

SCHOOL-BASED VISION SCREENINGS IN ARKANSAS

Introduction

Nearly 9,000 children and teens in Arkansas have a visual impairment or are blind, according to the Centers for Disease Control and Prevention (CDC).¹ Early diagnosis of vision problems is essential to optimize the health and development of children.² Some uncorrected vision problems can worsen over time and lead to permanent loss; early detection increases the chances of problems being completely corrected.

Poor vision can also impact learning. School-based vision screenings can help detect vision disorders that children may not realize they have. These screenings may be the only time that some children have their eyes checked.^a

Younger children are the most likely to go without vision screenings. In a 2017 survey, parents in Arkansas reported that 64% of children ages 0–5 had never had their vision screened, which is slightly higher than the national average of 61%.³

This explainer will provide information on school-based vision screening requirements in Arkansas, examine vision screening data provided by school districts, and look at barriers to access to comprehensive eye exams.

^a The American Association for Pediatric Ophthalmology and Strabismus recommends that the screening include an external inspection of the eyes, visual acuity testing, and an ocular motility assessment. Visual acuity testing varies by age but includes the use of an eye chart with children standing a specified distance away from the chart. An ocular motility assessment is an examination of eye movements.

School-Based Vision Screening

In 2003, the Arkansas General Assembly passed a law establishing the Arkansas Commission on Eye and Vision Care of School Age Children to study the adequacy of vision care and screenings and the effects of inadequate vision on the educational performance of children.⁸ The work of the commission led to the passage of a law requiring children who attend public school in Arkansas to receive a vision screening.⁹ The law also established standardized vision testing and reporting requirements for schools.

REQUIREMENTS IN ARKANSAS

- Screenings are required for children in prekindergarten, kindergarten, and grades 1, 2, 4, 6, and 8, all transfer students, and any student suspected of having vision problems.¹⁰
- Arkansas State Board of Education rules govern the requirements for tests, procedures, equipment, and instruments.
 - Screenings must include tests for distance and visual acuity, muscle balance, and color perception.¹¹
- A school nurse or school vision care consultant must rescreen children with potential vision issues within one month of the initial screening.¹⁰
- The school must give each student's parent or guardian a report that identifies whether the child has potential vision issues.¹⁰
- If a child has potential vision issues, the school must provide notice to student's parent or guardian of the need for a comprehensive eye and vision exam.¹² The student's

COMMON VISION PROBLEMS IN CHILDREN

The CDC has identified the following common vision problems in children:⁴

Refractive errors: These conditions cause blurred vision and include nearsightedness, farsightedness, and astigmatism.

Amblyopia (lazy eye): This condition occurs when vision in one eye is reduced because the brain miscommunicates with the affected eye and relies more heavily on the stronger eye. If left untreated, it can affect a child's vision permanently.⁵

Strabismus (crossed eyes): This condition occurs when the eyes are misaligned, preventing them from focusing on the same object at the same time. It can affect one or both eyes. This condition can usually be corrected if treated early.⁶

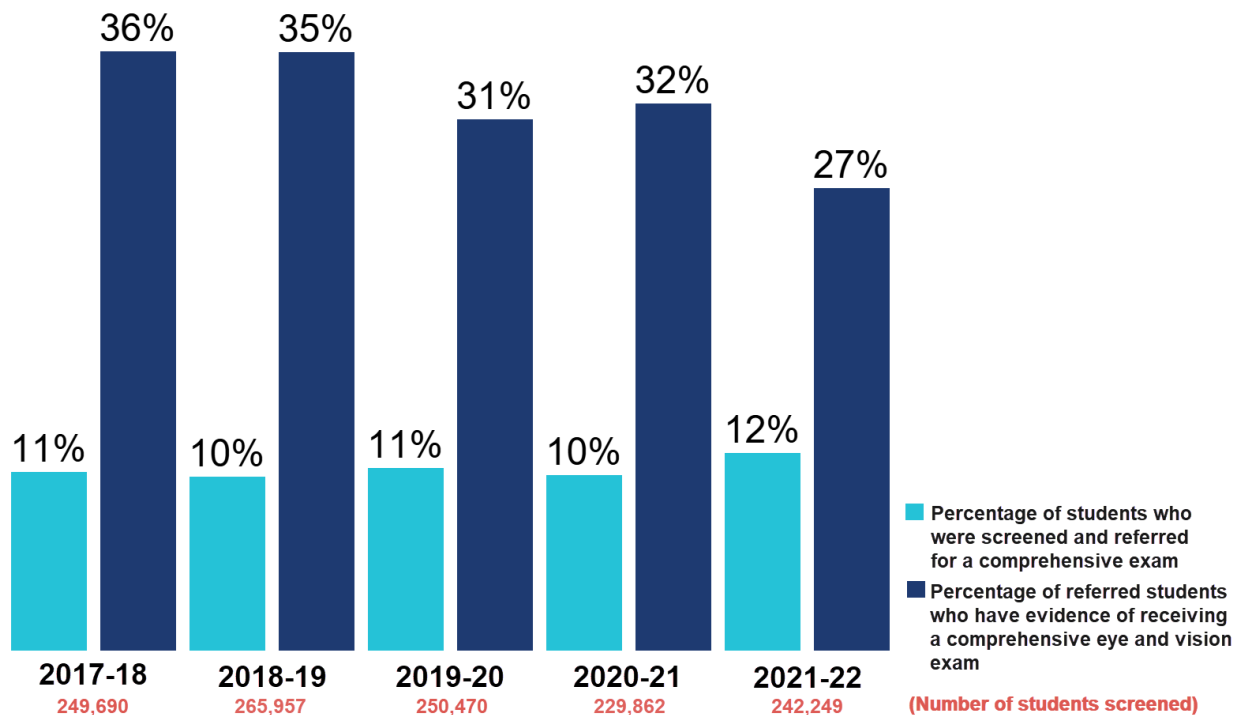
Convergence insufficiency: This condition affects how the eyes work together. It can cause blurry or double vision. If left untreated, it may persist throughout adulthood.⁷



