



VISION SCREENING GUIDELINES

Maryland State School Health Services Guidelines

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MARYLAND SCHOOL HEALTH SERVICES PRACTICE ISSUES COMMITTEE (2022)

Isha Alston, MSN, RN
Deputy Director
Bureau of School Health and Support
Anne Arundel County Department of Health

Catie Bonner, MSN, RN, NCSN
School Nurse
St. Mary's County Public Schools

Karen Siska Creel, MSN, RN
Director of Nursing
Bureau of School Health and Support
Anne Arundel County Department of Health

Bianca Gaines, BSN, RN
Maryland Mental Health Response Program
Maryland State Department of Education

Filipa Gomes, MSN, RN, CNM, NCSN
Supervisor of Health Services
Carroll County Public Schools

Janice Howells, BSN, RN
School Health Programs Coordinator
Washington County Public Schools

Christine Knode, BSN, RN, NCSN
Supervisor of Student Services/School Health
Calvert County Public Schools

Nancy Mattucci, MSN, RN
Supervisor, Office of Health Services
Baltimore County Public Schools

Tammatha Metcalf, MSN, RN, NCSN
Supervisor of Health Services
St. Mary's County Public Schools

Alicia Mezu, MSN/Ed, BSN, BSc, RN
Lead Health Services Specialist
Maryland State Department of Education

Mary Nasuta, MS, BSN, RN, NCSN
Nurse Coordinator
Harford County Public Schools

Rachel Nurse-Baker, RN, BSN, MPH
Nurse Consultant, School Health
Office of Population Health Improvement
Maryland Department of Health

Barbara Obst, MEd, RN, NCSN
SHNIC Coordinator
Kennedy Krieger Institute

Jamie Perry, MD, MPH
Director of School Health
Office of Population Health Improvement
Maryland Department of Health

Megan Roesler, MSN, RN, CPN
SHNIC Educator
Kennedy Krieger Institute

Michal Thornton, BSN, RN
Nurse Consultant, Center for Immunization
Maryland Department of Health

Kerrie Wagaman, MSN, BSN, RN, NCSN
Coordinator of Health Services
Howard County Public School System

Jenifer Waters, MSN, RN
Health Services Specialist
Frederick County Public Schools

Jennifer Yost, BSN, RN
Health Services Coordinator
Caroline County Public Schools

SCHOOL HEALTH SERVICES VISION SCREEN GUIDELINE EXTERNAL CONTRIBUTORS AND REVIEWERS (2019-2022)**Vision Screening Subcommittee**

Mary Louise Collins, M.D.
Pediatric Ophthalmologist
Greater Baltimore Medical Center

Megan Collins, MD, MPH
Assistant Professor of Ophthalmology

Elisabeth McGinn, O.D.
Greater Baltimore Medical Center Eye Center

Past Contributors

Tina Backe
Health Policy Analyst
Office of Population Health Improvement
Maryland Department of Health

Karen Bates, MS, BSN, RN
Former Nursing Supervisor
School Health Policy, Services and Innovation
Prince George's County Public Schools

Cheryl Duncan De Pinto, MD, MPH
Former Director
Office of Population Health Improvement
Maryland Department of Health

Audrey Novak
Former Executive Director
Maryland Society for Sight

Foreword

There is a strong relationship between academic achievement and a child's physical, emotional and mental health. This link is the foundation for providing school health services as an important component of a school program. School health services provide primary prevention aimed at keeping students in schools through appropriate screenings; early identification of children at risk for physical, emotional and mental health concerns; and case management of students with chronic health concerns.

The Maryland Code Annotated, Education § 7-401 (Md. Code Ann., Educ. § 7-401) requires the Maryland State Department of Education (MSDE) and the Maryland Department of Health (MDH) to jointly develop public standards and guidelines for school health programs. The following guidelines were developed in accordance with that requirement and are based on the expressed needs of the local school health services programs. The guidelines developed under Md. Code Ann., Educ. § 7-401 contain recommendations for minimum standards of care and current best practices for the health service topics addressed. It is intended that these guidelines will be used by the local education agencies (LEAs) in developing policies and procedures to assist local school health services programs in providing consistent and safe care to the students of Maryland. Specific laws and regulations that direct school nursing practice or other health services are identified in the guidelines.

To implement these guidelines, LEAs and local health departments should consult with MSDE and MDH who will:

- Assist and provide technical assistance to local school health services programs to support their efforts to plan for students with special health needs;
- Provide training to all appropriate school staff regarding issues related to students with special health needs including, but not limited to, planning, maintaining a safe environment, and medication administration issues; and
- Monitor the implementation of school health services programs including, but not limited to, programs and policies related to students with special health needs.

