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**Date:** August 23<sup>rd</sup>, 2021

**To:** Massachusetts School Nurses, School Physicians, Primary Care Providers, and Other Health Personnel (who are approved by the Department of Public Health for the purpose of screening vision)

**SUBJECT:** Updated Massachusetts Vision Screening Protocols

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## PURPOSE AND INTRODUCTION

The Massachusetts Department of Public Health (MDPH) has worked in partnership with expert consultants from ophthalmology, optometry, school nursing and Prevent Blindness to update the preschool through grade 12 vision screening protocols to reflect current evidence-based practices.<sup>1,2</sup> School nurses are critical to school-based vision screening programs and must remain current in evidence-based protocols and recommendations. These protocols are intended to guide school nurses, pediatricians, eye care providers, special education professionals and others in the identification of children who may have a vision disorder, who must then be promptly referred to an eye doctor (ophthalmologist or optometrist) for further evaluation.

It is well-documented that timely identification and treatment of many vision disorders in young children can prevent permanent vision loss. Scientific studies have also documented that undetected or untreated vision disorders in children can negatively affect acquisition of early literacy skills.<sup>3,4</sup> MDPH recognizes vision screening does not detect all vision disorders, and that a vision screening is one step in the system of vision care for children.<sup>5</sup> Children who do not pass a vision screening require a comprehensive eye examination from an eye doctor for evaluation, diagnosis, and if needed, treatment and follow-up.

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<sup>1</sup> <https://www.pediatrics.org/cgi/doi/10.1542/peds.2015-3596>

<sup>2</sup> <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/vision-in-children-ages-6-months-to-5-years-screening>

<sup>3</sup> Kulp MT, Ciner E, Maguire M, et al. Uncorrected hyperopia and preschool early literacy: results of the Vision in Preschoolers-Hyperopia in Preschoolers (VIP-HIP) Study. *Ophthalmology*. 2016;123(4):681e689.

<sup>4</sup> Bruce A, Kelly B, Chambers B, et al. The effect of adherence to spectacle wear on early developing literacy: a longitudinal study based in a large multiethnic city, Bradford, UK. *BMJ Open* 2018;8:e021277. doi:10.1136/bmjopen-2017-021277

<sup>5</sup> <https://preventblindness.org/12-components-of-a-strong-vision-health-system-of-care/>

Vision screening is of limited value if follow-up eye examinations do not occur or treatment plans are not followed. School and other health personnel should assist parents or guardians in coordination of eye care as needed and support any treatment recommendations which may include treatment during school hours. Working together with families will help ensure the best possible health and educational outcomes for the child.

We acknowledge there may be issues, such as the timing of the screening within your district and/or training of personnel, both of which may play a significant role in the implementation of these new protocols. We remain confident in the knowledge that all school districts are committed to conducting this important population-based screening program in the best manner possible

**Training in the New Protocols:**

MDPH will provide a Vision Screening Manual for more detailed information. The approved training programs listed [here](#) will provide continuing education courses for school nurses and training for other professionals on current preschool through grade 12 vision screening protocols.

**COMMONWEALTH OF MASSACHUSETTS LAWS AND REGULATIONS**

The following is a summary of Massachusetts law for vision screening children. For more details, please refer to:

1. Massachusetts General Law (MGL), Chapter 71 (Education of Children in Public Schools), Section 57: [Physical Examination of Pupils; Eye Examination, Written Report](#)
2. Massachusetts Department of Public Health Regulation: 105 CMR 200.000: [Physical Examination of School Children](#)

**Vision screening frequency:**

In accordance with the MDPH regulation 105 CMR 200.400, the vision of each student in the public schools is to be screened in the year of school entry, annually through grade 5 (or by age 11 in ungraded classrooms), once in grades 6 through 8 (or ages 12 through 14 in ungraded classrooms) and once in grades 9 through 12 (or ages 15 through 18 in ungraded classrooms). The vision of each student shall be tested by a method approved by the MDPH.

MDPH advises screening the vision of all new students (regardless of age and month of entry into school) in distance visual acuity, near visual acuity, and stereopsis, when unable to present past evidence of having completed these required screenings. This would include students whose residence was previously outside the Commonwealth prior to enrollment or those who have transferred into your school district.

