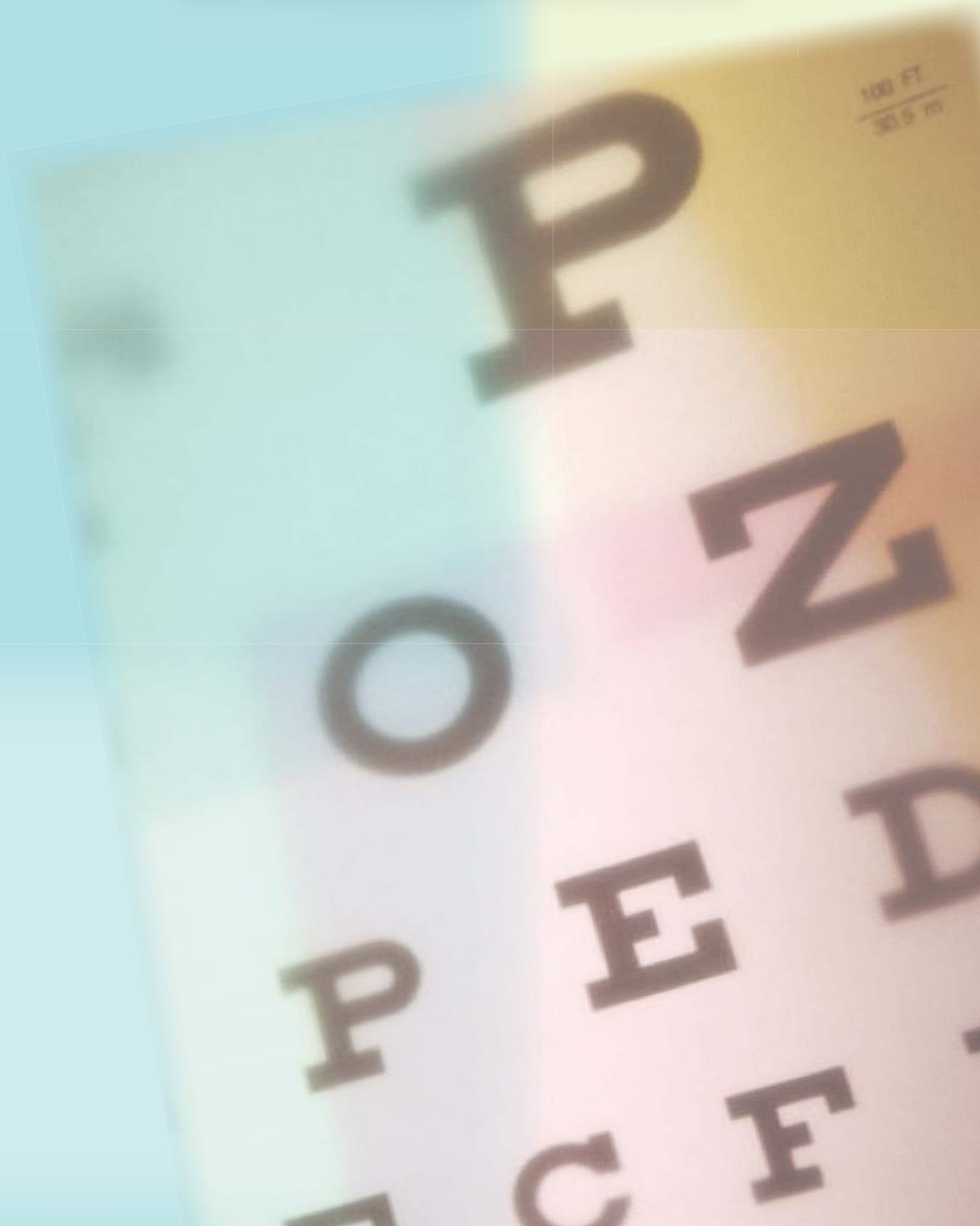
Guidelines for Vision Screening in Missouri Schools



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Introduction

Purpose

The ability to see greatly impacts a student's ability to learn. Screening for vision problems is an appropriate and important part of school health services, largely carried out by the school nurse.

The objective of a vision screening program is to identify children with possible visual defects at the earliest possible stage. This allows ample time to refer children for diagnosis and treatment.

Vision screening is mandated by Missouri state law (RSMo 167.195), enacted in 2007, for children in first and third grades. In addition, Missouri state law (RSMo 167.194) calls for children enrolling for the first time in kindergarten or first grade in a public elementary school to receive a comprehensive vision examination.

What the Law Says

- Beginning July 1, 2008, every child enrolling for the first time in kindergarten or first grade in a public elementary school in this state shall receive one comprehensive vision examination performed by a state-licensed optometrist or physician.
- The law allows a parent or legal guardian to have a child excused from the comprehensive vision examination requirement and/or the vision screening upon submission of a written request to the school administrator.
- The law also created a state-level Children's Vision Commission, with members appointed by the governor, to establish specific vision-screening criteria.
- Beginning July 1, 2008, and continuing through the 2010-11 school year unless extended by act of the General Assembly, all public school districts shall conduct an eye screening for each student once before the completion of first grade and again before the completion of third grade.
- The eye screening method utilized shall be one approved by the Children's Vision Commission and shall be performed by an appropriately trained school nurse or other trained and qualified employee of the school district.

Characteristics of Screening Programs

Screening is a brief or limited evaluation of a group of individuals presumed to be normal. The value of early detection of a problem must be weighed against the time and human resources required to conduct the screening. The value of the screening process depends on how well the program is carried out and how the findings are used. Results must be communicated, and follow-up on referrals for those "at risk" must be continued until the problem is resolved in some manner.

Screening program results must be evaluated in terms of:

- Validity – ability to identify those who have the condition
- Reliability – consistency of results of screening process
- Yield – number of persons identified to be "at-risk"
- Cost – personnel and equipment
- Acceptance – informed parents agree to the value of screening
- Follow-up – communicating results to parents and assuring family has resources for diagnosis and treatment

Evaluation of Vision Screening Programs

To determine the effectiveness of the vision screening program, careful evaluation of the planning, implementation, referral process and referral outcomes must be completed with each vision screening. Much of this information is essential for reports to the board of education, the school health advisory commitee and the Children's Vision Commission.

Evaluation is an on-going process. Keeping outcome data about the vision screening program and referrals helps the school nurse evaluate the effectiveness of the program.

There are many questions that can be answered from the acquired data. Information that can be gathered in the evaluation process includes the number of students screened, the number of referrals, the types of vision problems identified and utilization of vision insurance (see Vision Screening Annual Report and Vision Exam Annual Report forms in Appendix C).

Screening schedule and protocol

Schools develop screening schedules based on a variety of situations; e.g., school board policy, special education plans, tradition and, now, RSMo 167.195.

Detection of visual problems at any age requires observation for signs and symptoms of vision problems and visual acuity screening. Individual children are often referred for vision screening based on signs and symptoms observed by parents and teachers. It is helpful to share the "ABC Checklist for Vision" (Appendix C) or the "Signs and Symptoms" (Appendix C) with school staff and parents. These tools may help others in making observations and referrals for possible vision problems.

Color discrimination is not a required screening procedure.

Grade	Screen	Type of screening
All students new to district	Recommended	Age appropriate
Kindergarten	Stongly Recommended	Near and distance acuity, Random Dot E
1st grade	Strongly Recommended	Near and distance acuity, Random Dot E
2nd grade	Recommended	Near and distance acuity, Random Dot E
3rd grade	Strongly Recommended	Near and distance acuity, Random Dot E
Every other year after 3rd grade	Recommended as time permits	Distance acuity (Near acuity optional)

Screening vision in school-age children

Visual Acuity

Visual acuity refers to the sharpness of one's eyesight. The size of all letters in a row is smaller than the row above. Beside each row is a fraction. The top half of the fraction (numerator) stands for how many feet the person is standing from the chart (usually 20 feet). The bottom half of the fraction (denominator) shows how far away a person with normal visual acuity can stand from the chart and still read the symbol.

The 20/20 line is the standard for normal vision. A screening result of 20/100 means that the smallest line the person can read at 20 feet could be read by a person with normal vision at 100 feet.

> Numerator – distance from the subject to the chart, e.g., 20 feet
> Denominator – distance a person with normal vision can see the chart, e.g., 100 feet
> *Example: 20/40 – At 20 feet, the eye sees at a 20 foot distance what a normal eye sees at 40* feet.

Distance Acuity

Purpose: To screen for clearness of vision when looking in the distance; to detect myopia (nearsightedness), amblyopia (weakness of sight, lazy eye) and astigmatism (blurred vision).

Equipment

Distance chart for 10 to 20 feet (should include a 20/25 line), appropriate flash cards or chart for young children, occluder (e.g., paper cup, paper patch, palm of hand with tissue) and antibacterial wipes.

Note: Ten foot chart is preferred for young children.