Section I: Introduction

PURPOSE

The purpose of these guidelines is to:

1. Provide guidance to school health services programs in the development and implementation of policies regarding vision screening pursuant to the Md. Code Ann., Educ. § 7-404 and the Code of Maryland Regulations (COMAR) 13A.05.05.07-(C) (3-7); and
2. Provide standards of care and best practices for student vision screening and referral in Maryland schools.

BACKGROUND

Childhood vision disorders are prevalent and are a significant public health problem. Early identification of these disorders and appropriate management can reduce the impact these disorders have on a student's development and learning.

The Md. Code Ann., Educ. § 7-404 requires each county board or county health department to provide vision screenings for all students in the public schools. Additionally, each county health department shall provide and fund vision screenings for all students in any private school that has received a certificate of approval under Md. Code Ann., Educ. § 2-206 and in any nonpublic educational facility in the state approved as a special education facility by MSDE. Unless evidence is presented that a student has been tested by an optometrist or ophthalmologist within the past year, vision screenings required under Md. Code Ann., Educ. § 7-404 shall be given in the year that a student enters a school system, enters the first grade, and enters the eighth or ninth grade.

Screening involves the use of quick, simple, evidence-based procedures to identify students who may have potential health concerns. Screeners are the "first line" detectors of possible vision disorders. Appropriate identification and referral depend upon careful screening of the student with input from those involved with his or her care. School nurses provide leadership in the promotion of vision screenings in local school health services programs.

The following vision screening procedures and standards of referral have been developed to facilitate identification of students at risk through failed screening and appropriate follow-up of all screening failures. Only a professional examination can determine the presence of a vision disorder and whether it requires treatment.

OBJECTIVES

The objectives of school vision screening programs are to:

- Identify students who may have vision disorders detected by screening
- Notify parent(s)/guardian(s) of the results of vision screening
- Recommend evaluation by an optometrist or ophthalmologist to parent(s)/guardian(s) of students who fail a vision screening
- Provide parent(s)/guardian(s) with educational material and resources on vision screenings (See Appendix A)

- Assist students and families in obtaining appropriate follow-up, recommended services, and access to resources
- Document screening results and receipt of recommended services and report required data to MDH

PROGRAM COMPONENTS

In order to meet the objectives above, the following components should be considered when establishing a school vision screening program:

- Identification of students to be screened and notification of parent(s)/guardian(s)
- Training and competency of screening staff
- Screening methods and equipment
- Referral and follow-up procedures
- Reporting of screening and follow-up statistics

STUDENTS TO BE SCREENED

Under Md. Code Ann., Educ. § 7-404, vision screenings are required and shall be given to students as follows:

- In the year that a student enters a school system
- In the year that a student enters the first grade, and
- In the year that a student enters the eighth or ninth grade

Students may be screened at additional times based on local jurisdiction policies and resources, including, but not limited to:

- Those who have vision concerns as reported by a teacher, other school personnel, parent(s)/guardian(s), and
- Those who are absent during the scheduled screening period

Under Md. Code Ann., Educ. §7-404, students who should NOT be included in the vision screening program include:

- Those whose parent(s)/guardian(s) object in writing to vision screening on the grounds that it conflicts with the tenets and practice of a recognized church or religious denomination of which they are an adherent or member, and
- Those who provide evidence of testing by an optometrist or ophthalmologist within the past year.

Local school health services programs should develop procedures for identification of students to be screened each school year and appropriate documentation for those who are not screened.

VISION SCREENERS

Screening personnel may include school nurses (RNs), other nursing or unlicensed staff with delegation by the school nurse, or other trained lay or volunteer screeners. All screeners shall receive thorough initial training, routine refresher training, and assessment of competency. Experienced screeners should validate results obtained by new screeners until they become comfortable with the equipment and training process.

Section II: Vision Screening Methods and Equipment

A comprehensive vision screening program should include history, observation, and the use of age-appropriate, evidenced-based tests and/or instruments.

HISTORY AND OBSERVATION OF STUDENTS

School nurses, teachers, and other personnel should observe students throughout the school year for signs, symptoms, and behaviors that may indicate a possible eye or vision problem:

- Appearance of eyes (e.g., cloudiness or haze of cornea; unequal or irregular pupils; strabismus - eyes turning in or out, crossed eyes; watery, red eyes; white pupil; signs of eye injury)
- Behaviors or complaints (e.g., closing or covering one eye when doing near work, complaints of blurred or double vision, unusual sensitivity to light, needing to hold reading material close to their face or move closer to board, squinting or frowning when trying to focus, frequent headaches/nausea/dizziness, excessive blinking, tilting or turning of head to one side most of the time, complaints of burning).

A primary care physician, optometrist, or ophthalmologist should evaluate students who exhibit any of these signs, symptoms, or behaviors.