A Closer Look at Arkansas

Schools must report screening information each year to the Arkansas Department of Education, which reports aggregate information on its My School Info website.¹³ Figure 1 provides a summary of screening information for all public schools. The COVID-19 pandemic resulted in fewer students being screened as many students moved to virtual learning. During the 2020-21 school year, Arkansas students who were required to be screened were offered screenings at their enrolled districts, but over 18,000 students either refused a screening or did not receive one for unspecified reasons.¹⁴ The percentage of students who have evidence of receiving a comprehensive eye and vision exam after a referral has also declined, going from 36% during the 2017-18 school year to 27% during the 2020-21 school year.

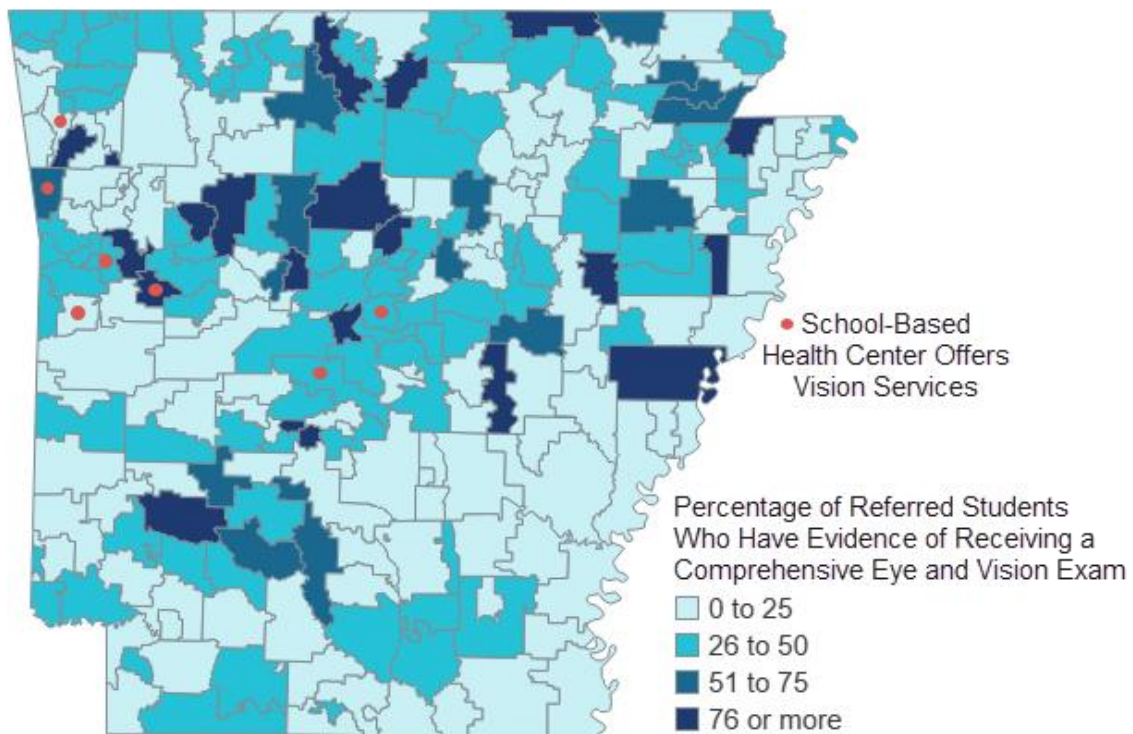
FIGURE 1: NUMBER OF STUDENTS SCREENED, PERCENTAGE OF STUDENTS REFERRED, AND PERCENTAGE OF REFERRED STUDENTS WHO HAVE EVIDENCE OF RECEIVING A COMPREHENSIVE EYE AND VISION EXAM IN ARKANSAS BY SCHOOL YEAR



