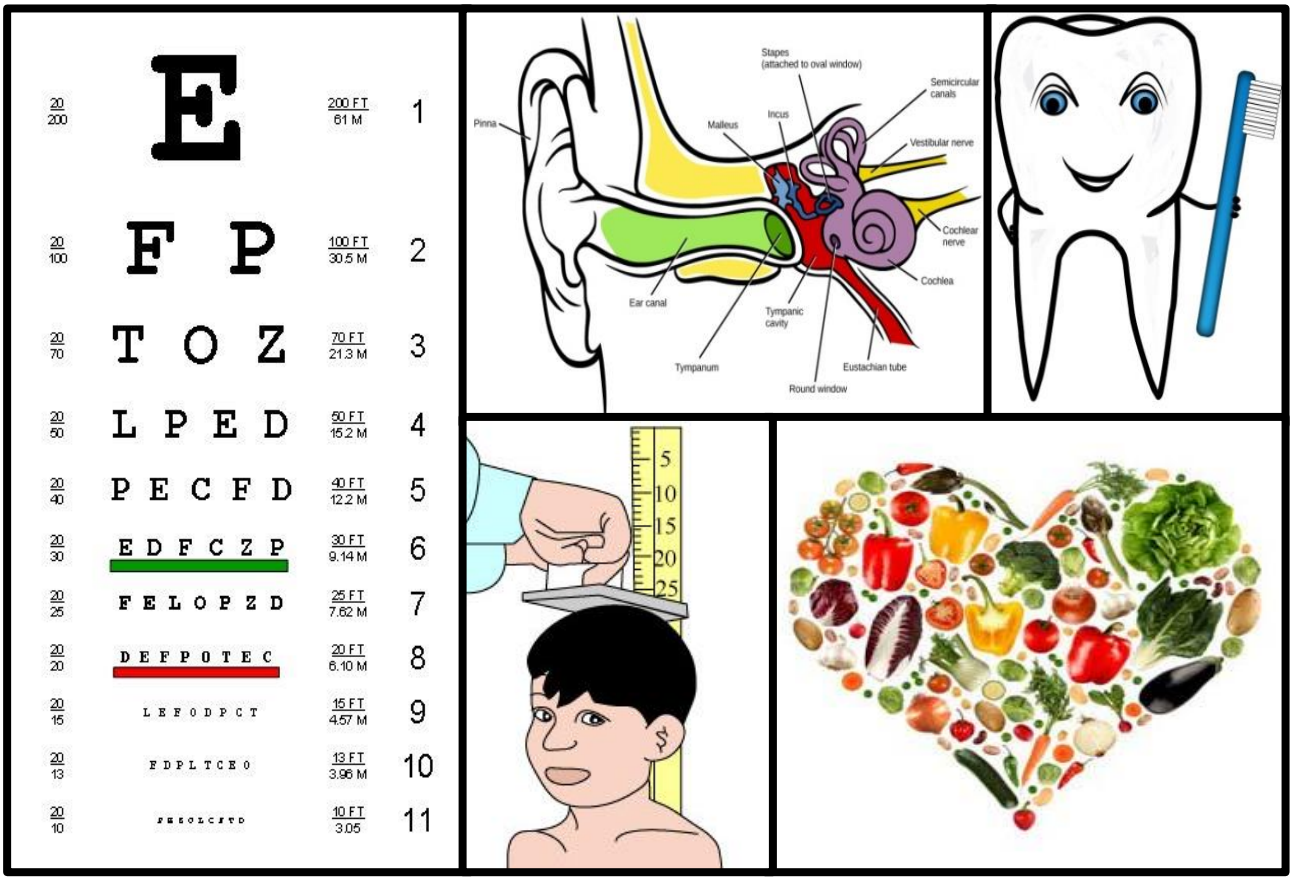
Tennessee School Health Screening Guidelines

Tennessee Department of Education

and

Tennessee Department of Health



TENNESSEE DEPARTMENT OF HEALTH

TENNESSEE DEPARTMENT OF EDUCATION

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Health-related problems, if not detected and treated, can limit the ability of a child to learn. Healthy students are better learners. School health screenings are often the best way to detect these problems. When a health concern is identified early through a regular school health screening, steps can be taken to access needed health care in order to improve educational as well as health outcomes. This updated *Tennessee School Health Screenings Guidelines* is a tool to successfully screen students for a variety of health-related concerns.

In Tennessee, all students in grades Pre-K, K, 2, 4, 6, and 8 will receive vision and hearing screening. Those same grades except for Pre-K will be screened for blood pressure and height/weight. One grade of high school will also be screened for blood pressure and height/weight. Oral health screenings for students are encouraged but not mandated as is scoliosis screening for 6th graders.

Please take your time and read through the entire manual. You will find helpful sample forms in the Appendices and various resources listed to support your school health screening efforts.

You never know when you might discover a child with hypertension, scoliosis or dental disease whose life will be forever altered because a caring school health professional took the time to ask questions and screen for these types of conditions.

Sincerely,

Lori Paisley

Lori Paisley, Associate Executive Director
Office of Coordinated School Health
Tennessee Department of Education

D. GENERAL STUDENT HEALTH SCREENING GUIDELINES

Historically, school nurses have been in charge of facilitating and/or conducting school health screenings. In order to complement and expand the capacity for health care services in school systems, it may be beneficial to develop community screening partnerships. Potential partners include employees of local universities, health departments, community hospitals, HOSA students and non-profit organizations.

D.1 HEALTH SCREENINGS

For all health screenings, specific Local Education Agency (LEA) protocols must be followed and staff/volunteer training is required.

REQUIRED HEALTH SCREENINGS:

Vision: All students in grades Pre-K, K, 2, 4, 6 and 8 are screened annually. One year (or class) of high school is optional. Other students who should be screened are those new to the school system and/or suspected of having a vision problem by their teachers.

Hearing: All students in grades Pre-K, K, 2, 4, 6 and 8 are screened annually. One year (or class) of high school is optional. Other students who should be screened are those new to the school system and/or suspected of having a hearing problem by their teachers.

Blood Pressure (BP): All students in grades K, 2, 4, 6, 8 and one year of high school (usually wellness class) are screened annually.

Body Mass Index (BMI) – Height and Weight: All students in grades K, 2, 4, 6, 8 and one year of high school (usually wellness class) are screened annually.

ENCOURAGED HEALTH SCREENINGS:

Scoliosis: Schools are encouraged to screen all students in 6th grade for scoliosis.

Oral Health: Schools are encouraged to screen students for oral health problems.

Concussion: Schools are encouraged to provide baseline concussion screenings for students who participate in sports.

D.2 PARENTAL/GUARDIAN CONSENT TO SCREEN

Parents/Guardians who do not want their children screened for any health concerns have the right to decline the screening for their child. Every student in the grades being screened will receive a health screening unless their parent/guardian declines the screening. School districts determine if they want to use an "active" or "passive" parental permission form.

- "Active" parent permission requires all parents to return a signed form to the school indicating either they DO want their child to receive health screenings or they DO NOT want their child to receive health screenings.
- "Passive" parent permission assumes parents/guardians want their child screened unless they return a signed form to the school indicating their preference to decline the screening for their child.

Sample parent/guardian permission forms can be found in Appendix A.

School districts are encouraged to develop and post a list of local health resources on their website for parents to access both general health information as well as health care provider contacts to assist in health screening referral follow-up. A reference to this resource should be included in all parent permission as well as screening referral communications.

D.3 STUDENT PREPARATION

Prior to screening, students should be given an explanation of the screening procedures which will take place. This explanation will help to reduce stress and fears students may have regarding the procedure. Students time, before and after health screenings, can be utilized to provide additional health education.

D.4 SCREENER PREPARATION

An orientation must be provided to all staff and volunteers that includes a review of the general screening guidelines prior to conducting any school health screenings. If trained properly, student nurses, community-based nurses, HOSA students, health science instructors, clinical instructors, school nurses and other community-based volunteers such as members of a local Lions Club can conduct school health screenings.

All volunteers need to understand that after the screenings have been completed they will not have access to student identifying information collected during a school health screening and should be counseled regarding confidentiality issues. School personnel should follow local school system protocol regarding the use of background checks needed for all non-school volunteers. All volunteers need to sign a confidentiality form prior to assisting with school health screenings.

Resource: NASN - The Use of Volunteers in School Health Services

D.5 CONFIDENTIALITY

Protecting the confidentiality of student health information is mandatory. All school systems should develop a school district policy regarding student health information confidentiality. A confidentiality agreement form must be signed by anyone outside of the school system who performs school health screenings. Two sample confidentiality forms are provided in Appendix B. Student health screening data provided to an external evaluator or to the Tennessee Department of Education should **NEVER** contain student names OR student identification numbers.

Questions may be asked about who has access to the student screening/health records. A school official may be asked to sign or disclose the purpose of their request for the health records of a student. Please note the following excerpt from the Family Educational Rights and Privacy Act (FERPA) guidelines regarding student confidentiality:

> FERPA Regulations Title 34 § 99.31 An educational agency or institution may disclose personally identifiable information from an education record of a student without the consent required by § 99.30 if the disclosure meets one or more of the following conditions: (1) The disclosure is to other school officials, including teachers, within the agency or institution whom the agency or institution has determined to have legitimate educational interests. School officials include persons employed by the district as an administrator, supervisor, teacher, or support staff

member (including, but not limited to transportation personnel); or a person, agency, or company with whom the District has contracted, or otherwise arranged to perform a special task or service. Such individuals have a legitimate educational interest if s/he needs to review an education record in order to fulfill his/her professional and/or official responsibility. A **legitimate educational interest** also exists where the staff member or other individual works directly with students and needs to review education records to increase his/her awareness of steps necessary for the safety and welfare of students and staff members.

Resources: NASN - *HIPAA and FERPA*; NASN - *Privacy Standards for Student Health Records*

D.6 RECORD KEEPING

If the school system has or plans to utilize a student data collection system, we suggest all screening results be entered in the student health section. The local LEA will need to develop a policy or procedure to address an appropriate plan of action for referrals. See Appendix C for sample result forms for school records.

Resource: NASN - School Nurse Role in Electronic School Health Records – 2014

D.7 POST-SCREENING REFERRALS AND FOLLOW-UP

According to NASN's School Nursing: A Comprehensive Text (second edition, 2013), it is the role of the school nurse to facilitate referral and follow-up services for screenings done at school. School nurses need to be diligent in following up on referrals. For nurses to make referrals, they must be aware of the resources available in their communities. This includes health-care providers, as well as resources to help pay for needed services. School nurses may be able to collaborate with school social workers in making appropriate referrals. In some communities, the United Way compiles lists of service providers and identifies those who accommodate low-income clients. Hospital social service departments, local health departments and medical, dental, and optometric societies may be helpful in identifying community resources. Local and state school nurse organizations are other resources. The school nurse should keep a list of appropriate referral sources, including cost, hours, and transportation options to provide to families.

The success of a screening program is dependent on the implementation of a systematic follow-up procedure including:

1. Notification to parent/guardian in writing listing the results of the screening and making recommendations for further evaluation, if needed. See Appendix D for sample forms. These may be completed by the screeners or the school nurse.
    a. The most common method of distributing the referral paperwork is to send it home with the students. Unfortunately, students are not always reliable in giving papers to their parents/guardians. Phone calls, parent conferences and/or letters (postal or e-mail) can be used to follow-up on the initial referral. Avoid making any recommendation to a specific individual or a specific class of practitioner.
    b. It is important to assist parents in overcoming obstacles to understanding the need for and obtaining needed care. These include assistance with locating appropriate providers

and transportation, providing resources for financial assistance and interpreters when needed and setting reminders to prevent missing appointments.

c. Advise the parent/guardian to take the evaluation form to the appointment with the professional. Have the completed evaluation form returned to school after the student is evaluated. The information on the form is needed by the school to determine if any adjustments or accommodations need to be made to the student's education program.

2. The school nurse, or other individual designated by the principal, should develop and implement a system to record screening results, referrals and outcomes. If a child fails a school health screen, school staff should attempt to notify the parent/guardian at least three times using successively different contact strategies. All attempts to reach parents should be documented. This will help ensure referrals are not forgotten. Maintain contact with the parent/guardian to ascertain if the student has received the needed examination and necessary care. If necessary, refer any parent/guardian in need of financial assistance to an appropriate community resource. Pertinent information should be documented on the student's cumulative heath record (CHR) or in the electronic student management system.
3. Consult with teachers and recommend necessary educational adjustments or accommodations to meet individual needs.

A practical example of a follow-up is a child who is referred because of a vision difficulty, as assessed during a vision screening. The child is then evaluated and glasses are recommended by the healthcare provider. If the family cannot afford glasses, the Lions Club may be an excellent resource. Once the child has his/her glasses, it is important to assess whether the child is wearing them during the school day. Because the goal of school nursing is to assist children in achieving academic success, it is recommended that the school nurse check in to see how the child is doing academically. An improvement in grades is an outstanding example of the positive effect of screening programs. It would be beneficial to the school nurse to engage the classroom teacher in tracking the student's use of his/her vision corrective devices (glasses or contacts) and any improvements noted in academics.

School Health Screenings Overview Sheet
for
Coordinated School Health Grant

Parents/Guardians who do not want their child to participate in health screenings have the right to omit their child from any or all screenings. For all health screenings, specific Local Education Agency (LEA) protocols must be followed and staff/volunteer training is required

REQUIRED HEALTH SCREENINGS:

- **Vision:** All students in grades Pre-K, K, 2, 4, 6 and 8 are screened annually. One year (or class) of high school is optional. Other students who should be screened are those new to the school system and/or suspected of having a vision problem by their teachers.
- **Hearing:** All students in grades Pre-K, K, 2, 4, 6 and 8 are screened annually. One year (or class) of high school is optional. Other students who should be screened are those new to the school system and/or suspected of having a hearing problem by their teachers.
- **Blood Pressure (BP):** All students in grades K, 2, 4, 6, 8 and one year (or class) of high school (usually wellness class) are screened annually.
- **Body Mass Index (BMI) - Height and Weight:** All students in grades K, 2, 4, 6 and 8 and one year (or class) of high school (usually wellness class) are screened annually.

ENCOURAGED HEALTH SCREENINGS:

- **Scoliosis:** Schools are encouraged to screen all students in 6th grade for scoliosis.
- **Oral Health:** Schools are encouraged to screen students for oral health problems.
- **Concussion:** Schools are encouraged to provide baseline concussion screenings for students who participate in sports.

REMINDERS:

- **Annual Wellness Exam:** A comprehensive annual wellness examination needs to be encouraged by school staff for all students. These visits can be provided through the school system, the county health department or through a primary care provider (PCP). It is important for students and their families to have a medical home where their PCP can monitor and coordinate their ongoing healthcare needs. School nurses should assess and if needed, encourage parents to establish a medical home for their children.
- **Health Insurance:** It is suggested that parents/guardians are asked about ability to access health care for their children and if they are covered by medical insurance. If they need assistance, you should provide information about the Affordable Care Act, TennCare, CoverKids and local county health department services and community health centers if available in your community.
- **Partnerships:** In order to complement and expand the capacity for health care services in school systems, it is beneficial to develop community partnerships. Potential partners include but are not limited to universities, health departments, community hospitals, and non-profits.
- **Correspondence with Parents:** Screening referral results for BP, vision and hearing should go out to the parents in a timely manner in regards to the specific screen. Body Mass Index results should not be sent as a standalone communication. If possible, provide each student with a health report card which includes the results of all screening services provided. It may be necessary to send a specific referral letter for any screening that needs follow-up.

E. VISION SCREENING

T.C.A. § 49-6-5004 Promotion of eye, hearing and dental care awareness.

a) Upon registration or as early as is otherwise possible and appropriate, public schools, nursery schools, kindergartens, preschools or child care facilities are encouraged to make reasonable efforts to apprise parents of the health benefits of obtaining appropriate eye, hearing and dental care for children.

b) A health care professional is authorized to indicate the need for an eye, hearing or dental examination on any report or form used in reporting the immunization status for a child as required under this part. Health care professionals shall provide a copy of the report or form to the parents or guardians indicating the need to seek appropriate examinations for the child.

c) If the parent/guardian of a child with a need for an eye or hearing examination is unable to afford the examination, an LEA of a county or municipality may use revenues from gifts, grants and state and local appropriations to provide the eye or hearing examinations.

d) LEAs are encouraged to seek free or reduced-cost eye examinations from optometrists or ophthalmologists and free or reduced-cost hearing examinations from physicians or audiologists willing to donate their services for children who are unable to afford the eye or hearing examinations.

e) The commissioner shall promulgate rules and regulations in accordance with the Uniform Administrative Procedures Act, compiled in title 4, chapter 5, that are necessary to carry out this section.

E.1 VISION SCREENING REQUIREMENT

At a minimum, all students in grades Pre-K, K, 2, 4, 6, and 8 shall receive a vision screening once a year. Screening in one year of high school is optional; however whichever year (or class) of high school is selected, the same year (or class) should be screened year after year. For example, if the Wellness classes were chosen then wellness classes should be screened every year thereafter. Other students who should be screened are those new to the school system and/or suspected of having a vision problem by their teachers. If a Pre-K student has already been screened, through their primary care provider, prior to school entry, then the data from their permanent record can be used instead of re-screening these students. A student can be referred for screening per local school district protocol at any point.

All health screenings require active or passive parental/guardian permission. School systems may utilize trained school personnel, volunteers, or outside agencies to conduct their system-wide screenings. Minimum procedures for vision screening include distance and near vision acuity. Color perception should be performed once. Functional vision testing includes either muscle balance or depth perception testing. Visual field testing may also be included.

E.2 VISION SCREENING RATIONALE

Many children suffer from eye and vision problems, in fact, some conditions are more common in children than they are in adults. According to The Vision Council's Making The Grade report, studies related to children's vision found that:

- Between two and five percent of pre-school-age children suffer from lazy eye or amblyopia.

- Between three and four percent of pre-school-age children suffer from strabismus, which causes the eyes to turn in or out.
- 15 to 20 percent of pre-schoolers had a refractive error, with myopia (nearsightedness) being the most common error.
- 64 percent of children five years and younger have never had a vision screening by a healthcare professional.
- More than 40 percent of children who had a vision problem identified during a screening did not see an eye care professional for follow-up care. This percentage may begin to decrease because, according to the American Academy of Ophthalmology, children's comprehensive eye exams and glasses or contact lenses to correct refractive errors will be covered in full beginning January 1, 2014, by health plans offered through state insurance exchanges.
- Two out of three children enter school without ever having a vision screening.

Unidentified and uncorrected vision problems and eye conditions can have a devastating impact on children's development because it is estimated that 80 percent of children's learning occurs through visual processing. That is one reason that early detection is so important. Another equally important reason is that some conditions are easier to correct at a young age, before irreversible vision damage occurs.

Source:
Vision Council, Making the Grade Report 2009 https://www.thevisioncouncil.org/topic/problems-conditions/kids

E.3 VISION IMPAIRMENTS

1. Care of students with eyeglasses, contact lenses, or a known vision impairment:
   If the student wears lenses or has a known vision impairment, school health personnel should determine whether the school has a record of the student's eye examination. It is recommended that the results of a professional eye examination and any recommendations that might affect school performance be obtained. If a student has lenses or reduced vision with lenses, school health personnel should do the following:
   a) School health personnel can assist the student in adjusting to the need for corrective lenses if newly prescribed and/or other therapeutic interventions such as patches, or eye drops.
   b) Engage in direct student counseling regarding eye health and safety.
   c) Emphasize the importance of continued follow-up by the student's eye care professional. Reinforce with the student the reasons for regular eye examinations.
   d) Teach the student the importance of keeping his/her lenses clean and properly adjusted. Demonstrate how to do this as needed.