In addition, the school nurse should be aware of conditions with a higher incidence of vision and eye health problems:

- Neurodevelopmental disorders (e.g., cerebral palsy, cognitive impairment, autism spectrum disorder, hearing loss, speech delay)
- Systemic or genetic diseases known to have associated eye disorders (e.g., diabetes, juvenile idiopathic arthritis, sickle cell disease)
- Use of medications known to have ocular side effects
- Known family history of strabismus, amblyopia, or high refractive error in a parent or sibling
- History of prematurity less than 32 weeks or low birth weight less than 1500 grams

Referrals to an optometrist or ophthalmologist for a comprehensive eye examination should be made for a student with any of these conditions, even if the student has passed screening. Students who have received an eye examination from an optometrist or ophthalmologist within the prior 12 months do not need to be screened but should be referred to their eye care provider if follow up is needed.

VISION SCREENING TESTS

All students should be screened for monocular distance visual acuity using optotype-based tests OR as an alternative, young students may be screened using an instrument-based test. Stereoacuity screening and screening for color vision deficiency are optional. These recommendations are based on guidance from the National Center for Children's Vision and Eye Health. The table below provides criteria for the different types of vision screening tests.

Table 1: Required Vision Screening Tests

Test Type	Acceptable Tests	Recommended Ages/ Grades for Use	Referral Criteria
Optotype-based Monocular Distance Visual Acuity	LEA Symbols or HOTV Letters	<ul style="list-style-type: none"> Recommended for ages 3-6 years Use at school system entry if age 5 years or below; first grade if unable to read SLOAN letters; may be considered in higher grades if unable to read SLOAN letters 	<ul style="list-style-type: none"> 3 years: Unable to pass 20/50 line in either eye 4 years: Unable to pass 20/40 line in either eye 5+ years: Unable to pass 20/32 line in either eye All ages: two line difference between the eyes, even within the passing range, e.g., 20/16 and 20/25
	SLOAN Letters	<ul style="list-style-type: none"> Recommended for ages 6 years and older Use in first grade and higher 	<ul style="list-style-type: none"> 5+ years: Unable to pass 20/32 line in either eye OR two-line difference between the eyes, even within the passing range, e.g., 20/16 and 20/25
Instrument-based Vision Screening (for estimates of refractive error and eye misalignment)	Righton Retinomax; SureSight Vision Screener; Welch Allyn Spot Vision Screener; Plusoptix	<ul style="list-style-type: none"> Recommended for ages 3-5 yrs. Use at school system entry if age 5 years or below; may be considered in higher grades if unable to participate in optotype-based screening 	<ul style="list-style-type: none"> Follow manufacturer's guidelines

Table 2: Optional Vision Screening Tests

Test Type	Acceptable Tests	Recommended Ages/ Grades for Use	Referral Criteria
Stereoaucuity	PASS Test 2	<ul style="list-style-type: none"> Use in first grade or at school system entry if later 	<ul style="list-style-type: none"> 3-4 years: Unable to correctly identify the Smile face on Card B 5+ years: Unable to correctly identify the Smile face on Card B or Card C
	Random Dot E	<ul style="list-style-type: none"> Use in first grade or at school system entry if later 	<ul style="list-style-type: none"> Unable to see the E figure in the RDE card at all <p>OR</p> <ul style="list-style-type: none"> Able to see the E figure only when the card is approximately 20 inches away
Color Vision	Pseudoisochromatic Plates - ex. Ishihara, Color Vision Testing Made Easy, Color Check Complete Vision Screener	<ul style="list-style-type: none"> Boys upon school system entry 	<ul style="list-style-type: none"> Unable to read the number of plates determined by the manufacturer

PREPARATION AND CONSIDERATIONS FOR MONOCULAR DISTANCE VISUAL ACUITY SCREENING

Visual acuity is defined as the sharpness or clearness of a person's vision. Screening for distance visual acuity can help detect myopia, amblyopia, or astigmatism.

When preparing for distance visual acuity screening using wall and flip charts, consider the following:

- Determine a location within the school building that has appropriate physical space and lighting to conduct screening.
- Accurately measure 10 feet (or five feet if needed) between chart and student's eyes and mark a line for student placement.
- Place the arch of the student's foot on the line when measuring the 10-foot distance, not heels or toes. If the student is seated, align the back legs of the chair on the line.

- When using a wall chart, hang the chart on the wall at the student's eye level. Position the chart to avoid glare on the chart surface or the student's eyes. Avoiding glare is also important when using flip charts and cards.
- Ensure sufficient supplies for occlusion and for any necessary cleaning/disinfecting.
- Disposable patches are the preferred method for occlusion. If occluder glasses or hand-held occluder are used, standard infection control precautions should be used.
- If hand-held occluders are used, the child should not be permitted to hold them as this increases the risk of peeking.
- Screening should be done with glasses or contact lenses in place for children who wear them. Note on the screening form as to whether the child was screened with or without corrective lenses.