Note: The data used to calculate the values in Figures 1 and 2 may contain duplicate records.

Figure 2 shows the percentage of students who received a comprehensive eye and vision exam after referral (also described as a follow-up exam). It also indicates which districts offer vision services at a school-based health center. In Arkansas, over 80% of the school districts had follow-up exam rates below 51% in the 2020-21 school year.

FIGURE 2: PERCENTAGE OF REFERRED STUDENTS WHO HAVE EVIDENCE OF RECEIVING A COMPREHENSIVE EYE AND VISION EXAM BY SCHOOL DISTRICT: SCHOOL YEAR 2021-22



Access to Comprehensive Exams

Vision screening in schools is very important, but screening cannot diagnose the problem a child may have. A comprehensive eye and vision exam by an eye doctor should follow any screening that indicates a problem may be present. Unfortunately, as shown in Figure 1, many children may not receive a follow-up exam. Factors that may contribute to the lack of follow-up exams include cost concerns, access issues such as a lack of available providers or language/cultural barriers, perceptual barriers (e.g., questioning the results or not considering them a priority),¹⁵ or logistical difficulties with transportation or scheduling.

Children who have vision coverage either through Medicaid or a private plan are more likely to have their vision tested by a doctor or health professional. The Medicaid Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit provides vision services for children who are enrolled in Medicaid. A school district may participate as a provider to perform various components of the vision screening in accordance with EPSDT procedures and bill for these

services. A CDC survey found that 67% of children with private health insurance had their vision screened, compared to 61% with public coverage and 43% of those who were uninsured.¹⁶

There are various programs and resources to assist parents with diagnostic eye exams and treatment. According to the 2020-21 Annual Summary Report of Vision Screenings in Arkansas Public and Charter Schools sent to the Arkansas General Assembly, the Arkansas Department of Education provides the following resources.¹⁴

- VSP Eyes of Hope: The program provides school nurses with gift certificates for no-cost eye exams and new glasses.¹⁷
- Eyes of a Champion: Created by the Brandon Burlsworth Foundation, the program provides free eye exams and glasses to uninsured preschool through 12th grade students.¹⁸
- Local Lions Club International: Local clubs collect eyeglasses and provide them to people in need.¹⁹
- School-based health centers: These centers provide a range of services to meet student healthcare needs. Several of the centers across Arkansas provide vision services.

COMPONENTS OF A STRONG VISION HEALTH SYSTEM OF CARE

The National Center for Children’s Vision and Eye Health (NCCVEH) at Prevent Blindness created a 12-step approach to finding children with vision disorders. The following are some key steps to encourage follow-up exams.²⁰

- Provide parents/caregivers educational material — that respects cultural and literacy needs — about the importance of good vision and the importance of eye exams.
- Request permission to share results with the child’s eye doctor.
- Send results in easy-to-understand language that respects cultural and literacy needs and provides steps to take for prompt follow-up with an eye doctor.
- Create a system with parents/caregivers to help ensure that the eye exam occurs.
- Link parents/caregivers with an eye doctor who specializes in the care and treatment of children.



Conclusion

School-based vision screenings are important for early detection of vision problems. The percentage of students statewide who have evidence of receiving a comprehensive exam after referral based on a school-based vision screening has been consistently low over the past several years. However, there is wide variation in follow-up exams across the state, with some school districts exceeding 75% success in making sure students receive follow-up exams. Most schools are not equipped to provide follow-up comprehensive exams but have resources available to help children once a medical or vision problem is determined. Efforts to identify successful strategies to increase the percentage of referred children who receive a follow-up exam — such as offering full vision services at school-based health centers, bringing mobile eye clinics to schools, and providing educational materials to parents or caregivers on the importance of good vision — should help to reduce barriers and improve vision in Arkansas school children.