2. Care of students with non-correctable vision loss (severe vision impairments):
   Some students have visual impairments that cannot be fully corrected through treatment. In these cases, school health personnel should do the following:
   a) Counsel parents/guardian regarding severe vision loss.
   b) Refer students to a teacher of the Visually Impaired and/or Orientation & Mobility specialist.

c) Refer to the special education specialist within the school district.
d) Refer parents/guardians to the program for students with disabilities in their county for eligible services relating to the student's visual impairment.
e) Review the professional eye exam report for information to determine if any adjustments or accommodations need to be made to the student's education program (including participation in physical education, intramurals, and interscholastic sports).
f) Maintain identification procedures for students with severe visual impairment as well as referral and follow-up services at periodic intervals.
g) Make certain the student is following the eye care professional's recommendations regarding the wearing of protective eyewear for activities at school with a risk of eye injury. This may include assisting the student in obtaining appropriate eyewear and explaining to school staff the importance of the student wearing the eyewear at school.

E.4 VISION SCREENING PROGRAM

School vision screening programs should include as a minimum:

1. Recording of any signs, symptoms, and relevant history as reported by the student, parent/guardian, and/or school staff that may indicate visual problems.
2. Observation and recording of any unusual features or eye movement of the student during screening.
3. Observation and recording of the student's behavior during screening (i.e., squinting, rubbing eyes, moving forward).
4. Screening and recording of the following visual tests:
    a. Distance visual acuity: annually in grades Pre-K, K, 2, 4, 6, and 8.
    b. Near visual acuity: annually in grades Pre-K, K, 2, 4, 6 and 8.
    c. Color perception: one-time screening to be done at the initial screen.
    d. *Optional:*
        i. Plus lens (hyperopia): Upon new admission to school for those children that pass distance visual acuity testing.
        ii. Functional tests such as muscle balance and depth perception or ocular motor.
5. The vision screening results including proper notification of the parent/guardian, follow-up efforts by health office personnel (school nurse or other designated person), and eye care professional evaluation findings, should all be recorded on the student's cumulative health record (CHR) or in the electronic student management system. Screening results should be printed and sent with record request from other schools when students transfer.

E.4.a Equipment Needed

1. **Eye Chart** –The Snellen chart is preferred, but other charts may be used depending on the student's age and level of maturity. Displaying the Snellen chart at 20 feet (or at 10 feet if properly calibrated) is preferred for distance visual acuity. Pre-K/young students who are unable to recall letters should be tested with either the HOTV or LEA symbols chart at 3 meters with matching cards available. Measure the distance between the student and the eye chart. Tape may be used to mark the spot for the student to sit or stand. A reduced Snellen, HOTV, or LEA symbols chart should be used for measuring near acuity. Mechanical vision testers capable of testing both distance vision and near vision are available, but generally less desirable. If using a mechanical vision tester it must be calibrated annually or according to the manufacturer's recommendation

2. **Occluder** - Pirate style or occlusive patches (which can be as simple as a piece of 2 inch paper tape, use new piece for each student) are preferred to having a student or an assistant hold their hand over the student's eye. Care must be taken to ensure that the student is not peeking around the occluder.
3. **Pointer** – the examiner's finger, a stick, or a laser pointer may be used to attract the student's attention to the letter or symbol on the eye chart.
4. **Pseudoisochromatic plates** used to check red-green color vision may be used with a paint brush or cotton swab (this is useful with younger students).
5. ***Optional*-Glasses/Flippers with + 2.00 diopter lens** are used for hyperopia screening in those passing distance visual acuity.

E.4.b Setting Up the Screening Area

In the planning of a vision screening program, attention should be given to the room selection in which to screen. Whenever possible, the health office should be used. It is also important to consider lighting; bright sunlight should be filtered and behind the student. Since students are easily distracted, it is advisable to select a room or area that is quiet and free from interruptions. The room needs to include appropriate space to set up screening components. If possible, a waiting area should be included for those students awaiting screening. Ideally, the site selected should not have multiple uses so as not to distract the student during screening at any time before completion. This is not always possible in a school health office and cooperation of the building administration in supporting the health office staff during screening procedures is essential to a smooth process.

1. Place a 20-foot eye chart (preferably Snellen) on a light-colored, uncluttered wall with 20/40 line of chart at the eye level of the student to be screened.
2. Measure the distance from the chart to where the student will sit or stand and use a piece of tape to mark the student's place. Maintain an unobstructed floor space between the tape and the eye chart.
    a. A 20-foot Snellen chart can be tested at 10 feet if needed for space.
        i. All acuities would then need to be doubled to adjust for the distance (a 20/40 line read at 10 feet would actually be 20/80 acuity)
3. If a 10-foot eye chart is used, follow directions in (1) and (2) for 10 feet.
4. Arrange table and chairs for screening and recording. Keep out of line of eye chart and 20-feet floor mark.
5. Ensure normal lighting on the chart and avoid undue glare.
6. Follow the manufacturer's instructions if using mechanical vision testers for distance and near vision testing

E.5 STUDENT INTERACTION WHEN VISION SCREENING

Explanation to students

It is important that students understand the purpose of the vision screening and their role in the activity. School health personnel should plan time to review the purpose of periodic vision screening and demonstrate screening procedures prior to the screening for early elementary students. Instruction should emphasize the value of early and periodic screening, the relationship of health and safety practices to the prevention of eye diseases and injuries, the prompt medical treatment of correctable and/or reversible eye health conditions, and environmental factors which are conducive to the maintenance of

eye health and safety. Teaching may be enhanced by notifying families of the upcoming screening, and asking them to discuss the process with their child, particularly with younger students.

During the procedure, instructions to students should be simple and clear. Students should be told they may not be able to see everything. Students should understand that they must tell you when they cannot see the letters or symbols. The word "test" implies the "need to pass". Using the term "vision screening" may help to prevent students from attempting to guess when they are unable to see the letters or symbols. An alternative to the Snellen acuity chart for young students would be the use of the HOTV or LEA symbols chart. (The examiner should use the most reliable chart that the student is capable of consistently recognizing.) Sensitivity to individual student needs along with use of appropriate screening procedures, orientation, familiar personnel, and establishing rapport with the student will assist in the success of screening activities.

Observations of the student

When a student is scheduled for screening, whether based on referral or scheduled screening, teacher observations of visual behavior should be gathered and reviewed as warranted. A teacher may also refer a student for a professional eye exam if they feel the student may be having difficulties based on their observations. The teacher should put the referral in writing, including the behaviors they observed that prompted the referral and send to the parent/guardian to be shared with the eye care professional. A copy of this referral letter to the parent is placed in the student's health record. When feasible, school health personnel should observe the student performing a variety of visual tasks.

E.6 VISION SCREENING PROCEDURE

A sample vision screening results form to retain in school records can be found in Appendix C.

E.6.a Distance Visual Acuity

1. The distance from the front of student's face to the chart should be 20 feet for Snellen charts or 10 feet for HOTV/LEA charts in Pre-K.
2. Check student to be sure he/she understands how to respond to the figures on the displayed chart. Ensure he/she can describe the letters or symbols. Move the student closer to the chart for orientation, if necessary. Test both eyes by pointing to a few letters to be sure student can be screened.
3. Test right (R) eye first; then left (L) eye. Both eyes must be tested individually.
    a. If student wears glasses or contact lenses, screen with glasses or contact lenses in place; or
    b. If student has glasses or contact lenses and is not wearing them, screening should be scheduled for another day with glasses or contact lenses.
    c. It is optional to test vision both with and without lenses.
4. Cover student's left eye with occluder without pressing tightly. Be sure that the student cannot see around the occluder. Advise the student not to squint, tilt head, or close occluded eye.
5. Have the student identify the first letter or symbol on each of the rows until difficulty is had or the lowest acuity line is reached, then attempt all symbols from left to right on that row. Use the pointer to point from below to each letter. The examiner should not block out or cover the other letters or symbols on the same line.

6. If the first line is read correctly, proceed to the next smaller line. Continue presenting each smaller line of letters through the 20/20 line as long as the student can identify one more than half the line. To pass a line, the student must be able to correctly identify one more than half the letters on the line.
7. If the student fails to read a line, repeat the line in the reverse order. If the line is failed twice, identify the visual acuity as the next higher line read correctly. For example, if the student fails on the 20/30 foot line, record the visual acuity as 20/40 noting the eye tested: R (or O.D.) indicates the right eye, and L (or O.S.) indicates the left eye.
8. Repeat above procedures (4) through (7) with the right eye occluded and record the results for the left eye as instructed in (7).
9. Failure criteria:
    a. Inability to read 20/30 (Grades K-12) or 20/40 for Pre-K.
    b. A two-line or greater difference between the two eyes (e.g., right eye 20/20, left eye 20/40).

If the student fails the vision screening, best practice would dictate re-screening another day. If the student initially failed using a mechanical vision tester, the re-screening should be done with a conventional eye chart. If the student fails the re-screening, notify the parent/guardian in writing, with a written recommendation for an eye examination by an eye care professional. Ideally a telephone call to the parent/guardian should precede the written referral.

E.6.b Near Visual Acuity

1. Have the student sit at a table or desk with adequate lighting. Use the Reduced Snellen Chart (or other appropriate eye chart if the student cannot accurately recognize letters) at a distance per the manufacturer's directions.
2. Have the student cover his/her left eye with an occluder and read the letters on the chart from left to right, starting with the smallest line he/she was able to read on the distance acuity chart. Tell the child to keep both eyes open during the testing. Identify the smallest line read correctly, record as near visual acuity for the right eye, noting any facial or postural behaviors.
3. Repeat procedure (2) with right eye occluded and record the results as near visual acuity for the left eye.
4. Failure criteria:
    a. Inability to read 20/30 (Grades K-12) or 20/40 for Pre-K.
    b. A two-line or greater difference between the two eyes (e.g., right eye 20/20, left eye 20/40).

If the student fails the vision screening, best practice would dictate re-screening another day. If the student initially failed using a mechanical vision tester, the re-screening should be done with a conventional eye chart. If the student fails the re-screening, notify the parent/guardian in writing with a written recommendation for an eye examination by an eye care professional. Ideally a telephone call to the parent/guardian should precede the written referral.

E.6.c Color Perception Screening

1. Follow manufacturer's directions for use of Pseudoisochromatic plates.
    a. Options include: Ishihara plates, or Color Vision Made Easy by Konan Medical.
2. Acquaint the student with the screening materials and method of responding.

3. Have the student keep both eyes open and test both eyes together.
4. Show the student how to use a soft, dry paint brush or cotton swab to trace the symbols on the color plate if unable to verbalize symbols.
5. Failure criteria:
    a. Follow the manufacturer's instructions for what constitutes failure of the screening.

Inform parents/guardian in writing about a possible color vision abnormality and the importance of discussing the matter with their eye care professional. Ideally a telephone call to the parent/guardian should precede the written referral.

NOTE: Pseudoisochromatic plates in mechanical vision testers are not acceptable for use. However, **it is acceptable** to use the Eye Handbook color testing application which is free for iPad and Android tablets.

E.6.d Hyperopia with +2.00 Diopter Lenses: Convex or Plus Lens - Optional

1. Have the student remain at the appropriately marked 20 or 10 foot line (depending on the chart used), and ask the student to put on glasses/flippers with +2.00 diopter lenses. Students who wear corrective lenses for close visual correction should not wear those lenses when screening. All other students should have their corrective lenses on when screened.
2. While looking through the +2.00 lenses, ask the student to read the 20/30 line of the acuity chart. If using a mechanical vision tester, follow the manufacturer's instructions.
3. If the student is able to read this line correctly, he or she has failed hyperopic screening.
4. Record pass or fail results.
5. Failure criteria:
    a. The ability to read a 20/30 line through +2.00 diopter lenses.

If the student fails the first screening, re-screen using the same procedure. If the student fails the re-screening, notify the parent/guardian in writing, with a recommendation for an examination by an eye care professional. Ideally a telephone call to the parent/guardian should precede the written referral.

E.6.e Functional Vision Testing: Muscle balance or Depth Perception - Optional

1. Muscle Balance can be tested using a variety of mechanical vision testing instruments (ex, Keystone Telebinocular) or other apparatus
    a. Muscle Balance Failure Criteria:
        i. > 4 diopters esophoria, >8 diopters exophoria
2. Depth Perception: mechanic testing options, Randot or Wirt Circles
    a. Depth Perception Failure Criteria:
        i. 5 years and younger: worse than 250 seconds of arc
        ii. 6 years and older: worse than 70 seconds of arc

If the student fails the re-screening, notify the parent/guardian in writing, with a recommendation for an examination by an eye care professional. Ideally a telephone call to the parent/guardian should precede the written referral.

E.7 PARENT/GUARDIAN NOTIFICATION

The success of the program is dependent on the implementation of a systematic follow-up procedure including notification to parent/guardian in writing (refer to Appendix D for sample form). School health personnel may precede this with a telephone call, and/or through a parent conference regarding screening results requiring a professional vision examination. Refer the student to an eye care professional. Avoid making any recommendation to a specific individual or a specific class of practitioner (ophthalmologist or optometrist).

1. Advise the parent/guardian to take the evaluation form to the appointment with an eye care professional. Have the completed evaluation form returned to school after the student is evaluated by an eye care professional. The information on the form is needed by the school to determine if any adjustments or accommodations need to be made to the student's education program.
2. Maintain contact with the parent/guardian to ascertain if the student has received the needed examination and necessary care. If necessary, refer any parent/guardian in need of financial assistance to an appropriate community resource. Depending on need, such resources may include:
    a. Local county department of social services for Medicaid assistance.
    b. Lions Club for refractions, glasses, and eye examinations.
    c. PTA and other service organizations.
    d. The local county physically impaired children's program.
    e. Health insurance plans.
    f. Vision Service Plan (VSP) program available through the National Association of School Nurses or your local Boys and Girls Club.
3. Consult with teachers and recommend necessary educational adjustments or accommodations to meet individual needs (e.g. color perception impairment).

F. HEARING SCREENING

T.C.A. § 49-6-5004 Promotion of eye, hearing and dental care awareness.

a) Upon registration or as early as is otherwise possible and appropriate, public schools, nursery schools, kindergartens, preschools or child care facilities are encouraged to make reasonable efforts to apprise parents of the health benefits of obtaining appropriate eye, hearing and dental care for children.
b) A health care professional is authorized to indicate the need for an eye, hearing or dental examination on any report or form used in reporting the immunization status for a child as required under this part. Health care professionals shall provide a copy of the report or form to the parents or guardians indicating the need to seek appropriate examinations for the child.
c) If the parent/guardian of a child with a need for an eye or hearing examination is unable to afford the examination, an LEA of a county or municipality may use revenues from gifts, grants and state and local appropriations to provide the eye or hearing examinations.
d) LEAs are encouraged to seek free or reduced-cost eye examinations from optometrists or ophthalmologists and free or reduced-cost hearing examinations from physicians or audiologists willing to donate their services for children who are unable to afford the eye or hearing examinations.
e) The commissioner shall promulgate rules and regulations in accordance with the Uniform Administrative Procedures Act, compiled in title 4, chapter 5, that are necessary to carry out this section.

F.1 HEARING SCREENING REQUIREMENT

At a minimum, all students in grades Pre-K, K, 2, 4, 6, and 8 shall receive a hearing screening once a year. Screening one year of high school is optional; however whichever year (or class) of high school is selected, the same year (or class) should be screened year after year. For example, if the Wellness classes were chosen then wellness classes should be screened every year thereafter. Other students who should be screened are those new to the school system and/or suspected of having a hearing problem by their teachers. A student can be referred for screening per local school district protocol at any point.

Some students may not need screening as they are already under care for regular, periodic evaluation for their hearing impairment. Students falling into this category would include:

1. Students with known hearing loss.
2. Any student coded Deaf or Hard of Hearing.
3. Any student enrolled in regular or special education who is unable to respond, for any reason, to screening procedures. The school nursing personnel should follow these students to ensure that they are receiving periodic evaluations and/or care as determined by their hearing care specialist. Documentation of these evaluations should become part of the cumulative health record (CHR) or in the electronic student management system.

F.2 HEARING SCREENING RATIONALE

The purpose of hearing screening is to identify students with hearing loss in order to refer for diagnosis and management. Hearing loss is the most common birth defect, with a prevalence of 1 – 3 infants per 1,000 births (Finitzo, Albright, & O'Neal, 1998; US Centers for Disease Control and Prevention, 2009; Van

Naarden, Decoufle, & Caldwell, 1999). Hearing loss prevalence increases to an estimated 9 - 10 per thousand in school-age children due to late-identification, late-onset or acquired hearing loss (White, 2010).

Hearing loss can impact communication, development, and classroom learning. Children with hearing loss are at increased risk for academic, speech and language, social, emotional and behavioral problems (Bess, Dodd-Murphy, & Parker, 1998; McKay, Gravel, & Tharpe, 2008; Tharpe & Bess, 1991). Even mild or unilateral hearing loss can be impactful, and it is reported that more than one-third of children with minimal or unilateral hearing loss fail a grade (Bess et al., 1998).

References:

Bess, F. H., Dodd-Murphy, J., & Parker, R. A. (1998). Children with minimal sensorineural hearing loss: prevalence, educational performance, and functional status. *Ear Hear, 19*(5), 339-354.

Finitzo, T., Albright, K., & O'Neal, J. (1998). The newborn with hearing loss: detection in the nursery. *Pediatrics, 102*(6), 1452-1460.

McKay, S., Gravel, J. S., & Tharpe, A. M. (2008). Amplification considerations for children with minimal or mild bilateral hearing loss and unilateral hearing loss. *Trends Amplif, 12*(1), 43-54. doi: 10.1177/1084713807313570

Prevention, US Centers for Disease Control and. (2009). Summary of 2008 National CDC EHDI Data, Version A. http://www.cdc.gov/ncbddd/hearingloss/2009-Data/2009_EHDI_HSFS_Summary_508_OK.pdf

Tharpe, A. M., & Bess, F. H. (1991). Identification and management of children with minimal hearing loss. *Int J Pediatr Otorhinolaryngol, 21*(1), 41-50.

Van Naarden, K., Decoufle, P., & Caldwell, K. (1999). Prevalence and characteristics of children with serious hearing impairment in metropolitan Atlanta, 1991-1993. *Pediatrics, 103*(3), 570-575.

White, K. (2010). *Twenty years of early hearing detection and intervention (EHDI): Where we've been and what we've learned.* Paper presented at the ASHA Audiology Virtual Conference.

F.3 HEARING SCREENING PROGRAM

Screening program guidelines from the American Speech–Language-Hearing Association (1997) and American Academy of Audiology recommend that training for screeners be managed or supervised by an audiologist whenever possible.

F.3.a Screeners and Volunteers

Volunteers may assist with the flow of students through the screening procedure and may be trained to conduct the hearing screening (initial sweep screen- details below). Holding a volunteer instruction session is helpful and should be scheduled close to the day of the screening. During the training session, volunteers should be familiarized with the audiometers, screening forms, and procedures. Having volunteers who feel comfortable with the equipment increases the accuracy of screening results.

Some screeners may opt to complete a formal training program and exam to obtain certification as an Occupational Hearing Conservationist through the Council for Accreditation in Occupational Hearing Conservation (CAOHC).

References:

American Speech-Language-Hearing Association. (1997). *Guidelines for audiologic screening* [Guidelines]. Available from www.asha.org/policy.

American Academy of Audiology. (2011). *Childhood Hearing Screening Guidelines* [Guidelines].

Available from
http://www.cdc.gov/ncbddd/hearingloss/documents/AAA_Childhood%20Hearing%20Guidelines_2011.pdf.

F.3.b Screening Equipment

1. Audiometer with headphones

F.3.c Setting Up the Screening Area

1. Schedule a room that is as quiet as possible. Consider all potential nearby noise sources such as plumbing, heating/cooling systems, traffic, office machines, appliances, fluorescent light "buzz", as well as music or talking in adjoining rooms or hallways.
2. Have a desk or table that will provide space for the audiometer and recording materials. Two chairs will be needed: one for the screener and one for the individual to be screened.
3. Leave the audiometer on all day when screening.
4. Set all connections, dials, and switches on the audiometer in the correct position per manufacturer's instructions.
5. Screen yourself or another person who is known to have good hearing before the screening to ensure the audiometer is working properly.
6. Audiometers should be calibrated annually by a qualified technician.
7. There should be a "standard precautions" policy and procedure in place to ensure earphones are properly cleaned between each child.

