



Hillrom™

SAVE SIGHT IN CHILDREN

Learn how to bring
vision screenings
to your patients.





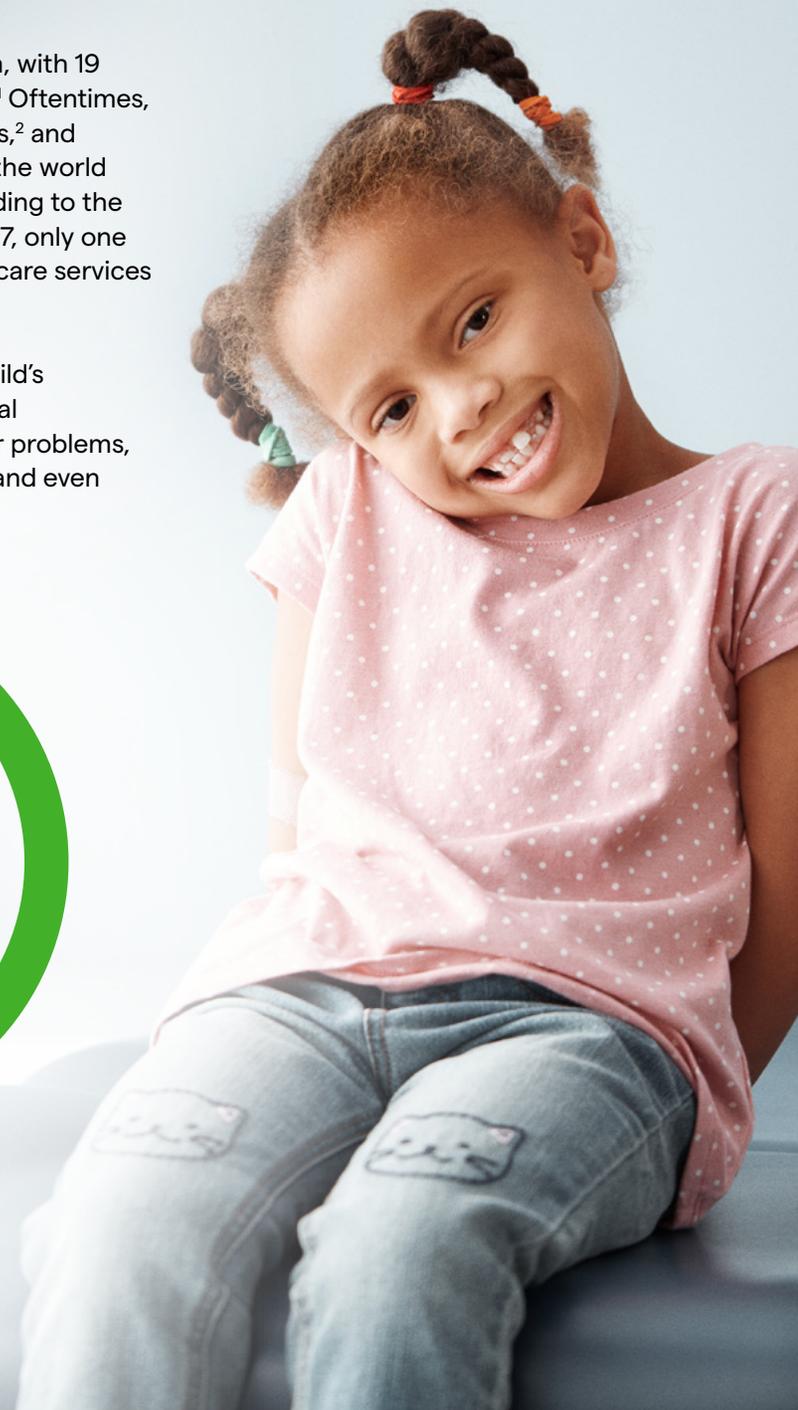
Eye Health is Important for Bright Futures

Early detection and treatment of vision problems in childhood is crucial.

