

Vision Screening: *What?!? No Snellen or Sailboat Charts?*

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BLINDNESS

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MONDAY, JUNE 25, 2018



Presenter Disclosures

Kira Baldonado

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose



Presenter Disclosures

P. Kay Nottingham Chaplin, Ed.D

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

In addition to working for the NCCVEH, also employed by Good-Lite and School Health Corporation as vision screening education consultant – NOT IN SALES.



Today's Presentation



- Learn about 2 evidence-based approaches to vision screening and describe what each measures
- Appropriate use of an optotype-based eye chart
- Appropriate ages for optotype-based and instrument-based vision screening
- Q & A

Cast of Characters

NCCVEH:

- National Center for Children's Vision and Eye Health at Prevent Blindness
 - Optometry
 - Ophthalmology
 - Family Advocates
 - Nurses
 - Public Health Professionals
 - Educators

AAP:

- American Academy of Pediatrics
- American Association for Pediatric Ophthalmology and Strabismus
- American Academy of Ophthalmology
- American Association of Certified Orthoptists

2 Approaches to Vision Screening

1. Optotype-based screening

Tests of visual acuity using optotypes to measure visual acuity as interpreted by the brain

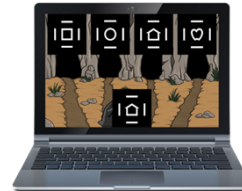
- *Quantifiable measurement of the sharpness or clearness of vision when identifying black optotypes on a white background using specific optotype sizes at a standardized distance*

2. Instrument-based screening

Instruments do not measure visual acuity

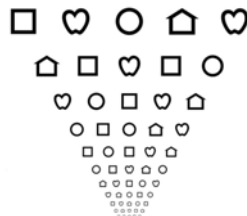
Instruments analyze images of the eyes to provide information about amblyopia and reduced vision risk factors:

- Estimates of significant refractive error (hyperopia, myopia, astigmatism)
- Estimates of anisometropia
- Estimates of eye misalignment (some, not all)

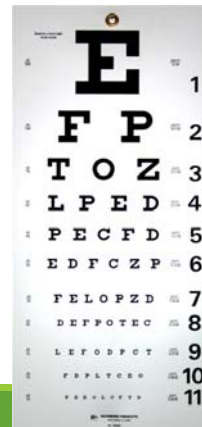
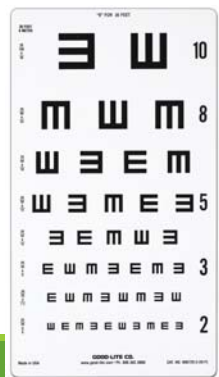


Threshold & Critical Line Screening

- Threshold screening
 - Move down chart until child cannot correctly identify majority of optotypes
- Critical line screening
 - Use only line child needs to pass according to child's age



"Not so great" charts . . .



NOT Recommended by NCCVEH and/or AAP



"Sailboat"



Allen Pictures

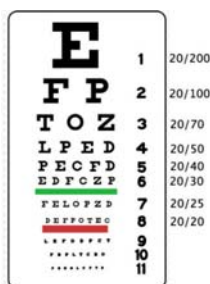


Lighthouse or
 "House, Apple,
 Umbrella"

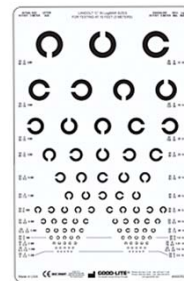


Tumbling E

Snellen



Landolt C



Why **NOT** Recommended?

- The use of validated and standardized optotypes and acuity charts is important for an accurate assessment of vision.
- Charts not standardized.
- Children may not know their letters.
- Requires discrimination of direction, which is not sufficiently developed in preschool-aged children.
- Not well validated in screening environment.

Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

Donahue, S. P., Baker, C. N., & AAP Committee on Practice and Ambulatory Medicine, AAP Section on Ophthalmology, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus, American Academy of Ophthalmology (2016). Procedures for the evaluation of the visual system by pediatricians. *Pediatrics*, 137(1), e20153597. Retrieved from <http://pediatrics.aappublications.org/content/pediatrics/early/2015/12/07/peds.2015-3597.full.pdf>

Importance of Appropriate Tools

- “Visual acuity scores can be significantly affected by the chart design.” (p. 1248)
 - Bailey, I.L. (2012). Perspective: Visual acuity – Keeping it clear. *Optometry and Vision Science*, 89(9), 1247-1248.
- Excluding optotype size, “each visual acuity level on a test chart should present an essentially equivalent task”. (p. 740)
 - Bailey, I. L., & Lovie, J. E. (1976). New design principles for visual acuity letter charts. *American Journal of Optometry & Physiological Optics*, 53(11), 740-745.