F.3.d General Overview of School Screening Procedure

1. If ears appear clear (no apparent drainage), instruct the child and position earphones over the ears.
2. Administer an individual sweep screen - presenting tones at 1,000, 2,000, and 4,000 Hz in each ear at 20 decibels. *(Further sweep screen details to follow in F.5.a.)*
3. Record responses as Pass or Fail at each frequency.
4. If any frequencies are failed in either ear, same day rescreening should be done immediately, preferably by a different tester using a different audiometer. Reinstruct the child, replace the earphones, and repeat the screening procedure.
5. Record responses as Pass or Fail at each frequency.
    a. A child that passes this same day rescreen receives a pass.
    b. A child who fails the same day rescreen will be rescreened again in 6 – 8 weeks. *
6. If a 6-8 week rescreen is needed, use the same procedure. If the student still fails one or more frequencies in one or both ears, they should be referred for further (diagnostic) evaluation. If the school has an audiologist, he/she may be asked to perform an individual threshold test to determine the need for a referral.
7. It is not appropriate to make adjustments for a noisy environment (e.g., increasing the level of decibels above 20 for the screening). The range of normal hearing is –10 to 20 decibels. Increasing the decibel level during screening could result in passing a child that should be referred for evaluation.

A sample hearing screening result form to retain in school records can be found in Appendix C.

** ASHA and AAA guidelines recommend a two-tiered screening approach (same-day rescreen followed by subsequent rescreening [6-8 weeks later]) for failures to reduce false positive referrals.*

F.4 STUDENT PREPARATION FOR HEARING SCREENING

Do not screen any children with a known hearing loss who receive regular audiologic management. Consider each student individually; some precocious three years old can be screened audiometrically, but some ten year old children cannot.

Bypass screening and refer to physician for medical consultation if blood or other discharge is observed in either ear.

1. Visually inspect ear for signs of drainage or blood. If ears appear clear, proceed with screening.
2. Seat the student in a chair facing away from the examiner so the person whose hearing is being screened cannot watch the audiometer or the screener's movements and expressions. Children who are shy or difficult to screen may be screened facing the examiner with their eyes closed.
3. Give test instructions and determine how the child will respond to the sounds (e.g., hand raise or conditioned response such as dropping a block in a bucket) before putting on the earphones.
4. Tell the child that they will hear some tones or "beeps" and that they should respond to the sound even if it is "very soft or tiny." The response method should be agreed upon between the screener and the student before beginning. The individual could respond in one of the following ways:
    a. Raising hand
    b. Saying "yes" or "I hear it"
    c. Nodding head
    d. Holding block, chip, or bead close to ear then dropping it into a container when the sound is heard (for use with young children)

F.5 HEARING SCREENING PROCEDURE

F.5.a Individual Sweep Screen Procedure

After the student has been instructed in the procedure, begin the screening:

1. Perform a visual inspection of the ear. If no drainage is observed, proceed with screening.
2. Position the earphones over the ears. Adjust earphones so they fit snugly over the outer ear, with the speaker (center) of the earphone over the ear canal. Make sure hair is not under the earphones.
3. The RED earphone should be placed on the RIGHT ear and the BLUE earphone on the LEFT ear.
4. Set the LOUDNESS dial to 20 decibels (dB). If you are in an environment with some ambient noise that cannot be eliminated, the screening should be rescheduled or relocated to a quieter environment.

    Note: Guidelines from the American Academy of Audiology (AAA) (Sept 2011) pertaining to the screening environment indicate that sound level "should not exceed 50, 58, and 76 dB SPL respectively for 1000, 2000, and 4000 Hz as measured by a sound level meter. If no sound level meter is available, the screening environment should be quiet enough for a normal hearing adult to perceive 1000, 2000, and 4000 Hz tones presented at 10 dB HL."

5. Set control so that the tone comes on when the examiner activates the switch or presses the button.
6. Start screening the RIGHT ear.
7. Present a short tone of approximately 1-2 seconds and note if the child responded. Each tone should be presented a minimum of 2, but no more than 3 times at each screening frequency.
8. Do not present the stimulus in such a rhythm that the person being screened is given clues as to when to respond. Screen the frequencies in this order:
    - 1,000
    - 2,000
    - 4,000
9. Record the results as Pass or Fail by marking a "P" for those sounds heard at 20 dB on at least 2 of 3 presentations; record as "F" for those tones not heard at 20 dB on 2/3 presentations. See link for more on Interpretation of Screening Results.
10. Screen the LEFT ear in the same manner. Tell the child being screened when you are changing to the other ear.

F.5.b Rescreening Procedure

Same-day (immediate) rescreening should be completed for children who refer on the initial screening. It is recommended that same-day rescreening be completed by a different screener on an alternate piece of equipment if possible. Children who fail the same-day rescreening should be rescreened a final time 6 – 8 weeks later. Prior to the rescreening:

1. Earphones should be removed and repositioned.
2. Instructions should be repeated to ensure students understand the procedure.
3. Complete Individual Sweep Screen Procedure (above).
4. Refer for medical and/or audiological evaluation for any individual who fails one or more frequencies in one or both ears. In schools, an audiologist may be asked to do an "individual threshold test" prior to referral. This information may be helpful to the professional doing the evaluation.
5. It is estimated that about 3-9% of students will fail a hearing screen and warrant a referral.

F.6 INTERPRETATION OF SCREENING RESULTS

Individuals who pass all frequencies in each ear are presumed to have normal hearing at those pitches.

- **PASS**: Child reliably responds to at least 2 out of 3 presentations at each frequency in both ears. **FAIL**: Child misses 2 of 3 presentations at any frequency in either ear.
- Rescreen any individual who fails one or more frequencies in one or both ears.
- Rescreens may also be done on the basis of observations, symptoms, or for children with responses that are judged to be of fair or poor reliability.

F.7 PARENT/GUARDIAN AND TEACHER NOTIFICATION

Parent/Guardian:

The success of the program is dependent on the implementation of a systematic follow-up procedure. Send a referral letter home for a student who fails the hearing screening. See sample form in Appendix D. The letter will recommend the student be seen by an audiologist, which may require a physician referral.

Maintain contact with the parent/guardian to determine if the student has received the needed examination and necessary care. If necessary, assist the parent/guardian in need of financial assistance through a referral to an appropriate community resource.

Teacher Notification:

The nurse should notify the child's teacher(s) if a child refers on the hearing screening. In addition to being alert to the possibility the child is having difficulty hearing, the school personnel are often in a position to reinforce the need to follow through on the referral. It is important to monitor the child closely and to document any concerns the nurse and/or teacher may have regarding the impact of the suspected hearing impairment on the child's education. These concerns also need to be communicated to the parent/guardian. School personnel are encouraged to explore the reason for failure to follow-up on a hearing screening referral. This may result in identification of the need for additional resources or information.

Until the student's hearing status is clearly defined by medical and/or audiological evaluation, the following measures should occur:

1. The student should be given preferential seating so that he/she is in direct line of the teacher's/speaker's voice. Optimum distance is four to six feet from the teacher. If a better ear has been identified, the student's better ear should be closest to the teacher.
2. Teachers should use appropriate clarification strategies to ensure that the student understands oral information (repeat, rephrase, speak louder or closer, etc.).
3. Whenever possible, teachers should avoid:
    a. Standing in front of a bright window while speaking.
    b. Speaking while writing on the chalkboard (back to class).
    c. Positioning themselves so that their faces are not visible to students.
4. Noisy learning environments should be avoided or minimized.

F.8 HEARING LOSS SYMPTOM CHECKLIST

If a child has one or more of these symptoms, the child may have difficulty hearing and should have their hearing checked as soon as possible.

MEDICAL SYMPTOMS

- ✓ If a child has a bad odor or smell from his/her ear
- ✓ If a child has repeated bouts of upper respiratory infections, runny nose, chronic cough, or ear infections
- ✓ If a child pulls, rubs or digs in his/her ears
- ✓ If a child's outer ear looks red or feels warm

LISTENING SYMPTOMS

- ✓ If a child is easily distracted or frustrated in a group
- ✓ If a child does not respond consistently to his/her name or live voice
- ✓ If a child cannot understand you when his/her back is turned
- ✓ If a child has difficulty finding the source of a sound
- ✓ If a child needs verbal instructions repeated several times before he/she understands
- ✓ If a child consistently turns the tape, CD, television, or computer speaker up louder

BEHAVIORAL SYMPTOMS

- ✓ If a child does not particularly like listening to tapes, CDs, television or listening activities such as rhymes, sound games, etc.
- ✓ If a child is very inattentive during story time
- ✓ If a child watches your face and eyes for visual cues of meaning
- ✓ If a child depends on visual cues to successfully complete simple verbal tasks
- ✓ If a child has a short attention span for his/her age

SPEECH/LANGUAGE SYMPTOMS

- ✓ If a child has poor or delayed language development
- ✓ If a child has poor articulation of speech sounds
- ✓ If a child has poor sentence structure and speech patterns
- ✓ If a child talks in an extremely loud voice or extremely soft voice

Source:
Janet Coscarelli, CCC-A, CCC-SL, Tennessee Head Start State Collaboration Office

G. BODY MASS INDEX (BMI) /HEIGHT AND WEIGHT

T.C.A § 49-6-1404 Nutrition and physical activity programs in schools where data suggests high rates of obesity.

Schools where aggregate data suggests that high rates of overweight children may be a problem are encouraged to expand existing or implement new school-based nutrition and physical activity programs designed to reduce those rates. The effectiveness of these results could be determined by completing a BMI-for-age on the school's students whose parents or guardians have not requested exclusion from the testing at the end of the school year.

G.1 BMI REQUIREMENT

At a minimum, all students in grades K, 2, 4, 6, 8 and one year (or class) of high school (usually wellness class) are screened annually. Whichever year (or class) of high school is selected, the same year (or class) should be screened year after year. For example, if the Wellness classes were chosen then wellness classes should be screened every year thereafter. Staff training for BMI screenings is required. Specific protocols must be used.

G.2 BMI RATIONALE

The rapid increase in overweight children and adolescents is generating widespread concern. Since the 1970s, the prevalence of overweight among children has more than doubled for preschoolers ages 2-5 and adolescents ages 12-19, and it has more than tripled for children 6-11 years. Nearly one-third of children and adolescents aged 6-19 years (31.0%) are considered to be either at risk for overweight or overweight, defined as at or above the 85th percentile of the sex-specific BMI-for-age growth chart, and 16% are overweight or at or above the 95th percentile of the sex-specific BMI-for-age growth chart.

G.3 TEN SAFEGUARDS TO IMPLEMENT BEFORE CONDUCTING WEIGHT SCREENING

Screening children to identify potential weight problems can contribute to positive health outcomes but, if done without sensitivity, can have negative effects on emotional well-being. On the positive side, students at both ends of the weight spectrum can be objectively identified and referred for additional evaluation and possible intervention. On the negative side, weight screening that results in labeling a child as “too fat” or “too thin” can damage self-esteem and may increase susceptibility to eating disorders.

According to the CDC, schools should not initiate weight screening unless the following ten safeguards are in place:

SAFEGUARD 1: ***INTRODUCE THE PROGRAM TO PARENTS, GUARDIANS, STUDENTS, AND SCHOOL STAFF; ENSURE THAT THERE IS AN APPROPRIATE PROCESS IN PLACE FOR OBTAINING PARENTAL CONSENT FOR MEASURING STUDENTS’ HEIGHT AND WEIGHT.***

To help minimize negative response from the public, programs need to involve parents or guardians early in the planning stages. Before the program begins:

1. All parents should receive a clear description of the program to minimize confusion and anxiety.
2. Communications with parents should focus on the health implications of obesity, overweight, and underweight, and make it clear that the school will be measuring weight out of concern for a student’s health, not their appearance or a desire to criticize parenting practices.

3. Schools should assure parents and students that the screening results will remain confidential.
4. In addition, students and school staff should be informed of the purposes and logistics of height and weight measurement, as well as the school's policy on sharing results.

Parents must be given the option of declining permission to measure their child's BMI. Some programs use passive parental consent; that is, all students have their BMI measured unless parents send a written refusal. For example, at the beginning of each school year, school districts can inform parents about the school health program and the screenings that are conducted in each grade. Parents can choose not to have their child screened; otherwise all students are measured. Alternatively a school district can require active consent from both parents and students; only students who signed the consent form and whose parents have submitted a signed consent form would be screened.

SAFEGUARD 2: ***ENSURE THAT STAFF MEMBERS WHO MEASURE HEIGHT AND WEIGHT HAVE THE APPROPRIATE EXPERTISE AND TRAINING TO OBTAIN ACCURATE AND RELIABLE RESULTS AND MINIMIZE THE POTENTIAL FOR STIGMATIZATION.***

Accurate measurements are those that correspond to the youth's actual height and weight, while reliable measurements are those that produce consistent results when they are repeated. Measurements are more likely to be accurate and reliable when they are conducted by trained professionals, such as school nurses. Unfortunately, many schools do not have full-time nurses on campus, and many school nurses feel that they cannot add another responsibility to their workload. Staff members involved in the program need the appropriate technical training from people who are experienced in conducting height and weight measurements and calculating and interpreting BMI results. Conducting repetitive tasks, such as measuring height and weight, can be tedious and may lead an individual to become careless and fail to consistently follow measurement protocols. Quality control checks can be implemented through random visits at measurement sites to oversee the performance of the staff measuring students' height and weight.

Staff members need to ensure that each student takes off his/her shoes and jacket or other heavy clothing items and removes all items from his/her pockets before being weighed. Similarly, staff members must make sure that hair styles do not interfere with an accurate measurement of height. Each measurement should be taken twice and the youth should be repositioned prior to each measurement. If the two measurements do not agree within one-fourth of a pound for weight or one-fourth of an inch for height, then two additional measures should be taken until there is agreement. Height errors, in particular, reduce the validity of BMI substantially.

Staff also need appropriate training to measure height and weight in a sensitive and caring manner. This training should address procedures to maintain student privacy during measurement, increase awareness of groups at increased risk of stigmatization (i.e., larger students, shorter boys, and taller girls), provide information about body size acceptance and the dangers of unhealthy weight control practices, and help staff identify indications of student problems related to weight or body image (e.g., eating disorders).

Staff should be prepared to respond to questions or comments by students. For example, if a student makes a negative comment about his/her own weight, staff members need to be able to respond with supportive statements such as, "Kids' bodies come in lots of different sizes and shapes. If other kids are teasing you about your body, let's talk and see what we can do about it". Staff members also need to know how to respond to questions about what the school will do with the measurement results and referrals.

Resources that can assist with training on height and weight measurement include:

- Health Resources and Services Administration's Maternal and Child Health Bureau
- CDC's Division of Nutrition, Physical Activity, and Obesity Growth Chart Training Modules
- The Center on Weight and Health's Guidelines for Collecting Heights and Weights on Children and Adolescents in School Settings

SAFEGUARD 3: ***ENSURE THAT THE SETTING FOR DATA COLLECTION IS PRIVATE.***

Height and weight measurements must not be conducted within sight or hearing distance of other students. The trained staff member conducting the measurement should be the only person to see the results and should not announce them out loud. To maintain anonymity when collecting data for surveillance purposes, school staff should remove identifying information, including the student's name, from the data collection form as soon as record keeping is complete and prior to calculating BMI and aggregating and analyzing the data.

SAFEGUARD 4: ***USE EQUIPMENT THAT CAN ACCURATELY AND RELIABLY MEASURE HEIGHT AND WEIGHT.***

The preferred equipment to assess students' weight is an electronic or beam balance scale that is properly calibrated to the nearest one-fourth pound according to the manufacturer's directions. Spring balance scales, such as bathroom scales, are not sufficiently accurate. The preferred equipment to assess height is a stadiometer, a wall-mounted or portable unit solely designed to measure height to the nearest one-eighth inch. The stadiometer should include a vertical board, metric tape, and horizontal headpiece that slides down to measure height. All equipment should be maintained and calibrated regularly.

SAFEGUARD 5: ***ENSURE THAT THE BMI NUMBER IS CALCULATED AND INTERPRETED CORRECTLY.***

The English formula for calculating BMI is:

$$(\text{Weight [lb]} \div [\text{Height (in)}]^2) \times 703$$

Schools should establish the BMI-for-age percentile using the CDC growth charts. Staff must collect the student's correct age in years and months as well as their gender to properly plot the BMI on the CDC growth charts. Schools conducting BMI screening programs should refer youth categorized as underweight, overweight, and obese to a medical care provider for diagnosis and possible weight management counseling.

Resource: CDC's About BMI for Children and Teens

SAFEGUARD 6: ***DEVELOP EFFICIENT DATA COLLECTION PROCEDURES.***

To facilitate efficient and accurate data collection, BMI measurement programs should coordinate data collection times with school administrators and employ a sufficient number of staff members to minimize disruptions to class time.

CDC's BMI Tool for Schools is an excel spreadsheet that can compute up to 2000 BMI and BMI percentiles and provide a summary of students' BMI-for-age categories and graphs for the prevalence of overweight and obesity. Software can substantially reduce the time it takes staff to conduct screenings. Other software may be available that can both aggregate the data and produce health report cards.

SAFEGUARD 7: ***DO NOT USE THE ACTUAL BMI-FOR-AGE PERCENTILES OF THE STUDENTS AS A BASIS FOR EVALUATING STUDENT OR TEACHER PERFORMANCE (E.G., IN PHYSICAL EDUCATION OR HEALTH EDUCATION CLASS).***

Many factors beyond physical education and health education courses influence a student's weight, so it is not appropriate to hold students or teachers accountable for changes in BMI percentiles. Using BMI results to evaluate performance might heighten attention to weight and increase stigmatization and harmful weight-related behaviors.

Knowledge, skills, and changes in dietary, physical activity, and sedentary behaviors are more appropriate as performance measures.

SAFEGUARD 8: ***EVALUATE THE BMI MEASUREMENT PROGRAM BY ASSESSING THE PROCESS, INTENDED OUTCOMES, AND UNINTENDED CONSEQUENCES OF THE PROGRAM.***
Data should be collected on concerns about the program, such as stigmatization, cost, parental responses, and displacement of other health–related initiatives. Schools can use the evaluation results to guide improvements to their program. The results should be shared with key stakeholders, parents, the community, school administrators, and policy makers in order to inform their decisions about school-based BMI measurement.

Resource: CDC Program Evaluation

SAFEGUARD 9: ***ENSURE THAT RESOURCES ARE AVAILABLE FOR SAFE AND EFFECTIVE FOLLOW-UP.***
BMI screening programs are not intended to diagnose weight status. Schools should refer students who need follow-up to appropriate local medical care providers.

Actions to initiate a screening program:

1. Schools
    a. Work with the local medical community to ensure that adequate diagnostic and treatment services are available, staffed by employees with appropriate training, and accessible to all students, including those with low family incomes or without insurance.
    b. Identify school- or community-based health promotion programs that encourage physical activity and healthy eating.
2. School nurses
    a. Be educated, trained, and equipped with the appropriate resources to respond to parents requesting guidance.
    b. A valuable resource during the follow-up period, school nurses can provide parents with a clear explanation of the results and health risks associated with obesity, develop an action plan for behavior change, and connect the family to medical care in the community.
3. School health personnel
    a. Establish systematic processes and criteria for referring students to external medical care providers.
    b. Refer students with signs of underweight, overweight, obesity, disordered eating or other diet-related health conditions (e.g., sudden weight loss, eating disorders) to a local medical care provider for diagnosis and, if needed, establishment of management or treatment plans. For example, students classified as obese or overweight after BMI screening require further medical examination to determine whether the student in fact has excess body fat or other conditions related to obesity (e.g., diabetes or prediabetes, high blood cholesterol and triglyceride levels, or early pubertal maturation).
4. School staff members

a. Receive guidance on how to recognize early signs of health risks that require urgent attention such as hunger or disordered eating. If a school staff member suspects a student to have these risk behaviors, staff should confidentially refer these students to school health or mental health personnel.