80% of vision disorders can be prevented or cured.¹

Vision problems are common among children, with 19 million worldwide living with a vision disorder.¹ Oftentimes, vision disorders have no noticeable symptoms,² and as a result, children may not realize they see the world differently than others.³ Unfortunately, according to the National Survey of Children's Health 2016–2017, only one in three children in the U.S. has received eye care services before the age of six.⁴

Uncorrected vision disorders can impact a child's cognitive, emotional, neurological and physical development, potentially resulting in behavior problems, interference with early literacy and learning, and even permanent vision loss.⁵





The Problem



The Solution

THE PROBLEM THE SOLUTION

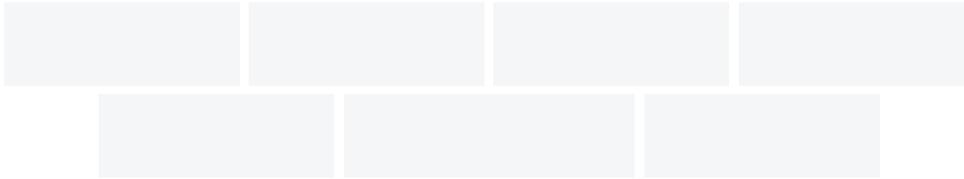
Common Pediatric Eye Problems

Up to one in twenty children is at risk for permanent vision loss due to vision disorders like amblyopia.⁶ Many factors might have a negative impact in vision such as an eye trauma, uncorrected refraction or a brain disease.⁷

Equal input from both eyes is vital for normal development of the visual system in babies and young children.⁸ A child's vision may be permanently impaired if one or both eyes are unable to send clear images to the brain.⁸

Some of the most common disabling vision disorders among U.S. children are various refractive errors (e.g., myopia, hyperopia), amblyopia and strabismus.⁴

Select a vision disorder below to learn more.



Signs of Vision Problems

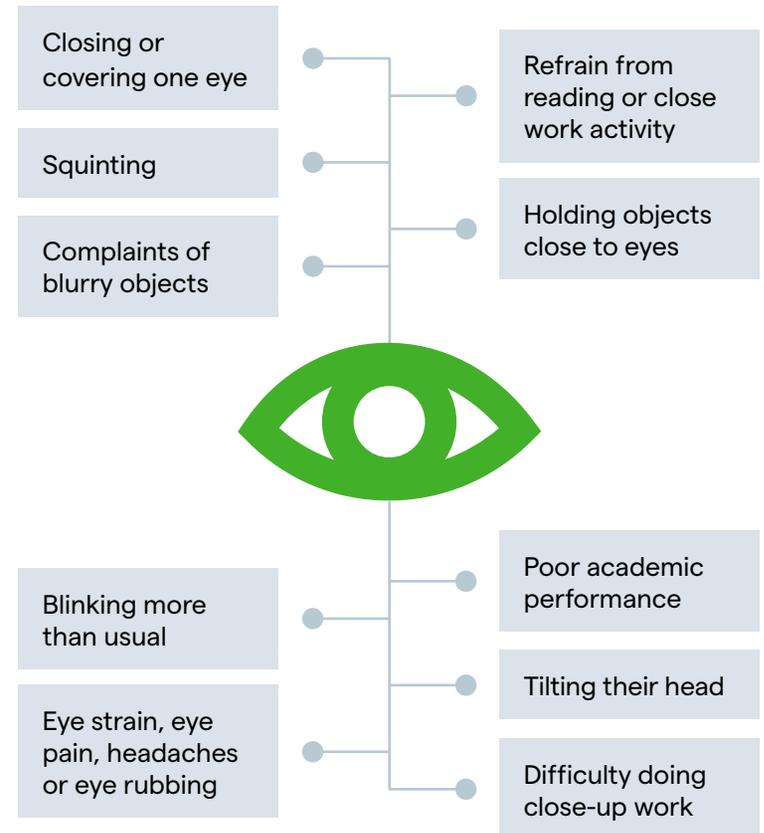
It's important for healthcare professionals to listen carefully to parents who express that their child may be experiencing visual impairment.

Healthcare providers should examine family histories regarding vision disorders or early use of glasses.¹⁰ In addition, healthcare professionals should ask parents questions to determine any vision problems.

Types of questions that can help you uncover a vision disorder:¹⁰

- 1 "Do you think your child sees well?"
- 2 "Does your child hold objects close to their eyes?"
- 3 "Do your child's eyes appear straight?"
- 4 "Do your child's eyes seem to cross?"