National and international distance visual acuity eye chart design recommendations

- **1980 - National Academy of Sciences-National Research Council (NAS-NRC)**
 - Committee on Vision. (1980). Recommended standard procedures for the clinical measurement and specification of visual acuity. Report of working group 39. Assembly of Behavioral and Social Sciences, National Research Council, National Academy of Sciences, Washington, DC. *Advances in Ophthalmology*, 41:103–148.
- **1984 - International Council of Ophthalmology (ICO)**
 - www.icoph.org/dynamic/attachments/resources/icovisualacuity1984.pdf
- **2003 - World Health Organization Prevention of Blindness & Deafness (WHO)**
 - Prevention of blindness and deafness. Consultation on development of standards for characterization of vision loss and visual functioning. Geneva: WHO;2003 (WHO/PBL/03.91).
- **2010 – American National Standards Institute, Inc.**
 - ANSI Z80.21-1992 (R2004) Approved May 27, 2010

Similar recommendations across guidelines

- Optotypes approximately equal in legibility
- Horizontal between-optotype spacing = 1 optotype width
- Vertical between-line spacing = height of next line down
- Geometric progression of optotype sizes of 0.1 log units (logMAR, ETRS)
- 5 optotypes per line
- Optotypes black on white background with luminance between 80 cd/m² and 160 cd/m²

Design guidelines = "ETDRS" or "logMAR" chart

Tips:

- Line outside optotypes
- 20/32 vs. 20/30
- 10 feet vs. 20 feet

YES

NO

Do the following eye charts fit national/international eye chart design guidelines?

Yes or No?

✓

Preferred Optotypes for Ages 3 to 7 Years

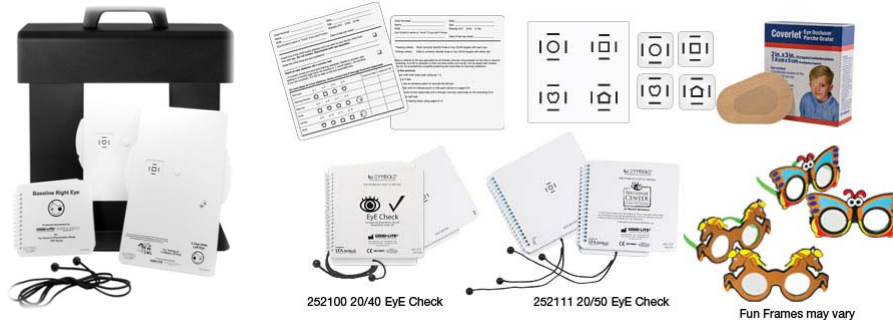
- NCCVEH
- AAP
- Recommend LEA SYMBOLS® and HOTV letters as optotypes

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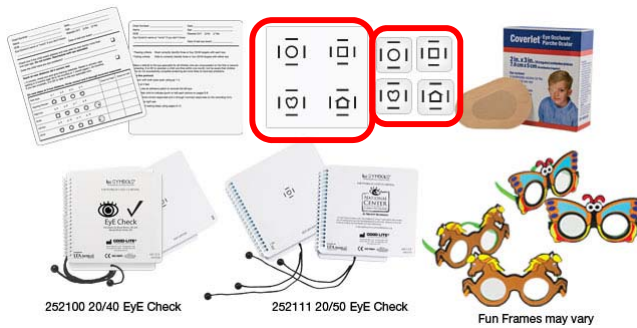
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Preferred Optotype Format

NCCVEH national guidelines call for using single, LEA SYMBOLS® or HOTV letter optotypes surrounded with crowding bars for children ages 3, 4, and 5 years at 5 feet



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Card with 4 optotypes – use as matching game

Individual cards may be placed on floor in front of child – ask child to step on card matching optotype to identify