Schools can play an important role in developing and marketing a referral system for students and families. To establish a referral system, school health personnel should identify health-care services and school or community-based programs that encourage healthy eating and physical activity and address obesity and eating disorders. These services include:

1. school-linked health clinics
2. local health departments
3. universities
4. medical schools
5. outside health-care providers (e.g., private physicians and dentists, hospitals, psychologists and other mental health workers, pediatric weight management clinics, community health clinics, and managed care organizations)
6. community-based nutrition and physical activity providers and services (e.g., dieticians, recreational programs, and cooking classes)

The list of referral services should be based on the health needs of the student population, barriers to health care in the community, past student use of community services, and current community culture. Health, mental health, and social services staff members can assess which services are available at the school and which require outside referral. The list should include services that are accessible to all students, including those with low family incomes or without health insurance or transportation. If feasible, arrangements can be made to bring community-based services to the school. With a comprehensive referral system in place, health, mental health, and social services staff members are able to respond to requests from families seeking guidance and increase access to care among students.

Resource: CDC School Health Guidelines to Promote Healthy Eating and Physical Activity. MMWR. 60(5):1-75

SAFEGUARD 10: ***PROVIDE ALL PARENTS WITH A CLEAR AND RESPECTFUL EXPLANATION OF THE BMI RESULTS AND A LIST OF APPROPRIATE FOLLOW-UP ACTIONS.***

Parents should be notified of student's BMI results by secure means. To reduce the risk of stigmatizing students, notification should be consistent to all parents. To avoid giving the impression that a diagnosis has been made, the letters to parents about students who need further evaluation—those classified as underweight, overweight, or obese—should avoid definitive statements about the student's weight category. For example communication might:

1. State that the student's BMI result "suggests" that he/she "might be" overweight.
2. Identify the student's height, weight, and BMI-for-age percentile, and include a table defining BMI-for-age percentile categories with images.
3. Communicate that the student's weight was found to be low/normal/high for his/her height and age.

All communication should strongly encourage parents to consult a medical care provider to determine if the student's weight presents a health risk.

Communication to all parents, including those whose children have been classified as normal weight, should include scientifically sound and practical tips designed to promote health-enhancing physical activity and dietary behaviors. For example, the communication might encourage families to consume a healthy diet based on the U.S. Dietary Guidelines for Americans. Parents should also be aware that youth should engage in 60 minutes or more of physical activity each day and reduce sedentary screen time such as television, video games, and computer usage. If written, the communication should be written in appropriate languages and at appropriate reading levels to be understood by parents; the tone should be neutral to avoid making parents feel that they are being blamed for their child's weight status. Motivational messages should be guided by sound communication and health behavior change theories. To ensure comprehension and effectiveness, the letters can be tested with representative parents in advance.

The communication should include:

1. Contact information for the school nurse or other school-linked medical care provider;
2. Educational resources for weight, nutrition, and physical activity;
3. Contact information for community-based health programs or medical care providers who treat weight-related health problems (including programs for those without health insurance); and
4. Information on school and community-based programs that promote nutrition and physical activity.

Source: Nihiser AJ, Lee SM, Wechsler H, McKenna M, Odom E, Reinold C, Thompson D, Grummer-Strawn L. Body Mass Index Measurement in Schools. Journal of School Health. 2007; 77:651-671.

G.4 BODY MASS INDEX SCREENING PROGRAM

Collaboration between health care services in school systems and the community is essential to a screening program. Before any data is collected the participation and enthusiasm of the community should be solicited to ensure validation of the process and interest in the results. It is imperative that school system administrators are supportive of the system and willing to participate. The recommended partners are suggested resources for logistics of data collection and management, and are not limited to those listed.

Potential Partners:

- Local Health Councils
- School administration
- Hospitals
- Local health department
- Health Science Instructors
- HOSA Students
- PTA/PTO
- Parent volunteers
- School psychologist/school counselor
- UT Extension
- Local institutions of higher education

G.4.a Equipment Needed

Accuracy and reliability are affected by the quality of the screening equipment. It is difficult to perform accurate and reliable screenings with inadequate equipment. Even with the proper screening equipment, care must be taken to properly maintain and effectively implement the use of that equipment.

While proper screening equipment can appear to be prohibitively expensive, the accuracy and consistency of quality equipment is worth the cost. If screening results aren't accurate and consistent, then the data cannot be relied upon. High-quality, easily calibrated and well maintained equipment is a good investment and will provide years of accurate and reliable service. Because quality equipment is durable, the seemingly high initial investment costs for quality equipment can be amortized over 20 or more years of service.

1. Scale - A properly calibrated, high quality balance beam or electronic digital scale should be used to measure children and adolescents. Spring balance scales such as bathroom scales should not be used. The scale should:
    a. be able to weigh in ¼ pound increments;
    b. have a stable platform;
    c. have the capacity to be "zeroed" after each weight is taken; and
    d. have the capacity to be calibrated.
2. Scale calibration weights
3. Stadiometer (measures height) A portable or wall-mounted stadiometer should be used that
    a. is able to read to ⅛ inch increments;
    b. has a large stable base; and
    c. has a horizontal headpiece that is at least 3 inches wide that can be brought into contact with the most superior part of the head (i.e., the crown).
        i. Movable headpiece attached to balance-beam scales are **not** recommended for use.
4. Data collection form
5. Privacy screen
6. Parental/guardian permission request form (see Appendix A for samples)
7. Follow-up parent/guardian letters (see Appendix D for samples)
8. Quality assurance notebook

Maintenance and Calibration of Equipment

1. Check the equipment regularly to ensure accurate measurements.
2. Scales should be calibrated regularly to ensure accurate measurements.
    a. Re-calibrate if the scale has been moved to a different surface.
    b. Portable digital scales, frequently moved, should be calibrated before each use.
    c. For scales that are not moved or used excessively, calibrate at least annually.
    d. Use known weights (a set of standard weights purchased from a sports store) on the scale or a professional service to check accuracy.
    e. Send the scale for professional calibration if the standard weight and the scale weight are off by ¼ pound or more. For a digital scale, change the batteries and if it is still off after checking again with the standard weights, send scales for professional calibration and/or check the owner manual for scale instructions.
    f. Beam balance scales should have "screw type" provision for immobilizing the zeroing weight.
3. Check the stadiometer regularly to be sure the base is stable and measures are accurate.

a. Length rods, a standard measuring test rod, should be used to verify accuracy at least annually.
b. Portable stadiometers should be checked more frequently.
c. If a discrepancy is found in accuracy, contact the manufacturer for advice.

G.4.b Training for Reliable Results

Along with training, data collection personnel must sign a confidentiality statement that will be kept on file. Make sure there is documentation that all volunteers have been trained and that the documentation is on file with the school administrator.

Data Collection Personnel:

- Minimum of 2 people are needed with the cooperation of the classroom teacher
- Personnel suggestions:
  - Health educators
  - Nutrition staff
  - School nurse
  - PE/Health/Wellness teachers
  - Parent/Community volunteers

Train staff involved in the screening process. To improve accuracy, especially for mass screening of students, it is recommended that at least two staff conduct the BMI screening: one to measure the child and one to record the data. This greatly reduces recording errors. The objectives for training are:

1. Proper use and maintenance of equipment for accurate and precise measurement;
2. Review of forms for the recording of information;
3. Emphasis on the importance of privacy and confidentiality for the students; and
4. Appropriate and sensitive communication with students regarding height and weight measurement (e.g., saying "Let's check your weight" instead of "Let's see how big you are"; reassuring students that kids' bodies come in different sizes and shapes; and avoiding labels such as "obese," "overweight," "too thin," or "too short").

G.4.c Children with Physical Disabilities

Assessing measurement of non-ambulatory students with special health care needs requires special consideration as children may not be able to stand up or lie flat. An example would be a child with a cast or a child in a wheelchair. Measurements may need to be assessed at an alternate time or coordinate with the primary care specialist for the child with special health needs to obtain measurements, if needed. Alternate methods are available for measuring children requiring special accommodations such as sitting heights, segmental lengths, girths and skin folds but require special skills and equipment.

G.5 PROCESS FOR WEIGHT AND HEIGHT MEASUREMENTS

Accuracy is important in obtaining height and weight measurements because these measurements will be used to calculate the BMI which, in turn, is utilized to assess healthy weight status and/or provide for surveillance data. Prior to screen:

- Calibrate the scales and record data in the quality assurance notebook.
- Set up measurement stations with the appropriate equipment.

- Check that all data is recorded on data collection form.
- For all children, there is a need to respect privacy. Privacy includes where the measurements are taken, clothing removal, describing the measuring process, and interpreting the numbers.
- Have appropriate gender specific CDC stature-for-age growth charts available to plot measurements.

1. **Measuring Weight**
    - Set the scale at zero reading.
    - Have the student remove shoes, heavy outer clothing (jacket, vest, sweater, hat), and empty pockets (cell phones, iPods) to extent possible.
    - Have the student step on center of the scale, facing away from the read out ensuring they cannot see their test results; with body weight evenly distributed on both feet, arms hanging naturally at side with palms facing thighs and head is up and facing straight ahead.
    - Make note of the first weight value to the nearest ¼ pound.
    - Have the student step off the scale and take a second measurement, repeating the steps above.
    - The measures are compared; they should agree within ¼ lb.
        - If the difference between the measures exceeds the tolerance limit, the child should be repositioned and re-measured a third time. The average of the two measures in closest agreement is recorded.
    - For confidentiality and to avoid stigma or harassment, do not call out weight value.
    - Record the weight value immediately on the student data form.
    - If using a balance beam scale, return the weights to zero position.

2. **Measuring Height**
    - Remove the child's shoes, hats, and bulky clothing, such as coats and sweaters. Undo or adjust hairstyles and remove hair accessories that interfere with measurement.
    - Have the student stand erect, with shoulders level, hands at sides, knees or thighs together and weight evenly distributed on both feet.
    - The student's feet should be flat on the floor or foot piece, with both heels at base of the vertical board. When possible, all four contact points (i.e., the head, back, buttocks, and heels) should touch the vertical surface while maintaining a natural stance. Some students will not be able to maintain a natural stance with all four contact points touching the vertical surface. For these students, at a minimum, two contact points; the head and buttocks, or the buttocks and heels, should always touch the vertical surface.
    - Position the student's head by placing a hand on the student's chin to move the head into the Frankfort Plane. The Frankfort Plane is an imaginary line from the lower margin of the eye socket to the notch above the tragus of the ear. When aligned correctly, the Frankfort Plane is parallel to the horizontal headboard and perpendicular to the vertical measurement board. This is best viewed and aligned when the screener is directly to the side and at eye level with the child.
    - Assure student's legs are straight, arms are at sides, and shoulders are relaxed.
    - Ask the child to look straight ahead, inhale deeply and to stand fully erect without altering the position of the heels.

- Lower the headpiece until it firmly touches the crown of the head with sufficient pressure to compress the hair and is at a right angle with the measurement surface.
- Check contact points to ensure that the lower body stays in the proper position and heels remain flat. Some students may stand up on their toes, but verbal reminders are usually sufficient to get them in proper position.
- Position yourself so that your eyes are parallel with the head piece, read the measurement to the nearest ⅛ inch, and make note of the first measurement.
- Move the headboard away; check the posture, and re-measure the student.
- Measurements should agree within ¼ inch, re-measure and select the average of the two measures that agree the most.
- Immediately record the results in the student health record or data log.

G.5.a Calculating BMI

After collecting the student's height and weight, the BMI can be calculated. There are several methods to determine BMI:

- BMI Wheel
- BMI calculation computer software
- BMI Table, found online at the CDC website http://cdc.gov/nccdphp/dnpa/healthyweight/assessing/bmi/00binaries/bmi-tables.pdf
- The Children's BMI Tool for Schools: http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/tool_for_schools.html
  - This Excel spreadsheet can be used by school, child care, and other professionals who want to compute Body Mass Index (BMI)-for-age for a group of up to 2000 children, such as for a school class room or grade.
- If using electronic health records, the program may calculate and plot BMI on the growth chart
- BMI Percentile Calculator for Child and Teen http://apps.nccd.cdc.gov/dnpabmi/
- BMI calculation by mathematical equation:

BMI =	(weight in pounds) divided by (height in inches X height in inches)	X 703

This website will calculate height percentile for you.

G.6 PARENT/GUARDIAN NOTIFICATION

See Safeguard 10: Provide all parents with a clear and respectful explanation of the BMI results and a list of appropriate follow-up actions.

G.7 EATING DISORDERS/MALNUTRITION

Although considered to be mental health disorders, eating disorders are remarkable for their association with nutrition-related problems. In anorexia nervosa, nutrition-related problems include refusal to maintain a minimally healthy body weight (e.g., 85% of that expected), dramatic weight loss, fear of

gaining weight even though underweight, preoccupation with food, and abnormal food consumption patterns. Anorexia nervosa is 10 times more common in females, especially just after onset of puberty, peaking at ages 12-13 years. Bulimia nervosa is an eating disorder with food addiction as the primary coping mechanism. In bulimia nervosa, problems include recurrent episodes of binge eating, a sense of lack of control over eating, and compensatory behavior after binge eating to prevent weight gain (e.g., self-induced vomiting, abuse of laxatives or diuretics, fasting). Body weight is often normal or slightly above normal.

Students identified to be at risk for malnutrition or failure-to-thrive or who are suspected to have eating disorders should be referred to a primary care provider for in-depth medical assessment. These nutrition-related conditions must be addressed cautiously and expediently. Aside from psychological disturbances, eating disorders can lead to serious electrolyte imbalances and dehydration. Long-term effects include osteoporosis. Death can occur in extreme cases. Because of the serious nature of these potential conditions, it is imperative that school health personnel communicate observations and concerns directly to the parent/guardian. Effective treatment for eating disorders involves medical and psychological treatment, nutritional counseling, and family and school support. Keep in mind that a diagnosis of an eating disorder can be made only by a physician or an appropriate health care provider.

Sources:

- BMI Screening Guidelines for Schools. Massachusetts Department of Public Health. 2014
- Maternal and Child Health Bureau. "Accurately Weighing and Measuring: Developing and Rating Your Measurement Technique". Department of Health and Human Services. 2014
- Maternal and Child Health Bureau. "Accurately Weighing and Measuring: Equipment". Department of Health and Human Services. 2014

Website Resources:

This website list was compiled for parents, school personnel and interested individuals. The websites listed are reliable sources of nutrition, physical activity and weight management.

- American Dietetic Association
- Center for Health and Health Care in Schools – Parents Resource Center
- CDC - Healthy Youth
- CDC – Healthy Weight Guidance
- CDC – Tips for Parents – Ideas to Help Children Maintain a Healthy Weight
- Fruits and Veggies: More Matters
- GirlsHealth
- Healthier Tennessee
- MyPlate
- Tennessee Department of Education, Office of Coordinated School Health
- Tennessee Department of Education, School Nutrition Programs
- Tennessee Department of Health, Nutrition
- UT Extension Service
- Weight Control Information Network: Helping Your Overweight Child

H. BLOOD PRESSURE SCREENING

No state statute or rule requires districts to provide this screening. School districts are required to implement this screening on direction from the Coordinated School Health grant and from the Local Education Agency (LEA) protocols.

H.1 BP SCREENING REQUIREMENT

At a minimum, all students in grades K, 2, 4, 6, 8, and one year (or class) of high school (usually the wellness classes) shall receive a blood pressure (BP) screening once a year. Whichever year (or class) of high school is selected, the same year (or class) should be screened year after year. For example, if the Wellness classes were chosen then wellness classes should be screened every year thereafter.

Additionally, all students who present with signs and symptoms that indicate a need should have their blood pressure status assessed and monitored. Education, counseling, and referral should be offered as indicated by the assessment.

H.2 BP SCREENING RATIONALE

1. Mortality due to hypertension (high blood pressure) and heart disease in Tennessee is among the highest in the nation.
2. Early identification followed by successful treatment may prevent heart disease, stroke and kidney failure.
3. Elevated BP may be an early indication of the presence of other disease, stroke and kidney failure.
4. Screening presents an excellent opportunity for health promotion related to cardiovascular health with a population of emerging adults.

H.3 BP SCREENING PROGRAM

School staff will organize and implement a BP assessment program which includes screening and education of risk factors associated with hypertension and cardiovascular disease. Screening can be accomplished as a collaborative community effort with qualified staff from other agencies or with appropriately trained volunteers. If volunteers are used, training regarding confidentiality should be a component of the training content.

Work with the appropriate persons within the school to coordinate the screening activity. The process for coordination with teachers varies among schools. There may be preferred classes during which screenings are usually allowed.

Develop or obtain forms for recording the results of the screening for each student (Appendix C). Develop or obtain parent/guardian notification forms (Appendix D) and educational brochures.

H.3.a Equipment Needed

A manual or hospital grade BP cuff can be used. The **preferred** method of BP measurement is auscultation (sphygmomanometer and stethoscope). Measures obtained by oscillometric devices (automated blood pressure monitors) that exceed the 90th BP percentile should be repeated by

auscultation. When measuring BP, use a stethoscope, sphygmomanometer, and correct size cuffs (pediatric, adult or large adult).

When measuring the student's height for use in assessing the student's BP a vertical measurement board (stadiometer), metallic measuring tape or yardstick attached to a flat wall with no baseboard should be used. A movable right triangular headboard should be used to site the accurate height. This may be attached to the measurement board or separate if using a metallic measuring tape or yardstick.

Equipment should be maintained and calibrated according to the manufacturer's guidelines to assure accurate measurements. Some sources recommend calibration of aneroid manometers on a semi-annual basis. Equipment should be cleaned prior to each use and when necessary to minimize the spread of infection.

H.3.b Setting up the Screening Area

1. Every effort should be made to ensure the students' privacy during the screening process.
2. Locate a quiet room for conducting the BP screenings.
3. Prior to conducting the screening, set up the room for screening one student at a time or use a privacy partition if more than one screener will be working in the same room.
4. Preferably, the student being screened should not be able to see or hear other students.
5. The room should have an area without a baseboard for mounting the metallic yardstick or stadiometer that will be used for measuring height.
6. To assist with the flow of students, you may wish to have a teacher or staff assistant monitor students waiting to be screened in an adjacent room or hallway. Once a student has been screened, he/she can join his/her classmates and the next student to be screened can then enter the screening room.
7. Have supplies available to clean equipment per the manufacturers' suggestions between each student.

H.3.c Student Preparation for BP Screening

Talk with the student using age and developmentally appropriate terms. You may need to use words like "pressure" rather than blood pressure, and "arrow" rather than needle. As appropriate, prior to checking a student's BP, the examiner should ask the caretaker or the student about the student's health history to determine if any risk factors exist that may cause BP readings to vary from the norm. Prior to screening, students should be given an explanation of hypertension, ways to help maintain a normal BP, and an overview of the screening process.

Advise students of the possibility that shoes will need to be removed and hairstyles may need to be adjusted in order to secure an accurate height measurement. Also advise students of clothing options that allow ease of baring the right arm for BP measurement. This may be done via a classroom instructional unit or if necessary, individually. Explain to the student that you will be measuring his/her BP to determine if it is within a normal range or high range. Let the student know that a person's BP changes during the day depending upon many factors (e.g., activity level, diet, medications). Advise the student that if the measurement is high, you will recheck his/her BP and may want to check it again on another day to see if the BP measurement is still high.

Help the student to understand that if his/her BP remains high after you have checked it several times, you will suggest that the student's parents/guardians have a health care practitioner check to determine if the student has hypertension. The results of the BP screening do not mean that the student has hypertension; it means that the BP measurement was high during the screening activity.

H.4 BP SCREENING PROCEDURE

In children and adolescents, the normal range of BP is determined by body size and age. BP standards that are based on gender, age, and height provide a more precise classification of BP according to body size. Screening should be conducted in a manner congruent with infection control and standard precautions. Trained personnel should follow standard practices and procedures for measuring BP. Screen for BP using an age and developmentally appropriate screening process.