Recommended acuity screening tools: Visual acuity charts should be chosen according to the child's developmental level. Any of the following types of visual acuity charts may be used:

- Letter charts (for example HOTV, Snellen, Sloan, Tumbling E)
- Symbol charts (for example, Lea Symbol, Lighthouse)

General Procedures for Distance Visual Acuity Screening:

1. Make sure the room in which you are screening is quiet, has no distractions (e.g., pictures, toys, other children), is well lit and free from glare. Do not shine a spotlight on the charts. Self-illuminated charts are preferred over non-illuminated, because with self-illuminated equipment yellowing shadows are minimized, and the letters are well-contrasted. However, clean, white wall charts with clear contrast between the letters and the background are acceptable.

2. Mount the chart at the child's eye level. Adjust the chart height for the size of the person being screened. A suggestion is to place Velcro on the wall and move the chart as needed.

3. Mark off 10 to 20 feet, whichever is appropriate for your chart. The line may be marked with masking tape or paper feet placed on the floor, so that the child will be the required distance from the chart. The child can be seated or standing. Make sure the child's eyes are in the direct line above the tape or paper feet.

4. Ask the child to position their heels on the line, or other floor marking. Do not allow the child to lean the torso or head forward. If sitting, be sure to have the back legs of the chair on the line.

5. For distance and near acuity you will need an occluder. You can use any of a number of easily available items, e.g., paper cups, paper patches or the palm of the hand with a tissue. Be sure the child does not peek. Be consistent in screening the right eye first to avoid errors in charting.

6. Ask if a child wears glasses. If so, screening should be conducted with glasses. Note on the screening form that the child is wearing glasses.

7. Watch carefully to be sure that the child is not peeking, tilting the head or squinting. If at all possible for young children, have someone stay next to the child and watch closely. Children want to do well on these screenings and will often peek, tilt the head or squint to compensate for vision problems.

8. Instruct the child to keep both eyes open and read the selected letter or line of letters with the uncovered eye. Do not use a marking device (pencil/pen) as a pointer to avoid leaving distracting marks on the chart.

9. When screening students in grade one and above, start with at least the 20/50 line and move down to the 20/20 line. If the student is unable to read the 20/50 line, move upward.

10. The child must identify or match greater than 60 percent of the letters/symbols on the chart, or not miss one more than 50 percent of the letters/symbols on a line.

11. If the child is unsuccessful, he or she must be rescreened at a later date prior to referral.

12. Do not comment either positively or negatively on the child's responses.

13. Record results. All failures should be rechecked within a month. Two screenings without passing should be referred.

Procedure

Training Session
Before screening for visual acuity with the above charts, orient the child to the screening. Let the child use both eyes to look at the 20/100 letters or symbols to make sure the child can identify the letters or symbols. It may save time to demonstrate to several children how to perform the screening, but the screener should review it with each child to be sure the child is able to perform the task. Demonstrate how to use the occluder.

Screening Session

1. Begin by screening the right eye, with the left eye covered using an occluder. Make sure the child is not peeking from behind the cover.
2. Ask the child to name or match the first symbol, to match the first letter in each line or indicate the direction the lines are pointing on the first E down to the 20/20 row.
3. Ask the child to name or match each remaining symbol, match each remaining letter, or indicate the direction in the 20/20 row.
4. In order to pass the screening, the child must identify or match greater than 60 percent of the letters/symbols on the chart, or not miss one more than 50 percent of the letters/symbols on a line.
5. Repeat steps 2-4 for the left eye.
6. Record results. Rescreen all failures within one month.

Near Point Acuity

Purpose: Near vision cards are used to assess near visual acuity; detect excessive hyperopia/hypermetropia (farsightedness).

Equipment

Near vision chart, occluders, and antibacterial wipes.
Note: Near acuity charts should be chosen according to the child's developmental level.

General Procedures for Near Point Acuity Screening

1. Make sure the room in which you are screening is quiet, has no distractions (e.g., pictures, toys, other children) and is well-lit. As the card is presented, make sure it is free from glare.

2. Ask if a child wears glasses. If so, screening should be conducted with the glasses on. Note on the screening form the child was wearing glasses during the screening.

3. Hold the card at the appropriate distance (refer to manufacturer's recommendations for distance) from the face at eye level. If a string is attached, it should be taut.
   Note: Optimal measure of distance would be to use the Harmon-Distance. The Harmon-Distance is measured as the distance from the middle of the center knuckle (placed on chin) to the elbow. Working at the Harmon-Distance reduces near point visual stress. (http://www.pavevision.org/TipsandTools/StressReduction/tabid/816/Default.aspx).

4. Do not allow the child to lean the head or torso forward.

5. Watch carefully to be sure the child is not peeking, tilting the head, or squinting.

6. Occlude the left eye with an occluder (a paper cup, paper patch or palm of hand with tissue) and screen the right eye. Then reverse the procedure and screen the left eye.

7. Ask the child to name or read the letter or symbols on each line as directed. If the child is able to read "most" of the letters or symbols on the line, the child passes. Refer to chart on page 10.

8. If the child is unsuccessful, he or she should be rescreened at a later date prior to referral. Do not comment either positively or negatively on the child's responses.

Referral Criteria

Beginning in first grade, each eye must see at least the 20/30 line. If not, the student is to be referred. The important exception is a two-line difference between the two eyes. For example: Right 20/20 Left 20/30 should be referred because there is a two-line difference (the second line being the 20/25 line). For younger children, preschool through kindergarten, each eye must see at least the 20/40 line. The important exception is a two-line difference between the two eyes.

Binocularity / Stereoscopic Vision

What is Binocular Vision?
Binocular vision has two components; ocular alignment and stereo acuity. Screening binocularity determines how well the two eyes function together.

The purpose of screening binocular vision/stereovision is to determine if child has adequate binocularity.

Equipment

Random Dot E (RDE) Stereotest Kit and antibacterial wipes

RDE Kit includes:

- Demonstration plate (with a large, raised, embossed letter "E") to be used for training purposes only
- Stereo E screening plate, with an array of dots that appear randomly oriented (however, when viewed through the stereo glasses, a large letter "E" will appear if the child has normal binocular vision)
- Blank screening plate, with an array of dots that appear randomly oriented (even when viewed through the stereo glasses, i.e., no "E" appears even with the stereo glasses in place)
- One pair of stereo sunglasses

General Procedure for Stereovision Screening

Training Session

1. Show the child the raised "E" figure on the demonstration card. Tell the child that the "E" figure is "popping off the card" and ask the child to point to it. This will allow you to be sure that the child can identify an "E" figure.
2. Put the polarized "magic" glasses on the child. If the child hesitates, tell him or her that you are putting on glasses that look like sunglasses, or that they are magic glasses so they can see magic pictures. Let the child use both eyes to look at the two screening cards. Tell the child to point to the card that contains the "E." Repeat this process three to four times until you are sure that the child understands the task.
3. If the polarized glasses are too large for the child, put a short piece of masking tape on the top of the glasses and use the other end of the tape to hold the glasses on the child's forehead.
4. When showing the child the screening targets, be sure he/she keeps his/her head straight up, as tilting to one side or allowing the glasses to tilt on his nose will interfere with the screening.
5. Slightly rotate (don't tilt) the cards up and down to pick up light to give optimal viewing of the stereo image.
6. When you feel the child is comfortable with the glasses and images, move on to the screening session.

Screening Session

1. Place the polarized glasses on the child. Do not remove prescription glasses if the child wears them.
2. At a distance of 40 inches from the child, hold the Stereo "E" card and blank card at the child's eye level. Tell the child to point or identify the card with the "E" or the picture on it.
3. Mix the blank card and Stereo "E" card behind your back and present the cards to the child. Have the child identify the card they see the "E" or picture.
4. Repeat this process five times.

Referral Criteria

For a pass, the child must locate the Stereo "E" card at least four out of five presentations.
Note: A child who is uncooperative or unable to complete the screening should be referred.

Missouri Vision Screening Protocol

Evaluate Distance Acuity, Near Acuity and Stereopsis

Function to be evaluated	Specific screening	Recommended Screening Procedure	Passing Criterion
Distance Visual Acuity	**Letter Charts** **Symbol Charts** The chart includes a 20/25 line. Important to choose a developmentally appropriate chart.	**Screening distance:** 10 feet or 20 feet (chart determines distance) **Conditioning:** (performed binocularly) **Screening procedure:** (performed monocularly)	20/40 – Preschool, Kindergarten 20/30 – 1st-12th Grades HOTV, Lea, Symbol, Snellen E. The child must identify or match greater than 60% of the letters/ symbols on the chart, or not miss one more than 50% of the letters/symbols on a line.
Near Visual Acuity	**Letter Charts** **Symbol Charts** The chart includes a 20/25 line. Important to choose a developmentally appropriate chart.	**Screening distance:** (see chart recommendation) **Conditioning:** (performed binocularly) **Screening procedure:** (performed monocularly)	20/40 – Preschool, Kindergarten 20/30 – 1st-12th Grades HOTV, Lea, Symbol, Snellen E. The child must identify or match greater than 60% of the letters/ symbols on the chart or not miss one more than 50% of the letters/symbols on a line.
Stereopsis/ Binolcular	Random Dot E	**Screening distance:** 40 inches All screening, including prescreening, should be done binocularly with the polarized glasses on. **Conditioning:** Screen child's ability to perform the screening by having the child identify the location of the three-dimensional "E" correctly on four out of five presentations. **Screening procedure:** Screen child's ability to identify the location of the Stereo E. Five presentations should be used, varying the location in a random manner.	Child must locate Stereo E on four out of five presentations. Done binocularly with the polarized glasses on.