Considerations for Special Populations:

Additional support and strategies may be required when screening students with special health needs, English Learners (EL), and preschool aged students. These students may benefit from:

- Meeting with the teacher to discuss techniques and best time to screen the student
- Preparing the student prior to the screening
- Allowing extra time to screen the student
- If possible, having an interpreter present, or having written instructions in the student's native language
- Allowing the student to observe testing of other students

PROCEDURES FOR MONOCULAR DISTANCE VISUAL ACUITY SCREENING TESTS

Threshold Versus Critical Line Screening

Threshold screening is the traditional method of testing visual acuity. The child starts at the top of an eye chart and continues reading down each line until he or she recites the smallest line of optotypes discernable with each eye tested separately. This method enables one to identify the best level of visual acuity in each eye. Thus, children with near-normal acuity who still have a mild difference in acuity between each eye can be detected. However, threshold line evaluation can be sufficiently time consuming, resulting in loss of attention from a young subject.

Young children, even those with normal vision, are frequently unable to attend sufficiently to small optotypes and identify them. "Critical line" screening is an effective alternative to threshold testing for identifying children with potentially serious vision concerns and can be more quickly administered than can screening by using threshold testing. The "critical line" is the age dependent line a child is expected to see normally and pass. For screening purposes, it is unnecessary to measure acuity below the age-specific critical line to pass the test. The critical line to pass screening becomes smaller as age increases.

SLOAN LETTERS Wall Chart - (Threshold or Critical Line Screening)

Threshold Screening Procedure

1. Use a standardized 9 x 14 in SLOAN Letter chart and follow preparation and considerations for testing monocular visual acuity at 10 feet.
2. Explain the screening process to the student.
3. Screen the **right eye** first, with the left eye occluded.
4. Starting at the top line on the **right side** of the chart, ask the student to identify the first letter on the **right side** of each line and move down the chart until a letter is missed. Screener may point briefly below the letter if needed to assist the student with understanding where to start.
5. When the student misidentifies a letter with the right eye, return to the line above the missed letter and ask the student to identify each letter on that line, reading left to right.
6. If the student correctly identifies three of the five letters on the line, move down to the next line and ask the student to identify the letters.
7. Continue to move down the lines on the right side of the chart until the student is unable to identify three out of five letters on a line.
8. Record the visual acuity for each eye as 20/XX for the lowest line the student was able to correctly identify any three out of five letters, or all the letters on a line that has less than five letters.
9. Repeat procedure to screen the **left eye** with the right eye occluded, starting with the first letter on the **left side** of each line.
10. Depending on the SLOAN chart used, the lines split into two columns towards the bottom half of the chart. Use the right column for screening the right eye and the left column for screening the left eye.

NOTE: The SLOAN wall chart may also be used for critical line screening. Screen the right eye first, with the left eye occluded. Using the critical line for age, ask the child to identify the letters reading left to right. The child must correctly identify at least three out of five letters to pass the critical line. Repeat procedure to screen the left eye with the right eye occluded.

Refer

Student should be referred to an optometrist or ophthalmologist for a comprehensive eye examination when the following criteria are met:

- 5 years and older: Miss three or more letters on the 20/32 line with either eye OR Two-line difference between the eyes, even within the passing range, e.g., 20/16 and 20/25.

LEA SYMBOLS or HOTV LETTERS - Wall Chart (Threshold or Critical Line Screening)

Threshold Screening Procedure

1. Use a standardized 9 x14 in chart and follow preparation and considerations for testing monocular visual acuity at 10 feet.

2. Pre-condition the child to the process of screening by pointing to several optotypes on the wall chart and having the child say or match the optotypes on the response card.
3. Screen the **right eye** first, with the left eye occluded.
4. Starting at the top line on the **right side** of the chart, ask the child to identify the first optotype on the **right side** of each line and move down the chart until an optotype is missed. Screener may point briefly below the optotype if needed to assist the child with understanding where to start.
5. Return to the line above the missed optotype and ask the child to identify each letter or shape on that line, reading left to right.
6. If the child correctly identifies three of the five optotypes on the line, move down to the next line and ask the child to identify the optotypes.
7. Continue to move down the lines on the right side of the chart until the child is unable to identify three out of five optotypes on a line.
8. Record the visual acuity for the right eye as 20/XX for the lowest line the child was able to correctly identify any three out of the five optotypes, or all the optotypes on a line that has less than 5.
9. Repeat procedure to screen the **left eye** with the right eye occluded, starting with the first optotype on the **left side** of each line.
10. Depending on the LEA SYMBOLS or HOTV chart used, the lines split into two columns towards the bottom half of the chart. Use the right column for screening the right eye and the left column for screening the left eye.