H.4.a BP Measurement

1. Check to be sure that the sphygmomanometer has been calibrated in accordance with the manufacturer's suggestions.
2. Check the functionality of all equipment.
    a. Sphygmomanometer and stethoscope.
    b. Automated blood pressure monitors (oscillometric devices). Note: The **preferred** method of BP measurement is auscultation.
3. The screener may choose to stand or be seated during the BP measurement phase of the procedure.
4. Assess the BP:
    a. Prior to measuring BP, allow the student to rest at least 3-5 minutes.
    b. Explain the process to the student.
    c. Position student appropriately:
        i. Student should be seated with feet flat on floor.
        ii. Student should be leaning gently against back of chair, not on arm.
        iii. The entire arm in which the BP will be measured should be fully supported on a firm surface (table) with the right arm (brachial artery) at heart level.
        iv. Upper arm should be bare – do not apply cuff over clothing.
    d. Choose appropriate cuff size:
        i. The screener must ensure that the rubber bladder completely encircles the student's arm and the width of the bladder covers approximately 75% of the upper arm. Most modern cuffs are marked with range lines to denote need to use larger or smaller cuff. Proper cuff size is essential for measuring BP accurately.
        ii. If there is a question between two cuffs, use the larger one. A cuff that is too small may result in an artificially elevated BP whereas a slightly larger cuff is unlikely to cause a falsely elevated BP level.
    e. Place the BP cuff on the upper right arm:
        i. Leave enough room at the top of the cuff to prevent obstruction to the axilla and enough room at the bottom to place the stethoscope in the antecubital fossa.
        ii. Position the right arm so that the brachial artery is at heart level.
        iii. The right arm is preferred for consistency and comparison with standard tables for BP parameters and because of the possibility of coarctation of the aorta, which might result in false low readings in the left arm.

f. To determine how far to inflate the cuff for measuring the student's BP:
    i. Palpate for the radial pulse.
    ii. Inflate the cuff while palpating the radial pulse.
    iii. Note the level at which the radial pulse disappears.
    iv. Release air from cuff rapidly and wait 15 seconds prior to measuring the student's BP.
    v. When measuring the BP, inflate the cuff 20–30 mm Hg above the point where the radial pulse disappeared.
g. After the 15 second wait period, measure the student's BP:
    i. Palpate the brachial pulse.
    ii. Place the ear tips of the stethoscope in your ears with tips facing forward.
    iii. Place the diaphragm of the stethoscope over the brachial artery. The diaphragm of the stethoscope should not touch the cuff.
    iv. Rapidly inflate cuff 20–30 mm Hg above the point at which the radial pulse disappeared.
    v. Release cuff pressure at a rate of 2–3 mm Hg per second, while auscultating brachial artery.
    vi. The systolic BP reading is determined at the onset of a clear 'tapping' sound (1st Korotkoff sound).
    vii. The diastolic BP reading is determined at the disappearance of Korotkoff sounds (5th Korotkoff sound). After the disappearance of Korotkoff sounds, continue to deflate the cuff slowly for another 10 mm Hg. If no further sounds are heard, rapidly release all air in the cuff and record the BP measurement.
    viii. If the Korotkoff sounds continue to 0 mm Hg or is very low, repeat the BP measurement with less pressure on the head of the stethoscope. In some children, Korotkoff sounds can be heard to 0 mmHg. Under these circumstances, the BP measurement should be repeated with less pressure on the head of the stethoscope.
    ix. If the very low 5th Korotkoff sound persists record the 4th Korotkoff (muffling of the sounds) as the diastolic BP.

H.4.b Height Measurement

If you do not already have a current height measurement for the student, measure the student's height and plot it on the appropriate gender specific CDC stature-for-age growth charts. Children who are able to stand on their own should be measured standing, without shoes, using a vertical measurement board (stadiometer) or a metallic measuring tape/yardstick attached to a flat wall with no baseboard. A movable right triangular headboard should be used when actually measuring height. Do not use the measuring rod attached to the platform scale. Prior to starting, check measurement board to ensure it is working correctly. The headboard should slide easily, but should not be so loose or worn that it slips when measuring the height.

1. Remove the child's shoes, hats, and bulky clothing, such as coats and sweaters. Undo or adjust hairstyles and remove hair accessories that interfere with measurement.
2. Have the student stand erect, with shoulders level, hands at sides, knees or thighs together and weight evenly distributed on both feet.
3. The student's feet should be flat on the floor or foot piece, with both heels at base of the vertical board. When possible, all four contact points (i.e., the head, back, buttocks, and heels) should

touch the vertical surface while maintaining a natural stance. Some students will not be able to maintain a natural stance with all four contact points touching the vertical surface. For these students, at a minimum, two contact points; the head and buttocks, or the buttocks and heels, should always touch the vertical surface.

4. Position the student's head by placing a hand on the student's chin to move the head into the Frankfort Plane. The Frankfort Plane is an imaginary line from the lower margin of the eye socket to the notch above the tragus of the ear. When aligned correctly, the Frankfort Plane is parallel to the horizontal headboard and perpendicular to the vertical measurement board. This is best viewed and aligned when the screener is directly to the side and at eye level with the child.
5. Assure student's legs are straight, arms are at sides, and shoulders are relaxed.
6. Ask the child to look straight ahead, inhale deeply and to stand fully erect without altering the position of the heels.
    a. Lower the headpiece until it firmly touches the crown of the head with sufficient pressure to compress the hair and is at a right angle with the measurement surface.
    b. Check contact points to ensure that the lower body stays in the proper position and heels remain flat. Some students may stand up on their toes, but verbal reminders are usually sufficient to get them in proper position.
    c. Position yourself so that your eyes are parallel with the head piece, read the measurement to the nearest ⅛ inch, and make note of the first measurement.
    d. Move the headboard away; check the posture, and re-measure the student.
    e. Measurements should agree within ¼ inch, re-measure and select the average of the two measures that agree the most.
    f. Immediately record the results in the student health record or data log.

H.5 BP STATUS

Blood Pressure Status Overview for Children and Adolescents:

1. Normal BP is defined as systolic and diastolic that is < the 90th percentile for gender, age, and height.
2. Prehypertension is defined as average systolic and/or diastolic levels that are ≥ the 90th percentile but < the 95th percentile for gender, age, and height on three or more occasions. BP levels ≥ 120/80 mmHg but < the 95th percentile should be considered prehypertensive.
3. Hypertension is defined as average systolic and/or diastolic that is ≥ the 95th percentile for gender, age, and height on three or more occasions. Hypertension is classified into two stages:
    a. Stage 1 hypertension is an average systolic and/or diastolic that is from the 95th to the 99th percentile plus 5 mmHg.
    b. Stage 2 hypertension is an average systolic and/or diastolic that is > the 99th percentile plus 5 mmHg. For the purpose of a screening referral, **hypertensive levels within the Stage 2 classification will warrant priority referral.**

H.5.a Using the Blood Pressure Tables

Gender Specific BP Levels by Age and Height Percentile tables created by International Pediatric Hypertension Association are available on pages 43-46.

1. Determine height percentile of the student using the appropriate gender specific CDC growth chart. If the student's height percentile is between two percentiles, use the higher percentile.

2. Measure and record the child's systolic BP and diastolic BP.
3. On the Gender Specific BP Levels by Age and Height Percentile table find the child's age on the left side of the table. Follow the age row horizontally across the table to the intersection of the line for the child's height (vertical columns labeled 5th, 10th, 25th, 50th, 75th, 90th, and 95th – see image below). If the student's height is between percentiles, use the larger height percentile.

Age yrs	BP Percentile	Systolic BP (mmHg)							Diastolic BP (mmHg)						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
	Height inches	31.9	32.4	33.3	34.2	35.1	36.0	36.5	31.9	32.4	33.3	34.2	35.1	36.0	36.5

4. Now, compare the student's systolic and diastolic BP measurements with the level provided in the BP tables to determine if the measurement falls in a normal or abnormal category. If the initial BP reading is greater than the 90th percentile (yellow, orange or red row), the BP should be repeated twice at the same visit, and an average systolic and diastolic BP should be used. Measures obtained by oscillometric devices that exceed the 90th BP percentile (yellow, orange or red row) should be repeated by auscultation.
    a. The GREEN row represents a normal blood pressure value or a blood pressure that is normotensive (NT).
    b. The YELLOW row may represent prehypertension (PreHT).
    c. The ORANGE row (Stage 1 HT) may represent hypertension and should be repeated on two additional occasions. If hypertension is confirmed, referral is required.
    d. The RED row (Stage 2 HT) requires prompt referral for evaluation and therapy. If the patient is symptomatic, immediate **priority referral** and treatment are indicated.

Legend for the Gender Specific BP Levels by Age and Height Percentile Table:
NT = Normotensive = GREEN row (50th percentile)
PreHT = Pre-hypertensive = YELLOW row (90th percentile)
Stage 1 HT = Stage 1 hypertensive = ORANGE row (95th to the 99th percentile plus 5 mmHg)
Stage 2 HT = Stage 2 hypertensive = RED row (99th percentile plus 5mmHg)

H.5.b Assessment & Referral Criteria

In presenting these guidelines we acknowledge that the school nurse may exercise her/his clinical judgment regarding referral decisions. Keep in mind that for all ages and heights a BP measurement that is ≥ 120/80 (diastolic and/or systolic) is considered prehypertensive, unless the BP reading for the student's height and age is in the hypertensive category.

1. If BP (systolic and diastolic) is in the GREEN row and normotensive (NT):
    a. Provide educational material regarding healthy diet, sleep and physical activity for maintaining a healthy cardiovascular system.
2. If BP (systolic and/or diastolic), after being repeated twice at the same visit, is in the YELLOW row under the prehypertensive (PreHT) range:
    a. Provide educational material regarding healthy diet, sleep and physical activity.
    b. Recheck the student's BP again within two weeks, on two separate visits that are a few days apart. If the average of the three measurements or 2 of 3 of the readings is considered prehypertensive, recommend that the parent/guardian notify the student's health care practitioner at the student's next regularly scheduled visit.
3. If BP (systolic and/or diastolic), after being repeated twice at the same visit, is in the ORANGE row under the stage 1 hypertensive (Stage 1 HT) range:

a. Assess for other symptoms of hypertension (e.g., headaches, blurred vision, feeling faint) and/or other activities that might explain a high BP (e.g., exercise prior to BP measurement, caffeine intake, medications).
    i. If symptomatic, ask the student to rest for 15 minutes; then recheck the student's BP. Average the two measurements.
        - Refer for evaluation by the student's health care practitioner.
        - A telephone call to the student's parent/guardian should be placed immediately to discuss the BP screening results and to assist with referral completion.
    ii. If not symptomatic, recheck the student's BP again within one week, on two separate visits that are a few days apart. Average the three measurements.
        - If the average of the measurements is elevated, contact the parent/guardian and refer for an evaluation by the student's health care practitioner.
b. Provide educational material regarding healthy diet, sleep and physical activity.

4. If BP (systolic and/or diastolic), after being repeated twice at the same visit, is in the RED row under the stage 2 hypertensive (Stage 2 HT) range it is **priority referral**:
    a. Assess for other symptoms of hypertension (e.g. headaches, blurred vision, feeling faint) and/or other activities that might explain a high BP (e.g., exercise prior to BP measurement, caffeine intake, and medications).
        i. Ask the student to rest for 15 minutes; then recheck the student's BP. Average the two measurements.
            - Immediate referral for evaluation by the student's health care practitioner.
            - A telephone call to the student's parent/guardian should be placed immediately to discuss the BP screening results and to assist with referral completion.
    b. Provide educational material regarding healthy diet, sleep and physical activity.

H.6 PARENT/GUARDIAN NOTIFICATION

Parents/guardians should be notified of their child's screening results and provided information regarding cardiovascular health maintenance. Education and counseling should be provided about normal findings, deviations from normal, and for any specific concerns identified during the visit. Referrals for assessment, treatment, and follow-up, may be made using an appropriate parent notification form found in Appendix D.

All students with a BP assessment that varies from normotensive should receive a referral to their health care practitioner for evaluation and treatment as indicated. Efforts should be made by the school nurse to assist parents/guardians with referral completion. All findings, referrals, and follow-up should be documented in the student's school health record

Sources:

- The Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents, U.S. Department of Health and Human Services, National Institutes of Health, National Heart, Lung and Blood Institute, Revised May 2005.
- Centers for Disease Control and Prevention Clinical Growth Charts
- National High Blood Pressure Education Program. 2003. 7th report of the Joint National Committee on Detection, Evaluation, and Treatment of High BP

BP Levels for Boys by Age and Height Percentile

Updated: January, 2012

Age yrs	BP Percentile	Systolic BP (mmHg)							Diastolic BP (mmHg)						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
2	Height - *inches*	31.9	32.4	33.3	34.2	35.1	36.0	36.5	31.9	32.4	33.3	34.2	35.1	36.0	36.5
	Height - *cm*	81.1	82.4	84.5	86.9	89.2	91.4	92.6	81.1	82.4	84.5	86.9	89.2	94.4	92.6
	NT	84	85	87	88	90	92	92	39	40	41	42	43	44	44
	PreHT	97	99	100	102	104	105	106	54	55	56	57	58	58	59
	Stage 1 HT	101	102	104	106	108	109	110	59	59	60	61	62	63	63
	Stage 2 HT	114	115	116	118	120	122	122	71	72	73	74	75	76	76
3	Height - *inches*	35.1	35.6	36.5	37.5	38.6	39.5	40.1	35.1	35.6	36.5	37.5	38.6	39.5	40.1
	Height - *cm*	89.2	90.5	92.7	95.3	97.9	100.4	101.9	89.2	90.5	92.7	95.3	97.9	100.4	101.9
	NT	86	87	89	91	93	94	95	44	44	45	46	47	48	48
	PreHT	100	101	103	105	107	108	109	59	59	60	61	62	63	63
	Stage 1 HT	104	105	107	109	110	112	113	63	63	64	65	66	67	67
	Stage 2 HT	116	117	119	121	123	124	125	76	76	77	78	79	80	80
4	Height - *inches*	37.6	38.2	39.3	40.4	41.5	42.5	43.1	37.6	38.2	39.3	40.4	41.5	42.5	43.1
	Height - *cm*	96.5	97.1	99.7	102.5	105.4	108.0	109.5	96.5	97.1	99.7	102.5	105.4	108.0	109.5
	NT	88	89	91	93	95	96	97	47	48	49	50	51	51	52
	PreHT	102	103	105	107	109	110	111	62	63	64	65	66	66	67
	Stage 1 HT	106	107	109	111	112	114	115	66	67	68	69	70	71	71
	Stage 2 HT	118	119	121	123	125	126	127	79	80	81	82	83	83	84
5	Height - *inches*	39.9	40.6	41.7	43.0	44.2	45.3	46.0	39.9	40.6	41.7	43.0	44.2	45.3	46.0
	Height - *cm*	101.5	103.2	106.0	109.2	112.3	115.1	116.8	101.5	103.2	106.0	109.2	112.3	115.1	116.8
	NT	90	91	93	95	96	98	98	50	51	52	53	54	55	55
	PreHT	104	105	106	108	110	111	112	65	66	67	68	69	69	70
	Stage 1 HT	108	109	110	112	114	115	116	69	70	71	72	73	74	74
	Stage 2 HT	120	121	123	125	126	128	128	82	83	84	85	86	86	87
6	Height - *inches*	42.2	43.0	44.2	45.5	46.9	48.1	48.8	42.2	43.0	44.2	45.5	46.9	48.1	48.8
	Height - *cm*	107.3	109.2	112.2	115.7	119.1	122.1	123.9	107.3	109.2	112.2	115.7	119.1	122.1	123.9
	NT	91	92	94	96	98	99	100	53	53	54	55	56	57	57
	PreHT	105	106	108	110	111	113	113	68	68	69	70	71	72	72
	Stage 1 HT	109	110	112	114	115	117	117	72	72	73	74	75	76	76
	Stage 2 HT	121	122	124	126	128	129	130	85	85	86	87	88	89	89
7	Height - *inches*	44.6	45.3	46.6	48.0	49.5	50.8	51.6	44.6	45.3	46.6	48.0	49.5	50.8	51.6
	Height - *cm*	113.2	115.1	118.4	122.0	125.7	129.0	131.0	113.2	115.1	118.4	122.0	125.7	129.0	131.0
	NT	92	94	95	97	99	100	101	55	55	56	57	58	59	59
	PreHT	106	107	109	111	113	114	115	70	70	71	72	73	74	74
	Stage 1 HT	110	111	113	115	117	118	119	74	74	75	76	77	78	78
	Stage 2 HT	122	123	125	127	129	130	131	87	87	88	89	90	91	91
8	Height - *inches*	46.8	47.6	48.9	50.4	52.0	53.4	54.3	46.8	47.6	48.9	50.4	52.0	53.4	54.3
	Height - *cm*	118.8	120.8	124.3	128.1	132.1	135.7	137.8	118.8	120.8	124.3	128.1	132.1	135.7	137.8
	NT	94	95	97	99	100	102	102	56	57	58	59	60	60	61
	PreHT	107	109	110	112	114	115	116	71	72	72	73	74	75	76
	Stage 1 HT	111	112	114	116	118	119	120	75	76	77	78	79	79	80
	Stage 2 HT	124	125	127	128	130	132	132	88	89	90	91	92	92	93
9	Height - *inches*	48.7	49.6	51.0	52.7	54.3	55.8	56.7	48.7	49.6	51.0	52.7	54.3	55.8	56.7
	Height - *cm*	123.8	126.0	129.6	133.7	137.9	141.8	144.1	123.8	126.0	129.6	133.7	137.9	141.8	144.1
	NT	95	96	98	100	102	103	104	57	58	59	60	61	61	62
	PreHT	109	110	112	114	115	117	118	72	73	74	75	76	76	77
	Stage 1 HT	113	114	116	118	119	121	121	76	77	78	79	80	81	81
	Stage 2 HT	125	126	128	130	132	133	134	89	90	91	92	93	93	94

