g., repairs, reprogramming, replacement) to personal hearing aids, cochlear implants or other personal hearing devices are necessary, the educational audiologist must consult with the dispensing audiologist and the family to identify how these issues will be resolved.

- Assessment for students who use amplification that includes the following measures obtained at least annually as appropriate:

- | | |
|--|--|
| 1. Unaided Soundfield: | <ul style="list-style-type: none"> ▪ Speech reception threshold (SRT) or speech awareness threshold (SAT) ▪ Word recognition in quiet and noise and at soft and average speech levels (when possible) ▪ Optional soundfield procedures: <ul style="list-style-type: none"> ○ Warble tone or narrow band noise thresholds ○ Most comfortable loudness level (MCL) ○ Uncomfortable loudness level (UCL) ○ Speechreading |
| 2. Aided Soundfield (hearing aid and FM): | <ul style="list-style-type: none"> ▪ Speech reception threshold (SRT) or speech awareness threshold (SAT) ▪ Word recognition in quiet and noise, at soft and average speech levels, and with and without visual cues (when possible) ▪ Most comfortable loudness level (MCL) ▪ Uncomfortable loudness level (UCL) ▪ Optional procedures <ul style="list-style-type: none"> ○ Ling 6 Sound Speech Test ○ Narrow band noise thresholds to provide gain estimates for soft sounds |
| 3. Amplification Verification: | <ul style="list-style-type: none"> ▪ Listening check ▪ Electroacoustic analysis ▪ Probe Microphone measurements |
| 4. Amplification Validation (one assessment per category): | <p>Assessment</p> <ul style="list-style-type: none"> ▪ Functional Listening Evaluation (FLE) or other comparable tool <p>Survey/Self-Assessment</p> <ul style="list-style-type: none"> ▪ Screening Instrument for Targeting Educational Risk (SIFTER) ▪ Listening Inventory for Education (LIFE) ▪ Early Listening Function (ELF) ▪ or other comparable tool |
| 5. Listening Ability (choose one): | <ul style="list-style-type: none"> ▪ Functional Auditory Performance Indicators (FAPI) ▪ Test of Auditory Comprehension (TAC) ▪ or other comparable listening skill assessment |

Amplification Monitoring Procedures:

- Monitoring is required by IDEA to ensure that the hearing aids or amplification devices worn in school by children are functioning properly. Therefore, a written statement must be included in each student's IEP that describes how the student's hearing aids or amplification will be monitored (how often and by whom). The audiologist must also have a plan for how information will be communicated to parents when a problem is identified.

Reporting Procedures:

- A written report stating the findings, implications of the hearing impairment and appropriate educational recommendations is provided to the parent, teacher, physician and other appropriate staff.

Note: The following tools suggested in this audiological assessment protocol are available at the CDE website- www.cde.state.co.us/cdesped (word search: audiology)

Classroom Participation Questionnaire
Functional Listening Evaluation
Functional Auditory Performance Indicators

Other tools are available through the Educational Audiology Association: www.edaud.org

SPECIAL EDUCATION: REFERRAL, ASSESSMENT, AND INDIVIDUAL PLANNING

Referral for Consideration of Special Education Services comprises:

Referral for Educational Review:

- Audiologic criteria for Educationally Significant Hearing Loss
 1. Audiologic criteria for a deficiency in hearing sensitivity which is educationally significant is one of the following:

- A three frequency pure-tone average hearing loss in the speech range of at least 20dBHL in the better ear which is not reversible within a reasonable period of time.
- A high frequency, pure-tone average hearing loss of at least 35dBHL in the better ear for two or more of the following frequencies - 2000, 3000, 4000, or 6000 Hz.
- A three frequency pure-tone average unilateral hearing loss of 35dBHL or greater, which is not reversible within a reasonable period of time.

Individuals with documented chronic otitis media who exhibit hearing loss for a least three (3) months during the year may be included in the above audiologic criteria. See the CDE *Preferred Practice Guidelines for Otitis Media* for further information.

2. All individuals who meet the audiologic criteria for educationally significant hearing loss are referred to a building-level team for consideration of special education assessment and individual education planning.

Note: A student with hearing loss is eligible for special education services when the student's deficiency in hearing sensitivity prevents him or her from receiving reasonable educational benefit from general education (with or without amplification).