NOTE: The LEA Symbols and HOTV wall charts may also be used for critical line screening. Screen the right eye first, with the left eye occluded. Using the critical line for age, ask the child to identify the optotypes reading left to right. The child must correctly identify at least three out of five optotypes to pass the critical line. Repeat procedure to screen the left eye with the right eye occluded.

Refer

Student should be referred to an optometrist or ophthalmologist for a comprehensive eye examination when the following criteria are met:

- 3 years: Miss three or more optotypes on the 20/50 line in either eye
- 4 years: Miss three or more optotypes on the 20/40 line in either eye
- 5 years and older: Miss three or more optotypes on the 20/32 line in either eye
- All ages: Two line difference between the eyes, even within the passing range, e.g., 20/16 and 20/25

LEA SYMBOLS or HOTV LETTERS - Flip Charts (Critical Line Screening)

Procedure

1. Use a standardized flip chart with crowded lines of five optotypes per page at 10 feet or single, surrounded optotypes at five feet and follow preparation and considerations for testing monocular visual acuity at 10 feet (or five feet).
2. Pre-condition the child to the process of screening by pointing to several optotypes on the flip chart and having the child say or match the optotypes on the response card.
3. Screen the **right eye** first, with the left eye occluded.
4. Using the critical line for age, ask the child to identify the optotypes. The child must correctly identify at least three out of five optotypes to pass the critical line.
5. Repeat procedure to screen the **left eye** with the right eye occluded.

Refer

Student should be referred to an optometrist or ophthalmologist for a comprehensive eye examination when the following criteria are met:

- 3 years: Miss three or more optotypes on the 20/50 line in either eye
- 4 years: Miss three or more optotypes on the 20/40 line in either eye
- 5 years and older: Miss three or more optotypes on the 20/32 line in either eye

PROCEDURES FOR INSTRUMENT-BASED SCREENING

Instrument-based screening refers to vision screening using automated technology. Generally, instrument-based screening is quick to administer and requires minimal cooperation from the child. Instrument-based screening using autorefraction or photorefraction/photostereopsis identifies the presence and magnitude of refractive error rather than providing a measurement of visual acuity.

Because of the association among amblyopia, strabismus, and uncorrected significant refractive error, screening for refractive error alone is often successful in identifying children with constant strabismus and moderate to severe levels of amblyopia.

Screeners should refer to the manufacturer's instructions for use as well as the instrument- and age-specific pass/fail refractive error criteria.

PROCEDURES FOR STEREOACUITY SCREENING

Stereoacuity is a measure of the quality of depth perception. Screening can help identify diseases such as amblyopia, strabismus, and other refractive errors.

PRESCHOOL ASSESSMENT OF STEREOPSIS WITH A SMILE (PASS TEST 2)

Procedure

1. Place the polarized viewers on the child. If the child wears prescription glasses, the polarized viewers should always be worn over them.
2. Ask the child to point to or identify the Smile Face on Card A (DEMO).

3. Next, hold Card A and the blank card side by side without touching in front of the child at a 10-degree angle (top of card tilted back towards the screener). Always ensure that the arrow on the back of each card is pointing up and hold the blank card at exactly the same distance from the child as Card A.
4. Ask the child to point to the Smile Face. Shuffle the cards behind your back to randomly change the position of the Smile Face and then present it randomly either to the right or left of the blank card. Avoid creating a pattern of presentation (e.g., R, L, R, L or R, R, L, L).
5. Repeat steps 4-6 a maximum of five times. The child is successful if they are able to identify the card with the Smile Face four out of four or four out of five presentations.
6. If the child is unsuccessful on Card A (DEMO), STOP testing. If the child is successful on Card A they are “able” to understand the test. Proceed by replacing Card A with Card B.
7. Repeat the same procedure (steps 3-5) again now with Card B and the blank card. It may take a few seconds for the child to see the smile face. Encourage the child to continue looking.
8. If the child is unsuccessful on Card B, STOP testing.
9. For children 5 years and older only: If the child successfully identifies two or more presentations of Card B, replace Card B with Card C and repeat the same procedure (steps 3-5) again with Card C and the blank card.

Refer

Student should be referred to an optometrist or ophthalmologist for a comprehensive eye examination when the following criteria are met:

- 3-4 years: Does not correctly identify Card B on four out of four or four out of five presentations.
- 5 years and older: Does not correctly identify two out of two presentations on Card B or four out of four or four out of five presentations on Card C.