**Prior to entry to kindergarten:**

In accordance with M.G.L. c. 71, § 57, upon entering kindergarten or within 30 days of the start of the school year, the parent or guardian of each child shall provide to school health personnel the results of a vision screening or comprehensive eye exam that was completed within the previous 12 months. For children who did not pass their vision screening, proof of a comprehensive eye examination performed by an eye doctor must also indicate any pertinent diagnosis, treatment, prognosis, recommendation, and evidence of follow-up treatment if necessary.

**Children with a diagnosis of neurodevelopmental delay:**

In accordance with M.G.L. c. 71, § 57, children entering kindergarten with a diagnosis of neurodevelopmental delay, must show proof of a comprehensive eye exam performed by an eye doctor within the past 12 months, indicating any pertinent diagnosis, treatment, prognosis, recommendation, and evidence of follow-up treatment if necessary.

**Religious exemption:**

In accordance with M.G.L. c. 71, § 57, any child shall be exempt on religious grounds from these examinations upon written request of parent or guardian.

**Non-public schools:**

In accordance with M.G.L. c. 71, § 57, every private school that does not perform vision screening is required to inform each parent and guardian of every enrolled pupil that the school does not conduct these examinations, and shall recommend that the parent consult with their child’s health care provider, local school committee or board of health to ensure that these examinations are conducted.

**Students who do not pass a vision screening:**

In accordance with Regulation 105 CMR 200.400, for any student who does not pass a vision screening, a written plan shall be developed by the school nurse, in consultation to the extent possible with a student's parent or legal guardian, for appropriate follow up of the student. With the consent of the parent or legal guardian, the student's primary care provider shall be furnished with a copy of the record of screening tests performed in the school.

**Waivers of requirements:**

Except as provided by law, the Massachusetts Department of Public Health shall have the discretionary power to waive any of 105 CMR 200.100 through 200.500, except confidentiality requirements of 105 CMR 200.500(A), upon written request. (A) The request for a waiver must be accompanied by an alternative plan to the regulation that would adequately protect the health of the school child. (B) Waiver requests shall not be based upon reductions in the budget for school health or granted on such basis. (C) Waivers may be granted for periods up to one year and may be renewed upon demonstration of improvement in school health programs.

**SUMMARY OF ADDITIONS/CHANGES TO VISION SCREENING PROTOCOL**

Implementation of new protocol: September 1, 2022.

1. **The Critical Line** standard for children and adolescents for chart-based screening ONLY:
  - Preschool (3 years old): 20/50
  - Preschool (4+ years old): 20/40
  - Kindergarten (5 years old) through Grade 12: 20/32
  
2. **Public preschool children (ages 3, 4, and 5 years) to be vision screened annually**, starting the year of school entry. The approved protocol is summarized on page 6.
  
3. **Visual Acuity charts to use logMAR notation and scoring:** Acceptable near and distance visual acuity charts are LEA SYMBOLS® and Sloan Letters charts. All other visual acuity charts are discontinued.

4. **Near vision screening to be conducted annually for children beginning the year of school entry through Grade 3 (ages 3 through 9 years):** Near vision screening is conducted at 16". Acceptable age-appropriate charts are LEA SYMBOLS® and Sloan Letters.
5. **Distance visual acuity for public preschool children (ages 3, 4, and 5 years):** The "Eye Check" screening, performed at a 5-foot distance, is approved as an additional option for use in children ages 3, 4, and 5 years. All other approved distance visual acuity screenings are performed at 10 feet.
6. **Stereoacuity screening to use the "Pass 1" test, and will be used for children ages 5 years through 9 years only (K through Grade 3).** The Random Dot E is discontinued.
7. **Instrument-based screening devices:** PlusOptix, Retinomax or Spot™, or any other MDPH-approved instrument-based screening devices, are for use in children ages 3, 4 and 5 years only. The age limitations for instrument-based vision screening may be adjusted as additional research data becomes available. Children ages 6 years and older who cannot participate in approved letter or symbol visual acuity screening are to be referred for a comprehensive eye exam by an eye doctor who is experienced in treating children.