Referral Criteria

Beginning in first grade, each eye must see at least the 20/30 line (except for preschool and kindergarten). If not, the student is to be referred. The important exception is a two-line difference between the two eyes. For example: Right 20/20 Left 20/30 should be referred because there is a two-line difference (the second line being the 20/25 line). For younger children, preschool through kindergarten, each eye must see at least the 20/40 line. The important exception again is a two-line difference between the two eyes.

Table 1. Referral Criteria Preschool and Kindergarten

ONE EYE	OTHER EYE	RESULTS
20/20	20/20	Pass
20/25*	20/25	Pass
20/30	20/30	Pass
20/20	20/25	Pass
20/20	20/30	Refer: two-line difference
20/30	20/40	Pass
20/40	20/40	Pass
20/40	20/50	Refer
20/30	20/50	Refer: two-line difference

Table 2. Referral Criteria Grades 1-12

ONE EYE	OTHER EYE	RESULTS
20/20	20/20	Pass
20/25*	20/25	Pass
20/30	20/30	Pass
20/20	20/25	Pass
20/20	20/30	Refer: two-line difference
20/30	20/40	Refer
20/40	20/40	Refer

*All charts should have a 20/25 line.

Referral

Following up with vision referrals is the most important component of a vision screening program and often the most difficult and time consuming task. All failures on a screening should be rescreened to confirm the need for further evaluation. Initial failure may be due to misunderstanding directions, misinterpretation of information, fatigue or distractions during screening.

After determining that the individual needs referral, the nurse should notify the parent/guardian in person or by telephone. This referral should be followed in writing, using a form that communicates the findings of the screening as well as any additional observations made in the school setting. The form should request a written report from the eye care professional with results of the examination and any recommendations for the school setting.

The most useful form for a vision referral contains:

- Notice to parent about a possible problem
- Any vision-related signs and symptoms noted
- Results of screening and rescreening
- Section for results of the professional exam
- Recommendations for the school

Parents may not take children for a professional eye exam for a variety of reasons. The most common reason is lack of insurance or means to pay for an exam or glasses if they are prescribed. It is important for the school nurse to become familiar with resources available for exams and glasses. The school nurse should also assist in reminding the parent about follow-up visits, if recommended in these reports. A sample referral letter and medical release information form (HIPPA compliant) are provided in Appendix C (pages 34 and 38).

Follow-up

The school nurse should develop a method of tracking the referrals made. It is not unreasonable to expect a response from the parent/guardian within a two-week period, notifying the school that the parent/guardian understands the referral and has made an appointment for an examination. The parent/guardian should be contacted periodically until the nurse knows the disposition of the referral. Many times, the parent/guardian is reluctant to say they cannot afford an eye exam. The nurse should be aware of community resources for those who need financial assistance.

Referral Resources

The school nurse's role is to identify whether there is a need for financial assistance for those students with incomplete referrals.

MO HealthNet

If a parent indicates there is a financial problem, the first step is to determine if the student is financially eligible for assistance through MO HealthNet. MO HealthNet is based on a national child health insurance program for uninsured children. This is a program for medical, dental and vision insurance.

Access to these programs is through the Family Support Division (FSD) of the Department of Social Services. Children eligible for free and reduced lunch programs may often meet the financial criteria. If the parent/guardian does not have a Medicaid card for the student and is interested in exploring their eligibility for MO HealthNet, they should be referred to the county FSD office. The phone number is 1-877-543-7669, or log on to http://www.dss.mo.gov/mhk/index.htm.

These programs will provide an eye exam every two years and frames and lenses if needed. New lenses may be obtained on an annual basis if there is a medical necessity. Some schools have personnel who have been trained to facilitate an application for MO HealthNet.

Blindness Education, Screening and Treatment (BEST) Program

The BEST Fund is a provision of RSMo 192.935 (4), and is designed to provide comprehensive vision examination payment for those public school children in first and third grade that fail a school eye screening in accordance with RSMo 167.195.1, and are referred for a vision examination. Subject to appropriations, costs for vision examinations not covered by existing public health insurance may be paid from this fund. Monies from the BEST Fund shall be used to pay for additional costs providing costs do not exceed $99,000 per year. Costs payment shall be at the state MO HealthNet reimbursement rate. Public school districts will be notified annually of the availability of vouchers for each school district.

Prevention of Blindness Program

A resource available to all citizens in Missouri is the Prevention of Blindness Program (POB). This program is entirely funded by the State of Missouri, and all funds are expended through a coordinator in the state office. All individuals in the state who are legal residents, regardless of age, are provided eye care services when they meet the eligibility requirements.

Eligibility requirements include:

- Financial – dependent on net monthly income, number of individuals in the household, cash and resources other than the family residence. All income generated in the household is taken into consideration.

- Visual – eligibility is based on a visual acuity of 20/200 or worse without correction in at least one eye, a progressive eye disease, or a malformation or malfunction of the eye. Visual eligibility determination for the Prevention of Blindness Program can be made after a report is filed in the POB office by an eye care professional that has completed an examination of the client. This examination is to determine the existence or nonexistence of disease of the eye, to check for ocular muscle functions and to determine whether any other ocular problems exist.

The program provides for the purchase of the following:

- Glasses
- Routine and follow-up eye examinations
- Surgery
- Hospitalization
- Anesthetic fees

Other services include:
- Referrals to other agencies (public and private)
- Purchase of glaucoma medication

The Prevention of Blindness Program accepts referrals from any source, utilizing a form that may be obtained from the county Family Support Division office. The nurse may need to assist the parent/guardian in completing the form to avoid unnecessary delays in getting approval for care.

Community-based Programs

- *Lions Clubs*
  In many communities, the Lions Club International provides assistance for vision problems. Some clubs sponsor community eye-screening programs and assistance for adults as well as children. The nurse has a responsibility to be an advocate for the school-age population and to communicate the need for a resource in the community. If your area has a Lions Club, check with a member to determine if the club has resources available to students in your district and what the procedure is to access the resources.

- *National Association of School Nurses / Vision Service Plan*
  The National Association of School Nurses (NASN) collaborates with Vision Service Plan (VSP) Sight for Students program for low-income students not eligible for government programs. Members of NASN can obtain materials for providing up to ten "gift certificates" for vision care. In exchange, they agree to ensure the child is financially eligible, assist the family with completing the application, and assure the family keeps the appointment. www.nasn.org.

- *Informal Community Resources*
  In addition to these resources, local school health advisory councils often identify informal resources within the community by communicating the need for financial assistance for vision care. School nurses play an important role in collecting the data to identify the needs and advocating for the development of resources.

APPENDIX A: Screening Vision in Infants and Toddlers

A. Health and developmental history related to vision

When assessing infants and toddlers, a thorough health and developmental history especially related to vision is important. Some indicators for potential vision problems are prematurity, family history of "lazy eye" or other visual problems. Infection and high fever may also lead to vision difficulties.

1. Normal visual development

Visual function develops in an orderly sequence as follows:

Neonate	Alert with widening of palpebral fissures to visual stimulation by an object or face presented 20 to 30 cm (6-12 inches) from the eyes. Makes momentary eye contact with an adult. Follows a visual stimulus in a horizontal arc 30 degrees on either side of the mid line. Turns head toward a diffused source of light. Blinks at a flashlight shone in the eyes.
1 month	Follows a visual stimulus in a horizontal arc 60 degrees on either side of the mid line. Follows a visual stimulus vertically 30 degrees above and below the horizontal meridian. Shows "looming" response – blinks at approaching object.
2 months	Tracks horizontally across midline. Follows a moving person 13 cm (7 inches) away. Makes prolonged eye contact with adult. Smiles in response to a smiling face.
3 months	Eyes and head follow smoothly through 180 degree arc. Regards own hands. Looks at objects placed in hand; initiation of visual-motor coordination.

4 to 5 months	Shows spontaneous social smile in response to familiar adult. Reaches on sight for a 2.5 cm (1 inch) cube presented 30.5 cm (12 inches) from the infant. Notices a raisin presented 30.5 cm (12 inches) from the infant.
5 to 6 months	Smiles at mirror image.
7 to 8 months	Picks up a raisin by raking.
8 to 9 months	Pays visual attention to details of objects, e.g., facial features of dolls, or pokes at holes in pegboard.
9 months	Shows neat pincer grasp.
12-14 months	Gains skills in perceptual motor items such as stacking blocks, using form board or placing a peg in a round hole.