Pre-referral Conference:

- A process exists to consider all individuals with Educationally Significant Hearing Loss in order to determine if educational modifications/accommodations are needed. When there is an indication of disability a special education referral must be made. This process includes the following:
 1. The audiologist and/or teacher of students who are deaf or hard of hearing meets with the building child study team.
 2. The team reviews all student records and discusses observations and performance of the individual to determine if a referral for special education assessment and individual educational planning should be made.
 3. Classroom accommodations should be implemented immediately upon identification of the hearing loss and the individual's response to these accommodations is included as part of the team review.
 4. Should there be no indication of eligibility for special education, the team

considers referral for a 504 plan and continuation of needed accommodations within regular education.

5. In addition, due to the known educational risks of hearing loss, annual monitoring of all individuals with educationally significant hearing impairment occurs in the following areas to identify any potential concerns that would require assessment for special education and related services (the S.I.F.T.E.R., available in preschool, elementary and secondary versions, is suggested as a tool for monitoring school performance):
 - Academics
 - Attention
 - Communication
 - Class Participation
 - School Behavior
6. The outcome of the pre-referral conference is documented in the student's records.
7. When a special education referral is made, parents are informed of the reasons for referral and parent permission for assessment is obtained.

**Special
Education
Referral &
Assessment:**

- All students referred for special education receive a multidisciplinary assessment to determine present levels of educational performance and needs in the following areas:
 1. Educational (performance within the general education curriculum and on age appropriate tasks and benchmarks).
 2. Social/emotional/adaptive behavior (management of feelings and interactions with others, adaptation to different environments, e.g., home school community).
 3. Physical/motor & physical health (vision, hearing, coordination, and general health); audiological assessment and vision screening and/or assessment must precede all other evaluations.
 4. Communicative (ability to listen, understand language, and express him or herself).
 5. Cognitive (think, problem solve and learn within the environment).
 6. Transition/life skills (preparation to transition to each level of school, ability to function in school, home and community).
- Personnel conducting the assessments are familiar with characteristics of individuals who are deaf or hard of hearing and use appropriate assessment materials.

Note: Personnel should be familiar with and competent in the use of the communication system of the student, including manual communication. When assessing deaf children of deaf parents, this should include personnel who are familiar with and competent in the use of American Sign Language (ASL).

**Individual
Education
Planning:**

- Once a special education referral has been made and the assessment completed, a meeting is held to determine if the child has a disability. If so, an IEP must be developed within 45 school days of the date of the special education referral.
- The composition of IEP committee is in accordance with the Rules for the Administration of the Exceptional Children's Education Act (ECEA). The audiologist

or designee is present at the meeting if the individual has hearing loss.

- The specific functions of the audiologist during the planning meeting are to ensure that:
 1. Appropriate audiologic assessment has been conducted.
 2. Hearing loss is considered in all assessment interpretations.
 3. Appropriate educational amplification is prescribed.
 3. Specific recommendations are made for the special needs of the individual who is deaf or hard of hearing (e.g., classroom/environmental accommodations, instructional strategies and modifications, and auditory (re)habilitation treatment needs).
- The IEP planning committee determines that assessment of sufficient scope and intensity was completed.
- The planning committee discusses present levels of performance and their relationship to individual achievement and performance.
- The planning committee identifies specific special education needs that address the *Colorado Quality Standards for Programs and Service for Children and Youth who are Deaf and Hard of Hearing* (2004):
 1. Identification and Referral
 2. Assessment of Unique Needs
 3. Support for Instruction and Learning (classroom acoustics, assistive technology, qualified providers)
 4. Instruction and Learning
 5. Parent, family and community Involvement (family-school partnership, support, information, training).
- The IEP planning committee determines whether or not the individual with hearing loss is able to receive reasonable benefit from general education alone. If not, the condition constitutes a disability and the individual is eligible for special education and related services when justified by the presence of one or more of the following characteristics:

1. Soundfield word recognition (unaided) of less than 75% in quiet as measured with standardized open-set audiometric word recognition (speech discrimination) tests presented at the level of typical conversational speech (50-55dBHL); interpretation must be modified for closed-set tests
2. A receptive and/or expressive language delay as indicated below, determined by standardized tests.
 - Under age 3: less than one-half of expected development for chronological age
 - 3 to 8 years: one (1) year delay or more
 - 9 to 13 years: two (2) years delay or more
 - 14 to 21 years: three (3) years delay or more
3. An impairment of speech articulation, voice, and/or fluency.
4. Significant discrepancy between verbal and non-verbal performance on a standardized intelligence test.
5. Delay in reading comprehension due to language deficit.
6. Poor academic achievement.
7. Inattentive, inconsistent, and/or inappropriate classroom behavior.