Note: Distance visual acuity screening and stereoacuity screening is not required when using the instrument-based screening protocol in children ages 3, 4 and 5 years. *However, near visual acuity screening must still be conducted when using instrument-based screening.*

8. **Vision Testing Machines are discontinued:** MDPH no longer recommends, for any age group, the use of vision testing machines (such as Optec, Titmus, Keystone View). Vision testing machines do not have reliable evidence-basis. Additionally, a child's behavior that may indicate a vision problem, such as squinting, is hidden from the screener using this method.

## **FURTHER RECOMMENDATIONS FROM THE DEPARTMENT OF PUBLIC HEALTH:**

1. **English language learners:** Instrument-based screening for children ages 3, 4 and 5-years, and/or matching lap cards with visual acuity charts can be used when testing the vision of children who are non-English proficient.
2. **A comprehensive eye exam by an eye doctor experienced in treating children should be sought in the following cases:**
  - a. **Children unable to complete, or who refuse to complete a vision screening,** if unable to be re-screened in a timely manner.
  - b. **Children with complex or multiple disabilities** (Special Health Care Needs) whose disability or behavior prevents them from performing a standard screening.
  - c. **Children not reaching educational milestones** or who are being considered for, or who receive, additional educational support such as an Individualized Education Plan (IEP), even if the child has passed a recent vision screening.

- d. **Parent, teacher, nurse, or screener concerns** about the potential existence of a vision problem (such as noting observable signs or complaints from the child, outlined more fully in the addendum), even if the child has passed a recent vision screening.<sup>6</sup>
- e. **Frequently observed classroom behaviors that may indicate a vision problem:** Screeners, school nurses, teachers and other professionals interacting with children, are advised to understand factors which can influence the likelihood of a child having or developing a vision disorder; and be especially aware of frequently exhibited behaviors that may indicate a possible vision problem, even if the child has passed a recent vision screening. Parents should fully understand the necessity for the referral.

### **3. Sharing of vision screening and vision plan of care with teachers:**

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. FERPA Privacy rules allow sharing of information without parent authorization amongst school personnel who have a legitimate educational interest in that child. Records maintained by a school nurse and any health screening conducted by the school or by an agency contracted by the school, is an education record regulated by FERPA privacy laws, not a health record regulated by HIPAA privacy laws. School-based clinic provider medical records can be regulated by HIPAA.<sup>7,8</sup> Sharing a student's vision screening result and treatment plan with their teacher, reading specialist, IEP provider, or school personnel with legitimate educational interest is encouraged in situations where compliance with referral or treatment is not being followed.

### **4. Referral and follow-up care:**

Vision screening is the first step in identifying children who may have an undetected vision problem that requires evaluation by an eye doctor experienced in diagnosing and treating children. The referral process begins with notifying parents and caregivers of the need for an examination by an eye doctor, with a systematic process in place for periodic parental reminders, notation of eye exam results, and sharing of results with the child's teachers where appropriate.

There are many reasons why a child may not receive timely vision care. School Nurses along with other educational and health personnel must consider the unique barriers to care when developing referral and follow up systems that are individualized to families and communities. Some of these considerations include factors related to the Social Determinants of Health (SDoH), such as socio-economic status (SES), homeless status, insurance status, access to eye care services, cultural, racial, and other areas of discrimination. All personnel must work towards engaging families and providers to mitigate these barriers to vision follow up and care. The Department strongly advises co-creating solutions with the parent or caregiver to enable the child to receive the necessary vision care treatment, including providing linguistically and culturally-appropriate informational materials about childhood vision and the importance of follow-up eye exams, so the child will receive, and remain in, eye care.

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<sup>6</sup> Vaughn, W., Maples, W. C., & Hoenes, R. (2006). The association between vision quality of life and academics as measured by the College of Optometrists in Vision Development quality of life questionnaire. *Optometry*, 77(3), 116-123.

<sup>7</sup> <https://www.cdc.gov/phlp/docs/hipaa-ferpa-infographic-508.pdf>

<sup>8</sup> <https://www.hhs.gov/hipaa/for-professionals/special-topics/ferpa-hipaa/index.html>

## Summary Chart of Additions/Changes

The following chart provides a summary of the changes only. A more detailed summary of required screening tests for each grade, is given on Page 8.

