VISION SCREENING OF PRE-SCHOOL CHILDREN – 1. Acuity

*Materials: (contained in small suitcase with each Photo Screener)*

1. “HOTV” 10ft. vision chart *
2. Random Dot E Kit (Stereo acuity test)*
3. Measuring tape (at least 10 ft. long)
4. Bright desk lamp or similar to illuminate chart
5. Eye cover (home-made paddle or plastic cake mixer, e.g.)
6. Masking or painting tape (to mark standing position)
7. HOTV letters on prompt card for comparison by illiterate child*
8. Slot mask for chart (isolates line being tested)
9. Pointer (stick or pen)

* available from Prevent Blindness Virginia®
Call: (888)-790-2020, use form on CD or email: Alison@theeyesite.org

*Setup:*

Find a hallway or room with at least 10 feet for testing. Chart may be taped to wall or a stand about three feet from floor. Place a bright lamp near to chart for even illumination (dim light or room light will greatly decrease measured acuity). Place a piece of tape on floor exactly ten feet in front of chart. Chairs for examiners (one next to child and the other at the chart) are helpful, esp. to avoid intimidation of child (to say nothing of comfort for examiner!)

Keep the room quiet and free of distractions, although you will usually have several children waiting to be examined. Too many adults present is not good – the ideal number for a single examining station is no more than 4 to 6. One recording results, one examining, one at the chart, and one or two managing the children is ideal.

*Procedure:*

1. Introduce yourself and other tester at the chart to the child and explain simply that you will checking “how well you can see.” Don’t take time to socialize as focus should be kept on the testing process.

2. Show the HOTV prompt card to the child and ask if they know the letter names. If they don’t, many can learn them on the spot, while others will need to point to the relevant letter during testing. Much encouragement may be needed for a shy child.

3. WITHOUT covering an eye, ask the child to name a large letter being indicated by the assistant at the chart. At this time, if letters are not known, use of the prompt card can be learned as a “game”. If unable to do this, photo screen the child. Don’t waste time pushing an uncooperative or inattentive child as it may interfere with photo screening later.

4. If successful in naming or comparing larger letters, say “I’m going to play peek-a-boo with you” while covering your own eyes back and forth. Then cover the LEFT eye first (note that you are not actually ‘covering’ the eye but blocking the vision) by holding the paddle over the head with the examiners hand near the top of the head with the paddle hanging down. This keeps the paddle away from the child’s face and mouth and is less intrusive. Try not to touch the child, esp. their face. Exercise diligence to prevent peeking around the cover. Children with poor
vision in the eye being tested will try to see by any means possible and such maneuvering itself may be a sign of poor vision. Ask the person at the chart to periodically check that the eye not being tested is covered. The examiner’s side view makes it difficult to confirm the visual path is blocked completely.

5. Once an eye is covered, quickly jump down to the smaller letters from the larger ones. *Don’t have the child read all the letters on the chart! Go to the standard line for the child’s age quickly – this maintains focus of attention (which is very short).* Many children more easily identify letters by proceeding from RIGHT to LEFT. Use the mask to isolate the line being tested to avoid confusion. If unable to see the correct line, try to get an idea of which line can be read and record that acuity on the list.

6. Tips for person at the chart:
   - The tip of the pointer must be exactly placed over the top center of a letter and held there until a response is given. Be steady and still. Listen closely to both child and examiner.
   - Avoid holding the pointer at a confusing angle. Straight up & down is best.
   - Once a large letter is identified, move quickly to the line for the child’s age (see below)
   - Start using the mask to isolate the line as soon as the letters fit in the space.
   - If answers are hesitant, try starting at the right end of the line.
   - After the right eye is tested, try to use best right acuity line to test left eye.

**PASS:** Under 5 – 20/40 line (4 of 5 correctly identified)(THTOV)

Age 5 yrs. and older – 20/30 line (4 of 5 correctly identified)(HTHVO)

REFER ANY CHILD NOT PASSING THESE ACUITY LEVELS!

SEE NEXT PAGE FOR STEREOST DING PROCEDURE
VISION SCREENING OF PRE-SCHOOL CHILDREN – 2. Stereo Testing

**Setup:** Same as for visual acuity

**Procedure:**

1. After the visual acuity testing, have the child move forward to the examiner next to the eye chart and bright light. Alternatively, another examiner in bright light can do the test. If the child has not passed the acuity test, there is no reason to proceed with stereo testing.

2. Place the special polarized glasses on the child (over any glasses being worn) explaining that they are ‘magic’ glasses, or like ‘sunglasses’.

3. Hold the stereo “E” card about 20” away and ask if the child can see the letter. The model card is rarely helpful in demonstrating the effect. If the “E” is seen, then randomly present the stereo E and the blank card to the child. 4 correct of 5 attempts is a ‘pass’. The “raised E” is often more easily seen than the “recessed E”, so be certain the card is presented correctly and is exactly aligned.

**Results:** REFER ANY CHILD UNABLE TO IDENTIFY THE STEREO “E” LESS THAN 4 OF 5 TIMES or identify it at all or only nearer than 20”.

Prepared by Lion John A. Watters, Jr., MD, revised October 2009

Ref:  
1. Massachusetts Pre-School Vision protocol, 2005  
   www.mass.gov/dph/fch/schoolhealth/preschool_vision_protocols.doc  
2. The RDE Stereotest, Stereo Optical Co., Inc., www.stereooptical.com  
3. Screening for Visual Impairment in Children Younger than 5 Years Old  
   U.S. Preventive Services Taskforce, AHRQ Pub. No. 04-0541-A, 6 May 2004  
   11618 Busy St., Richmond, VA 23236