2. Signs of potential vision problems

The following list of alerting signs and blindisms is a useful guide to identify infants in need of a referral to an eye specialist.*

a. Alerting signs suggesting referral to an eye specialist:

1. Failure to pass screening items, such as those listed in “Visual Development”, other developmental items at a similar level are passed
2. Appearance of any strabismus (cross-eyed) after 2 months of age
3. Wandering uncoordinated eye movements
4. Nystagmus (dancing or jerky eyes)
5. Holding items too close (within 6 inches) for visual inspection
6. Cocking head habitually to look at items
7. Turns head, then eyes, to look at people or object
8. Disregard of objects presented in peripheral field

b. Blindisms (self-stimulating behaviors frequently observed in visually impaired children)

1. Prolonged handwatching past developmental age of 5 months (shadowing)
2. Staring at lights in preference to people or objects
3. Poking at eyes
4. Rubbing eyes
5. Flicking finger (stimulus presented peripherally)
6. Rocking
7. Spinning
8. Banging head
9. Smelling, sniffing, "rooting"
10. Prolonged mouthing of objects

After the infancy period, obtain an initial history, or update previous history, including questions about illness, injury, and signs and symptoms of visual problems.

** "Program Planning for the Visually Impaired Child," by Carol M. Donovan*

Knowledge of the sequence of normal visual development will alert the screener to "red flags" in history taking.

B. Gross assessment of vision

In infancy, the screening of vision is usually based on visual fixation and following responses. These are screened by moving an object of visual interest in front of the child and watching to see whether the child's eyes turn toward the object and follow its movement back and forth in the visual field. The object of visual interest can be a face, a flashlight or a brightly colored toy.

Although adding sound to the screening might theoretically compromise its purity as a visual stimulus, in practice, a light that rattles or a toy that squeaks is often more effective in gaining an infant's visual attention. The size of the object and its distance from the face are not critical, since one is not trying to measure quantitative visual acuity.

Full-term, normal infants under ideal circumstances can fix and follow objects at birth, but such responses become more obvious to parents at 6 weeks to 2 months of age. If visual fixation and following are not present by 4 months of age, further eye examination is certainly indicated.

There are a number of screenings that advocate the use of small objects such as cars, animals, etc., but none are standardized screenings. Observing an infant's or child's notice of such an object can indicate gross visual acuity. Screenings such as the Denver II incorporate gross vision in the screening where an infant is observed noticing and attempting to pick up a raisin.

The following pages contain specific guidelines for functional assessment of vision in infants and toddlers. Gross vision in children with severe development delays may be assessed using these same techniques.

Red reflex

Ages: Birth to 3 years

Purpose: To observe for the red reflex in both eyes

Description: The demonstration of the red reflex indicates no interruption of the light pathways

Facilities: Normal or lowered light level in the room

Equipment: Penlight, flashlight or ophthalmoscope

Procedure: Move the light beam across the pupil. Observe from a distance of approximately 10 inches. An orange or red glow should reflect from the fundus through the pupil.

Pass: If both pupils reflect the orange or red glow, it is considered normal.

Fail: If a partial white or asymmetrical reflex is observed, the child should be referred. A partial red or black reflex may be abnormal or due to misalignment of the light.

Several conditions may prevent the red reflex, i.e., cataracts, tumors, retinal abnormalities, opacity of the cornea, retrolental fibroplasia, retinoblastoma, or chorioretinitis.

Note: A white pupil warrants immediate referral!

Blink reflex

Ages: Birth to 1 year

Purpose: This screening is to determine if the infant or child has visual function and responds to the movement of a hand toward their face

Description: With the blink reflex, blinking occurs automatically when a hand or any object moves toward the face

Procedure: Problems to avoid: Do not create a wind by moving the hand too quickly as the child may blink in response to the wind rather than the visual stimulus.

Pass: The child blinks in response to the hand.

Fail: Child does not blink in response to hand.

Refer for evaluation.

Pupillary response

Ages: Birth to 3 years

Purpose: To screen to the degree to which the pupils respond to light

Description: A pupillary response occurs when the pupil of the eye changes shape or size when the light is presented

Facilities: Normal or lowered light in room

Equipment: Bright penlight or flashlight

Procedure: Observe the condition of the pupil without stimulation. Remove glasses if the child is wearing them (for screener's benefit). Direct a penlight into the child's eyes from approximately 12-16 inches away and notice whether the pupils constrict or remain unaffected.

If no response, use a brighter light source (flashlight) or turn off room lights to provide greater contrast.

Pass: Both pupils should react by constricting when light is presented and dilating when light is removed.

Fail: If one/both pupils do not respond as expected, or if one pupil is slower to respond than the other on two occasions.

If repeat screening is consistent, refer child for evaluation.

Tracking

Ages: 4 months to 3 years (Informal assessment can be done as early as 4 months of age when the child should be developmentally able to fixate and follow an object. By 12 months of age, child should be able to follow an object with both eyes horizontally and vertically, without moving or turning head.)

Purpose: To determine if an infant's or child's eye muscles are working together

Description: Tracking is evidenced when a child follows a moving light or object with his or her eyes or head

Equipment: Penlight, flashlight or brightly colored object

Procedure: Hold light or object 14-16 inches from eye. Move the light or object horizontally 18 inches to the left from the center, then 18 inches to the right from the center. If the child does not follow at 14-16 inches, move closer. Screener may lightly hold child's head in place while screening.

Move light vertically, about 18 inches above, then 18 inches below eye level.

Move light in a circle, at least 2 feet in diameter.

With each screening, observe for full, smooth eye movements.

Pass: Child follows light with eyes completely to right and left, and above and below.

Fail: If a cooperative child does not visually follow an object in all directions with smooth eye movements, referral should be made for evaluation.

Corneal light reflex (Hirschberg)

Ages: 6 months to 3 years

Purpose: To detect constant eye deviations

Description: By noting the similarity or dissimilarity in position of light being reflected in the pupils, the observer is able to detect a constant eye deviation of a lesser degree than possible in the observation screening. This screening is easily done while checking for pupillary reaction.

Facilities: Normal or lowered light level in room – minimum number of light sources (windows, overhead lights, etc.)

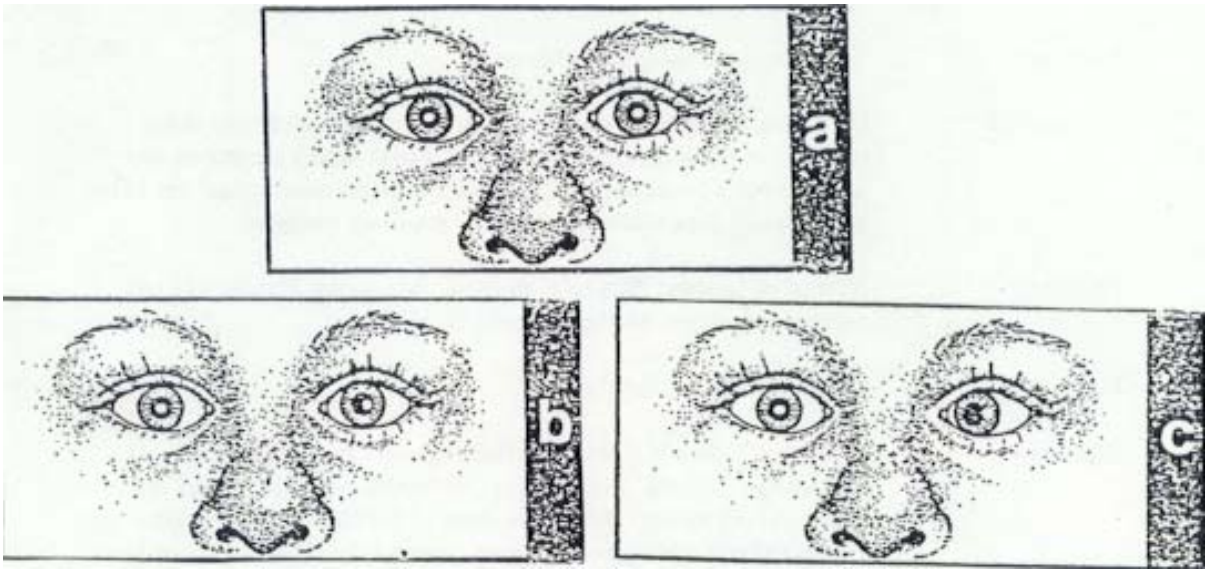
Equipment: Bright penlight or flashlight

Procedure: Screen with glasses if child has them (glasses may already be correcting problem). Position the child so the penlight is held at arm's length (12-16 inches), directly in front of the child's eyes, and the light is directed at the bridge of the nose. Instruct the child to look toward the light. The screener observes the pupils for the position of the light reflex in each eye.

Pass: The reflection of the penlight appears to be in a similar position in the pupil of each eye (see illustration).

Fail: The reflection of the penlight does not appear to be in a similar position in the pupil of each eye (see illustration).

If a repeat screening is consistent, the child should be referred for evaluation. Even a slight difference may indicate the presence of strabismus (cross-eyed).



The position of the light on the cornea or pupil may be used to detect strabismus.

a. Since light reflexes are symmetrical in both eyes, no strabismus is present.

b. An esotropia exists in the left eye since it is turned inward. The light reflex is on the outer half of the right pupil.

c. An exaggeration of the degree of esotropia in the left eye is shown by the farther position of the light reflex.