- The IEP planning committee determines specific annual goals, short term instructional objectives, and objective measurement criteria.
- The IEP planning committee identifies the special education and related services, the manner in which the services will be offered, where the services should be provided and the extent to which the student will participate in general education programs. This includes services to address academic achievement, hearing loss, communication skills, auditory/speech/language skills, authentic peer relationships, self-esteem and emotional development, and transition/life skill needs.

The Deaf Child Bill of Rights requires the following [ECEA 4.02 (4) (k)]:

The written IEP for each child with a hearing disability, including those students with multiple disabilities, must include a communication plan developed by the IEP team. The plan should be completed once eligibility is determined and prior to the determination of goals and objectives. The Communication Plan should be reviewed at each IEP meeting and modified when necessary. The plan shall include the following:

1. A statement identifying the child's primary communication mode as one or more of the following: aural, oral, speech-based, English-based manual or sign system, American Sign Language. Further, there should be no denial of opportunity for instruction in a particular communication mode based on:
 - Residual hearing
 - The parents' inability to communicate in the child's primary communication mode or language, nor
 - The child's experience with another mode or communication or language.
2. A statement documenting that the IEP team, in addressing the child's needs, considered the availability of deaf/hard of hearing adult role models and a deaf/hard of hearing peer group of the child's communication mode or language.
3. An explanation of all educational options provided by the school district and available to the student, where there is direct and ongoing communication access to instruction, related services, school services, and extracurricular activities in the child's primary communication mode.

4. The teachers, interpreters, and other specialists delivering the communication plan to the student must have demonstrated proficiency in, and be able to accommodate for, the child's primary communication mode or language.
5. A statement indicating that the communication-accessible academic instruction, school services, and extracurricular activities the student will receive have been identified.

■ Instructional service options to be considered include:

1. General education with supports and/or modifications of curriculum, method of presentation, instructional strategies and/or classroom environments. Such supports and modifications should be under the direction of a teacher of the deaf/hard of hearing. Classroom acoustics, amplification, assistive technology, and the need for an educational interpreter and notetaking services must be considered.
2. Center-based classes with other students with hearing disabilities for part or all of the school day.
3. Special programs for students with hearing disabilities, such as the Colorado School for the Deaf and Blind or the Rocky Mountain Deaf School.

■ Related supports and services to be considered include:

1. Speech/language/auditory skill development.
2. Amplification and assistive technologies.
3. Authentic peer relationships and social/recreational activities with other students with hearing disabilities.
4. Counseling in the student's primary communication mode by a counselor with expertise in hearing disabilities.
5. Parent support, counseling, and training relating to hearing loss and its consequences.

- The IEP planning committee determines projected dates for initiation of services and the anticipated duration of services, including consideration of the need for services beyond the regular school year.

- The IEP planning committee determines a rationale for special education and related services to be provided outside the regular classroom.

SPECIALIZED INSTRUCTION: AUDIOLOGICAL (RE)HABILITATION SERVICES

School Audiological (Re)habilitation Services comprise:

- (Re)habilitation and instructional services that are provided in a variety of delivery settings from home school to residential placement. Services that must be considered include:
 1. Consultation services by the audiologist, teacher of the deaf/hard of hearing, or other special educator with knowledge in hearing disabilities.
 - Ongoing inservice training to classroom teachers, peers, and other staff regarding the needs and accommodations necessary for individuals with hearing loss or auditory processing disorders.
 - Ongoing technical assistance to school staff regarding the function, use, and maintenance of specialized equipment and assistive technology.
 2. Direct services by the audiologist, teacher of the deaf/hard of hearing and/or other special educator with knowledge in hearing disabilities.
 - Training about hearing loss, or auditory processing disorders, and its implications and advocacy for hearing/processing-related needs.
 - Determination of the need for amplification; referral for personal hearing devices,
 - Selecting and fitting assistive listening devices and evaluating their effectiveness.
 - Training in the use of residual hearing, hearing aids, and other amplification devices.
 - Support for communication skill development.
 - Training in the use of compensatory strategies, including visual communication skills, related to hearing loss or auditory processing disorders.
 - Support in academic areas.

MONITORING AND 504 SERVICES

School Audiology Monitoring and 504 Services comprise:

■ Monitoring of students with non-educationally significant hearing loss

All students with any hearing loss, or at-risk for hearing loss, should have their hearing monitored annually; these students may be monitored through the school screening program or by the audiologist. This population includes children and youth:

- with tubes
- with a history of otitis media
- at risk due to family history of hearing loss
- with medical conditions which are known to cause hearing loss
- who are taking medications which may be ototoxic
- who are exposed to excessive noise levels
- with any degree of hearing loss
- with progressive hearing loss
- with other risk factors known to be associated with hearing problems.