Click the boxes below to learn what warning signs to look for that could indicate a vision problem.^{7,9}





THE PROBLEM THE SOLUTION

Vision Screening Versus Eye Exams

Among preschool children, less than 15% receive comprehensive eye examinations and less than 22% undergo vision screenings.¹¹ Evaluating vision can help detect conditions like strabismus and amblyopia that distort or suppress normal visual images.² Without early detection and treatment, these vision conditions may lead to permanent vision loss.²

A vision screening is a more time-efficient eye exam. The American Academy of Ophthalmology (AAO) recommends that vision screening can be done by a pediatrician, primary care doctor or a properly trained health allied personnel. A referable eye exam is advised if the child does not pass the vision screening.¹²

It is important to understand the difference between vision screenings and comprehensive eye exams.

A vision screening can help identify vision problems but does not replace a professional eye exam.⁴

Toggle between the two tabs below to see the differences between a vision screening and a comprehensive eye exam.



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Healthcare Providers and Pediatric Eye Health

Primary care providers, eye care professionals, school nurses, community volunteers and vision rehabilitation specialists are all professions that have an essential role in vision and eye health.⁴

Select a portrait below to learn how each role contributes to the process.

**PRIMARY
CARE PROVIDERS**

**EYE CARE
PROFESSIONALS**

**SCHOOL-BASED VISION
SCREENING PARTNERS**

**VISION
REHABILITATION SPECIALISTS**

Instrument-Based Vision Screening

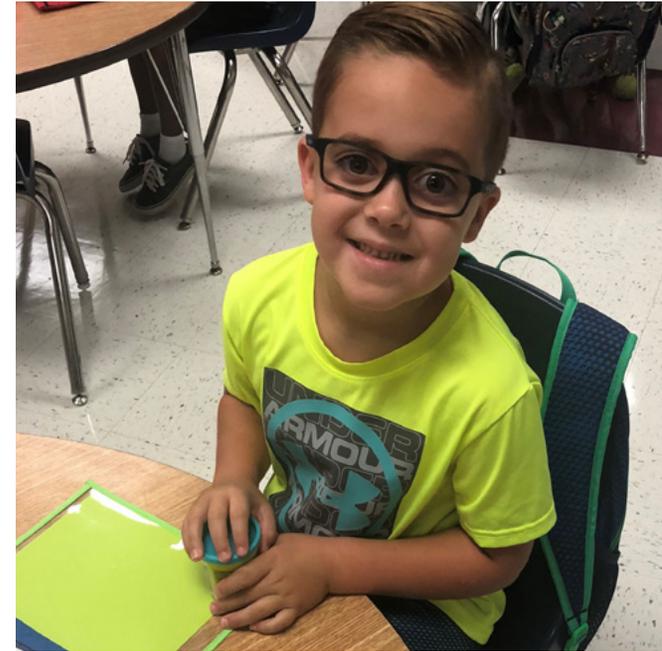
An instrument-based vision screener is a device that can help identify vision conditions or risk factors that may cause decreased vision or amblyopia.¹⁸ An instrument-based vision screener takes an image of the eyes to measure refractive error and ocular misalignments, and is as easy as having a photo taken with a digital camera.^{6,18} Other names for instrument-based vision screening include automated screening, autorefractor, objective screening and photoscreening.²

The [Welch Allyn® Spot® Vision Screener](#) is an instrument-based vision screener that can help you quickly and easily detect vision issues on patients from six months of age through adult.¹⁴ The Spot Vision Screener detects common vision problems such as myopia, hyperopia, astigmatism, anisometropia, strabismus and anisocoria.¹⁴

The American Academy of Pediatrics (AAP), American Association for Pediatric Ophthalmology (AAPOS), American Association of Certified Orthoptists (AAO) and AAO recommend instrument-based vision screening for children who are unable to perform a visual acuity chart test.¹⁹ Instrument-based vision screening is especially useful for:¹⁸

- All children ages 1-3 years who are usually unable to read a visual acuity chart.
- Some children ages 3-5 years who are unable to read an age-appropriate visual acuity chart.
- Other children with developmental disabilities who are unable to read a visual acuity chart.

Instrument-based vision screeners do not typically test visual acuity directly. Additionally, instrument-based vision screening should not replace comprehensive eye exams, as it does not detect eye diseases that are unrelated to refractive errors.¹⁹



Michelle Williams, RN, and Nurse Manager for Lifespan Health, utilized the Welch Allyn Spot Vision Screener to help identify her son Parker's vision disorder during a community screening event.

