Hoosier Uplands Early Head Start Vision Screening

Child’s Name:_________________________________________  DOB:________________   Age:__________

**ABC'S OF VISION DIFFICULTY**

This list can be used to identify the need for a vision examination and should be shared with the teacher, parents, Infant-Toddler network, or child’s physician.

**A'S - APPEARANCE OF THE EYES (Check all that apply)**

- Red/Yellow “whites”
- Watery eyes or Drainage
- Encrusted lids
- Droopy &/or Swollen eyelids
- Frequent styes
- Very large &/or Difference size eyes
- Eyes constantly move, eyes jerk w/fixation
- Eyes &/or pupils look different in pictures
- Eyes crossed - turning in or out at any time (>6mos.)

**B'S - BEHAVIORS INDICATIVE OF POSSIBLE VISION DIFFICULTY**

**Birth-1st month of life:**
- Looks towards the face of the person holding him
- Check: Yes/No

**2nd - 3rd month of life:**
- Stares and follows moving object, light or face past midline
- Switches gaze/stare between two people or objects (toys)
- Check: Yes/No

**4th – 5th month of life:**
- Reaches towards an object (toy) and grasps it
- Eyes are aligned when fixates on/stares at a close object
- Check: Yes/No

**6th month of life:**
- Looks at near and distant objects
- Attempts to pick up dropped toy and can transfer toy hand-to-hand
- Check: Yes/No

**7th -12th months of life:**
- Accurately reaches for item of interest/good eye-hand coordination (> 6 months)
- Notices and tries to pick up small items such as bread crumbs
- Plays pat-a-cake and peek-a-boo
- Check: Yes/No

**13th-18th month of life:**
- Looks for and identifies (point to) pictures in books
- Puts items into and pulls items out of a container
- Check: Yes/No

**24th-36th month of life:**
- Uses crayon to make lines and circle scribbles
- Arranges similar pictures/objects in groups
- Watches & imitates other children (30-36mos)
- Catches, climbs up/on, and stacks items
- Check: Yes/No

**Additional Visual Symptoms of Concern:**
- Blinks excessively or Rarely blinks
- Turns head using only one eye to look at object in front of child
- Academic difficulties for age/development
- Thrusts head forward/backward when looks at distant objects
- Puts head close to book/desk when looking at books/drawing
- Exhibits “acting out” or “class clown” behavior NOT appropriate for age
- Covers or closes one eye frequently
- Avoids close work/learning activity
- Squints or frowns as looks at objects

**C'S - COMPLAINTS ASSOCIATED WITH USING THE EYES**

- Rubs eyes as if they Hurt, Burn, Itch
- Cries & holds head like has Headache
- Has Nausea &/or Dizziness

**None of the A, B, C’s of Vision Difficulty apply to my child**
Hoosier Uplands Early Head Start Vision Screening

Child’s Name: ___________________________ DOB: ___________ Age: ___________

Visual Risk Factors (For Initial 45d VS - Check all that apply)

☐ Premature Birth (4 weeks or more)
☐ In Neonatal Intensive Care Unit for Greater than Four Days, PLUS OXYGEN
☐ Very Low Birth Weight \(<1500 \text{ GRAMS} = (3.3 \text{ lbs.})\]
☐ Birth Defects Involving Head or Face
☐ Family History of Childhood Vision Impairment
  • Amblyopia (dim vision) • Severe refractive error (near/far sighted) • Strabismus (cross eyed) • Nystagmus (jerking eye movement) • Color blind or other visual perceptual problems
  • CMV • Toxoplasmosis • Maternal Venereal Conditions (i.e. Herpes) • Rubella
☐ Congenital Deafness (e.g., Usher Syndrome)
☐ A Condition (e.g., disease, syndrome) which is Associated with Vision Problems
  • Down Syndrome • Cerebral Palsy • Hearing Impairment • Diabetes • Hydrocephalus (excess fluid on brain) • Glaucoma
  • Retinoblastoma (eye cancer) • Juvenile Rheumatoid Arthritis • Albinism • Sickle Cell Anemia • Cataracts
☐ Head Trauma (e.g., Shaken Baby Syndrome or Recent injury)
☐ Brain Tumor
☐ Chemical Exposure (e.g., lead poisoning, drugs during pregnancy, Fetal Alcohol Syndrome)