BP Levels for Boys by Age and Height Percentile *(Cont'd)*

Updated: January, 2012

IPHA

Age yrs	BP Percentile	Systolic BP (mmHg)							Diastolic BP (mmHg)						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
10	Height - *inches*	50.5	51.4	52.9	54.7	56.4	58.0	59.0	50.5	51.4	52.9	54.7	56.4	58.0	59.0
	Height - *cm*	128.2	130.5	134.4	138.8	143.3	147.4	149.0	128.2	130.5	134.4	138.8	143.3	147.4	149.0
	NT	97	98	100	102	103	105	106	58	59	60	61	61	62	63
	PreHT	111	112	114	115	117	119	119	73	73	74	75	76	77	78
	Stage 1 HT	115	116	117	119	121	122	123	77	78	79	80	81	81	82
	Stage 2 HT	127	128	130	132	133	135	135	90	91	91	93	93	94	95
11	Height - *inches*	52.1	53.1	54.7	56.6	58.5	60.2	61.2	52.1	53.1	54.7	56.6	58.5	60.2	61.2
	Height - *cm*	132.4	134.9	139.0	143.7	148.5	152.9	155.6	132.4	134.9	139.0	143.7	148.5	152.9	155.6
	NT	99	100	102	104	105	107	107	59	59	60	61	62	63	63
	PreHT	113	114	115	117	119	120	121	74	74	75	76	77	78	78
	Stage 1 HT	117	118	119	121	123	124	125	78	78	79	80	81	82	82
	Stage 2 HT	129	130	132	134	135	137	137	91	91	92	93	94	95	95
12	Height - *inches*	54.1	55.1	56.8	58.8	60.8	62.6	63.7	54.1	55.1	56.8	58.8	60.8	62.6	63.7
	Height - *cm*	137.3	139.9	144.3	149.3	154.4	159.0	161.9	137.3	139.9	144.3	149.3	154.4	159.0	161.9
	NT	101	102	104	106	108	109	110	59	60	61	62	63	63	64
	PreHT	115	116	118	120	121	123	123	74	75	75	76	77	78	79
	Stage 1 HT	119	120	122	123	125	127	127	78	79	80	81	82	82	83
	Stage 2 HT	131	132	134	136	138	139	140	91	92	93	94	95	95	96
13	Height - *inches*	56.5	57.6	59.5	61.6	63.7	65.6	66.7	56.5	57.6	59.5	61.6	63.7	65.6	66.7
	Height - *cm*	143.6	146.4	151.1	156.4	161.7	166.6	169.5	143.6	146.4	151.1	156.4	161.7	166.6	169.5
	NT	104	105	106	108	110	111	112	60	60	61	62	63	64	64
	PreHT	117	118	120	122	124	125	126	75	75	76	77	78	79	79
	Stage 1 HT	121	122	124	126	128	129	130	79	79	80	81	82	83	83
	Stage 2 HT	133	135	136	138	140	141	142	92	92	93	94	95	96	96
14	Height - *inches*	59.3	60.5	62.5	64.6	66.7	68.6	69.7	59.3	60.5	62.5	64.6	66.7	68.6	69.7
	Height - *cm*	150.5	153.6	158.7	164.1	169.5	174.2	177.0	150.5	153.6	158.7	164.1	169.5	174.2	177.0
	NT	106	107	109	111	113	114	115	60	61	62	63	64	65	65
	PreHT	120	121	123	125	126	128	128	75	76	77	78	79	79	80
	Stage 1 HT	124	125	127	128	130	132	132	80	80	81	82	83	84	84
	Stage 2 HT	136	137	139	141	143	144	145	92	93	94	95	96	97	97
15	Height - *inches*	61.7	62.9	64.9	67.0	69.0	70.8	71.8	61.7	62.9	64.9	67.0	69.0	70.8	71.8
	Height - *cm*	156.7	159.8	164.8	170.1	175.3	179.8	182.4	156.7	159.8	164.8	170.1	175.3	179.8	182.4
	NT	109	110	112	113	115	117	117	61	62	63	64	65	66	66
	PreHT	122	124	125	127	129	130	131	76	77	78	79	80	80	81
	Stage 1 HT	126	127	129	131	133	134	135	81	81	82	83	84	85	85
	Stage 2 HT	139	140	141	143	145	147	147	93	94	95	96	97	98	98
16	Height - *inches*	63.3	64.5	66.3	68.4	70.3	72.0	73.0	63.3	64.5	66.3	68.4	70.3	72.0	73.0
	Height - *cm*	160.8	163.7	168.5	173.6	178.6	182.9	185.5	160.8	163.7	168.5	173.6	178.6	182.9	185.5
	NT	111	112	114	116	118	119	120	63	63	64	65	66	67	67
	PreHT	125	126	128	130	131	133	134	78	78	79	80	81	82	82
	Stage 1 HT	129	130	132	134	135	137	137	82	83	83	84	85	86	87
	Stage 2 HT	141	142	144	146	148	149	150	95	95	96	97	98	99	99
17	Height - *inches*	64.2	65.3	67.1	69.0	70.9	72.6	73.6	64.2	65.3	67.1	69.0	70.9	72.6	73.6
	Height - *cm*	163.1	165.8	170.4	175.3	180.2	184.5	187.0	163.1	165.8	170.4	175.3	180.2	184.5	187.0
	NT	114	115	116	118	120	121	122	65	66	66	67	68	69	70
	PreHT	127	128	130	132	134	135	136	80	80	81	82	83	84	84
	Stage 1 HT	131	132	134	136	138	139	140	84	85	86	87	87	88	89
	Stage 2 HT	144	145	146	148	150	151	152	97	98	98	99	100	101	102

The 90th percentile is 1.28 SD, the 95th percentile is 1.645 SD, and the 99th percentile is 2.326 SD over the mean.

NT = normotensive (50th percentile **PreHT** = pre-hypertensive (90th percentile) **HT** = hypertensive (95th percentile for stage 1 and 99th% + 5 mmHg for stage 2)

BP Levels for Girls by Age and Height Percentile

Updated: January, 2012

IPHA

Age yrs	BP Percentile	Systolic BP (mmHg)							Diastolic BP (mmHg)						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
2	Height - *inches*	31.4	31.9	32.7	33.6	34.5	35.4	35.9	31.4	31.9	32.7	33.6	34.5	35.4	35.9
	Height - *cm*	79.6	80.9	83.0	85.4	87.7	89.9	91.1	79.6	80.9	83.0	85.4	87.7	89.9	91.1
	NT	85	85	87	88	89	91	91	43	44	44	45	46	46	47
	PreHT	98	99	100	101	103	104	105	57	58	58	59	60	61	61
	Stage 1 HT	102	103	104	105	107	108	109	61	62	62	63	64	65	65
	Stage 2 HT	114	115	116	117	119	120	121	74	74	75	75	76	77	77
3	Height - *inches*	34.6	35.1	36.0	37.1	38.1	39.1	39.7	34.6	35.1	36.0	37.1	38.1	39.1	39.7
	Height - *cm*	87.8	89.2	91.6	94.2	96.9	99.3	100.8	87.8	89.2	91.6	94.2	96.9	99.3	100.8
	NT	86	87	88	89	91	92	93	47	48	48	49	50	50	51
	PreHT	100	100	102	103	104	106	106	61	62	62	63	64	64	65
	Stage 1 HT	104	104	105	107	108	109	110	65	66	66	67	68	68	69
	Stage 2 HT	116	116	118	119	120	121	122	78	78	79	79	80	81	81
4	Height - *inches*	37.0	37.6	38.6	39.8	40.9	42.0	42.7	37.0	37.6	38.6	39.8	40.9	42.0	42.7
	Height - *cm*	94.0	95.6	98.1	101.0	104.0	106.8	108.4	94.0	95.6	98.1	101.0	104.0	106.8	108.4
	NT	88	88	90	91	92	94	94	50	50	51	52	52	53	54
	PreHT	101	102	103	104	106	107	108	64	64	65	66	67	67	68
	Stage 1 HT	105	106	107	108	110	111	112	68	68	69	70	71	71	72
	Stage 2 HT	117	118	119	120	122	123	124	81	81	81	82	83	84	84
5	Height - *inches*	39.5	40.2	41.3	42.5	43.8	45.0	45.7	39.5	40.2	41.3	42.5	43.8	45.0	45.7
	Height - *cm*	100.4	102.0	104.8	108.0	111.2	114.3	116.1	100.4	102.0	104.8	108.0	111.2	114.3	116.1
	NT	89	90	91	93	94	95	96	52	53	53	54	55	55	56
	PreHT	103	103	105	106	107	109	109	66	67	67	68	69	69	70
	Stage 1 HT	107	107	108	110	111	112	113	70	71	71	72	73	73	74
	Stage 2 HT	119	119	121	122	123	125	125	83	83	84	84	85	86	86
6	Height - *inches*	42.1	42.8	43.9	45.3	46.7	48.0	48.8	42.1	42.8	43.9	45.3	46.7	48.0	48.8
	Height - *cm*	106.9	108.6	111.6	115.0	118.6	121.9	123.9	106.9	108.6	111.6	115.0	118.6	121.9	123.9
	NT	91	92	93	94	96	97	98	54	54	55	56	56	57	58
	PreHT	104	105	106	108	109	110	111	68	68	69	70	70	71	72
	Stage 1 HT	108	109	110	111	113	114	115	72	72	73	74	74	75	76
	Stage 2 HT	120	121	122	124	125	126	127	85	85	85	86	87	88	88
7	Height - *inches*	44.5	45.2	46.5	47.9	49.4	50.8	51.7	44.5	45.2	46.5	47.9	49.4	50.8	51.7
	Height - *cm*	113.1	114.9	118.1	121.8	125.6	129.1	131.3	113.1	114.9	118.1	121.8	125.6	129.1	131.3
	NT	93	93	95	96	97	99	99	55	56	56	57	58	58	59
	PreHT	106	107	108	109	111	112	113	69	70	70	71	72	72	73
	Stage 1 HT	110	111	112	113	115	116	116	73	74	74	75	76	76	77
	Stage 2 HT	122	123	124	125	127	128	129	86	86	87	87	88	89	89
8	Height - *inches*	46.7	47.5	48.8	50.3	51.9	53.4	54.3	46.7	47.5	48.8	50.3	51.9	53.4	54.3
	Height - *cm*	118.5	120.5	123.9	127.8	131.9	135.6	137.9	118.5	120.5	123.9	127.8	131.9	135.6	137.9
	NT	95	95	96	98	99	100	101	57	57	57	58	59	60	60
	PreHT	108	109	110	111	113	114	114	71	71	71	72	73	74	74
	Stage 1 HT	112	112	114	115	116	118	118	75	75	75	76	77	78	78
	Stage 2 HT	124	125	126	127	128	130	130	87	87	88	88	89	90	91
9	Height - *inches*	48.5	19.3	50.8	52.4	54.1	55.7	56.6	48.5	19.3	50.8	52.4	54.1	55.7	56.6
	Height - *cm*	123.2	125.3	129.0	133.1	137.4	141.4	143.8	123.2	125.3	129.0	133.1	137.4	141.4	143.8
	NT	96	97	98	100	101	102	103	58	58	58	59	60	61	61
	PreHT	110	110	112	113	114	116	116	72	72	72	73	74	75	75
	Stage 1 HT	114	114	115	117	118	119	120	76	76	76	77	78	79	79
	Stage 2 HT	126	126	128	129	130	132	132	88	88	89	89	90	91	92

BP Levels for Girls by Age and Height Percentile *(Cont'd)*

Updated: January, 2012

IPHA

Age yrs	BP Percentile	Systolic BP (mmHg)							Diastolic BP (mmHg)						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
10	Height - *inches*	50.2	51.1	52.6	54.4	56.2	57.9	58.9	50.2	51.1	52.6	54.4	56.2	57.9	58.9
	Height - *cm*	127.5	129.8	133.7	138.2	142.8	147.0	149.6	127.5	129.8	133.7	138.2	142.8	147.0	149.6
	NT	98	99	100	102	103	104	105	59	59	59	60	61	62	62
	PreHT	112	112	114	115	116	118	118	73	73	73	74	75	76	76
	Stage 1 HT	116	116	117	119	120	121	122	77	77	77	78	79	80	80
	Stage 2 HT	128	128	130	131	132	134	134	89	89	90	91	91	92	93
11	Height - *inches*	52.1	53.1	54.9	56.8	58.7	60.5	61.6	52.1	53.1	54.9	56.8	58.7.	60.5	61.6
	Height - *cm*	132.4	135.0	139.4	144.3	149.2	153.7	156.4	132.4	135.0	139.4	144.3	149.2	153.7	156.4
	NT	100	101	102	103	105	106	107	60	60	60	61	62	63	63
	PreHT	114	114	116	117	118	119	120	74	74	74	75	76	77	77
	Stage 1 HT	118	118	119	121	122	123	124	78	78	78	79	80	81	81
	Stage 2 HT	130	130	131	133	134	135	136	90	90	91	92	92	93	94
12	Height - *inches*	54.8	55.9	57.7	59.6	61.6	63.3	64.4	54.8	55.9	57.7	59.6	61.6	63.3	64.4
	Height - *cm*	139.2	142.0	146.5	151.5	156.4	160.8	163.5	139.2	142.0	146.5	151.5	156.4	160.8	163.5
	NT	102	103	104	105	107	108	109	61	61	61	62	63	64	64
	PreHT	116	116	117	119	120	121	122	75	75	75	76	77	78	78
	Stage 1 HT	119	120	121	123	124	125	126	79	79	79	80	81	82	82
	Stage 2 HT	132	132	133	135	136	137	138	91	91	92	93	93	94	95
13	Height - *inches*	57.4	58.4	60.1	61.9	63.8	65.4	66.4	57.4	58.4	60.1	61.9	63.8	65.4	66.4
	Height - *cm*	145.9	148.4	152.7	157.3	162.0	166.1	168.6	145.9	148.4	152.7	157.3	162.0	166.1	168.6
	NT	104	105	106	107	109	110	110	62	62	62	63	64	65	65
	PreHT	117	118	119	121	122	123	124	76	76	76	77	78	79	79
	Stage 1 HT	121	122	123	124	126	127	128	80	80	80	81	82	83	83
	Stage 2 HT	133	134	135	137	138	139	140	92	92	93	94	94	95	96
14	Height - *inches*	58.9	59.9	61.4	63.2	64.9	66.5	67.4	58.9	59.9	61.4	63.2	64.9	66.5	67.4
	Height - *cm*	149.7	152.1	156.0	160.5	164.9	168.9	171.3	149.7	152.1	156.0	160.5	164.9	168.9	171.3
	NT	106	106	107	109	110	111	112	63	63	63	64	65	66	66
	PreHT	119	120	121	122	124	125	125	77	77	77	78	79	80	80
	Stage 1 HT	123	123	125	126	127	129	129	81	81	81	82	83	84	84
	Stage 2 HT	135	136	137	138	140	141	141	93	93	94	95	95	96	97
15	Height - *inches*	59.6	60.5	62.0	63.7	65.5	67.0	68.0	59.6	60.5	62.0	63.7	65.5	67.0	68.0
	Height - *cm*	151.3	153.6	157.5	161.9	166.3	170.2	172.6	151.3	153.6	157.5	161.9	166.3	170.2	172.6
	NT	107	108	109	110	111	113	113	64	64	64	65	66	67	67
	PreHT	120	121	122	123	125	126	127	78	78	78	79	80	81	81
	Stage 1 HT	124	125	126	127	129	130	131	82	82	82	83	84	85	85
	Stage 2 HT	136	137	138	139	141	142	143	94	94	95	96	96	97	98
16	Height - *inches*	59.8	60.7	62.3	64.0	65.7	67.3	68.2	59.8	60.7	62.3	64.0	65.7	67.3	68.2
	Height - *cm*	151.9	154.3	158.2	162.6	166.9	170.9	173.2	151.9	154.3	158.2	162.6	166.9	170.9	173.2
	NT	108	108	110	111	112	114	114	64	64	65	66	66	67	68
	PreHT	121	122	123	124	126	127	128	78	78	79	80	81	81	82
	Stage 1 HT	125	126	127	128	130	131	132	82	82	83	84	85	85	86
	Stage 2 HT	137	138	139	140	142	143	144	95	95	95	96	97	98	98
17	Height - *inches*	60.0	60.9	62.4	64.1	65.9	67.4	68.3	60.0	60.9	62.4	64.1	65.9	67.4	68.3
	Height - *cm*	152.3	154.6	158.6	162.9	167.3	171.2	173.6	152.3	154.6	158.6	162.9	167.3	171.2	173.6
	NT	108	109	110	111	113	114	115	64	65	65	66	67	67	68
	PreHT	122	122	123	125	126	127	128	78	79	79	80	81	81	82
	Stage 1 HT	125	126	127	129	130	131	132	82	83	83	84	85	85	86
	Stage 2 HT	138	138	139	141	142	143	144	95	95	96	96	97	98	98

The 90th percentile is 1.28 SD, the 95th percentile is 1.645 SD, and the 99th percentile is 2.326 SD over the mean.

NT = normotensive (50th percentile **PreHT** = pre-hypertensive (90th percentile) **HT** = hypertensive (95th percentile for stage 1 and 99th% + 5 mmHg for stage 2)

I. SCOLIOSIS SCREENING

Schools are encouraged to screen all 6th graders for scoliosis once a year. Staff training for scoliosis screenings is required and specific LEA protocols must be used. If your school system chooses to screen for scoliosis (6th grade only), it is recommended to partner with a local orthopedic doctor, osteopathy doctor or other trained professional to provide specific training for school staff and/or volunteers.

I.1 SCOLIOSIS SCREENING RATIONALE

Scoliosis is a physical condition characterized by an abnormal curvature of the spine. Its cause is unknown in most cases. The amount of curvature is measured in degrees after an X-ray and can vary from mild to severe. It is most often seen in the middle school age group, when rapid growth is occurring. Both girls and boys may be affected, but girls tend to progress eight times more frequently. Treatment ranges from observation to bracing to corrective surgery in severe cases. After scoliosis is identified or suspected, follow-up is essential to measure the degree of curvature and determine treatment options. Kyphosis, an accentuated spinal hump, and lordosis, or swayback, may occur independently or in conjunction with scoliosis.

I.2 SCOLIOSIS SCREENING PROGRAM

Every student present will be screened, unless the parent/guardian decline the screening in writing through active permission or returns the passive permission form declining the screening for their child.

Scoliosis screening consists of a primary screen by school personnel. Specially-trained PE teachers, clinic personnel, or volunteers can complete or assist school nurses with primary screening. Female examiners are preferable for female students. A second screening of those who appear to deviate from normal shall be performed at a separate session by someone other than the original screener. The same screening procedure will be used for both the primary screening and for those students with positive findings selected for rescreening.

Screening involves examination of the student's unclothed back. Female students can be screened wearing just a bra above the waist (preferred), or can wear a bathing suit under their clothes for the day of screening. The student will be asked to stand straight, and then bend forward while the examiner looks from the front, the back and the side. The screener looks for obvious curves, rib humps, uneven shoulders, waist or hips.

Tips for setting up a Successful Scoliosis Screen:

1. Training for volunteers and new staff, and a refresher for experienced screeners should be done shortly before the screening date.
2. Schedule the screening so that there are no conflicts with testing, field trips, etc.
3. Schedule when secondary screeners can be available if possible.
4. Many middle schools schedule screenings during PE or exploratory periods on one day and reschedule lunch periods if necessary to complete screenings.
5. Send letters/permission forms home one to two weeks before the screening is scheduled.
6. Have teachers collect and save the "Do Not Screen" letters.
7. Prepare students the day before screening, discussing the procedure that will be followed. Every effort should be made to minimize their anxieties.

8. Remind female students the day before to wear bras or bathing suits under clothes.
9. It is strongly recommended to have 2 screeners present.
10. It is strongly recommended that girls be examined by females. If this is not possible, it is mandatory that a female chaperone be in attendance at all times when girls are being examined.
11. Students or teachers should complete the personal information on the screening forms and the student should bring the completed form to the screening.
12. It is very important to manage the screening area so that the student's privacy is maintained i.e., utilizing boys' and girls' locker rooms, shower areas, screens, etc. This practice will make screening go more smoothly and quickly.
13. The setting chosen for screening should be checked for good lighting; the floor should be free of uneven areas; and the temperature of the room should be comfortable for students who will be undressing.
14. It is important to screen with the student's entire back exposed (no T-shirts around the neck, bra is OK). An adequate exam cannot be done otherwise.
15. Volunteers will be helpful to control "traffic," call classes down, get students to secondary screeners, etc.

A sample scoliosis screening result form to retain in school records can be found in Appendix C.

Instructional and Training Resources:

- National Scoliosis Foundation
- National Institute of Health

Source: Georgia Department of Human Resources, Division of Public Health, Children's Healthcare of Atlanta & Georgia Association of School Nurses 2004 Georgia School Health Resource Manual–Chapter 8 Screening Guidelines in the School Setting

I.3 SCOLIOSIS SCREENING OUTCOME

Refer students with questionable findings to the school nurse, public health nurse or other consultants for secondary screening. This can be done easily on the same day, if secondary screeners are available. Students who need to be rescreened include those with:

- Any visible prominence in the thoracic and/or lumbar area when student is flexed at the waist (forward bend position) – other deviations are usually insignificant.
- Exaggerated hump of upper back (kyphosis) on flexion, viewed from the side.
- Any student the screener is unsure of, or concerned about.

I.4 PARENT/GUARDIAN NOTIFICATION

Parents/guardians should be notified of their child's screening results and provided information regarding scoliosis. A personal contact by the nurse discussing the screening procedure and results can help reduce apprehension in parents. The thought of a spinal deformity is disturbing to both the student and the family. The nurse should also inform the parents about the referral criteria used and the need for a medical evaluation. Parents should understand that a referral does not constitute a diagnosis of scoliosis or kyphosis, but simply indicates the need for further evaluation.