This screening is useful in detecting pseudostrabismus where epicanthal folds may give a child the appearance of crossed eyes.

APPENDIX B: Screening Students for Dual Sensory Loss

Children who are born deaf or who have a profound hearing loss should be screened for the possibility of a genetic disorder, Usher Syndrome. This condition is of very low incidence, but a young person with Usher Syndrome develops retinitis pigmentosa (RP), usually in adolescence. RP is a condition that results in progressive loss of vision and ultimately, total blindness. It is important to identify these students as soon as possible in order to prepare them for the future.

Deaf students may function well using sign language or lip reading, but when they lose their vision, they must have other means of communication. Students identified with Usher Syndrome are often referred to special centers where they learn communication skills and mobility before they totally become blind.

The first screening is done by completing a screening check list on any student who has a history of congenital deafness or has a significant hearing loss. This will rule out more than 99 percent of the students who should be screened further for vestibular dysfunction, or balance, dark adaptation and loss of peripheral vision (see page 25).

Screening for balance

Screening for balance is easy to do. Ask the student to stand with feet together, arms outstretched to the side, and then close their eyes. In this position, younger students may have problems maintaining balance, but older students may only wobble a little.

Next, ask the student to stand with the heel of one foot immediately in front of the other foot, with arms outstretched. They may have some problem with their eyes open, but when asked to close their eyes, they will fall over immediately. It is important to support the sides of their torso until they get their balance, and be ready to catch them if they fall.

If the student fails the balance screening, parents should be contacted to get further history and to ask questions about their observations of the student's balance and vision. Look particularly for signs of night blindness. The student may have excellent central visual acuity in well-lighted conditions but have difficulty in dim light, twilight or at night.

Screening for dark adaptation

Put some red, white and blue objects (poker chips work well) in a jumbled heap on a dark table or carpet. Ask several students to participate. Turn out the lights, leaving just a tiny amount of light in the room. Ask the students to pick up a white object and note how long it takes each one to do it. Next, ask one student to sort the red and blue objects. After the first one completes the task, mix them up again and ask the next student to sort them. Use yourself as a comparison, but be aware that older people may have a longer adaptation time.

Some students with RP may not show any clinical signs of vision loss at night or during the day until mid-adolescence, so night vision should be checked periodically.

Screening visual fields

In students over age 8, screen for visual fields. In the early stages of cone dysfunction (a result of retinitis pigmentosa), students can see well at the extreme periphery but then lose sight of the object closer-in while maintaining normal vision centrally. Face the student, asking him to keep looking at your nose. Hold your hands out at 3 and 9 o'clock, then at 6 and 12 o'clock and in between these two positions. Keep your arms completely still and wiggle just the fingers on one or the other hand, varying the side in an unpredictable pattern. Ask the student to point to the one which is wiggling. If the student is unable to see the wiggling fingers, he may be losing peripheral vision.

Referral

Students who meet the referral criteria should be referred to a pediatric ophthalmologist or retinal specialist. The provider should be given any history that indicates the possibility of Usher Syndrome, results of observations, balance screening, dark adaptation and visual fields.

If a student is identified as having Usher Syndrome, please call the Missouri Deafblind Project (see page 23 for a description of services).

When hearing loss and Retinitis Pigmentosa happen together:

What is Usher Syndrome?

Usher Syndrome is a genetic disorder involving the loss of both sight and hearing. Hearing loss occurs at birth or shortly thereafter. A progressive loss of vision due to retinitis pigmentosa (degeneration of the eye's retinas) begins later in life, but usually before adolescence. There is no way of knowing the time of onset or rapidity of vision loss, but in almost all cases the result is legal blindness.

A person with Usher Syndrome has inherited the Usher gene from both parents. Usher Syndrome is an autosomal recessive gene, and both parents must pass the gene to their child in order for the child to have the condition. When both parents have the gene, the chances each child will have Usher Syndrome is one in four. While only approximately three per 100,000 people will have Usher Syndrome, it is estimated that 3 percent to 6 percent of people who are congenitally deaf have the condition.

Usher Syndrome accounts for over 50 percent of all cases of deaf-blindness, with approximately 10,000 known cases in the United States. In the general population, anywhere from 1 in 100 to 1 in 300 carry the Usher gene.

The two major types of Usher Syndrome are Type I and Type II. The most common is Type I (almost 90 percent of all Usher Syndrome cases) and is deafness with retinitis pigmentosa (RP) symptoms before adolescence. In Type II (almost 10 percent of cases), moderate to severe congenital hearing loss is paired with RP symptoms after adolescence.

Why is it important to diagnose Usher Syndrome as soon as possible?

Identifying Usher Syndrome as early as possible is important because:

- The gradual decrease in vision may go unnoticed by an individual who may continue activities, e.g., driving or working in hazardous conditions that cannot be safely done anymore.
- The individual, parents and teachers can plan for educational and vocational experiences and guidance that take into account the eventual visual difficulties. Resources are available for experiences such as mobility training, use of Braille and tactual communication.
- A diagnosis of Usher Syndrome in an older child allows parents to consider genetic counseling. People who have Usher Syndrome may also want to consider genetic counseling.

How is an individual identified as having Usher Syndrome?

Several screenings are used to determine whether a person has retinitis pigmentosa, and that is how a person who has a hearing loss is identified as having Usher Syndrome. These screenings include a visual field screening to assess peripheral vision and screening to evaluate color vision and dark adaptation. However, the definitive screening of retinitis pigmentosa is electroretinography (ERG), which has been found to be 95 percent accurate. ERG is the measurement of the electricity given off by nerve impulses in the retina. This painless screening is done by having the patient wear special contact lenses while looking at flashing lights.

Provided by the Missouri Department Deafblind Project in cooperation with the Missouri School for the Blind and the Missouri School for the Deaf.

Missouri Deafblind Project

Purpose

The purpose of the Missouri Deafblind Project is to develop partnerships, coordinate service networking and provide systematic training. Technical assistance, training and resources are available for the students identified as deaf and blind on the Missouri Deafblind Census, their families and service providers. Leadership and support is provided by the Missouri School for the Blind Outreach Team. Services are coordinated with local education agencies, adult service providers and deafblind task forces to enhance networking and build expertise in the community.

Services

- On-site technical assistance and consultation from the outreach team
- Inservice training on specific content areas
- Active state and local deafblind task forces
- Transition assistance including personal futures planning
- Missouri Deafblind Census
- Parent training including a home program for children, birth through five years

- Family workshops including Family Learning Vacation and Families Together, Inc.
- Early childhood training, such as VIISA and INSITE workshops
- Deafblind coursework, such as Hand-in-Hand
- Mentor program
- Usher screening resources
- Loan library of resources on effective practices
- Deafblind newsletter

All services are free. For additional information regarding the Missouri Deafblind Project contact:

Director, Outreach Services
Missouri School for the Blind
3815 Magnolia Avenue
St. Louis, MO 63110
314-776-4320, ext. 250

USHER Screening Check List

Name_____Birthdate_____Date_____

GENERAL QUESTIONS	Yes (stop)	No (go on)	?
1. Are multiple organ systems affected?			
2. Does a family history of deafness exist, with multiple generations affected?			
3. Is the individual mentally retarded?			
HEARING QUESTIONS	**Yes**	**No**	**?**
4a. Is the individual hard of hearing?	screen	go on	
4b. Is the individual prelingually deaf?	screening	stop	
5. Is the audiogram *atypical* of Usher Syndrome?			
BALANCE QUESTIONS	**Yes**	**No**	**?**
6. Is screening balance abnormal in deaf individual?	screen	stop	
7. Was individual late to walk (>15 months)?			
8. Is Individual considered clumsy?			
9. Does individual lose balance easily in dark?			
VISION QUESTIONS	**Yes**	**No**	**?**
10. Is there a history of nightblindness?	refer	go on	
11. Abnormal dark adaptation screening?	refer	go on	
12. Abnormal confrontational visual fields?	refer	go on	
13. Other concerns about vision?	refer	recheck*	

* Recheck later means to gather more history, enlisting parents and teachers to complete expanded questionnaires, do more observations and/or repeat the screening next year. If the "?" column is checked, the screening should be repeated mid-year. It is better to err on the side of overreferral than underreferral.

APPENDIX C: Sample Forms

REPORT TO PARENTS

Your child, _____, has participated in the Vision Screening Program in our school on _____, of this year. At this time he/she has no apparent visual problems. As your child grows and develops, this ability to see may change.

Please contact us if you have questions about your child's vision.

School Administrator

REPORT TO PARENTS

Your child, _____, has participated in the Vision Screening Program in our school on _____, of this year. At this time he/she has no apparent visual problems. As your child grows and develops, this ability to see may change.

Please contact us if you have questions about your child's vision.

School Administrator

ABC CHECKLIST FOR VISION

NAME_____GRADE_____ DATE_____

SCHOOL_____ TEACHER_____

OBSERVATION AND HISTORY

Please check appropriate items and return to the school nurse for review and determination of action to be taken.