Options: Critical Line Screening at 10 feet

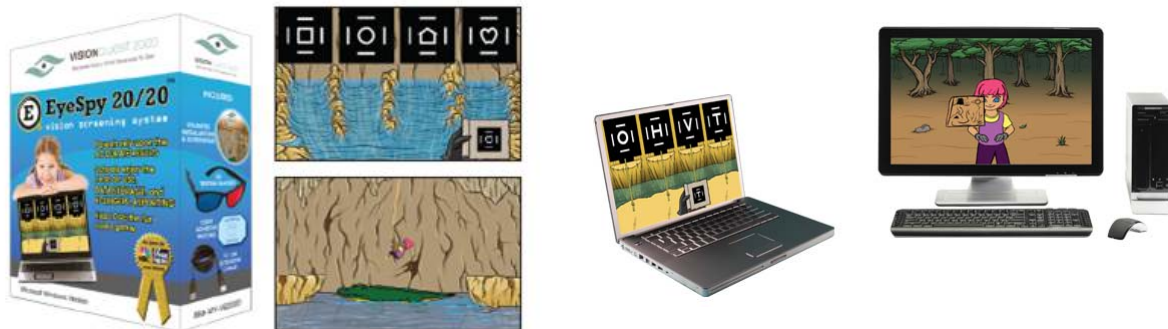
Sight Line Kit



Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

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Also acceptable . . .



Screening Distance

5 or 10 feet from chart to child's eyes

*New, standardized distance charts will be at
10 feet for children and adults*

10/xx on left side of chart with 20/xx on right
side – report 20/xx



Occlusion:

Children likely to peek
when given responsibility
for covering their eyes
during vision screening.

Occluders – Younger Children <10 Years



Unacceptable Occluders Ages 3, 4, and 5 years

- Hand



- Tissue



- Paper or plastic cup



- Cover paddle



- Why unacceptable?

- Children can easily peek



Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/oxp-92-06.pdf>

Occluders – Ages 10 Years and Older



Prevent Blindness. (2015). *Prevent Blindness position statement on school-aged vision screening and eye health programs*. Retrieved from <https://www.preventblindness.org/sites/default/files/national/positions/Prevent%20Blindness%20Statements%20on%20School-aged%20Vision%20Screening%20Approved%208-2015.pdf>

To Point or Not to Point . . . ?

Pointing to each optotype to help children know where they are on the chart is permissible.

True or False?



1.8 “Line-by-line isolation or pointing may be used, **but not letter by letter.**”



Donahue, S. P., Baker, C. N., & AAP Committee on Practice and Ambulatory Medicine, AAP Section on Ophthalmology, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus, American Academy of Ophthalmology (2016). Procedures for the evaluation of the visual system by pediatricians. *Pediatrics*, 137(1), e20153597. Retrieved from <http://pediatrics.aappublications.org/content/pediatrics/early/2015/12/07/peds.2015-3597.full.pdf>

World Health Organization (2003). *Consultation on development of standards for characterization of vision loss and visual functioning*. Geneva: Switzerland. Retrieved from http://apps.who.int/iris/bitstream/10665/68601/1/WHO_PBL_03.91.pdf

No Pointing at Optotypes

- Isolating an optotype with a pointer, or masking all optotypes but one on a line, can lead to under-referrals or missing children who should be referred because the optotype is easier for the child to identify.
- *Instead . . . briefly point under or over top of optotype and quickly remove pointer.*
- If line has a box around optotypes, stay outside the box with pointer.



No Need to Read Each Optotype on Every Line

World Health Organization
(2003) says:

May be less tedious for children to read 1st optotype on left-side of chart until missing one and then moving up a line and reading entire line

Camparini et al. found: ETDRS-Fast (reading 1 letter per row until a mistake is made) yields accurate results compared with standard method of reading each optotype on every line.

Also – significantly reduced test time

Camparini, M., Cassinari, P., Ferrigno, L., & Macaluso, C. (2001). ETDRS-Fast: Implementing psychophysical adaptive methods to standardized visual acuity measurement with ETDRS charts. *Investigative Ophthalmology & Visual Science*, 42(6), 1226-1231.