RANDOM DOT E

Procedure

1. Place the polarized glasses on the child. If the child wears prescription glasses, the polarized glasses should always be worn over them.
2. Hold the model E card up to the child and ask what the figure is. It is important to always hold the cards with the long sides on top and bottom. If the child cannot name it or has difficulty, point at the E figure on the card and say “That’s an ”E”.
3. When showing the child the test cards, be sure the child keeps their head straight up as tilting to one side or allowing the glasses to tilt will interfere with the test.
4. Hold the Random Dot E (RDE) card up next to the blank card at about 20 inches from the child and ask the child to identify which card has the E.
5. Put the RDE card and the blank cards behind your back and shuffle their positions. Then show the child the two cards side by side again and ask again where the E is.
6. Repeat this process at least four times. Once the task is understood, the answer should be correct every time if the child can see the stereo E figure on the RDE card.

7. Now, move the cards back to 40 inches from the child and repeat the test. Again, test the child's ability to point to the E at least four times in a row, shuffling them behind your back in between each test.
8. The child is successful if he/she is able to point to the correct stereo E card at least four times at 20 inches and 40 inches.

Refer

Student should be referred to an optometrist or ophthalmologist for a comprehensive eye examination when the following criteria are met:

- Child cannot distinguish the E figure in the RDE card at all OR
- Child can only see the E figure when the card is approximately 20 inches away

PROCEDURES FOR COLOR VISION DEFICIENCY SCREENING

Color vision deficiency is inability to recognize certain colors, primarily red or green, but rarely blue. There is no treatment for congenital color blindness. The National Center for Children's Vision and Eye Health recommends that if color vision deficiency screening is performed that it only be done once upon student's entry into the school system.

PSEUDOISCHROMATIC PLATES

To screen for the detection of color deficiency in males, the recommended test is a book of pseudoisochromatic plates. These tests resemble books with pages in which persons with normal red-green color vision can discern objects, shapes or numbers. There are many different manufacturers producing pseudoisochromatic plates.

Procedure

1. Special attention should be given to proper lighting when screening with pseudoisochromatic plates. Follow the manufacturer's instructions.
2. Show the testing book to the child. Tell the child to trace the shape, letter or number he/she sees using a clean cotton swab or similar instrument.
3. Because pseudoisochromatic plate tests differ, the screener should follow the manufacturer's instructions as to the administration of the test relative to distance, and the passing or failing criteria.

Refer

Student should be referred to an optometrist or ophthalmologist for a comprehensive eye examination when the following criteria are met:

- Child is unable to read the number of plates determined by the test manufacturer

EQUIPMENT MAINTENANCE

Vision screening instruments require proper care. For specific instrument-based screening devices, follow the manufacturers' guidelines on maintenance and service. In addition, the following guidelines are recommended when caring for vision screening equipment:

- Carry all necessary supplies including an extension cord and replacement bulbs.
- Test lighting system at the start of each screening day and replace bulbs as necessary.
- Check that all optical surfaces are free of dust and finger smudges.
- Do not use any abrasive material to clean surfaces.
- Check for scratches on slides, mirrors, and surfaces which may affect screening accuracy.
- Handle instrument with care when transporting.
- Properly cover and store equipment in a safe area when not in use.

INFECTION CONTROL

Infection control prevents or stops the spread of infection. Some general infection control practices to exercise when conducting vision screening include:

- Limit the number of students in the screening area according to the space available.
- Do not screen students displaying any signs of illness.
- Students and screeners should practice good hand hygiene before and after the screening session.
- Clean and disinfect any non-disposable screening objects or instruments touched by the student between each use.
- Practice routine cleaning of high touch surfaces.
- Follow school system and school guidelines regarding use and storage of cleaning and disinfecting products.

RESCREENING

Students who are unable to complete vision screening due to lack of cooperation or difficulty understanding the instructions should be rescreened no later than four to six weeks after the initial screening. Students who fail the second screening or are still unable to complete screening should be referred for a comprehensive eye examination.

Section III: Referral and Care Coordination

DOCUMENTATION AND FOLLOW-UP

The school nurse is responsible for:

- Communicating with the parent(s)/guardian(s) when a student has failed screening;
- Providing parent(s)/guardian(s) of a student who has failed screening with a recommendation/referral to see an optometrist or ophthalmologist;
- Assisting students and parent(s)/guardian(s) in selecting recommended services as needed;
- Assisting a student and parent(s)/guardian(s) to identify a healthcare provider for students without a usual source of care;
- Documenting screening results and receipt of services and interventions recommended by the optometrist, ophthalmologist, or other professional on the Student Record Card 5 (SR5); and
- Informing appropriate school personnel of students who have vision concerns which may impede learning and/or require special care.

EDUCATIONAL MATERIALS

The Md. Code Ann., Educ. § 7-404(c); requires that the parent(s)/guardian(s) of each student being screened receive educational materials that include the following:

- A disclaimer that a vision screening is not a substitute for a comprehensive eye exam performed by an optometrist or ophthalmologist;
- An overview of visual impairments and an explanation of the potential educational impact of untreated visual impairments; and
- A list of at-risk groups that are encouraged to have a comprehensive eye examination by an optometrist or ophthalmologist.