APPEARANCE: Do eyes look normal?

_____ Eyes turn in or out

_____ Crusty or red eyelids

_____ Different sizes - pupils or eyes

_____ Swelling of eyelids

_____ Conjunctivitis (pink eye)

_____ Drooping lids

_____Other _____

BEHAVIOR: Teacher or parent observation

_____ Tilts head, covers or closes one eye for critical seeing

_____ Difficulty in keeping place while reading - a “finger” reader

_____ Disinterested in activities involving critical seeing

_____ Excessive stumbling, awkwardness or daydreaming

_____ Holds printed materials in unusual position

_____ Other_____

COMPLAINTS: Student’s statements

_____ Eyes hurt or blur while reading

_____ Headaches when reading

_____ Words move or jump about when reading

_____ Double vision

_____ Eye problems following blow to head

_____ Can’t see the chalkboard

_____ Other _____

Signs or symptoms of eye problems

School personnel should be provided with a list of symptoms and student complaints that might indicate a vision problem, as a basis for referral for screening.

A. Appearance of eyes

- One eye turns in or out at any time
- Reddened eyes or lids
- Eyes tear excessively
- Encrusted eyelids
- Frequent styes or swollen lids
- Drooping lids

B. Behavioral signs of vision problems

1. Eye movement abilities (ocular motility)

- Head turns as student reads across page
- Loses place often during reading
- Needs finger or marker to keep place
- Displays short attention span in reading or copying
- Too frequently omits words
- Repeatedly omits small words
- Writes up or down hill on paper
- Rereads or skips lines unknowingly
- Orients drawings poorly on page

2. Eye-teaming abilities (binocularity/stereoscopic vision)

- Complains of seeing double (diplopia)
- Repeats letters within words
- Omits letters, numbers or phrases
- Misaligns digits in number columns
- Squints, closes or covers one eye

- Tilts head extremely while working at desk
- Consistently shows gross postural deviations at desk activities

3. Eye-hand coordination abilities
    - Must feel things to assist in any interpretation required
    - Eyes not used to “steer” hand movements (extreme lack of orientation, placement of words or drawings on page)
    - Writes crookedly, poorly spaced; cannot stay on ruled lines
    - Misaligns both horizontal and vertical series of numbers
    - Uses hands or fingers to keep place on page
    - Uses other hand or fingers to keep place on page
    - Uses other hand as “spacer” to control spacing and alignment on page
    - Repeatedly confuses left-right directions
4. Visual form perception (visual comparison, visual imagery, visualization)
    - Mistakes words with same or similar beginnings
    - Fails to recognize same word in next sentence
    - Reverses letters and/or words in writing and copying
    - Confuses same word in same sentence
    - Repeatedly confuses similar beginnings and endings of word
    - Fails to visualize what is read either silently or orally
    - Whispers to self for reinforcement while reading silently
5. Refractive status (nearsightedness, farsightedness, focus problems, etc.).
    - Comprehension reduces as reading continues; loses interest too quickly
    - Mispronounces similar words as reading continues
    - Blinks excessively at desk tasks and/or reading, not elsewhere
    - Holds book too closely; face too close to desk surface
    - Avoids all possible near-centered tasks
    - Complains of discomfort in tasks that demand visual interpretation

- Closes or covers one eye when reading or doing desk work
- Makes errors in copying from chalkboard to paper on desk
- Makes errors in copying from reference book to notebook
- Squints to see chalkboard or requests to move nearer
- Rubs eyes during or after short periods of visual activity
- Fatigues easily; blinks to make chalkboard clear up after desk tasks

This list was excerpted from "Learning Related Visual Problems," ERIC Clearinghouse on Handicapped and Gifted Children, 1920 Association Drive, Reston, VA.

If a student exhibits any of the above symptoms over a period of time, refer the student even if all other vision screening procedures are normal.

Referral Tracking System

Vision Screening					Results of Professional Exam				Comments
Student	Grade/Room	Rescreen Date	Results	Referral Date	Normal Exam	Observe/ Recheck	Re-eval Date	Positive Findings	Comments

MISSOURI DEPARTMENT OF SOCIAL SERVICES

VISION EXAM ANNUAL REPORT **(K OR 1st GRADES)**

SCHOOL AND PREPARER INFORMATION

DISTRICT:

DISTRICT CODE:

FORM COMPLETED BY:

DATE SUBMITTED:

PREPARER CONTACT INFORMATION:

	School Year:_____						Results of Professional Exam		
Grade	**Number of Students Starting School for the first time**	**Number of Students with Identified vision problem prior to enrollment**	**Number of Students with Comprehensive Vision Exam**	**Number of Students with an exam that does not meet the criteria for a Comprehensive Vision Exam**	**Number of Students with Parent Objection to vision exam via Opt-out Form**	**Number of Students with No Response from Parent(s) to vision exam request**	**Number of Students with Normal (No Abnormality) Comprehensive Vision Exam**	**Number of Students with Positive Findings**	**Number of Students with Positive Findings and No Resources for Correction or Treatment**
K									
1st									
Total									

Comments:

DISTRIBUTION: Provider to go to http://wicapp.dhss.mo.gov/pls/apex/f?p=144:1 RETAIN COPY IN SCHOOL FILE

MISSOURI DEPARTMENT OF SOCIAL SERVICES

VISION SCREENING ANNUAL REPORT **(1st AND 3rd GRADES)**

SCHOOL AND PREPARER INFORMATION

DISTRICT:

DISTRICT CODE:

FORM COMPLETED BY:

DATE SUBMITTED:

PREPARER CONTACT INFORMATION:

	1st Screening Information		Rescreen Information		Referral Information		Comprehensive Exam Results		Payment Information	
Grade	**Number of Students Screened**	**Number Passing Screening**	**Number of Students Rescreened**	**Number Passing Screening**	**No Referral at This Time**	**Referred for Comprehensive Exam**	**Normal (No Abnormality)**	**Positive Findings**	**BEST Fund Voucher**	**Insurance / Other**
1st										
3rd										
Total										

Comments:

DISTRIBUTION: Provider to go to http://wicapp.dhss.mo.go/pls/ape/f?p=144:1 RETAIN COPY IN SCHOOL FILE

SCHOOL VISION REFERRAL

CHILD'S NAME _____ GRADE _____

SCHOOL _____ TEACHER _____

Dear Parent:

Your child's eyes were screened by the school nurse as one of the health services provided by this school. The results of the screening test indicate the need for a more complete eye examination. The nurse's findings are attached to this letter.

Since poor vision can affect learning, it is important to complete this referral. **Please complete ONE of the options below:**

Option A: I will take my child for an exam. Take the attached form with you when you take your child for the examination. Return this letter, the attached form, and the eye exam results to me at the school.

Option B: My child is already receiving eye care. If your child is already receiving eye care from a doctor, please let me know the date your child was last seen.

Option C: I/We disagree with the need and do not wish my/our child to have an eye exam. If you wish to not have your child examined by an eye doctor, please make a note of that on this form and return the form to me at the school.

If finances are a concern and you do NOT have insurance, or need help in getting the eye exam, please call me at _____. Financial assistance may be available through various agencies.

THANKS FOR KEEPING YOUR CHILD HEALTHY

Parent(s) Signature _____ Date _____

SAMPLE

Dear Parent/Guardian:

This voucher is issued by the Department of Social Services (DSS) and will provide for payment of an eye exam. The voucher may be given to any eye doctor, as long as he/she agree to:

- Accept the current MO HealthNet reimbursement rate (the doctor will know the rate)
- Invoice the school for the exam

Be sure to contact the doctor about both of these items BEFORE making an appointment.
After the exam, please return to the school the:

- Voucher (doctor has to fill out part of the voucher)
- A copy of the exam results
- The invoice from the doctor

The school will submit the voucher to DSS for payment; DSS will send payment to the school; and the school will provide the payment to the doctor.

This voucher does not provide for treatment (glasses). It only pays for the exam. Contact _____ to discuss any community assistance that may be available for treatment.