Choose the Vision Screener that Works for You

Pediatricians should look for instrument-based vision screeners that are easy to operate and have a high capture rate.¹ Pediatricians should also consider the device capabilities and how vision risk factors are captured. For example, some instrument-based vision screeners do not provide instant results and may rely on an overread service by an ophthalmologist to detect risk factors for astigmatism, strabismus and anisocoria. Purchase options for an instrument-based vision screener will vary by manufacturer and may include leasing options. Pediatricians should consider the economic impact of instrument-based vision screening prior to selecting a device.

Pediatricians familiar with the concepts of sensitivity and specificity, and how various devices perform in respect to referral criteria, will find it easy to select the most appropriate instrument-based vision screener for their practice.² The Spot Vision Screener has better specificity and more successful measurement compared to similar devices.¹⁹

Selecting referral criteria with high sensitivity will result in few cases of missed disease, but may cause children with normal vision to be incorrectly referred.² Alternately, choosing referral criteria with high specificity will minimize over-referrals, but some children with disease may be missed.² The manufacturer's referral criteria is typically balanced for good sensitivity and specificity. If pediatricians wish to alter the device referral criteria, consultation with a local eye care professional may help limit both over- and under-referrals.

[For more information, view our Buyer's Guide to help you choose the right vision screener for your program.](#)

The half Helen Foundation has used the Spot Vision Screener exclusively to conduct over 45,000 school-based vision screenings. Motivated by my own vision loss as a child, I am committed to advancing children's vision health through innovative screenings and access to follow-up care and corrective wear for children in low-income communities. Spot Vision Screener is an efficient and effective solution that is helping transform school-based vision screenings across America.

**Chelsea Elliott, Executive Director,
half Helen Foundation**



Welch Allyn® Spot® Vision Screener



THE PROBLEM THE SOLUTION

Bring Vision Screenings to Your Patients

Modern instrument-based screening technology makes implementation of a screening program simple and affordable. Often, these programs are more successful when pediatricians partner closely with local ophthalmologists who have experience treating children's vision disorders.¹⁰ Ophthalmologists can help clarify questions regarding vision screening procedures and indications for eye-exam referral.¹⁰ In addition, pediatricians should consider working with families of children who fail a vision screening to ensure referred children receive appropriate eye care and exams.²



Reimbursement

The USPSTF recommends instrument-based vision screening with a “B” level evidence rating, meaning there is high certainty that the net benefit is moderate and that the practice should provide this particular service.² The Affordable Care Act requires health plans to cover preventative services that have an “A” or “B” level evidence rating.²

Reimbursement coding for vision screening is dependent upon the vision screening technique, for example:²

- CPT® code 99177 can be used for instrument-based vision screeners that produce an immediate result in the office.
- CPT code 99174 can be used for instrument-based vision screeners that require remote interpretation of images.

Instrument-based vision screeners can pay for themselves² with an average commercial coverage of approximately \$19.25.²¹ In addition, the Americans with Disability Act offers federal tax advantages for the purchase of an instrument-based vision screener.²

See how you can save money by navigating through this calculation of average reimbursement with the Spot® Vision Screener.



THE PROBLEM THE SOLUTION

Start Saving Sight Today

The National Eye Institute estimates that amblyopia affects up to three percent of children in the U.S.,¹⁸ costing \$10 billion annually.⁶ Early vision screenings are key to detecting and treating amblyopia.

Instrument-based vision screening provides an opportunity for all children to be screened during regular check-ups with their pediatrician.² As a result, more children will be referred to eye doctors during the early stages of amblyopia and strabismus, shifting the care delivery to a preventative stage and thus potentially eliminating vision loss in children.²

Are you ready to save sight in children?

Contact your local Hillrom representative to learn more about how integrating instrument-based vision screeners into your practice can help facilitate early detection and treatment of vision disorders in children.



Welch Allyn® Spot® Vision Screener



Together, with the dedication of primary care physicians, school nurses and volunteers like you, we can win the fight to prevent vision loss in children. We're ready to help. Contact your Hillrom representative today.