Changed item	Now	Additions or Changes From Sept 1, 2022
<b>Critical Passing Line</b>	20/40: 36 through 47 months 20/30: 48 months & older	Preschool (3 years): 20/50 Preschool (4+ years): 20/40  Kindergarten (5 years) through Grade 12: 20/32
<b>All public preschoolers</b> screened annually, from ages 3 years	Optional	Mandatory
<b>All visual acuity charts</b> to use logMAR notation	Varied options	Discontinuation of all charts not in logMAR notation
<b>Near visual acuity</b> screening tested annually	Grade 1-12	At year of school entry or ages 3 years (Pre-K0) through Grade 3
<b>Distance Visual Acuity</b> screening (ages 3, 4 and 5 years)	Mass VAT: LEA SYMBOLS® HOTV	“Massachusetts Sight Line” at 10 ft. or EyECheck @ 5ft LEA SYMBOLS® (w/ optional matching lap card)
<b>Distance Visual Acuity</b> screening (ages 6 years and older)	Any line letters, LEA NUMBERS®, Tumbling E’s or HOTV may be used if child is unsure of letters VA testing machines	Kindergarten as above. Sloan Letters (w/ optional lap card) for Grade 1 and older  LEA SYMBOLS® (w/ optional matching lap card if child is unsure of letters or is an ELL)
<b>Stereoacuity</b> Screening	Random Dot E (Pre-K through Grade 3)	Pass 1 Smile Test (Kindergarten through Grade 3)
<b>Visual Acuity Testing Machines</b>	Optec, Titmus, Keystone View	Discontinued
<b>Instrument-based</b> Screening (ages 3, 4 and 5 years)	Approved for use.	Near visual acuity must be conducted <i>in addition</i> . Instrument-based screening alone can replace distance visual acuity screening and stereoacuity screening. Use in Kindergarten only for children aged 5 years.
Instrument-based Screening (ages 6 years and older)	Not approved for use.	Children ages 6 years and older who cannot participate in approved letter or symbol visual acuity screenings are to be referred for a comprehensive eye exam by an eye doctor who is experienced in treating children.