■ Services for 504 eligible students

Students must meet the following federal definition and the hearing loss must meet the educationally significant criteria:

The Section 504 regulation defines a “handicapped person” as follows (Section 104.3(j):

- (1) “Handicapped persons” means any person who (i) has a physical or mental impairment which substantially limits one or more major life activities; (ii) has a record of such an impairment, or (iii) is regarded as having such an impairment...
- (2)(ii) “Major life activities” means functions such as caring for one’s self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

For students who qualify for 504 services, an individual 504 accommodation plan should be developed. The audiologist’s role in 504 includes the following:

1. Provide evidence to support disability and eligibility for 504.
2. Recommend necessary accommodations and services based on the hearing loss and its implications. These may include:
 - amplification
 - a notetaker or interpreter
 - classroom and environmental modifications
 - assistive technology (captioning, TDD)
3. Conduct annual hearing evaluations and update hearing needs when appropriate.
4. Monitor amplification and provide inservice to teachers on use of equipment.
5. Monitor academic performance.

PROGRAM ADMINISTRATION

School Audiology Program Administration comprises:

- Ensuring that identification, assessment, auditory management, educational, communication, and social-emotional needs of children and youth with hearing loss are met.
 - Management of purchasing, maintenance, and/or testing of assistive technology devices and audiometric testing equipment.
 - Fiscal and administrative support that is sufficient for services to be conducted according to these recommended standards of practice. In addition, annual program evaluation should occur to determine effectiveness of services and guide program development.
1. Staff:student ratios (position excludes direct (re)habilitative services):
 - A minimum 1.0 FTE audiologist for every 10,000 students (birth-21 years) is recommended (ASHA, 2002). This position should be supported by:
 - a. An audiometric technician or other trained professional to conduct hearing screening activities.
 - b. Secretarial assistance for such activities as data management, report writing, appointment scheduling.
 - Factors which may increase this ratio include:
 - a. Excessive travel time such as within a BOCES.
 - b. The number of students with hearing loss served by the administrative unit.
 - c. The quantity of FM and other assistive listening equipment (e.g., personal, auditory trainers, classroom soundfield FM systems).
 - d. The quantity of special tests that are performed such as speechreading, auditory skill development, central auditory processing.
 - e. In-house equipment calibration, test-check, and maintenance.
 - f. Involvement with local newborn screening follow-up efforts.
 - When direct services to students are provided by the audiologist, the ratio is adjusted according to the caseload based on itinerant service delivery.
 2. Technical Assistance from the Colorado Department of Education, or other entity, is requested when necessary for support to maintain current services or equipment.
 3. Program evaluation occurs at least annually to determine the effectiveness of existing services and to guide ongoing development and planning.

References

- American Academy of Audiology (2003). *Pediatric Amplification Protocol*. Reston, VA: Author.
- American Speech-Language-Hearing Association. (1993). Guidelines for audiology services in the schools. *ASHA*, 35, (Supple.10), pp. 24-32.
- American Speech-Language-Hearing Association. (2002). *Guidelines for audiology service provision in and for schools*. Rockville, MD: Author.
- Colorado Department of Education (2004). *Colorado quality standards: Programs and services for children and youth who are deaf and hard of hearing*. Denver, CO: Author.
- Colorado Department of Education & Colorado Department of Public Health and Environment (2001). *Early childhood hearing screening guidelines*. Denver, CO: Author.
- Colorado Department of Public Health and Environment (2004). *Colorado infant hearing advisory committee: Guidelines for infant hearing screening, audiologic assessment, and early intervention*. Denver, CO: Author.

HEARING SCREENING TRAINING CHECKLIST

Date: _____

District/Unit: _____

Name: _____

Evaluator: _____

Area - Skills	Meets Expectations:			Comments
	Yes	No	NA	
Case History				
Birth history, significant health issues				
Hearing loss history: newborn screening, otitis media, previous hearing loss, family history of hearing loss				
Language/speech delay				
Recording results				
Visual Inspection				
External ear abnormality				
Draining ear				
Excessive wax				
Recording results				
Hearing Screening				
Self Calibration				
Instructions				
Earphone placement				
Technique - play audiometry				
Screening frequencies				
Threshold finding (if appropriate)				
Recording results				
Immittance (tympanometry)				
Instructions				
Probe placement				
Equipment operation				
Interpretation of results				
Recording results				
Otoacoustic Emissions				
Instructions				
Probe placement				
Equipment operation				
Interpretation of results				
Recording results				