☐ Parent, Child or Caregiver has Concerns about Child’s Vision
☐ None of these conditions apply to my child

Annual Update – Visual Risk Factors (For Annual Update/F-Up Screens – Check all that apply)

☐ Parent, Child or Caregiver has Concerns about Child’s Vision
☐ Child has new health condition or developmental delay related to the eyes/vision
☐ Child has had head trauma since previous EHS Vision Screening was completed
☐ None of these conditions apply to my child

Screening (check appropriate box): with glasses without glasses (has prescription/doesn’t wear) without glasses (does not have/no prescription)

<table>
<thead>
<tr>
<th>Vision Screening Test</th>
<th>Birth to 6 months</th>
<th>6-18 months</th>
<th>18 months to 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC’s of Vision</td>
<td>_____ pass _____ fail</td>
<td>_____ pass _____ fail</td>
<td>_____ pass _____ fail</td>
</tr>
<tr>
<td>Risk Factors</td>
<td>_____ pass _____ fail</td>
<td>_____ pass _____ fail</td>
<td>_____ pass _____ fail</td>
</tr>
<tr>
<td>Eye Lid “Blink” Reflex</td>
<td>_____ pass _____ fail</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>(if birth-6 mos)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixation</td>
<td>_____ pass _____ fail</td>
<td>_____ pass _____ fail</td>
<td>_____ pass _____ fail</td>
</tr>
<tr>
<td>Tracking</td>
<td>_____ pass _____ fail</td>
<td>_____ pass _____ fail</td>
<td>_____ pass _____ fail</td>
</tr>
</tbody>
</table>

☐ Child uncooperative – rescreen in 2 weeks
☐ Child passed vision screening with both eyes
☐ Child failed vision screening
☐ Child referred to: _____Primary Physician _____Optometrist _____Ophthalmologist

Comments:

Signature of screener: __________________________________ Date of test: _____________
Signature of parent: ____________________________________ Date: ________________
Recent advances in infant vision assessment have made it possible to screen for vision problems from birth, thus allowing for much earlier detection of vision problems than in the past (e.g., Teller Acuity Cards, photo refractor). This early detection, if followed by appropriate referral and treatment, can have a significant impact on a child's development, school achievement, and overall quality of life.

The use of a functioning vision system for birth to age 3 is inherent for successful age appropriate completion of some of the tasks included in developmental screening tests such as the Denver II. A pattern of “fail” or caution items should alert the examiner to complete a more thorough review of the child’s vision.

Timing is a critical factor in screening the vision of very young children. Whenever possible, schedule the screening to occur at a time of day when the infant or toddler is typically awake and alert. Ask the parent/caregiver to bring a favorite toy, teething ring, pacifier, or other items that seem to quiet the child. During the screening the child should be kept as comfortable as possible, giving consideration to room temperature relative to the clothing worn, state of hunger, and position of the child.

Some children are quite visually attentive while drinking from a bottle or eating a cracker. Infants who lack head and neck control should be positioned so that their head and body are stabilized, either held by a parent/caregiver, or lying in an infant carrier. Most infants and toddlers are more visually attentive when positioned at least partially upright. Older infants and toddlers can be seated on the lap of a parent/caregiver. The child must feel secure in order to attend to the screening procedures.

The screener may find it helpful to use auditory cues (speech, noise making toys, etc.) to attract the child's attention to the vision task. However, the sound cues must be eliminated during the actual testing to be certain that the child is using vision, rather than auditory input, to respond during the test. The screener may also find it helpful to test the eyes in a specific sequence (e.g., right eye then left eye, then both eyes). Some equipment needed for testing includes a penlight, occluder and a small toy less than two inches in size.

Examples of Tasks on Denver II that Require Vision for Successful Completion:

- Regard own hand
- Work for toy
- Follow to midline
- Look for yarn
- Tower of cubes
- Any imitation activities that use visual cue only

Birth to Age Three

Vision screening is to be included in any infant-toddler screening program. Vision screening for children birth to age three includes: vision history with a review of risk factors for vision problems; appearance, behaviors and concerns related to the eyes and vision; and specific vision tests selected as a function of age. A number of vision screening tests can be administered to nonverbal individuals such as infants, toddlers, and older children experiencing delayed language development. These children should be screened annually. Early detection and appropriate intervention are critical to a child’s ability to learn.
Hoosier Uplands Early Head Start Vision Screening

**ABC'S OF VISION**

**Ages:** All ages - priority

**Purpose:** To ensure that the eyes are in good health by observing the appearance of the eyes and eliciting information regarding behaviors and complaints concerning functional use of the eyes.