References

- ¹ Children's Eye Foundation. <https://www.childreneyefoundation.org>. Accessed January 2, 2019.
- ² Children's Eye Foundation. A Practical Guide for Primary Care Physicians: Instrument-Based Vision Screening.
- ³ Prevent Blindness Wisconsin. Give Your Child the Best Vision Possible. https://preventblindness.org/wp-content/uploads/2020/08/PB_Best-vision-possible-parent-checklist.pdf. Accessed December 22, 2020.
- ⁴ Prevent Blindness Wisconsin. Our Vision for Children's Vision: A National Call to Action for the Advancement of Children's Vision and Eye Health. <https://preventblindness.org/wp-content/uploads/2020/07/Snapshot-Report-2020condensedF.pdf> Accessed August 24, 2020.
- ⁵ National Association of School Nurses. Vision and Eye Health. <https://www.nasn.org/nasn-resources/practice-topics/vision-health>. Accessed January 2, 2019.
- ⁶ Children's Eye Foundation. <https://www.childreneyefoundation.org/webdev/what-we-do/all-children-see>. Accessed August 24, 2020.
- ⁷ Centers for Disease Control and Prevention. Facts About Vision Loss. <https://www.cdc.gov/ncbddd/developmentaldisabilities/facts-about-vision-loss.html>. Accessed August 24, 2020.
- ⁸ American Academy of Ophthalmology. Eye Screening for Children. <https://www.aao.org/clinical-statement/vision-screening-infants-children>. Accessed August 24, 2020.
- ⁹ American Association for Pediatric Ophthalmology and Strabismus. Abnormal Head Position. <https://aapos.org/glossary/abnormal-head-position>. Accessed August 24, 2020.
- ¹⁰ Official Journal of the American Academy of Pediatrics. Eye Examination and Vision Screening in Infants, Children, and Young Adults. <http://pediatrics.aappublications.org/content/pediatrics/98/1/153.full.pdf>. Accessed January 2, 2019.
- ¹¹ Centers for Disease Control and Prevention. Keep an Eye on Your Vision Health. <https://www.cdc.gov/features/healthyvision>. Accessed January 3, 2019.
- ¹² American Academy of Ophthalmology. Eye Screening for Children. <https://www.aao.org/eye-health/tips-prevention/children-eye-screening>. Accessed December 30, 2020.
- ¹³ Prevent Blindness Wisconsin. Understanding Vision Screenings and Eye Examinations. <https://wisconsin.preventblindness.org/understanding-vision-screenings-and-eye-examinations>. Accessed January 3, 2019.
- ¹⁴ Hillrom. Spot Vision Screener. <https://www.hillrom.com/en/products/spot-vision-screener>. Accessed December 22, 2020.

References

- ¹⁵ American Association for Pediatric Ophthalmology and Strabismus. Vision Screenings. <https://aapos.org/glossary/vision-screening-description>. Accessed August 24, 2020.
- ¹⁶ Loh AR, Chiang MF. Pediatric Vision Screening. <http://pedsinreview.aappublications.org/content/39/5/225>. Accessed January 3, 2019.
- ¹⁷ HealthyChildren.org. Specific Eye Problems in Children. <https://www.healthychildren.org/English/health-issues/conditions/eyes/Pages/Specific-Eye-Problems.aspx>. Accessed January 3, 2019.
- ¹⁸ American Association for Pediatric Ophthalmology and Strabismus. Pediatric Vision Screening: Guidelines for Effective and Efficient Vision Screening in Children.
- ¹⁹ Donahue SP, Baker CN, et al. Procedures for the evaluation of the visual system by pediatricians: Clinical report - 2016. *Pediatrics*. 2016; 137(1):1-9
- ²⁰ Crescioni, M., Miller, J. M. & Harvey, E. M. (2015). Accuracy of the Spot and Plusoptix photoscreeners for detection of astigmatism. *Journal of the American Association for Pediatric Ophthalmology and Strabismus*, 19(5): 435-440. <https://www.ncbi.nlm.nih.gov/pubmed/26486025>
- ²¹ Truven, Commercial Claims. 2016.

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ADVANCING CONNECTED CARE™

Hillrom is a global medical technology leader whose 10,000 employees have a single purpose: enhancing outcomes for patients and their caregivers by advancing connected care. Around the world, our innovations touch over 7 million patients each day. They help enable earlier diagnosis and treatment, optimize surgical efficiency and accelerate patient recovery while simplifying clinical communication and shifting care closer to home. We make these outcomes possible through connected smart beds, patient lifts, patient assessment and monitoring technologies, caregiver collaboration tools, respiratory care devices, advanced operating room equipment and more, delivering actionable, real-time insights at the point of care. Learn more at hillrom.com.



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