After the personal contact, a referral form can be sent to the parents which encourages a medical evaluation for their child (sample parent notification form in Appendix D). It is extremely important for the nurse to follow through on referrals as time is a factor in the progression of a curve. Each student's screening results, referral, and follow-up should be documented in the student's school health record.

J. ORAL HEALTH SCREENING

T.C.A. § 49-6-5004 Promotion of eye, hearing and dental care awareness.

a) Upon registration or as early as is otherwise possible and appropriate, public schools, nursery schools, kindergartens, preschools or child care facilities are encouraged to make reasonable efforts to apprise parents of the health benefits of obtaining appropriate eye, hearing and dental care for children.
b) A health care professional is authorized to indicate the need for an eye, hearing or dental examination on any report or form used in reporting the immunization status for a child as required under this part. Health care professionals shall provide a copy of the report or form to the parents or guardians indicating the need to seek appropriate examinations for the child.
c) If the parent/guardian of a child with a need for an eye or hearing examination is unable to afford the examination, an LEA of a county or municipality may use revenues from gifts, grants and state and local appropriations to provide the eye or hearing examinations.
d) LEA's are encouraged to seek free or reduced-cost eye examinations from optometrists or ophthalmologists and free or reduced-cost hearing examinations from physicians or audiologists willing to donate their services for children who are unable to afford the eye or hearing examinations.
e) The commissioner shall promulgate rules and regulations in accordance with the Uniform Administrative Procedures Act, compiled in title 4, chapter 5, that are necessary to carry out this section.

J.1 ORAL HEALTH SCREENING RATIONALE

The American Dental Association recommends annual oral health screenings for every student. Oral health is an important component of overall health and should be integrated into school health services. Because schools are where the majority of children and youth are, schools, and school nurses in particular, have an important role to play in promoting oral health by serving as a significant source of information and participating in prevention programs such as providing dental health education, intervening in dental emergencies and advocating the provision of well-balanced nutritious meals.

The goal of the school oral health program is to prevent oral disease and injury. The program should enable every child to maintain his/her own oral health. Dental health education combined with referral and treatment programs has been shown to be effective in improving oral health. In addition, the school nurse can serve as an advocate for safe practices in all school settings (physical education, team sports, etc.) to prevent dental injuries.

Dental disease is a significant preventable debilitating disease. Nationally, diseases of the mouth, one of the most common health problems, affects about 98% of the entire U.S. population at some point in their lives. Health examination surveys conducted by the National Center for Health Statistics found that the most significant problems detected by an examination of children in the U.S. were "dental problems" in all age groups. Access to dental care is limited for a significant part of the population with 40% of Americans failing to receive any dental care each year. Preventable oral disease is more common in children from underserved groups and in disabled children.

Screening for dental defects should be part of total health screening, and the personnel should be those involved with the overall responsibility for health defects. Screening for dental disease should require

relatively little time. A set routine should be followed so as not to omit necessary aspects of the screening process. If one defect is found, the screening procedure should be terminated and the child referred to the family dentist or to the local health department dentist where available.

Source: Dr. E.J. Alderman, Former Director Oral Health Section, Office of Infant and Child Health, Georgia Department of Health

J.2 ORAL HEALTH SCREENING PROGRAM

All schools are encouraged to screen students for oral health problems. If your school system chooses to implement oral health screening it is recommended to partner with a local trained professional to provide specific training for school staff and/or volunteers. Specific LEA protocols must be used.

A dental screening is an appraisal activity and identifies individuals with pain or imminent pain. It also creates awareness about the importance of good oral health. Please note that a dental screening does not replace a regular dental examination by a dentist. Routine dental screenings will assist in securing every child dental services and education to prevent pain, infection, premature loss of teeth and/or malocclusion.

A Dental Health Screening Program is designed to preserve the health of children and provides a procedure where a program in preventive dental hygiene is presented. The benefits of an oral health screening program include:

1. Dental defects may be discovered early so they can be corrected with the least amount of discomfort to the child.
2. Early symptoms of oral disease may be detected and corrected.
3. Irregularity of tooth position may be observed and preventive measures instituted.
4. Referral for early treatment before problems become magnified will keep the cost of dental care to a minimum.

The Tennessee Department of Health, Oral Health Services Section provides a School Based Dental Prevention Program. This program is a statewide; school based preventive dental program targeting children in grades kindergarten through eighth in schools with 50% or more free and reduced lunch. Portable equipment is used by dental staff to provide dental screenings, referrals, and follow-up to dental providers to address unmet dental needs in this population. Health education and preventive sealants are provided to the target school population as well as information regarding TennCare eligibility and the application process. More information is available here. Also, contact your local health department to ascertain what types of oral health services are available for your community.

J.3 ORAL HEALTH SCREENING PROCEDURE

Oral health screening is performed using: a tongue depressor, disposable gloves, and flashlight. Gauze pads may be helpful if the tongue needs to be manipulated.

An overall visual inspection is performed in order to view the outer and inner aspects of the oral cavity, including the lips, outer cheeks, and all inner tissues, floor of the mouth, tongue, palate, oropharynx, uvula, and teeth. Prior to the oral health screening, view the student's face and neck for swollen and/or tender lymph nodes in the neck and/or jaw. If the student's breath is highly odiferous, seek the cause. Also, observe the quality of the voice.

J.4 ORAL HEALTH REFERRAL (WITH OR WITHOUT SCREENING)

1. Visibly decayed and/or fractured teeth, broken filling(s) and/or missing permanent teeth.
2. Toothache, swelling and/or bleeding gums.
3. Ulceration, lesions, inflammation or draining of oral mucosa, palate, tongue, gums.
4. Malocclusion, mal-position or supernumerary teeth.
5. Protrusion of upper/lower jaw; deviate swallowing (tongue thrust).
6. Leukoplakia (thickened white patches) on tongue or cheek, seen in known tobacco user.
7. Broken or ill-fitting orthodontic appliance.
8. Difficulty in eating; e.g. chewing or swallowing of food.
9. Swollen or tender lymph nodes in neck and jaw.
10. Dental-related injuries obviously requiring treatment.
11. Unusual lip conditions such as fissures, drooping, or color (e.g. pale or bluish).
12. Nasal voice quality can suggest a health problem such as enlarged adenoids.

Resource: Tennessee Department of Health, Oral Health Services

J.5 PARENT/GUARDIAN NOTIFICATION

Parents/guardians should be notified of their child's screening results and provided information regarding oral health maintenance. All students who require a dental referral should receive a referral to their dental provider for evaluation and treatment as indicated. If needed, assistance should be provided to help the student's family find dental treatment resources. Each student's screening result, referral, and follow-up should be documented in the student's school health record.

K. CONCUSSION: BASELINE SCREENING

In April 2013, Tennessee became the 44th state to pass a sports concussion law designed to reduce youth sports concussions and increase awareness of traumatic brain injury.

T.C.A § 68-55-501-502, has three key components:

1. To inform and educate coaches, youth athletes and their parents and require them to sign a concussion information form before competing.
2. To require removal of a youth athlete who appears to have suffered a concussion from play or practice at the time of the suspected concussion.
3. To require a youth athlete to be cleared by a licensed health care professional before returning to play or practice.

Note: The law does not direct schools to administer baseline concussion screens. The screening is a recommendation but not required.

Schools are encouraged to administer a baseline concussion screen for all student athletes. If a school district decides to implement a baseline concussion screening program, the individual school's athletic department is responsible for program implementation and funding. Staff training for screenings is required and specific LEA protocols must be used. If your school system chooses to administer a baseline concussion screen, it is recommended to partner with local trained professionals to provide specific training for school staff and/or volunteers. Baseline tests should only be conducted by a trained health care professional.

K.1 CONCUSSION: BASELINE SCREENING RATIONALE

According to the Centers for Disease Control and Prevention (http://www.cdc.gov/HeadsUp/), a concussion is a type of traumatic brain injury that changes the way the brain normally works. Most concussions occur without loss of consciousness. Athletes who have, at any point in their lives, had a concussion have an increased risk for another concussion. Young children and teens are more likely to get a concussion and take longer to recover than adults. The new concussion law is an opportunity to make playing sports safer for Tennessee's young athletes.

Baseline testing generally takes place during the pre-season, ideally prior to the first practice and is conducted by a trained health care professional. Baseline tests are used to assess an athlete's balance and brain function (including learning and memory skills, ability to pay attention or concentrate, and how quickly he or she thinks and solve problems), as well as to check for the presence of any concussion symptoms. Results from baseline tests (or pre-injury tests) can be used and compared to a similar exam conducted by a health care professional during the season if an athlete has a suspected concussion. (http://www.cdc.gov/headsup/basics/baseline_testing.html)

It is important to note that some baseline and concussion assessment tools are only suggested for use among athletes ages 10 years and older. Results from baseline testing can be used if an athlete has a suspected concussion. Comparing post-injury test results to baseline test results can assist health care professionals in identifying the effects of the injury and making more informed return to school and play decisions.

K.2 CONCUSSION: BASELINE SCREENING PROGRAM

If baseline testing is used, research suggests that most components of baseline testing be repeated annually to establish a valid test result for comparison. Baseline computerized or paper-pencil neuropsychological tests may be repeated every 2 years. However, more frequent neuropsychological testing may be needed if an athlete has sustained a concussion or if the athlete has a medical condition that could affect results of the test. Baseline testing should include a check for concussion symptoms, as well as balance and cognitive (such as concentration and memory) assessments. Computerized or paper-pencil neuropsychological tests may be included as a piece of an overall baseline test to assess an athlete's concentration, memory, and reaction time.

Tips for setting up a Successful Baseline Concussion Screen:

1. When creating at Baseline Concussion Screening program involve the school health personnel, community partners and athletic department personnel (athletic directors, coaches, coaches' assistant, athletic trainers etc.) in the process.
2. Information sheets should be provided by the individual school's athletic department to parents regarding baseline testing.
3. Each student-athlete's baseline concussion test results are kept on file with the school.
4. Schools may begin testing at any time prior to the season. Ideally tests should be administered prior to the first practice. However, tests for individual student-athletes must be completed prior to participation in their competition against another school, whether it is a scrimmage or game.
5. Only a trained health care professional with experience in concussion management should interpret the results of a baseline exam.
6. Any player who exhibits signs or symptoms consistent with a concussion shall be removed from the practice or contest and shall not return to play until cleared by an authorized health care provider. The clearance must be signed.
7. The player's parents shall be informed that their son or daughter may have suffered a concussion and shall be advised to take their child to an authorized health care provider as soon as possible.
8. Appropriate school personnel, including administrators, athletic director, athletic trainer, and school nurse, will be informed of the injury.
9. Appropriate follow-up will be initiated, including potential academic accommodations.
10. Education should always be provided to athletes and parents if an athlete has a suspected concussion. This should include information on safely returning to school and play, tips to aid in recovery such as rest, danger signs, and when to seek immediate care, and how to help reduce an athlete's risk for a future concussion.

Resources:
http://www.cdc.gov/HeadsUp/
http://www.cdc.gov/headsup/schools/index.html
http://www.cdc.gov/headsup/highschoolsports/training/index.html
http://www.cdc.gov/headsup/youthsports/training/index.html
http://health.tn.gov/TBI/concussion.htm

K.3 PARENT/GUARDIAN NOTIFICATION

Parents should be informed that their student-athlete may have suffered a concussion and be advised to take their child to an authorized health care provider as soon as possible. The parent will be issued a form

for medical clearance for a suspected head injury. The form should include procedures on how the student-athlete may obtain clearance to resume participation. The form must be completed and signed by an authorized health care provider. The completed form is returned to the designee over the program when the student-athlete returns to school. Each student's screening result, referral, and follow-up should be documented in the student's school health record.

APPENDIX A – PARENT/GUARDIAN CONSENT FORMS

SAMPLES

PARENT/GUARDIAN CONSENT FORMS FOR SCHOOL HEALTH SCREENINGS

These sample forms may be used and revised to incorporate any changes to fit the needs of your local education agency.

SAMPLE
"PASSIVE" PARENT/GUARDIAN SCREENING CONSENT FORM FOR SCHOOL HEALTH SCREENINGS

Dear Parent or Guardian,

Throughout the school year we will be providing several free health screenings for the students of _____ school system. We routinely screen a variety of students in the appropriate grade levels. We also screen all transfer students, any student needing a screening for evaluation purposes, or any student referred by a teacher. For example, a teacher may notice that a student is having difficulty seeing the board or hearing his/her instructions and request a screening of the child. This information is shared only on a need to know basis. Following the example above, if your child did have difficulty with his/her vision or hearing test, we would ask the teacher to move the student to the front of the classroom so they could see or hear the classroom information until you were notified and able to follow-up on the screening.

We will be screening for the following throughout the school year. The _____ County Health Department or other community health care providers may be assisting with these screenings. Again, this health information is only shared on a need to know basis.

▪Vision	▪Dental	▪Speech/Hearing
▪Height/Weight	▪Scoliosis	▪Blood Pressure

If we screen your child and find any alterations from a normal screening we will contact you concerning this manner. There are no charges for these services.

PLEASE NOTIFY YOUR CHILD'S TEACHER AT THIS TIME IF YOU WISH FOR HIM/HER NOT TO BE INCLUDED IN THESE SCREENINGS. Please feel free to contact your school nurse if you have any questions.

Thank you,

(Name) _____

Parent/Guardian: Please contact us if you have any concerns in the following areas:

Vision □ Hearing □ Height/Weight □ Blood Pressure □ Dental □ Scoliosis □

SAMPLE
"ACTIVE" PARENT/GUARDIAN SCREENING CONSENT FORM FOR SCHOOL HEALTH SCREENINGS

Dear Parent or Guardian,

Throughout the school year, (school district) staff will provide vision, hearing, height/weight, blood pressure, dental (oral health) and scoliosis (spinal deformity) screenings for students in specific grades. The _____ County Health Department or other community health care providers may assist with these screenings. **Any student health information collected during these screenings will be shared only on a need to know basis.** If school staff screens your child and find alterations from a normal screening you will be contacted concerning this matter. There are no charges for these services.

(school district) **will not provide your child with free health screenings unless the school district has a signed consent form from the student's parent/guardian.** Please sign and return this form to either give your permission for your child to receive these free health screenings or to indicate you do not want your child screened this year. If you have any question contact your school nurse.

PARENTAL CONSENT

I **give** permission for my son/daughter (name of student) to receive free school health screenings during the 20XX-20XX school year. Please check all boxes below indicating your **consent** for the school district to provide these screening services:

Vision □ Hearing □ Height/Weight □ Blood Pressure □ Dental □ Scoliosis □

If you have concerns in a specific area, please mark it below:

Vision □ Hearing □ Height/Weight □ Blood Pressure □ Dental □ Scoliosis □

PARENTAL REFUSAL

I do **not** give permission for my son/daughter to receive free school health screenings during the 20XX-20XX school year. Please check all boxes below indicating which screening services you do **not** want your child to receive from your school district:

Vision □ Hearing □ Height/Weight □ Blood Pressure □ Dental □ Scoliosis □

Student Name _____

Parent Name (Please print) _____

Parent Signature _____

Date _____ Grade level _____

School _____

APPENDIX B – CONFIDENTIALITY AGREEMENT FORMS

SAMPLES

CONFIDENTIALITY AGREEMENT FORMS

These sample forms may be used and revised to incorporate any changes to fit the needs of your local education agency.

SAMPLE
CONFIDENTIALITY AGREEMENT FORM

(STAFF)

Definition: Disclosing health information only to the people who are authorized to know it.

Purpose: To safeguard the privacy of students and staff regarding personal health information and to maintain the nurse/patient relationship while facilitating accurate nursing assessment and safe intervention. To allow student, staff and parent to feel secure in sharing appropriate information and to observe statutes and rules governing confidentiality.

Steps and/or Points:

1. Nursing assessment and intervention shall be provided in such a way as to protect student privacy and confidentiality.
2. Nursing feedback to school personnel who refer a student is essential and shall always occur. Share only information that is necessary and that impacts the student's educational experience, health care of safety.
3. Sharing student health information in staffing committees may require written permission for release of confidential information.
4. A "Health Concerns List" is distributed to all school personnel for whom the student's health information might possibly impact the student's educational experience and safety. This information is not sent to anyone whom the parent/guardian checked on the Health History as NOT wanting the information shared with. This Health Concerns List contains all students (listing conditions) who have a moderate to high risk of a major health problem exacerbation while at school.
5. There are situations when confidentiality must not be maintained. If at any time, information has been shared with you that indicates a student or staff member is at imminent risk of harm or is a danger to himself or others, that information must be shared with those who need to intervene in order to protect the student or staff member (school administrators, parent, child protective agency, police, health care provider, etc.).
    a. It is recommended that your discussion with students or staff include something like, "What you tell me, I will keep in confidence, unless I feel it is necessary to share it with someone to protect you or others."
    b. In those situations where nursing judgment determines it is necessary to reveal information regarding the student's health without a release from student/parent, it is prudent to share only those details that are essential to achieve resolution of the problem. It is also recommended that the information be shared with as few people as possible.
6. Records of student/nurse communications regarding the personal affairs of the student or his/her family are confidential and may be shared only as the student or parent authorizes except in life-threatening situations. All information is confidential by virtue of nurse/client relationship and under student records law.
    a. Only the school nurse, back-up, and the Director of Nursing may have access to nursing records without written release by student/parent.
    b. Nursing records may be viewed by the involved and, with some exceptions, his parent.
        (1) A student, particularly a student under age 18, can't limit the parent's access to nursing records in most cases. There are some health-related items that are confidential from parents, but such items are the exception.
        (2) The student may view records immediately upon his/her request unless the nurse feels such viewing would be counterproductive to the student's health management.
7. Anytime nurse/health records are released to someone, the bottom part of the Release of Information form is to be completed and filed in the student's or staff's nursing file.
8. Nursing records may not be released to another agency/individual unless the parent has signed a "Release of Information" document or the nursing record is subpoenaed by court action.

**The non-custodial parent has the right to inspect nursing records but not to sign an authorization to release them.

9. When a record is subpoenaed:
    a. The original of the records will be maintained by the school and a copy will be submitted to court.
    b. The exception to this would be health records obtained from other clinics/physicians that are stamped, "Do not release for third party access." For these unreleased records, make note in the released copy that a medical report from a specific clinic exists in your nursing record. The receiving party may wish to obtain a release for this same source document.
10. Information may be shared with protective services caseworkers without a subpoena when the caseworker is conducting an assessment or planning intervention/court hearing.

    **Information to be shared will be summative in nature; a subpoena is necessary to release the nursing record.
11. Exercise caution in discussing confidential issues on the telephone. Efforts should be taken to establish the identity of the caller and his/her right to confidential information.
12. Documents released by our department should be stamped, "Confidential; Not To Be Forwarded Without Parental Permission."
13. When uncertain who has legal custody of a student, consult with the school administrator and when necessary, the student's Child Protective Service Case Manager.
14. Use the FAX ONLY when there is not sufficient time for mailing records.
    a. Confirm recipient's FAX number before pushing the "send" button.
    b. Use a cover sheet to facilitate confidentiality and to give directions for destruction of misdirected information.
    c. Always call the receiver when you suspect a FAX was sent to a wrong place, to confirm the information was destroyed.
15. All health records containing staff or student's names should be kept in a locked location where no one but the school nurse, back-up, or nursing supervisor has access.
16. All discarded health records containing staff or student names should be shredded before being discarded.
17. Never discuss health information about a student or staff member with anyone who is not authorized to know it. The only people authorized to know it are as follows:
    a. School Nurse
    b. Back-up
    c. Director of Nursing
    d. Staff listed on the Health History whom the parent authorized to know the health information
    e. EMT personnel, if an ambulance has to be called
    f. Physicians, as listed on the Health History, if the Health History is signed.
    g. Persons/agencies authorized by the parent on the Release of Information
    h. Coordinated School Health (CSH) personnel
    i. Health screening workers/volunteers

    **The above listed authorized people only need to be informed of the health information if, and when, it becomes "need-to-know" to them. This means if and when the particular information would affect that person or agency by impacting the student's or staff's educational experience, health care or safety.
18. All school nurses, backups, CSH personnel, teachers, teaching assistants, and health screening workers/volunteers must sign a copy of this policy/procedure.