MISSOURI DEPARTMENT OF SOCIAL SERVICES

MISSOURI EYE EXAMINATION FORM FOR SCHOOL

IDENTIFYING INFORMATION	PATIENT/PROVIDER IDENTIFIER
STUDENT NAME	PROVIDER LAST NAME (First Four Digits)
DATE OF BIRTH OF STUDENT	SSN (Last four digits of student)
PARENT / GUARDIAN NAME	

CASE HISTORY

DATE OF EXAM

OCULAR HISTORY:	Normal ☐ or Positive for:
MEDICAL HISTORY:	Normal ☐ or Positive for:
DRUG ALLERGIES:	NKDA ☐ or Allergic to:
FAMILY OCULAR and MEDICAL HISTORY:	☐ Amblyopia ☐ Strabismus ☐ Glaucoma ☐ Diabetes Other:

OTHER PERTINENT INFORMATION

EXAM

	NORMAL	ABNORMAL	Not Able to Assess
AMBLYOPIA	☐	☐	☐
STRABISMUS	☐	☐	☐
INTERNAL EYE HEALTH	☐	☐	☐
EXTERNAL EYE HEALTH	☐	☐	☐
VISUAL ACUITY	☐	☐	☐
BINOCULAR VISION	☐	☐	☐

	OD	OS
Distance Unaided Acuity (20 ft)	20 /	20 /
Distance Best Corrected Acuity (20 ft)	20 /	20 /
Near Unaided Acuity (14 in)	20 / (eq)	20 / (eq)
Near Best Corrected Acuity (14 in)	20 / (eq)	20 / (eq)

REFRACTION

OD					
OS					

DIAGNOSIS

☐ Normal ☐ Myopia ☐ Hyperopia ☐ Astigmatism ☐ Strabismus ☐ Amblyopia

OTHER:

TREATMENT RECOMMENDATIONS

1	Glasses Prescribed ☐ Yes ☐ No
2	
3	

Spectacles to be worn for:

☐ Constant Wear ☐ Distance Vision Only ☐ Near Vision Only ☐ May be removed for recess/PE

PAYER

☐ Insurance ☐ MO HealthNet ☐ Complimentary ☐ Other form of payment		**TOTAL COST:**
EXAMINER NAME	☐ **OD** ☐ **MD/DO**	DATE

DISTRIBUTION: Provider to go to http://wicapp.dhss.mo.gov/pls/apex/f?p=144:1 and submit electronically. Copy to School

School Principal

Date

Dear Parent / Guardian:

This letter is to inform you of a new law starting with the 2008-2009 school year. This law is about eye exams for children starting public school for the first time. This law is important because there are many eye skills students need to have to do well in school. It is thought about 80% of all learning is done by seeing for children ages 12 and younger.

The new law says a child starting public schools in kindergarten or first grade for the first time needs to have an eye exam by January 1. A state licensed eye doctor or physician must do the exam. The doctor will send the results of the examination to the Department of Health and Senior Services. A copy of the results will be given to you to provide to the school.

If you don't want your child to have an eye exam, you must send a letter to the school by January 1 saying your child will not be getting an eye exam. A child will not be kept out of school for not getting an eye exam.

More information about the Children's Vision Law can be found on the Department of Social Services website (http://www.dss.mo.gov/fsd/rsb/childrensvision/index.htm). If you have any questions, please feel free to call your school nurse at _____.

ABC PUBLIC SCHOOLS

HIPAA-Compliant Authorization for Exchange of Health & Education Information

Patient/Student Name: _____ **Date of Birth**: _____

I hereby authorize _____ [*insert health care provider name & title*]

and _____ [*insert name & title of school official*] to exchange

health and education information/records for the purpose listed below.

_____ [*insert address & telephone of school/school district*]

_____ [*insert address and telephone of health care provider*]

Description:
The health information to be disclosed consists of:

The education information to be disclosed consists of:

Purpose: This information will be used for the following purpose(s):

1. Educational evaluation and program planning
2. Health assessment and planning for health care services and treatment in school.
3. Medical evaluation and treatment
4. Other:_____

Authorization

This authorization is valid for one calendar year. It will expire on _____[*insert date*]. I understand that I may revoke this authorization at any time by submitting written notice of the withdrawal of my consent. I recognize that health records, once received by the school district, may not be protected by the HIPAA Privacy Rule, but will become education records protected by the Family Educational Rights and Privacy Act. I also understand that if I refuse to sign, such refusal will not interfere with my child's ability to obtain health care.

_____

Parent Signature Date

_____

Student Signature* Date

*If a minor student is authorized to consent to health care without parental consent under federal or state law, only the student shall sign this authorization form. In Connecticut, a competent minor, depending on age, can consent to outpatient mental health care, alcohol and drug abuse treatment, testing for HIV/AIDS, and reproductive health care services.

Copies: Parent or student*
Physician or other health care provider releasing the protected health information
School official requesting/receiving the protected health information

PSA - Rev. 4/15/03

By CT State Department of Education, Nadine Schwab, & CT Chapter, American Academy of Pediatrics; adapted format from Ohio.

MISSOURI DEPARTMENT OF SOCIAL SERVICES

SCHOOL FUNCTIONAL VISION ASSESSMENT FORM

IDENTIFYING INFORMATION		REASON FOR ASSESSMENT
STUDENT NAME		☐ TEACHER REFERRAL ☐ ROUTINE SCREENING
GRADE		TODAYS DATE
SCHOOL YEAR	REASON FOR FUNCTIONAL SCREENING	

OBSERVATIONS		
PUPILLARY REACTION	☐ YES	☐ NO
FIXATES ON 4" OBJECT AT 12-18 INCHES	☐ YES	☐ NO
FIXATES ON 4" OBJECT AT 10 FEET	☐ YES	☐ NO
CONVERGES	☐ YES	☐ NO
SHIFTS GAZE	☐ YES	☐ NO
REACHES ON VISUAL CUE	☐ YES	☐ NO
TRACKS LIGHT HORIZONTALLY	☐ YES	☐ NO
TRACKS LIGHT VERTICALLY	☐ YES	☐ NO
TRACKS OBJECT HORIZONTALLY	☐ YES	☐ NO
TRACKS OBJECT VERTICALLY	☐ YES	☐ NO
PERIPHERAL AWARENESS		
RIGHT EYE	☐ YES	☐ NO
LEFT EYE	☐ YES	☐ NO

COMMENTS:

PICKS UP OR TRACKS OBJECT LESS THAN 1" IN SIZE (LIST RESULTS BELOW):			
OBJECT	☐ YES	☐ NO	
EYE PREFERENCE	☐ RIGHT	☐ LEFT	☐ NONE

PASS ☐ **REFER** ☐ **DATE OF REFERRAL** **DATE EYE EXAM REPORT RECEIVED**

DISTRIBUTION: SCHOOL TO RETAIN IN FILE

MISSOURI DEPARTMENT OF SOCIAL SERVICES

SCHOOL VISION SCREENING FORM

IDENTIFYING INFORMATION	REASON FOR SCREENING
STUDENT NAME	☐ TEACHER REFERRAL ☐ ROUTINE SCREENING
GRADE	TODAYS DATE
SCHOOL YEAR	

OBSERVATIONS

APPEARANCE	BEHAVIOR	COMPLAINTS
☐ RED EYES	☐ BLINKING	☐ CAN'T SEE BLACKBOARD
☐ GRANULATED LIDS	☐ WATERING EYES	☐ PRINT BLURS
☐ STYES	☐ SENSITIVE TO LIGHT	☐ DOUBLE VISION
☐ DISCHARGE	☐ RUB EYES	☐ HEADACHE
☐ SWELLING ABOUT EYES	☐ EXCESSIVE FROWNING	☐ NAUSEA
☐ HEAD TILT	☐ IRRITABILITY WHEN USING EYES	☐ DIZZINESS
☐ DROOPY LIDS	☐ SQUINTS OR SQUEEZES LIDS	☐ OTHER
☐ EYES OUT OF LINE	☐ HOLDS BOOK VERY CLOSE	
☐ STUMBLES/TRIPS OVER SMALL OBJECTS	☐ OTHER	

SCREENING DATE _____

☐ WEARING GLASSES ☐ GLASSES BROKEN/LOST ☐ GLASSES AT HOME ☐ DOES NOT WEAR GLASSES

DISTANCE ACUITY	RIGHT 20 / LEFT 20 /	CHART USED
NEAR ACUITY	RIGHT 20 / LEFT 20 /	CHART USED
BINOCULARITY	TYPE OF TEST	☐ PASS ☐ FAIL

RE-SCREENING DATE _____

☐ WEARING GLASSES ☐ GLASSES BROKEN/LOST ☐ GLASSES AT HOME ☐ DOES NOT WEAR GLASSES

DISTANCE ACUITY	RIGHT 20 / LEFT 20 /	CHART USED
NEAR ACUITY	RIGHT 20 / LEFT 20 /	CHART USED
BINOCULARITY	TYPE OF TEST	☐ PASS ☐ FAIL

PASS ☐ **REFER** ☐ **DATE OF REFERRAL** **DATE EYE EXAM REPORT RECEIVED**

If unable to complete vision screening, please conduct a functional vision assessment.

DISTRIBUTION: SCHOOL TO RETAIN IN FILE

APPENDIX D: Resources

Numerous companies market vision screening equipment. Possible sources for charts, card screeners and vision screening equipment include:

- Wilson Ophthalmalic Corporation 1-800-222-2020
- Bernell (sole source for Broken Wheel/Landolt C) 1-800-348-2225
- Lighthouse Products 1-800-453-4923
- Good-Lite Company 1-800-562-5200 www.good-lite.com
- School Health 1-800-323-1305 www.schoolhealth.com
- MacGill School Health 1-800-323-2841 www.macgill.com
- Stereo Optical Company 1-800-344-9500
- School Nurse Supply www.schoolnursesupplyinc.com
- Moore Medical www.mooremedical.com
- School Kids Healthcare www.schoolkidshealthcare.com

Additional informational Web sites:

- Professional information regarding screening programs:
  - http://www.aea11.k12.ia.us/nurseweb/vision.htm
- Information for parents and students:
  - www.kidshealth.org (Click on "Body," then "eyes.")
  - www.children-special-needs.org
- At risk students:
  - www.sightsavers.org (low vision students)
  - www.kidsource.com/NICHCY/visual.html
  - www.specialchildren.about.com/cs/visual
  - www.comeunity.com/disability/vision

Primary vision information Web sites:

- Healthy People 2010 Vision Objectives, www.healthypeople.gov

Links to national organizations concerned with the eye and vision:

- National Eye Institute, www.nei.nih.gov/

  Information about eye conditions, research results and vision education resources. Free materials are available upon request.