References

- ¹ Centers for Disease Control and Prevention. Vision and Eye Health Surveillance System (VEHSS). cdc.gov/visionhealth/vehss/estimates/index.html. Accessed August 4, 2022.
- ² Ethan D, Basch CE. Promoting healthy vision in students: Progress and challenges in policy, programs, and research. *Journal of School Health*. 2008;78(8):411-416. doi.org/10.1111/j.1746-1561.2008.00323.x
- ³ National Center for Children's Vision and Eye Health at Prevent Blindness. *Children's vision and eye health: a snapshot of current national issues (2nd Edition)*. preventblindness.org/wp-content/uploads/2020/07/Snapshot-Report-2020condensedF.pdf. Published 2020. Accessed August 5, 2022.
- ⁴ Centers for Disease Control and Prevention. Vision Health Initiative (VHI). cdc.gov/visionhealth/resources/features/vision-health-children.html. Accessed August 5, 2022.
- ⁵ Mayo Clinic. Lazy Eye (Amblyopia). mayoclinic.org/diseases-conditions/lazy-eye/symptoms-causes/syc-20352391#:~:text=Untreated%2C%20lazy%20eye%20can%20cause%20permanent%20vision%20loss. Accessed August 15, 2022.
- ⁶ Boston Children's Hospital. Strabismus and Amblyopia. childrenshospital.org/conditions/strabismus-and-amblyopia. Accessed August 15, 2022.
- ⁷ Advanced Vision Therapy Center. Conditions. advancedvisiontherapycenter.com/services/conditions/convergence_insufficiency_advanced_vision_therapy_center_boise_idaho/#:~:text=lf%20left%20untreated%2C%20or%20improperly,neural%20connections%20responsible%20for%20convergence. Accessed August 15, 2022.
- ⁸ Arkansas Act 755 of 2003. arkleg.state.ar.us/Acts/FTPDocument?path=%2FACTS%2F2003%2FPublic%2F&file=755.pdf&ddBienniumSession=2003%2FR. Accessed August 8, 2022.
- ⁹ Arkansas Act 1438 of 2005. arkleg.state.ar.us/Acts/FTPDocument?path=%2FACTS%2F2005%2FPublic%2F&file=1438.pdf&ddBienniumSession=2005%2FR. Accessed August 30, 2022.
- ¹⁰ Ark. Code Ann. § 6-18-1501.
- ¹¹ Arkansas Department of Education. Arkansas Division of Elementary and Secondary Education rules governing eye and vision screening report in Arkansas public schools. [adecm.ade.arkansas.gov/Attachments/Eye_and_Vision_Screening_--_FINAL_\(May_2,_2022\)_154917.pdf](https://adecm.ade.arkansas.gov/Attachments/Eye_and_Vision_Screening_--_FINAL_(May_2,_2022)_154917.pdf). Accessed August 8, 2022.
- ¹² Ark. Code Ann. § 6-18-1502.
- ¹³ ADE Data Center. My School Info. myschoolinfo.arkansas.gov. Accessed August 8, 2022.
- ¹⁴ McDonald C. *Annual summary report of vision screenings in Arkansas public and charter schools school year 2020–2021*. arkleg.state.ar.us/Calendars/Attachment?committee=430&agenda=4857&file=Exhibit+J-+Report+of+Vision+Screening.pdf. Accessed August 4, 2022.
- ¹⁵ Kimel LS. Lack of follow-up exams after failed school vision screenings: An investigation of contributing factors. *J Sch Nurs*. 2006;22(3):156-162. [doi:10.1177/10598405060220030601](https://doi.org/10.1177/10598405060220030601)
- ¹⁶ Centers for Disease Control and Prevention. cdc.gov/nchs/products/databriefs/db353.htm. Accessed August 9, 2022.
- ¹⁷ National Association of School Nurses. VSP Eyes of Hope. nasn.org/membership/benefits/vsp-eyes-of-hope. Accessed August 9, 2022.
- ¹⁸ Brandon Burlsworth Foundation. Eyes of a Champion. brandonburlsworth.org/eyes-of-a-champion. Accessed August 9, 2022.
- ¹⁹ Lions International. Eyeglasses and hearing aids recycle. lionsclubs.org/en/explore-our-clubs/eyeglasses-and-hearing-aids-recycling. Accessed August 9, 2022.
- ²⁰ Prevent Blindness. Best practices and research: Children's vision and eye health; 12 components of a strong vision health system of care. preventblindness.org/12-components-of-a-strong-vision-health-system-of-care/. Accessed August 18, 2022.