## Massachusetts Vision Screening Guidelines for PreK - Grade 12

Pre-K	Frequency of Screening	Elements of Assessment	Critical Passing Line or Performance Criteria	Approved Screening Methods/Recommended Tools		Recommended Follow Up	
	Annually	<b>Distance Visual Acuity (Monocular)</b>	Age 3 yrs: 20/50	"EyE Check" Flipbook with LEA SYMBOLS® at 5 ft.* <b>OR</b> "Massachusetts Sight Line" Flipbook with LEA SYMBOLS® at 10 ft.* <b>OR**</b> ALL ages must identify 4 out of 5 symbols presented.*	<b>OR**</b>	Instrument-Based Screening (Spot™, Plusoptix [without the visual acuity add-on component], Retinomax) for children ages 3, 4, and 5 years.  When instrument-based screeners are used, near visual acuity assessments must still be performed.	<ul style="list-style-type: none"> <li>* Document screening results in student health record.</li> <li>* Notify teachers or staff per FERPA guidelines.</li> <li>* Refer students who do not pass screening for a Comprehensive Eye Examination from a licenced Ophthalmologist or Optometrist trained and experienced in treating young children and provide follow up when needed.</li> </ul>
Ages 4+ yrs: 20/40							
<b>Near Visual Acuity (Binocular)</b>		Age 3 yrs: 20/50	LEA SYMBOLS® near card with 16-inch cord attached.  Must Identify 4 out of 5 symbols presented at 16-inch distance.				
		Ages 4+ yrs: 20/40					
						<ul style="list-style-type: none"> <li>* Assist families with identification and mitigation of any barriers to care (e.g., lack of insurance, access to care, language barriers, etc.). Ensuring timely access to vision care is critical to avoiding delays in treatment that may lead to permanent vision loss or a decrease in visual ability.</li> <li>* Develop plans of care and follow up when needed.</li> </ul>	
Kindergarten	Frequency of Screening	Elements of Assessment	Critical Passing Line or Performance Criteria	Approved Screening Methods/Recommended Tools		Recommended Follow Up	
	Annually	<b>Distance Visual Acuity (Monocular)</b>	20/32	"EyE Check" Flipbook with LEA SYMBOLS® at 5 ft.* <b>OR</b> "Massachusetts Sight Line" Flipbook with LEA SYMBOLS® at 10 ft.* <b>OR**</b> ALL ages must identify 4 out of 5 symbols presented.*	<b>OR**</b>	Instrument-Based Screening (Spot™, Plusoptix [without the visual acuity add-on component], Retinomax) for children ages 3, 4, and 5 years.  When instrument-based screeners are used, near visual acuity assessments must still be performed.	<ul style="list-style-type: none"> <li>* Document screening results in student health record.</li> <li>* Notify teachers or staff per FERPA guidelines.</li> <li>* Refer students who do not pass screening for a Comprehensive Eye Examination from a licenced Ophthalmologist or Optometrist trained and experienced in treating young children and provide follow up when needed.</li> </ul>
<b>Near Visual Acuity (Binocular)</b>		20/32	LEA SYMBOLS® near card with 16-inch cord attached.  Must identify 4 out of 5 symbols presented at 16-inch distance.				
<b>Stereopsis (Binocular)</b>		Identify smiley face	"PASS 1 Smile Test" at 16-inch distance.  Must identify "smiley face" 4 out of 5 times randomly presented at 16-inch distance.				
<p><b>PLEASE NOTE:</b> Per M.G.L. c. 71, § 57, students diagnosed with neurodevelopmental delay should be referred for a comprehensive eye exam from an eye doctor, if they have not presented the school with proof of such upon school entry.</p>							
<p>* Note: Verbal naming or matching lap card options are acceptable and may be useful for some students who do not verbalize a response or for those with limited English proficiency.</p>							
<p>** Note: Instrument-based screening can be done in place of distance visual acuity and stereopsis for children up to age 6 years ONLY. Near visual acuity also must be assessed.</p>							

## Massachusetts Vision Screening Guidelines for PreK - Grade 12

Grades 1-3	Frequency of Screening	Elements of Assessment	Critical Passing Line or Performance Criteria	Approved Screening Methods/Recommended Tools	Recommended Follow Up
	Annually	<b>Distance Visual Acuity (Monocular)</b>	20/32	"Massachusetts Sight Line" Flipbook w/ LEA SYMBOLS® or Sloan Letters *; <b>OR</b> Sloan Letters wall chart at 10 ft. distance.*  Must identify 4 out of 5 symbols or letters. *	<ul style="list-style-type: none"> <li>* Document screening results in student health record.</li> <li>* Notify teachers or staff per FERPA guidelines.</li> <li>* Refer students who do not pass screening for a Comprehensive Eye Examination from a licenced Ophthalmologist or Optometrist trained and experienced in treating young children and provide follow up when needed.</li> <li>* Assist families with identification and mitigation of any barriers to care (e.g., lack of insurance, access to care, language barriers, etc.). Ensuring timely access to vision care is critical to avoiding delays in treatment that may lead to permanent vision loss or a decrease in visual ability.</li> <li>* Develop plans of care and follow up when needed.</li> </ul>
		<b>Near Visual Acuity (Binocular)</b>	20/32	LEA SYMBOLS® near card with 16-inch cord attached.  Must identify 4 out of 5 symbols presented at 16-inch distance.	
		<b>Stereopsis (Binocular)</b>	Identify smiley face	"PASS 1 Smile Test" at 16-inch distance.  Must identify "smiley face" 4 out of 5 times randomly presented at 16-inch distance.	
Grades 4-5	Frequency of Screening	Elements of Assessment	Critical Passing Line or Performance Criteria	Approved Screening Methods/Recommended Tools	Recommended Follow Up
	Annually	<b>Distance Visual Acuity (Monocular)</b>	20/32	Sloan Letters wall chart at 10 ft. distance.*  Must identify 4 out of 5 letters.*	<ul style="list-style-type: none"> <li>* Document screening results in student health record.</li> <li>* Notify teachers or staff per FERPA guidelines.</li> <li>* Refer students who do not pass screening for a Comprehensive Eye Examination from a licenced Ophthalmologist or Optometrist trained and experienced in treating young children and provide follow up when needed.</li> <li>* Assist families with identification and mitigation of any barriers to care (e.g., lack of insurance, access to care, language barriers, etc.). Ensuring timely access to vision care is critical to avoiding delays in treatment that may lead to permanent vision loss or a decrease in visual ability.</li> <li>* Develop plans of care and follow up when needed.</li> </ul>
		<b>Near Visual Acuity (Binocular)</b>	N/A	N/A	
		<b>Stereopsis (Binocular)</b>	N/A	N/A	