**Description:** Conditions affecting the health of the eye can cause vision problems and, if unattended, can lead to eye damage; behaviors and complaints can indicate the presence of vision problems.

**Procedure:** See accompanying checklist, "The ABC's of Vision Difficulty". Through visual inspection of the child's eyes, note whether any of the "Appearance" conditions are present. Caregiver, teacher, and other service provider reports should be elicited to determine if a history of any of the "ABC's" conditions is present. Request information for age appropriate behaviors only.

**Pass:** Based on age appropriate behaviors, none of the conditions are present. No referral is recommended.

**Fail:** Based on age appropriate behaviors, any of the conditions are present. Refer to the child's ophthalmologist or optometrist.

**RISK FACTORS:**

**Ages:** Birth to three years - priority

Three to twenty-one years – priority if there is no vision screening record for a child

**Purpose:** To determine the existence of conditions associated with a higher probability of vision impairment.

**Description:** There are specific conditions associated with a higher probability of, or risk for, vision impairment. The presence of any of these high risk factors can be noted when you initially obtain the client's history, or when you update the client's history. The presence of a risk factor should alert you to an increased possibility of vision impairment.

**Procedure:** When obtaining the client's history, inquire about the presence of each of the vision risk factors on the Checklist. When updating the case history you need only to inquire about the presence of new conditions (disease), newly expressed concerns by the client or caregiver regarding eyes/vision and overall developmental skills, and instances of head trauma since the previous history update.

**Pass:** When there are no risk factors present, proceed with the remainder of your vision screening protocol. *When there is a risk factor present and the results of the remainder of your vision screening protocol indicate no vision problem is apparent, then vision screening on a regular schedule is recommended.*

**Fail:** When there is a risk factor present and the results of the remainder of your vision screening protocol indicate apparent vision problems, or when the results are inconclusive, or when you have any question about the client's vision, referral to an ophthalmologist or optometrist is recommended.

**EYE LID REFLEX**

**Ages:** Birth to six months - priority

**Purpose:** To determine the presence or absence of the protective blink reflex.

**Equipment:** Form for documentation.

**Procedure:** If necessary, child is held by a second adult so that head is in an upright position and supported. The tester's hand is positioned 5" to 6" above the child's eye level and slightly in front of the child's face; the palm of the hand should be parallel to the front surface of the eyes. The tester should rapidly lower the hand so that it passes directly in front of the child's face. Observe for the blink response immediately after the hand is lowered.

**Pass:** Child blinks in response to lowered hand.

**Fail:** Child does not blink in response to lowered hand after two opportunities to do so.
Hoosier Uplands Early Head Start Vision Screening

**FIXATION**

**Ages:** Birth to six months – priority  
Six months to five years - recommended

**Purpose:** To determine the presence of a visual orienting response.

**Equipment:** Small colorful object, no larger than 2” and not noisy (e.g. finger puppet).  
Form for documentation.

**Procedure:** Tester is positioned facing the child at child's eye level. Present the object approximately 12” in front of child's nose at eye level and observe child's eyes. Both eyes should be directed toward the object for at least two (2) seconds. Use of initial noise to get attention is acceptable but do not provide continuous sound stimulation.

**Pass:** Child fixes on object with both eyes for at least 2 seconds.

**Fail:** Child does not fixate on object, or fixates with one eye only. Any eye drifting is abnormal.

**TRACKING**

**Ages:** Birth to three years – priority  
Three years to eight years - recommended

**Purpose:** To observe ocular-motor development.

**Equipment:** Small, brightly colored object, no larger than 2” and free of noise.  
Form for documentation.

**Procedure:** Screen with glasses on if child wears them.  
Tester sits facing the child at child's eye level. Present the object approximately 12” in front of child's nose at eye level. When child has fixated on the object, move the object slowly to the right along the horizontal plane 6" to 8" (taking 2-3 seconds to cover the distance), then slowly move the object back to the central starting point. **Stabilize child's head if child does not naturally follow with eyes only.** Repeat procedure, moving object slowly to the left and back to the starting point.