SAMPLE
CONFIDENTIALITY FORM

(STAFF and VOLUNTEERS)

Tennessee Department of Education Confidentiality Statement

By signing below, I am acknowledging my awareness of the requirements of the Health Insurance Portability and Accountability Act (HIPPA) and acknowledging and understand that, as a volunteer for the Department of Education's interests I am prohibited from releasing to any unauthorized persons any protected health information which may come to my attention in the course of my duties and that all data is the property of the school system and State of Tennessee and is not the property of the screener. School systems are expected to follow the Family Educational Rights and Privacy Act (FERPA) requirements that cover health information privacy concerns in the educational setting.

_____
Signature

_____
Date

_____
Print Name

APPENDIX C – SCREENING RESULTS FORMS FOR SCHOOL RECORD

SAMPLES

SCREENING RESULTS FORMS FOR SCHOOL RECORDS

These sample forms may be used and revised to incorporate any changes to fit the needs of your local education agency.

SAMPLE
SCREENING RESULTS FORM FOR SCHOOL RECORDS

SCREENING RESULTS

School: _____ **Birth date**: _____

Last Name: _____ **First Name**: _____

Teacher: _____ **Grade**:_____ **Date**: _____

□ Routine Screening □ Special Ed Request
□Teacher/Parent Request □ Rescreening

Vision: □ Glasses □ Contacts **Last Exam**: □ > One Year □ < One Year
Glasses: □ Broken □ Lost □ Not Wearing □ Refuses to Wear
R FAR: Acuity 20/_____ **L FAR**: Acuity 20/_____
R NEAR: Acuity 20/ _____ **L NEAR**: Acuity 20/_____
Muscle Balance: □ Passed □ Failed

Comment:_____

Hearing: □ Hx.of hearing loss/surgery □ PE Tubes
□ Hearing Aid (s) □ Rescreening

Audiometry: □ Pass □ Fail

Otoscope:□ Cerumen □ Drainage □ Erythema □ Infected/Ruptured Eardrum

R Hz Freq 1000_____ R Hz Freq 2000_____ RHz Freq 4000_____

L Hz Freq 1000_____ L Hz Freq 2000_____ LHz Freq 4000_____

Comment:_____

Dental: _____1. Immediate Care is recommended for:
□ Pain □ Extensive Decay □ Severe Gum Inflammation
_____2. Care is recommended as soon as possible for:
□ Obvious Decay □Gum Inflammation □Damaged Filling
_____3. Care is recommended when possible for:
□ Symptoms of Early Decay □ Routine Cleaning/Exam needed

Comment:_____

Vital Statistics:

Blood Pressure: _____/_____ Ht: _____inches Wt: _____lbs.
Pulse: _____ BMI: _____

Vision	Hearing	Dental	Blood Pressure	BMI	Scoliosis
Passed □	Passed □	Passed □	Passed □	Normal for age/height □	Passed □
Failed □	Failed □	Failed □	Failed □	Low for age/height □	Failed □
Referred □	Referred □	Referred □	Referred □	High for age/height □	Referred □
Retest □	Retest □	Retest □	Retest □		Retest □

SAMPLE
SCOLIOSIS MEDICAL SCREENING FORM
FOR SCHOOL RECORDS

Shoulder Elevated _____

Shoulder Blade Prominence _____

Unequal Distance between Arm and Body _____

Uneven Hips _____

Rib Prominence _____

Lumbar Prominence _____

Kyphosis Increased _____

Date of screening: _____

Negative Referred for 2º screening _____

Screener's name (print):_____

Check one: __Volunteer __Teacher __Clinic Asst. __School Nurse

__Health Dept. Employee __Other (Specify) _____

Comments of screener:

_____

_____

Date of screening _____

Negative Referred _____

Screener's name (print):_____

Check one: __School Nurse __Health Dept. Employee __Other (Specify)_____

Comments of screener:

_____

_____

Elevated Shoulder blade (scapular) prominence _____

Unequal distance between arm and body _____

Uneven hips Rib Prominence (Upper back) _____

Lumbar Prominence (Lower back) _____

More than normal roundness (kyphosis) _____

Source: Georgia Department of Human Resources, Division of Public Health, Children's Healthcare of Atlanta & Georgia Association of School Nurses, *Georgia School Health Resource Manual–Chapter 8 Screening Guidelines in the School Setting, 2004*

SAMPLE
HEARING SCREENING FORM
FOR SCHOOL RECORDS

Student Last Name: _____ First: _____

Teacher _____ Grade ____ School _____

School System _____ Date _____

Pure Tone Screening

	1000 Hz	2000 Hz	4000 Hz
RIGHT EAR:	_____	_____	_____
LEFT EAR:	_____	_____	_____
Screening Level	(20 db HL)	(20db HL)	(20 db HL)

√ = Pass

_____ Pass _____ Could not screen

_____ Rescreen _____ Absent

_____
(Screener's Signature)

- -

Rescreen Date _____

Pure Tone Screening

	1000 Hz	2000 Hz	4000 Hz
RIGHT EAR:	_____	_____	_____
LEFT EAR:	_____	_____	_____
Screening Level	(20 db HL)	(20db HL)	(20 db HL)

√ = Pass

_____ Pass

_____ Further testing indicated

_____
(Screener's Signature)

SAMPLE
HEARING SCREENING PROGRAM
RE-SCREENING WORKSHEET FOR SCHOOL RECORDS

Name:_____ Age: ____ Grade: ____ Teacher: _____

Parents:_____

Address: _____ Phone: _____

Healthcare Provider: _____

Conditions Indicative of Possible Hearing Loss: (teacher observations and health history)

Frequent earaches: R____ L____ Both____

____ Repeated colds
____ Cold today
____ Sore throat today
____ Discharge from ear more than once
____ Discharge from ear today
____ Complains of loud, constant ringing in ears
____ Hearing problems or deafness in family
____ Inattentive
____ Slow responding
____ Repeating grade
____ Says “huh?” or “what?” often
____ Speech defect “baby talk”
____ Omits letters
____ Substitutes letters
____ Garbled speech
____ Too soft
____ Too loud
____ Too high pitched
____ Too low pitched

Date of re-screen		
Frequency	R	L
1000		
2000		
4000		
6000 (optional)		

Referred by nurse to:
____ Family
____ Primary Care Provider
____ ENT Specialist
____ Speech/Language Pathologist
____ Audiologist
____ Other

APPENDIX D – PARENT/GUARDIAN NOTIFICATION AND REFERRAL FORMS

SAMPLES

PARENT/GUARDIAN NOTIFICATION and REFERRAL FORMS FOR SCHOOL HEALTH SCREENING RESULTS

These sample forms may be used and revised to incorporate any changes to fit the needs of your local education agency.

SAMPLE

PARENT/GUARDIAN SCREENING RESULTS NOTIFICATION FORM

_____ **COUNTY DEPARTMENT OF EDUCATION COORDINATED SCHOOL HEALTH**

Address:_____

Phone:_____ Fax:_____

Student Name: _____ Date: _____

Teacher: _____ Grade: _____

School: _____

Dear Parent/Guardian:

Your child recently participated in a vision, hearing, body mass index and blood pressure mandated by the State of Tennessee. They are effective in revealing common vision and hearing deficiencies, dental problems and developmental trends. Our school system also screens for scoliosis and oral health issues. It does not substitute for a professional examination.

YOUR CHILD <u>SCREENED WITHIN NORMAL LIMITS</u> THE FOLLOWING:

- ☐ Vision
- ☐ Hearing
- ☐ Body Mass Index (BMI)
- ☐ Blood Pressure
- ☐ Scoliosis
- ☐ Dental

If your child did not screen within normal limits on one or more of the above screens, you will be notified by phone and a referral form.

SAMPLE
PARENT/GUARDIAN SCREENING RESULTS NOTIFICATION FORM

_____ COUNTY DEPARTMENT OF EDUCATION COORDINATED SCHOOL HEALTH

Address:_____

Phone:_____ Fax:_____

Student Name: _____ Date: _____

Teacher: _____ Grade: ____ School: _____

Dear Parent/Guardian:

Your child recently participated in a vision, hearing, body mass index and blood pressure mandated by the State of Tennessee. These screenings are effective in revealing common vision and hearing deficiencies, dental problems and developmental trends. Our school system also screens for scoliosis and oral health issues. These screening do not substitute for a professional examination.

YOUR CHILD SCREENED WITHIN NORMAL LIMITS THE FOLLOWING:

☐ Vision ☐ Hearing ☐ Body Mass Index (BMI) ☐ Blood Pressure ☐ Scoliosis ☐ Dental

A RESCREEN WILL BE PERFORMED BY NURSING SERVICES FOR:

☐ Vision ☐ Hearing ☐ Blood Pressure

WE HAVE ISSUED A **REFERRAL** FOR **VISION**

For the above REFERRAL our observations for your child are listed below. If your child is not under the care of a medical provider, we strongly encourage you to make an appointment for a complete examination and any needed treatment. If your child has already been seen for the above referral please ask them to fax a report to _____. If your child does not have a medical provider or if you need financial assistance, please call our office. Thank you for your prompt attention to this matter.

Please have the eye doctor complete the form below and mail or fax to the address above. Thank you.

VISION RESULTS: Distance Acuity: 20/ 20/ Near Acuity: 20/ 20/

☐ Failed Functional Vision Testing: Muscle balance ☐ Failed Functional Vision Testing: Depth Perception

☐ Failed Color Perception Screening ☐ Failed Hyperopia with +2.00 Diopter Lenses: Convex or Plus Lens

WE RECOMMEND YOUR CHILD RECEIVE AN EXAMINATION FROM AN EYE DOCTOR.

To be completed by eye doctor:

This student was seen by me on _____as per your referral. The following recommendations were made:

_____

_____.

Glasses prescribed? Yes or No Comments:_____

_____ _____

Vision Specialist Signature Vision Specialist Phone Number

SAMPLE
PARENT/GUARDIAN SCREENING RESULTS NOTIFICATION FORM

_____ COUNTY SCHOOLS COORDINATED SCHOOL HEALTH

Address:_____

Phone:_____ Fax:_____

Student Name: _____ Date: _____

Teacher: _____ Grade: _____ School: _____

Dear Parent/Guardian:

Your child recently participated in a vision, hearing, body mass index and blood pressure mandated by the State of Tennessee. These screenings are effective in revealing common vision and hearing deficiencies, dental problems and developmental trends. Our school system also screens for scoliosis and oral health issues. These screening do not substitute for a professional examination.

YOUR CHILD SCREENED WITHIN NORMAL LIMITS THE FOLLOWING:

□ Vision □ Hearing □ Body Mass Index (BMI) □ Blood Pressure □ Scoliosis □ Dental

A RESCREEN WILL BE PERFORMED BY NURSING SERVICES FOR:

□ Vision □ Hearing □ Blood Pressure

WE HAVE ISSUED A **REFERRAL** FOR **HEARING**

For the above REFERRAL our observations for your child are listed below. If your child is not under the care of a medical provider, we strongly encourage you to make an appointment for a complete examination and any needed treatment. If your child has already been seen for the above referral please ask them to fax a report to _____. If your child does not have a medical provider or if you need financial assistance, please call our office. Thank you for your prompt attention to this matter.

Please have the hearing specialist complete the form below and mail or fax to the address above. Thank you.

HEARING RESULTS: □ Failed Audiometry

Signs of Infection: □ Pain □ Discharge □ Wax □ Erythema

_____1. Immediate Care is recommended for the acute symptoms marked above

_____2. Follow-up is recommended as soon as possible for a suspected hearing problem

WE RECOMMEND YOUR CHILD RECEIVE AN EXAMINATION FROM A PHYSICIAN OR AUDIOLOGIST.

To be completed by physician or audiologist:

This student was seen by me on _____as per your referral. The following recommendations were made:

_____.

Medication/PE Tubes/Hearing Aids prescribed: Circle One or No

Comments:_____

_____ _____

Hearing Specialist Signature Hearing Specialist Phone Number

SAMPLE
PARENT/GUARDIAN SCREENING RESULTS NOTIFICATION FORM

_____ COUNTY SCHOOLS COORDINATED SCHOOL HEALTH

Address:_____

Phone:_____ Fax:_____

Student Name: _____ Date: _____

Teacher: _____ Grade: _____ School: _____

Dear Parent/Guardian:

Your child recently participated in a vision, hearing, body mass index and blood pressure mandated by the State of Tennessee. These screenings are effective in revealing common vision and hearing deficiencies, dental problems and developmental trends. Our school system also screens for scoliosis and oral health issues. These screening do not substitute for a professional examination.

YOUR CHILD SCREENED WITHIN NORMAL LIMITS THE FOLLOWING:

□ Vision □ Hearing □ Body Mass Index (BMI) □ Blood Pressure □ Scoliosis □ Dental

A RESCREEN WILL BE PERFORMED BY NURSING SERVICES FOR:

□ Vision □ Hearing □ Blood Pressure

WE HAVE ISSUED A **REFERRAL** FOR **BODY MASS INDEX (BMI)**

For the above REFERRAL our observations for your child are listed below. If your child is not under the care of a medical provider, we strongly encourage you to make an appointment for a complete examination and any needed treatment. If your child has already been seen for the above referral please ask them to fax a report to _____. If your child does not have a medical provider or if you need financial assistance, please call our office. Thank you for your prompt attention to this matter.

Please have the doctor complete the form below and mail or fax to the address above. Thank you.

BODY MASS INDEX (BMI) RESULT

Call the Coordinated School Health Office _____ for your child's results.

WE RECOMMEND YOUR CHILD RECEIVE AN EXAMINATION FROM A PHYSICIAN

To be completed by physician:

This student was seen by me on _____as per your referral. The following recommendations were made:

_____

_____

_____.

_____ _____

Physician Signature Physician Phone Number

SAMPLE
PARENT/GUARDIAN SCREENING RESULTS NOTIFICATION FORM

_____ COUNTY SCHOOLS COORDINATED SCHOOL HEALTH

Address:_____

Phone:_____ Fax:_____

Student Name: _____ Date: _____

Teacher: _____ Grade: _____ School: _____

Dear Parent/Guardian:

Your child recently participated in a vision, hearing, body mass index and blood pressure mandated by the State of Tennessee. These screenings are effective in revealing common vision and hearing deficiencies, dental problems and developmental trends. Our school system also screens for scoliosis and oral health issues. These screening do not substitute for a professional examination.

YOUR CHILD SCREENED WITHIN NORMAL LIMITS THE FOLLOWING:

□ Vision □ Hearing □ Body Mass Index (BMI) □ Blood Pressure □ Scoliosis □ Dental

A RESCREEN WILL BE PERFORMED BY NURSING SERVICES FOR:

□ Vision □ Hearing □ Blood Pressure

WE HAVE ISSUED A ***REFERRAL** FOR **BLOOD PRESSURE**

For the above REFERRAL our observations for your child are listed below. If your child is not under the care of a medical provider, we strongly encourage you to make an appointment for a complete examination and any needed treatment. If your child has already been seen for the above referral please ask them to fax a report to _____. If your child does not have a medical provider or if you need financial assistance, please call our office. Thank you for your prompt attention to this matter.

Please have the doctor complete the form below and mail or fax to the address above. Thank you.

BLOOD PRESSURE RESULT

Date of screen: _____/_____/_____ Blood Pressure Reading: _____/_____

WE RECOMMEND YOUR CHILD RECEIVE AN EXAMINATION FROM A PHYSICIAN

*Referral was based on International Pediatric Hypertension Association (IPHA) criteria.

To be completed by physician:

This student was seen by me on _____as per your referral. The following recommendations were made:

_____

_____

_____.

_____ _____

Physician Signature Physician Phone Number

SAMPLE
PARENT/GUARDIAN SCREENING RESULTS NOTIFICATION FORM

_____ COUNTY SCHOOLS COORDINATED SCHOOL HEALTH

Address:_____

Phone:_____ Fax:_____

Student Name: _____ Date: _____

Teacher: _____ Grade: ____ School: _____

Dear Parent/Guardian:

Your child recently participated in a vision, hearing, body mass index and blood pressure mandated by the State of Tennessee. These screenings are effective in revealing common vision and hearing deficiencies, dental problems and developmental trends. Our school system also screens for scoliosis and oral health issues. These screening do not substitute for a professional examination.

YOUR CHILD SCREENED WITHIN NORMAL LIMITS THE FOLLOWING:

□ Vision □ Hearing □ Body Mass Index (BMI) □ Blood Pressure □ Scoliosis □ Dental

A RESCREEN WILL BE PERFORMED BY NURSING SERVICES FOR:

□ Vision □ Hearing □ Blood Pressure

WE HAVE ISSUED A **REFERRAL** FOR **SCOLIOSIS**

For the above REFERRAL our observations for your child are listed below. If your child is not under the care of a medical provider, we strongly encourage you to make an appointment for a complete examination and any needed treatment. If your child has already been seen for the above referral please ask them to fax a report to _____. If your child does not have a medical provider or if you need financial assistance, please call our office. Thank you for your prompt attention to this matter.

Please have the specialist complete the information below and mail or fax to the address above. Thank you.

SCOLIOSIS SCREEN RESULT

Your child was given a posture check to screen for scoliosis (curvature of the spine). The results are below. It is advised that you have your child further checked by your family doctor or pediatrician. Early treatment can often prevent a progressive spine deformity.

□ Greater than 10 degree curvature measured □ Accentuated kyphosis (roundness in upper back) observed

□ Extreme lordosis (swaying of the lower back) observed □ Obvious Leg Length Discrepancy observed

To be completed by physician:

This student was seen by me on _____as per your referral. The following recommendations were made:

_____

_____.

_____ _____

Physician Signature Physician Phone Number

SAMPLE
PARENT/GUARDIAN SCREENING RESULTS NOTIFICATION FORM

_____ COUNTY SCHOOLS COORDINATED SCHOOL HEALTH

Address:_____

Phone:_____ Fax:_____

Student Name: _____ Date: _____

Teacher: _____ Grade: _____ School: _____

Dear Parent/Guardian:

Your child recently participated in a vision, hearing, body mass index and blood pressure mandated by the State of Tennessee. These screenings are effective in revealing common vision and hearing deficiencies, dental problems and developmental trends. Our school system also screens for scoliosis and oral health issues. These screening do not substitute for a professional examination.

YOUR CHILD SCREENED WITHIN NORMAL LIMITS THE FOLLOWING:

□ Vision □ Hearing □ Body Mass Index (BMI) □ Blood Pressure □ Scoliosis □ Dental

A RESCREEN WILL BE PERFORMED BY NURSING SERVICES FOR:

□ Vision □ Hearing □ Blood Pressure

WE HAVE ISSUED A **REFERRAL** FOR **DENTAL**

For the above REFERRAL our observations for your child are listed below. If your child is not under the care of a medical provider, we strongly encourage you to make an appointment for a complete examination and any needed treatment. If your child has already been seen for the above referral please ask them to fax a report to _____. If your child does not have a medical provider or if you need financial assistance, please call our office. Thank you for your prompt attention to this matter.

Please have the specialist complete the form below and mail or fax to the address above. Thank you.

ORAL HEALTH RESULT

_____1. Immediate Care is recommended for:

□ Pain □ Extensive Decay □ Severe Gum Inflammation

_____2. Care is recommended as soon as possible for:

□ Obvious Decay □Gum Inflammation □Damaged Filling

_____3. Care is recommended when possible for:

□ Symptoms of Early Decay □ Routine Cleaning/Exam needed

WE RECOMMEND YOUR CHILD RECEIVE AN EXAMINATION FROM A DENTIST

To be completed by dental provider:

This student was seen by me on _____as per your referral. The following recommendations were made:

_____.

_____ _____

Dentist Signature Dentist Phone Number