Referral Criteria

NCCVEH

Age 3 years:

- Majority of optotypes on 20/50 line

Ages 4 and 5 years:

- Majority of optotypes on 20/40 line

Ages 6 years and older:

- Majority of optotypes on 20/32 line

AAP

Age 3 years:

- Majority of optotypes on 20/50 line

Ages 4 years:

- Majority of optotypes on 20/40 line

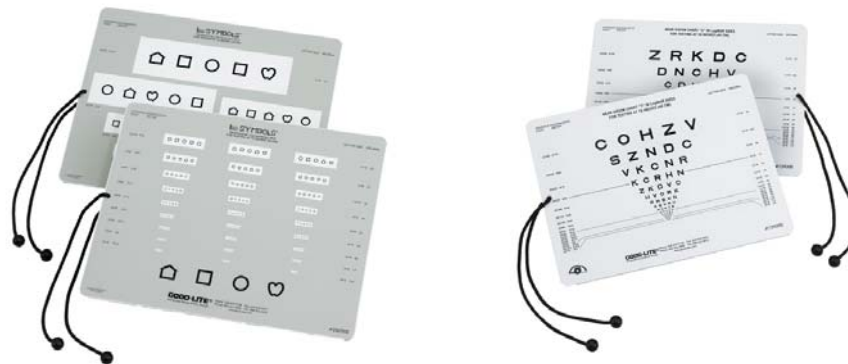
Ages 5 years and older:

- Majority of optotypes on 20/32 (or 20/30) line
- Or 2-line difference even in passing lines (i.e., 20/20 and 20/32)

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Choices for Near Vision Screening



Can do critical line only with both eyes open or one eye at a time.

2 Approaches to Vision Screening

1. Optotype-based screening

Tests of visual acuity using optotypes to measure visual acuity as interpreted by the brain

- Quantifiable measurement of the sharpness or clearness of vision when identifying black optotypes on a white background using specific optotype sizes at a prescribed and standardized distance

2. Instrument-based screening

Instruments do not measure visual acuity

Instruments analyze digital images of the eyes to provide information about reduced vision and amblyopia risk factors:

- Estimates of significant refractive error (hyperopia, myopia, astigmatism)
- Estimates of anisometropia
- Estimates of eye misalignment



Instrument-Based Screening

- Use beginning at 12 months; better success at 18 months (AAP)
- Use instruments OR tests of visual acuity for children ages 3, 4, and 5 years (NCCVEH and AAP)
- Instruments at any age for 6 years and older if child or young adult cannot do test of visual acuity (AAP)



Donahue, S. P., Baker, C. N., & AAP Committee on Practice and Ambulatory Medicine, AAP Section on Ophthalmology, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus, American Academy of Ophthalmology (2016). Procedures for the evaluation of the visual system by pediatricians. *Pediatrics*, 137(1), e20153597. Retrieved from <http://pediatrics.aappublications.org/content/pediatrics/early/2015/12/07/peds.2015-3597.full.pdf>

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Instrument-Based Screening

- If use instruments, no need to also do visual acuity screening unless you want to check both VA and refractive error.
- If cannot “capture” a pass or refer result... refer child for comprehensive eye exam.



- Do not attempt to convert estimated refractive error to visual acuity value.
- Child could fail vision screening with instrument, but pass with conversion and miss opportunity for eye exam.

Conversion Chart: Refractive State to “estimated” Visual Acuity^{[1][2]}

Myopia		Hyperopia			
Nearsighted		Farsighted			
Minus (-) Sphere		Plus (+) Sphere	Plus (+) Sphere	Plus (+) Sphere	
Ages: All	Estimated Visual Acuity	Ages: 5y to 15y	Ages: 25y to 35y	Ages: 45y to 55y	Estimated Visual Acuity
-0.5	20/30-40	+2.00	+1.25	+1.00	20/20
-0.75	20/50	+3.00	+1.75	+1.25	20/25
-1	20/60	+3.25	+2.50	+1.50	20/30
-1.25	20/70	+3.75	+3.00	+1.75	20/40
-1.5	20/100	+4.25	+3.50	+2.00	20/50
-2.5	20/200	+4.75	+4.00	+2.50	20/70

[1] Spherical results are based upon minus (-) cylinder convention.

Donahue, S. P., Cotter, S. A., & Moore, B. (in press). Position statement on the relationship between visual acuity and refractive error in the context of preschool vision screening using instrument-based technology.

Not Recommended for conversion of screening results for children screened for amblyopic risk factors

Instruments “Approved” by NCCVEH



Welch Allyn®
Spot™ Vision Screener



Plusoptix
S12C Vision Screener



Welch Allyn®
SureSight™
Vision Screener

Disclaimer: These tools are examples of vision screening instruments for this age group. These are not shown for the purpose of sales or promotion.