**Pass:** Smooth, continuous movement with the eyes remaining in symmetrical alignment.

**Fail:** Tracking with one eye only or one or both eyes fail to maintain gaze at object.

**NOTE:** Infants below three months old may track with less than mature levels of smooth, coordinated movement. Refer only those with markedly poor performance on this procedure.

**PUPIL RESPONSE**

**Ages:** Birth to three years – priority  
Three to twenty-one years - recommended

**Purpose:** To determine the presence or absence of the pupillary reflex to a light source.

**Equipment:** Penlight.  
Form for documentation.

**Procedure:** In a room with dim lighting, position the child so that s/he is not facing a window or other light source. Hold penlight 4" to 6" in front of right eye. Turn penlight on for 2 to 3 seconds while observing the right eye for pupil constriction. Turn penlight off and watch for pupil dilation. Wait 5 to 10 seconds; repeat the procedure for the left eye.

**Pass:** Each eye shows rapid, smooth constriction of the pupil when stimulated by the light, followed by smooth dilation in the absence of the light.

**Fail:** Either pupil fails to react to the light source, or reaction (constriction) is sluggish, jerky, or asymmetrical.

**NOTE:** Certain medications affect the pupillary reflex and could account for an abnormal pupil response to light. Regardless, abnormal pupillary reflex should be referred whenever observed, since this may suggest a neurological abnormality.
**Hoosier Uplands Early Head Start Vision Screening**

**CORNEAL LIGHT REFLECTION (HIRSCHBERG)**

**Ages:** Birth to eight years - priority

**Purpose:** To detect constant eye deviation. (strabismus)

**Description:** By noting the similarity or dissimilarity in the position of light being reflected in the pupils, the observer is able to detect a constant eye deviation of a lesser degree than possible when observing the eyes.

**Equipment:** Penlight.
Form for documentation.

**Facilities:** Normal or lower light level. Minimum number of light sources (windows, overhead lights, etc.).

**Procedures:** Screen with glasses on, if individual being screened wears glasses.
Position the individual so that the penlight and the screener’s line of vision are at midline in front of the child’s eyes at a distance of 14 – 18 inches. The child must be looking straight at the screener. Holding the penlight horizontally, direct the light at the bridge of the child's nose. Observe the pupils and check the position of the light reflection in each eye.

**Pass:** The reflection of the light appears to be in a similar position in the pupil of each eye. See Figure A in the accompanying illustration for an example of normal light reflections.

**Fail:** The reflection of the light does not appear to be in a similar position in the pupil of each eye. See Figures B, C, D and E in the accompanying illustration for examples of abnormal light reflections.

**NOTE:**

The shape of the eye opening depends on racial characteristics. Since alignment of the eyes is noted by a centered pupillary light reflex, the shape of the eye opening should have no influence on test results.

Essentially all babies have a flat bridge of the nose. This results in less scleral show (white of the eyes). Hence, normally aligned eyes may appear turned in if the examiner attends to the scleral show and not the corneal light reflex.

The most common method of assessing ocular alignment is the Hirschberg corneal light reflex test. In this test, the examiner notes the position of the corneal reflection from a light held about 3 ft (1 m) from both eyes. The reflection should fall in the same location in the cornea of each eye, even when the eyes move. Displacement of the corneal light reflection in one eye suggests strabismus.

Various findings encountered during corneal light reflection are illustrated in

*Figure 3:*

Findings during corneal light reflection. (A) Normal alignment: the light reflections are centered on both corneas. (B) Left esotropia: the light reflection is outwardly displaced on the left cornea. (C) Left exotropia: the light reflection is inwardly displaced on the left cornea. (D) Left hypertropia: the light reflection is downwardly displaced on the left cornea. http://www.aafp.org/afp/1998/0901/p691.html
Hoosier Uplands Early Head Start Vision Screening

**NEAR POINT OF CONVERGENCE**

**Ages:**
Six months to eight years – priority
Eight to twenty-one years - recommended

**Purpose:**
To test for convergence of eyes while focusing on a nearby object.

**Equipment:**
Target object (e.g., small toy; penlight; other small object)
Form for documentation.

**Procedure:**
Screen with glasses on if individual wears them.
Seat individual in front of the screener. Hold a small object approximately 12” in front of the individual's face at eye level. Direct the individual's attention so eyes fixate on the small object. Move target object slowly at individual's eye level on midline toward the bridge of the individual's nose. Observe how both eyes follow the target object.