Additional information shall be provided to the parent(s)/guardian(s) of a student who fails vision screening that includes:

- Notice that the results of the screening indicate that the student may have a vision disorder;
- A recommendation to the parent(s)/guardian(s) that the student be tested by an optometrist or ophthalmologist;
- A description of the warning signs, symptoms, risk factors, and behavioral problems associated with vision disorders or eye conditions;
- A description of the difference between eye examinations and the vision screenings required under this section;
- Information on how to enroll in the Maryland Medical Assistance Program; and
- Information on locally available free or low-cost nonprofit programs that provide eye examinations and eyeglasses for children, if any.

Appendix A contains sample vision screening educational materials for parents and guardians.

REPORTING

The Md. Code Ann., Educ. § 7-404 requires that the results of the vision screenings shall be reported to the county board or the county health department. The county board or the county health department shall report to the Maryland Department of Health: (i) The results of the vision screenings; and (ii) To the extent practicable, the number of students receiving the recommended services.

Section IV: Resources and References

RESOURCES

The following resources are provided to assist with information and guidance for vision screening in the school setting:

American Association for Pediatric Ophthalmology and Strabismus (AAPOS) All Children See

<https://www.childrenseyefoundation.org/webdev/what-we-do/all-children-see?msclkid=d6320f20c57311ecbcdc6e8e7625bea5>

The AAPOS offers a resource section dedicated to eye care for children, finding a pediatric ophthalmologist, and providing educational literature.

Maryland Optometric Association - Local Public Health Programs

<https://www.marylandoptometry.org/page/LocalPublicHealth>

The Maryland Optometric Association provides educational opportunities, strong federal and state advocacy, and resources to optimize the practice of optometry.

National Center for Children’s Vision and Eye Health at Prevent Blindness

<https://nationalcenter.preventblindness.org/>

National Center for Children’s Vision and Eye Health is dedicated to identifying gaps and establish a support system to approve vision health.

National Association of School Nurses (NASN) - Vision and Eye Health

<https://www.nasn.org/nasn-resources/resources-by-topic/vision-health>

The NASN provides guidance for school nurses and others involved in front-line vision screening.

National Federation of the Blind Maryland - Children’s Resources

<https://www.nfbmd.org/children>

The National Federation of the Blind Maryland provides resources for children including services for infant and toddlers and books for the blind.

Vision To Learn

<https://visiontolearn.org/?msclkid=b184e002c57311ec9ed89503604f0380>

Vision to Learn partners with school districts to provide students with access to eye care on the school campus.

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- Hearing and Vision Screenings for Students, Md. Code Ann., Educ. § 7–404. <https://mgaleg.maryland.gov/mgawebsite/Laws/StatuteText?article=ged§ion=7-404&enactments=False&archived=False>
- Marsh-Tootle, W. L., Russ, S. A., Repka, M. X., & National Expert Panel to the National Center for Children's Vision Eye Health (2015). Vision and eye health in children 36 to <72 months: proposed data definitions. *Optometry and vision science: official publication of the American Academy of Optometry*, 92(1), 17–23. <https://doi.org/10.1097/OPX.0000000000000444>
- National Association of School Nurses. (Updated 2022, February). Vision and eye health. Retrieved March 29, 2022 from <https://www.nasn.org/nasn-resources/resources-by-topic/vision-health>
- National Center for Children's Vision and Eye Health at Prevent Blindness. (2021, March). Evidence-based screening tool examples. https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2021/07/vision_screening_table2021.pdf
- National Center for Children's Vision and Eye Health at Prevent Blindness. (n.d.). Vision screening guidelines by age. Retrieved March 29, 2022 from <https://nationalcenter.preventblindness.org/vision-screening-guidelines-by-age/>
- School Health Program, Md. Code Ann., Educ. § 7–401. <https://mgaleg.maryland.gov/mgawebsite/Laws/StatuteText?article=ged§ion=7-401&enactments=false>
- School Health Services Standards, COMAR 13A.05.05.07. <https://dsd.maryland.gov/regulations/Pages/13A.05.05.07.aspx>

Guideline Administrative History: Original Issue 2001, Revised 2007. Revised 2023.

Appendix A: Sample of Vision Screening Educational Materials for Parents and Guardian

PASSED VISION SCREENING EDUCATION

School Letterhead

Vision Screening Results

Educational Materials for Parents and Guardians

Your student passed a vision screening at (school) _____
on (date) _____.

IMPORTANT INFORMATION ABOUT CHILDREN'S VISION

1. What is the difference between a vision screening and a comprehensive eye examination?

A vision screening is not a substitute for a comprehensive eye exam. A vision screening can be performed by a school nurse or vision screeners and may include all or some of the following tests:

Visual acuity measurement

Depth perception

Color vision

Photostcreening

The goal of school vision screening programs is to identify children who are or may be at risk for vision problems that, if not treated early, can lead to permanent vision loss. Screenings are not diagnostic, but a screening can determine who may need a comprehensive eye examination.