Vision Screening Children 36 to <72 Months—Cotter et al. 9

TABLE 2.
Distance visual acuity testing for vision screening of children aged 36 to younger than 72 months

	Best practice	Acceptable practice	Unacceptable
Optotype	Single surrounded HOTV letters or LEA Symbols	Rectangular crowding bar surrounding a single line* of HOTV letters or LEA Symbols	Snellen, Allen figures, Tumbling E, Landolt C, Lighthouse, Kindergarten Eye Chart
Test distance	5 ft (1.5 m)	10 ft (3 m)	20 ft (6 m) Near card Any distance <5 ft (1.5 m)
Monocular* visual acuity	Name or match correctly 3 or 4 out of 4; 20/50 for 3-y-olds 20/40 for 4- and 5-y-olds		Binocular testing
Illumination	≥80 cd/m ² luminance		Glare on test cards or computer screen
Occlusion	Adhesive patch or opaque paper tape	Specialized occluder glasses	Hand, tissue, paper cup, cover paddle
Examples of currently available commercial products	VIP Screener, single surrounded optotypes (Good-Lite)	MassVAT single surrounded lines (Precision Vision)*	Tests with optotypes listed above Near vision machines like those used at motor vehicle testing facilities

Ages 3, 4, and 5 years

Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/0px-92-06.pdf>

Visual Acuity Testing Machines (such as Titmus, Optec, and Keystone View vision screeners)

Visual acuity testing machines screen for near and distance visual acuity and can use a variety of letter or symbol slides. Some machines can test other visual functions. Such machines prevent observation of a child's face and eyes during screening. Child cooperation can be a problem when screening young school-aged children. Insufficient data exist to support machines as preferred practice for school-aged children. If screeners choose to use machines, Sloan Letters or LEA NUMBERS® are the preferred optotypes.

Prevent Blindness Position Statement on School-Aged Vision Screening and Eye Health Programs
<https://nationalcenter.preventblindness.org/publications-and-presentations>

Vision Screening is . . .

- Part of a process...not a single event.
- 1 of 12 components of a strong vision health system of care.



Evaluating Your Vision Health Program

Annual Vision Health Program Evaluation Checklist

Evaluation Date: _____ Completed By: _____

Instructions: Review each component described below. Select the "Yes", "No", or other response that best describes your vision health program as it currently operates. Please note comments in the area indicated. Once you have responded to the questions in each of the components proceed to the "Vision Health System Action Plan" located on page 7 to identify areas for attention or improvement in your program.

- Our program ensures that all parents/caregivers receive educational material, which respects cultural and literacy needs, about the importance of:
 - Good vision for their child now and in the future.
 - Scheduling and attending an eye exam when their child does not pass vision screening.
 - Increased risk for vision problems in defined high-risk populations.

Check Yes or No	Point of evaluation
<input type="checkbox"/> Yes <input type="checkbox"/> No	We have vision health information in <u>all</u> native languages of the families that we serve.
<input type="checkbox"/> Yes <input type="checkbox"/> No	We discuss the importance of healthy vision as a part of proper child development in the <u>general health information provided by our program</u> .
<input type="checkbox"/> Yes <input type="checkbox"/> No	We provide parents with <u>easy-to-understand</u> information on the visual milestones for children at all stages of life. <small>*Information is written at an appropriate reading level, provides graphics as well as descriptions, and has been tested for ease of understanding.</small>
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Our parent/and or health advisory committee(s) have reviewed our vision health information for, content, clarity of instruction, cultural literacy, and reading level (4 th to 6 th grade level).
<input type="checkbox"/> Yes <input type="checkbox"/> No	We provide health information to parents of children with special healthcare needs that describe their increased risk for vision problems.
<input type="checkbox"/> Yes <input type="checkbox"/> No	We have active Parent and Health Advisory Committees.

<https://www.nasn.org/nasn-resources/practice-topics/vision-health>

12-Components of a Strong Vision Health System of Care



Our Children's Vision Health System Action Plan

Directions: Review your responses from the program evaluation form and the notes written for each item. In all areas where "No" was the response selected, or your notes indicate a need for improvement, establish the next steps your program will take to improve efforts in that area. Once all responses have been accounted for, establish your top three priorities out of your needed actions, a date to review progress, and a completion date.

Needed actions: _____

Priority #1: _____

Priority #2: _____

Priority #3: _____

Visit <http://nationalcenter.preventblindness.org/year-children-vision> for information and resources that will help you improve your vision health program.