**PLEASE NOTE:**  
Per M.G.L. c. 71, § 57, students diagnosed with neurodevelopmental delay should be referred for a comprehensive eye exam from an eye doctor, if they have not presented the school with proof of such upon school entry.

\* Note: Verbal naming or matching lap card options are acceptable and may be useful for some students who do not verbalize a response or for those with limited English proficiency.

\*\* Note: Instrument-based screening can be done in place of distance visual acuity and stereopsis for children up to age 6 years ONLY. Near visual acuity also must be assessed.

## Massachusetts Vision Screening Guidelines for PreK - Grade 12

Grades 6-8	Frequency of Screening	Elements of Assessment	Critical Passing Line or Performance Criteria	Approved Screening Methods/Recommended Tools	Recommended Follow Up
	Once ONLY in Grades 6-8	<b>Distance Visual Acuity (Monocular)</b>	20/32	Sloan Letters wall chart at 10 ft. distance.* Must identify 4 out of 5 letters.*	<ul style="list-style-type: none"> <li>* Document screening results in student health record.</li> <li>* Notify teachers or staff per FERPA guidelines.</li> <li>* Refer students who do not pass screening for a Comprehensive Eye Examination from a licenced Ophthalmologist or Optometrist trained and experienced in treating young children and provide follow up when needed.</li> <li>* Assist families with identification and mitigation of any barriers to care (e.g., lack of insurance, access to care, language barriers, etc.) Ensuring timely access to vision care is critical to avoiding delays in treatment that may lead to permanent vision loss or a decrease in visual ability.</li> <li>* Develop plans of care and follow up when needed.</li> </ul>
		<b>Near Visual Acuity (Binocular)</b>	N/A	N/A	
		<b>Stereopsis (Binocular)</b>	N/A	N/A	
Grades 9-12	Frequency of Screening	Elements of Assessment	Critical Passing Line or Performance Criteria	Approved Screening Methods/Recommended Tools	Recommended Follow Up
	Once ONLY in Grades 9-12	<b>Distance Visual Acuity (Monocular)</b>	20/32	Sloan Letters wall chart at 10 ft. distance.* Must identify 4 out of 5 letters.*	<ul style="list-style-type: none"> <li>* Document screening results in student health record.</li> <li>* Notify teachers or staff per FERPA guidelines.</li> <li>* Refer students who do not pass screening for a Comprehensive Eye Examination from a licenced Ophthalmologist or Optometrist trained and experienced in treating young children and provide follow up when needed.</li> <li>* Assist families with identification and mitigation of any barriers to care (e.g., lack of insurance, access to care, language barriers, etc.) Ensuring timely access to vision care is critical to avoiding delays in treatment that may lead to permanent vision loss or a decrease in visual ability.</li> <li>* Develop plans of care and follow up when needed.</li> </ul>
		<b>Near Visual Acuity (Binocular)</b>	N/A	N/A	
		<b>Stereopsis (Binocular)</b>	N/A	N/A	
<p><b>PLEASE NOTE:</b> Per M.G.L. c. 71, § 57, students diagnosed with neurodevelopmental delay should be referred for a comprehensive eye exam from an eye doctor, if they have not presented the school with proof of such upon entry to school.</p>					
<p>* Note: Verbal naming or matching lap card options are acceptable and may be useful for some students who do not verbalize a response or for those with limited English proficiency.</p>					
<p>** Note: Instrument-based screening can be done in place of distance visual acuity and stereopsis for children up to age 6 years ONLY. Near visual acuity also must be assessed.</p>					