Comprehensive eye examinations can be performed only by an eye care professional (ophthalmologist or an optometrist). Comprehensive eye examinations include:

Medical and family history

Visual acuity measurement

Depth perception

Eye muscle balance

Pupil function and assessment of peripheral vision

Structural eye health evaluation including pupil dilation with drops

Refraction to determine the need for glasses

2. Which at-risk groups are encouraged to have a comprehensive eye examination by an ophthalmologist or optometrist?

At-risk groups include those:

Who failed a vision screening or who cannot be screened in school;

- Whose parent(s)/guardian(s), caregivers, or school staff are concerned that their child or student has a vision related problem or is not reaching age appropriate developmental or academic milestones;
- With known neurodevelopmental disorders (e.g., cerebral palsy, cognitive impairment, autism spectrum disorder, hearing loss, speech delay);
- With systemic or genetic diseases known to have associated eye disorders (e.g., diabetes, juvenile idiopathic arthritis);
- Using medications known to have ocular side effects;
- With a history of premature birth of less than 32 weeks or low birth weight of less than 3.3 pounds (1500 grams) who have not already had a normal comprehensive eye examination; or
- With a known family history of strabismus, amblyopia, or high refractive error in a parent, sibling, or child.

3. What are the warning signs, symptoms, risk factors, and behavioral problems associated with vision disorders or eye conditions?

A primary care physician, optometrist, or ophthalmologist should evaluate students who exhibit the following signs, symptoms, or behaviors:

- Closing or covering one eye when doing near work
- Cloudiness or haze of cornea
- Complaints of blurred or double vision
- Unusual sensitivity to light
- Needing to hold reading material close to their face or move closer to board
- Squinting or frowning when trying to focus
- Unequal or irregular pupils
- Headache, nausea, or dizziness most of the time
- Excessive blinking
- Tilting or turning of head to one side most of the time
- Strabismus – eyes turning in or out, crossed eyes
- Watery, red eyes or complaints of burning, scratching, or itchy eyes
- Eyelid lesion or infection
- White pupil
- Signs of eye injury

4. What are the most common vision problems in children?

The vast majority of vision problems in students are treatable. The most common vision problems in children are:

- Refractive errors (the need for glasses)
- Strabismus (eye misalignment)

Amblyopia (lazy eye)

There are less common and more difficult to treat medical eye conditions which include, but are not limited to:

Nystagmus

Cataracts

Glaucoma

Optic atrophy

Cortical visual impairment

Optic nerve hypoplasia

Retinopathy of prematurity

5. What are the potential educational impacts of untreated visual impairment?

Visual functioning is a strong predictor of academic performance in school-age children. Untreated vision problems may interfere with learning and can lead to permanent vision loss. Early detection and treatment of vision problems are critical for optimal eye health and academic success. Students with undiagnosed vision disorders or eye conditions may exhibit problems with attentiveness, behavior in the classroom, or behavior at play.

School Nurse: _____

Phone Number: _____

FAILED VISION SCREENING EDUCATION
School Letterhead
Vision Screening Results
Educational Materials for Parents and Guardians

Date: _____ School: _____

Dear Parent/Guardian of: _____

Your student was given a vision screening in school. The results of the screening indicate your student may have a vision disorder. The vast majority of vision problems in school age students are treatable. **It is recommended that your student have a comprehensive eye examination by an eye doctor (ophthalmologist or an optometrist).**

The student used glasses/contact lenses for the screening: Yes / No (circle one)

REASON FOR REFERRAL:

Visual Acuity: check eye(s) that did not pass screening (include visual acuity if known)

Right _____

Left _____

Other:

What free or low-cost resources are available to help your child if he/she has a vision problem?

Students who qualify for Maryland Medical Assistance programs can enroll at any time. Eligible students can be enrolled in Medicaid or the Maryland Children's Health Program (MCHP): 1) online at <https://www.marylandhealthconnection.gov>; 2) by calling the Maryland Health Connection at 1-855-642-8572 (TTY: 1-855-642-8573); 3) through the mobile app 'Enroll MHC'; or 4) by visiting your local health department at _____.

There are also locally available free or low-cost nonprofit programs that may provide eye examinations and eyeglasses for children. Please contact your school nurse or local health department to discuss these options in your community.

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With known neurodevelopmental disorders (e.g., cerebral palsy, cognitive impairment, autism spectrum disorder, hearing loss, speech delay);

With systemic or genetic diseases known to have associated eye disorders (e.g., diabetes, juvenile idiopathic arthritis);

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School Nurse: _____ Phone Number: _____