Screenings & Referrals

A Historical Review of Distance Vision Screening Eye Charts

What to Toss, What to Keep, and What to Replace

P. Kay Nottingham Chaplin, EdD, West Virginia
Geoffrey E. Bradford, MD, West Virginia

Historic screening protocol and equipment guidelines differ among schools across the United States. Budget cuts are forcing many school nurses to reevaluate their vision screening programs, as well as those in their vision screening facilities. School nurses tasked with incorporating those facilities in alternative which items to toss, keep, or replace are often unsure of the correct course of action. A historical review of vision screening eye charts is available to help ensure school eye charts are standardized. A national consensus policy exists that recommends specific eye charts and a large body of vision screening literature is available to help ensure more make informed decisions. Current documents suggest that LEA symbols are appropriate for young children and Sloan letters are a better choice than "Snellen" charts for older children.

Distance Visual Charts as Field 5
Optotype (letters, pictures) charts are most common test used in clinical practice.

Nottingham Chaplin, P. K., & Bradford, G. E. (2011). A historical review of distance vision screening eye charts: What to toss, what to keep, and what to replace. NASN School Nurse, 26(4), 221-228.

Screening/Referral

Vision and Eye Health

Moving Into the Digital Age With Instrument-Based Vision Screening

P. Kay Nottingham Chaplin, EdD
Kira Baldonado, BA
Amy Hutchinson, MD
Bruce Moore, OD

Significant advancements in vision screening research are leading to improved design, functionality, and reliability of screening tools. Presently, two vision screening approaches are available to school nurses for children ages 3 years and older: optotype-based screening and instrument-based screening. Optotype-based screening pertains to tests of visual acuity using optotypes (e.g., pictures, letters, and numbers), which children identify to determine visual acuity. Instrument-based screening pertains to automated devices that measure amblyopic risk factors, such as refractive error, media opacities, and eye misalignment. Differences between the two approaches, their use, and acceptable practice recommendations for both approaches, using acceptable tests of visual acuity, and best, acceptable, and unacceptable tests are discussed.

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attempt screening if classrooms may consider these children as "outliers" because they are not included in screening activities.

Instrument-Based Screening
Often referred to as devices, automated screening instruments, or automated vision screening devices, instrument-based screening uses automated technology to provide an estimation of

Nottingham Chaplin, P. K., Baldonado, K., Hutchinson, A., & Moore, B. (2015). Vision and eye health: Moving into the digital age with instrument-based vision screening. NASN School Nurse, 30(3), 154-60.

Screening/Referral

An Eye on Vision

20 Questions About Vision Screening and Eye Health

P. Kay Nottingham Chaplin, EdD
Kira Baldonado, BA
Geoffrey E. Bradford, MS, MD
Susan Cotter, OD, MS, FAOD
Bruce Moore, OD

Current evidence-based and best practice vision screening and eye health approaches, tools, and procedures are the result of revised national guidelines in the past 3 years and advances in research during the last 10 years. To help the busy school nurse with little time to keep up with changes in children's vision practices and a growing body of literature, the National Center for Children's Vision and Eye Health

assesses to 20 questions, the National Center for Children's Vision and Eye Health used published, peer-reviewed research, vision screening and eye health national guidelines, and consensus-based best practices from eye care professionals and public health experts. The answers may differ from your state or district vision screening recommendations and standards. This article is the first of "An Eye on Vision" Research-Based Questions

Outcomes
5. How should each eye be occluded (covered) during vision screening?

indicating where the student should stand, the student stands with the arches of each foot on the line at the end of the screening distance from the chart in alignment with the student's eyes.

Nottingham Chaplin, P. K., Baldonado, K., Bradford, G. S., Cotter, S., & Moore, B. (2018). An eye on vision: 20 questions about vision screening and eye health. NASN School Nurse, 33(2), 87-92.

Screening/Referral

An Eye on Vision

Five Questions About Vision Screening and Eye Health

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Current evidence-based and best practice vision screening and eye health approaches, tools, and procedures are the result of revised national guidelines in the past 3 years and advances in research during the past 10 years. By providing answers to the five questions in this article, the National Center for Children's Vision and Eye Health at Penn State Hershey used published, peer-reviewed research vision screening

screenings at different ages in different states. What are the recommended ages for school-based vision screening?