**Pass:**
Eyes converge and pupils constrict to focus on moving object and eyes have a symmetrical response until object is within 3” from the bridge of the nose.

**Fail:**
Poor fixation or asymmetrical response of eyes to the moving object beyond 3” from the bridge of the nose, or eyes do not converge to 3” from bridge of nose.
At each well child visit for children under age 3, the EPSDT vision screening includes: visual observation with an external eye examination (general inspections of lids and eyeballs); routine testing for visual acuity (eye tracking in different directions of gaze); and observation of pupillary response to direct light stimulus; distance acuity testing using a standardized eye chart for children over age 3; and referral to the child’s primary care physician, ophthalmologist or optometrist as indicated.

According to the American Optometric Association, a child’s first professional eye examination should be scheduled at 6 months of age (or sooner if signs or symptoms warrant). When no abnormalities are detected at this age, the next examination should be scheduled at age 3.

Purpose: The purpose of the HU EHS vision screening process is to identify health problems or potential health problems at the earliest possible time, to promote early intervention for those problems, and engage families to promote optimum health in children.

- Upon entry and thereafter as age appropriate, EHS nursing staff will obtain screening results for children who have been screened and followed within a system of care as these children need not be re-screened.
- Written parental consent shall be obtained before EHS screenings are completed.
- Screening shall be conducted by a qualified person trained by the Children’s Services RN at vision screening workshop and focus on skills required for all vision screeners who screen children. Staff must demonstrate the skills necessary to perform the required vision screening tests and make appropriate referrals.

Objectives of the HU Early Head Start vision screening program are to:
- Utilize uniform screening guidelines and referral criteria.
- Collaborate on an interagency basis for intervention of identified problems.
- Follow-up on all referrals where evaluation and/or treatment is recommended.
- Maintain vision records on children and document vision screening activities.

The overall supervision of the vision screening process will be provided by a registered nurse who will utilize professional judgment, direct the application of screening results to referral criteria, and coordinate follow-up for individual children.

Within 45 days of a child’s enrollment, home visitors will collaborate with parents to complete visual screening for children birth to 3 years using the following methods:
- ABC’s of Vision
- Risk factors
- Eye lid blink reflex
- Fixation
- Tracking

Within 90 days of a child’s enrollment, or sooner if warranted, an EHS nurse will collaborate with parents to complete visual screening for children birth to 3 years using the following methods:
- Observation of eye appearance along with visual behaviors
- Pupil response
- Corneal light reflection
- Near point of convergence
Screening shall result in one of three possible outcomes:
(1) “Pass,” which means that no concerns were identified and the child is developing within normal limits.
(2) “Questionable,” which means that the results of the screening process were such that a rescreening is needed within a specified time. Rescreen before referring.
(3) “Refer,” which means that concerns were identified and a referral for evaluation shall be made within two working days.

- Refer the child immediately when there is an obvious problem needing immediate attention. Children who do not pass the vision screening should receive a professional eye exam.
- A written statement from the parent(s)/guardian(s) indicating refusal for professional intervention should be included on the child’s health record.
- Screening should not be interpreted as a complete eye examination.

Follow up & Ongoing monitoring
Completion of the vision referral with a professional eye examination or determination of the parent(s)/guardian(s) refusal to secure the examination for their child should occur within one month after the original referral notification is made to the parent(s)/guardian(s).

The Children’s Services RN will partner with the Early Intervention Specialist to ensure appropriate accommodations for the child’s learning are made when warranted.

Home visitors will continue to observe children during the course of routine home visits for signs of newly developed visual issues.

EHS staff will partner with parents and providers to obtain age appropriate well child exam information including documentation regarding children’s eyes/vision.

Documentation
All screening consents, results, referrals and follow up documentation will be entered into Child Plus data tracking system and placed in the child's file at the Children’s Services office - Mitchell Administrative Building.

http://www.health.state.mn.us/divs/fh/mch/webcourse/vision/mod4b.cfm

Professional Guidance obtained from: Dr. Smoot @ Mitchell Optical

R-02192015trk