- Prevent Blindness America, www.preventblindness.org

  Formerly the National Society for the Prevention of Blindness. Provided community vision education, certified vision screening training, service programs, and national and state research.

Web sites for general vision information:

- American Optometric Association, www.aoa.org

  Public vision education and availability of eye care.

- American Academy of Pediatrics, www.aap.org/healthtopics/visionhearing.cfm

  Position statements for professionals and guidelines for child vision care.

- Center for Health and Health Care in Schools, http://www.healthinschools.org/

  Operated by The George Washington University, School of Public Health and Health Services, Graduate School of Education and Human Development, Washington, D.C. Information on child health issues for school health professionals.

- Center for Medicare and Medicaid Services, www.cms.hhs.gov/medicaid/eligibility

  Information about Medicaid eligibility and current Federal Poverty Guidelines.

- Children's Health Matters, www.childrenshealthmatters.org/

  Web site to assist with access to Medicaid and the State Children's Health Insurance Program (SCHIP).

- Eye Resources on the Internet, http://webeye.ophth.uiowa.edu/dept/websites/eyeres.htm

  Listing of resources compiled by the Association of Vision Science Librarians.29 Proctor, S.E. (2005). Ibid. p. 217.

- The Foundation of the American Academy of Ophthalmology, www.aao.org

  Resources for vision education, eye care and community outreach.

- Nemours Foundation: Your Child's Vision (in Kid's Health for Parents), http://kidshealth.org/parent/general/eyes/vision.html

  A newsletter for parents alerting them to signs and symptoms of potential vision problems in their child.

- Vision Connection, http://www.lighthouse.org/medical/childrens-vision/

  Information about educational, governmental or rehabilitative vision resources worldwide, with the capability of searching for local resources.

- Vision Education Agency (VEA) Newsletter, www.pvi.org.nz

  A periodic publication of the Vision Education Agency about vision education.

Resources for children with visual impairments:

- American Foundation for the Blind, www.afb.org/
- Children's Disability Information; Vision Impairment, Resources, www.childrensdisabilities.info/vision/resources.html
- Community Services for the Blind and Partially Sighted, www.csbps.com/
- EnVision (publication), www.lighthouse.org/about/education/newsletters.htm
- Health Education Database, http://www.seattlechildrens.org/safety-wellness/
- Visual Efficiency Skills Curricula Resources, www.tsbvi.edu/bib/visual.htm
- Vision Impairment and Blindness (National Library of Medicine and NIH), www.nlm.nih.gov/medlineplus/visionimpairmentandblindness.html

APPENDIX E: Glossary

Amblyopia – An ocular condition in an otherwise healthy eye, in which there is an abnormality of corticol response in the occipital lobe of the brain due to insufficient or inadequate stimulation of the fovea, neural pathway and cortex that may result in unilateral vision loss if untreated. Also known as lazy eye or weakness of sight.

Astigmatism – A refractive error of the eye in which, with accommodation suspended, the refracting power of the eye is not uniform in all directions such as that incoming rays of light in a single eye do not come together to focus at a single point but rather are focused at two or more points that usually results in blurred or partially blurred vision.

Binocularity – The characteristic of the eyes when binocular vision is intact. Used interchangeably with *binocular vision* and requires both ocular alignment and stereoacuity.

Denominator – The bottom half of the fraction that shows how far away a person with normal visual acuity can stand from the chart and still read the symbol.

Diplopia – Double vision or the perception of two images, one by each fovea, experienced when the eyes are intentionally crossed or out of alignment due to imbalance of the extraocular muscles.

Distance vision – The ability of the eye to see images clearly at a distance (often a great distance). The inability to see a distant object clearly is called *myopia.*

Esophoria – A type of heterophoria in which the eye deviates inward or nasally when covered, that is, when fusion is suspended.

Esotropia – A type of strabismus in which one or both eyes deviate inward toward the nose from a parallel axis of vision. Also called *convergent strabismus.*

Exophoria – A type of heterophoria in which the eye deviates outward or laterally when covered, that is, when fusion is suspended.

Exotropia – A type of strabismus in which one or both eyes deviate outward away from the nose from a parallel axis of vision. Also called *divergent strabismus.*

Fovea – The area of the retina made up entirely of cones at the center of the macula, responsible for the very keenest vision.

Fusion – The union of two single images, one from each eye, into a single three-dimensional image within the occipital cortex.

Harmon-Distance – For near-vision screening, this is the distance from the middle knuckle (placed on chin) to the elbow. This represents a child's functional near-working distance, i.e., where arm and hand are parallel to eye.

Heterophoria – A latent alignment disorder in which the eyes are not parallel during monocular vision, that is, when only one eye is seeing and binocularity and fusion are disrupted. Also referred to as *phoria*.

Heterotropia – A manifest alignment disorder, or *strabismus*, in which one or both eyes deviate from parallelism when attempting to focus on a target while both eyes are open. Also referred to as *tropia*. Proctor, S.E. (2005). Ibid. pp.195 – 204. Guidelines for School Vision Screening Programs: Kindergarten through Grade 12.

Hypermetropia – A refractive error in which the light rays from an incoming visual image have not converged by the time they reach the retina. Used interchangeably with the term *hyperopia*. (Formerly called "farsightedness," a sometimes confusing term no longer used.)

Hyperopia – A refractive error in which the light rays from an incoming visual image have not converged by the time they reach the retina. Used interchangeably with the term *hypermetropia*. (Formerly called "farsightedness," a sometimes confusing term no longer used.)

Hypophoria – A type of heterophoria in which the eye deviates downward, when covered, while fusion is suspended.

Hypotropia – A type of strabismus in which one or both eyes deviate downward from a parallel axis of vision.

Legal blindness - Best-corrected central vision of 20/200 or less, and peripheral vision of 20 degrees or less.

Myopia – The most common of the refractive errors in which light rays from an incoming visual image converge before they reach the retina, or preretinally. (Formerly called "nearsightedness," a confusing term no longer used.)

Near vision – The ability of the human eye to see objects with clarity at close range, also termed *near point acuity* or *near acuity*. Optimal near vision requires both accommodation and convergence.

Nearsightedness – See Myopia.

Numerator – The top half of the fraction that stands for the distance the examinee is away from the chart.

Nystagmus – An involuntary, jerky movement of one or both eyes suggestive of primary ocular or systemic disease. Also known as dancing eye or jerky eye.

Occluder – An object that temporarily obstructs vision during vision screening, preventing an eye from visualizing a focal target (e.g., paper cup, paper patch, palm of hand with tissue).

Ocular alignment – A positioning of both eyes by the extraocular muscles so they are targeting the same focal object simultaneously with the result that two images, one from each eye, fall on the respective foveae. The eyes are said to be *orthotropic* or *parallel.*

Ocular motility – The ability of the eyes to move together smoothly and fluidly, in all directions, at will.

Ocular tracking – The movement of the eyes together, at will, following a target in any direction. Also termed *tracking*.

Optotype – A focal image or target, very often letters or symbols on a chart, placed before the examinee's eyes and used to discern visual functioning.

Plus lens – A convex lens used in the diagnosis and treatment of *hyperopia*, which refracts light when placed in front of the eye.

Pseudoisochromatic plates – A screening of color vision that is a saturation screening and a measure of the purity of color, which works by detecting false perception of color.

Sensitivity – The ability of a screening to correctly identify those who actually have a disease, health problem or condition.

Serif – The short lines stemming from and at any angle to the upper and lower ends of a letter.

Sloan letters chart – A vision acuity chart named after ophthalmologist, Dr. Louise Sloan, composed of ten letters of the Roman alphabet intentionally selected, placed and ordered on the chart. Sloan letters are sans (without) serif and employ uniform fonts in all charts, and for this reason are now the preferred charts.

Snellen chart – The most common and well known of the vision acuity charts, named after its nineteenth century developer, Dr. Hermann Snellen. Modern version presents nine letters of the Roman alphabet in a font with serifs. Many charts in use are erroneously called "Snellen charts." Snellen charts are no longer recommended because of the confusion with the discrimination of the serifs on the letters. (See Sloan chart.)

Specificity – The ability of a screening to correctly identify all those who do not have a disease, health problem or condition.

Stereopsis – Depth perception or three-dimensionality possible only when both eyes are in alignment and perceive the same image clearly.

Strabismus – A manifest deviation of one or both eyes from the visual axis of the other so they are not simultaneously directed to the same object. Also referred to as *heterotropia* or *tropia*.

Visual acuity – The state, condition or effectiveness of central vision.