ANSWER: While vision screening guidelines exist for many (but not all) states, they can vary widely. Additionally, no federal guidelines exist that mandate schools conduct

critical for identifying vision disorders when treatment windows are short (e.g., amblyopia), as well as identifying vision disorders that may emerge in late childhood and adolescence (e.g., myopia). Early and ongoing vision screening can also help to detect untreated vision disorders that can impact a child's ability to learn.

Nottingham Chaplin, P. K., Baldonado, K., Bradford, G. S., Cotter, S., & Moore, B. (2018). An eye on vision: Five questions about vision screening and eye health. NASN School Nurse, 33(3), 146-149.

Year of Children's Vision

- <http://nationalcenter.preventblindness.org/year-childrens-vision>
- *Archived vision screening webinars in Resources*



National Center for Children's Vision & Eye Health

- <http://nationalcenter.preventblindness.org/>



Prevent Blindness Position Statement on School-Aged Vision Screening and Eye Health Programs



PREVENT BLINDNESS POSITION STATEMENT ON SCHOOL-AGED VISION SCREENING AND EYE HEALTH PROGRAMS

REVIEWED AND APPROVED AUGUST 5, 2015

Prevent Blindness recommends a continuum of eye care for children to include both vision screening and comprehensive eye examinations. All children, even those with no signs of trouble, should have their eyes checked at regular intervals. Any child who experiences vision problems or shows symptoms of eye trouble should receive a comprehensive eye examination by an optometrist or an ophthalmologist.

Prevent Blindness, other organizations, and school health personnel often perform vision screenings for children at schools and other settings. While vision screenings and eye examinations are complementary approaches to assessing the eye problems of a child, a screening is used to identify a child at risk for vision problems and does not replace a comprehensive examination performed by an eye doctor. Additionally, vision screenings provide a critical bridge from detection to eye care for families that may not regularly access health or eye care services, may need financial assistance to afford care, or those that may not fully understand the impact an undiagnosed and untreated vision problem might have on the rest of their child's life. Prevent Blindness advocates for good vision for all throughout the life spectrum, and that all children are visually ready as they begin school and beyond.

This document is a position statement, not formal recommendations or protocols, and is meant to guide those charged with developing, implementing and evaluating vision screening programs for school-aged students. The guidance provided in this

Prevent Blindness Position Statement on School-Aged Vision Screening and Eye Health Programs – Reviewed and Approved August 5, 2015.
Retrieved from
<http://www.preventblindness.org/sites/default/files/national/positions/Prevent%20Blindness%20Statements%20on%20School-aged%20Vision%20Screening%20%20Approved%208-2015.pdf>

**CHILDREN'S VISION AND EYE HEALTH:
A Snapshot of Current National Issues**

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http://www.preventblindness.org/site/default/files/national/documents/Children%27s_Vision_Chartbook.pdf

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NATIONAL CENTER
For Children's Vision & Eye Health

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NASN Vision and Eye Health Resource

(National Center for Children's Vision and Eye Health and NASN partnership)

<https://www.nasn.org/nasn-resources/practice-topics/vision-health>

NASN
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Vision and Eye Health

The National Center for Children's Vision and Eye Health at Prevent Blindness has partnered with the NASN to provide national guidance for school nurses and others involved in front-line vision screening. The goal is to standardize approaches to vision health, facilitate follow-up eye care for children who do not pass vision screening, provide family-friendly educational information, and consult with leading pediatric eye care providers to promote best practices.

The content on this page is organized according to the 12 Components of a Strong Vision Health System of Care.

Background

Vision impairments are common and affect 1 in 20 preschool-aged children and 1 in 4 school-aged children (U.S. Preventive Task Force, 2004). A recent report concluded that there is adequate evidence that early treatment of amblyopia results in improved visual outcomes (Holmes, et al., 2011). In addition, optical correction of significant refractive error may be related to child development (Istaitia, 2011) and improve school readiness (Roch-Leveco, Brody, Thomas, & Brown, 2006; Atkinson, et al., 2002).

With the focus on prevention, the Institute of Medicine (IOM) report, *The Future of Nursing: Leading Change, Advancing Health* Report Recommendations (2010), directs registered nurses to provide care within the full scope of their license. A comprehensive vision health program is a school nurse intervention that makes a significant measurable difference in a child's overall health and learning.

12 Components of a Strong Vision Health System of Care

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Info for Prevent Blindness nationally recognized vision screening certification you can do online at your own pace

<http://nationalcenter.preventblindness.org/prevent-blindness-childrens-vision-screening-certification-course>

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Thank you!

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