



# Child and Teen Checkups (C&TC) FACT Sheet

For Primary Care Providers

## Vision

C&TC Requirements:	Qualified Personnel	Documentation
<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• <b>Children less than 3 years of age</b> must be monitored for vision concerns. Children must be screened for family history of maternal and neonatal infection, ocular abnormalities, and early onset vision problems. A child must be observed for proper eye alignment, pupillary reflex, the presence of nystagmus, and muscle balance, which includes an examination for esotropia, exotropia, phorias, and extraocular movements. The external parts of a child's eyes must be examined including: lids, conjunctiva, cornea, iris and pupils. Until visual acuity can be obtained, observe the child's eyes for ability to track, pupillary response to light, and retinal reflex symmetry. The child, parent or guardian must be asked if there are concerns about the child's vision. When indicated, the child must receive a referral for age appropriate diagnostic vision tests.</li> <li>• <b>Children age three and older</b>, in addition to the above, must be <b>objectively screened for visual acuity</b> using current testing methods. When indicated, the child must receive a referral for age appropriate diagnostic vision tests. At the 16 and 20-year checkups, acuity testing is not required. However, subjective screening should be done; if no acuity testing occurred at the previous checkup, perform acuity testing.</li> </ul>	<p>Physician, Nurse Practitioner, Physician's Assistant, or RN with training*</p> <p>Nursing Assistant, Certified Medical Assistant, or Paraprofessional*</p> <p>*It is recommended that screeners attend the MDH vision training (for a list of trainings, visit: <a href="https://www.health.state.mn.us/divs/cfh/connect/index.cfm?article=mchedtrain_offerings">https://www.health.state.mn.us/divs/cfh/connect/index.cfm?article=mchedtrain_offerings</a>).</p>	<p>Document normal/abnormal vision findings.</p> <p>Document result of visual acuity for children 3 years of age and older. If visual acuity testing is not done, document reason. For examples, please refer to the C&amp;TC Documentation Forms and Criteria Guidelines.</p>

### Screening Tools:

Penlight, occluder, small toys, color vision book, HOTV or LH Symbol (Lea) Acuity Charts, and Snellen or Sloan Charts. Refer to "Minnesota Department of Health Recommended Vision Screening Equipment" online <http://www.health.state.mn.us/divs/fh/mch/hlth-vis/materials/visionequipment.html>



- **The HOTV and Lea (LH Symbol) charts are the only acuity charts recommended for screening children between the ages of 3 and 6 years.** These charts address three important principles:
  1. They use reversible symbols. The symbols remain the same even when the child reverses them in their mind.
  2. They give the child the option of naming the symbols or matching it on a response card.
  3. They are standardized. The LH Symbol chart has the added advantage in that all symbols blur into an "O" when below the child's visual acuity.
- Chart symbols should not be individually isolated as this may improve the vision of an amblyopic eye. If the child has trouble following, cover all the symbols except the line you are testing. Continue in the same way until you have found the smallest line the child can read.
- **The Snellen or Sloan charts should be used for screening children 6 years of age and older.**

### **Facts About Vision Screening:**

- "Studies estimate that only 21% of all preschool children are screened for vision problems and only 14% receive a comprehensive vision exam" [1].
- Visual impairment (refractive error, amblyopia, strabismus, and astigmatism) affects 5% to 7% of all preschool-age children [2].
- "Amblyopia ("lazy eye") develops in 2% to 5% of children with the greatest risk in the first 2 to 3 years of life. The potential for its development exists, however, until visual development is [approximately-ed.] complete at 9 years of age. Strabismus is one of the primary causes of amblyopia" [3].
- In 2009, there were 3,595 Minnesota children ages 3-5 years identified through Early Childhood Screening with a new potential vision problem [4].

### **Key Points:**

- Early detection and prompt treatment of ocular disorders in children is important to avoid lifelong visual impairment [5].
- "Untreated amblyopia may result in irreversible visual deficits" [6].
- "Vision disorders are the fourth most common disability among children in the United States and the leading cause of impaired conditions in childhood" [1].
- "Because children do not complain of visual difficulties, visual acuity measurement (vision screening) is an important part of complete pediatric eye care and should begin at 3 years of age" [6].
- Early childhood screening is required by Minnesota Statute prior to kindergarten enrollment. One of the required components is vision screening [7].

### **Professional Recommendations:**

American Academy of Pediatrics (AAP), American Association for Pediatric Ophthalmology and Strabismus (AAPOS), and the American Academy of Ophthalmology (AAO) [6]

- "Every effort should be made to ensure that eye examinations are performed using appropriate testing conditions, instruments, and techniques.
- Newborns should be evaluated for ocular structural abnormalities, such as cataract, corneal opacities, and ptosis, which are known to result in vision problems, and all children should have their eyes examined on a regular basis.



- The results of vision assessments, visual acuity measurements, and eye evaluations, along with instructions for follow-up care, should be clearly communicated to parents.
- All children who are found to have an ocular abnormality or who fail vision screening should be referred to a pediatric ophthalmologist or an eye care specialist appropriately trained to treat pediatric patients.
- For recommendations on ages to screen, refer to the “AAP Recommendations for Preventive Pediatric Health Care” in the Resources section.

#### U.S. Preventive Services Task Force (USPSTF) [5]

- “The USPSTF recommends vision screening for all children at least once between the ages of 3 to 5 years, to detect the presence of amblyopia or its risk factors.”

#### **Resources:** (Accessed January 2011)

- American Academy of Pediatrics. (2008). *Recommendations for Preventive Pediatric Health Care*. Online: <http://pediatrics.aappublications.org/cgi/data/120/6/1376/DC1/1>.
- Hagan JF, Shaw JS, Duncan PM, eds. 2008. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*, Third Edition. Elk Grove Village, IL: American Academy of Pediatrics.
- Minnesota Department of Health (MDH)
  - Vision Screening Homepage: <http://www.health.state.mn.us/divs/fh/mch/hlth-vis/vision.html>
- Minnesota Department of Human Services. C&TC Documentation Forms for Providers and Clinics [Online] [http://www.dhs.state.mn.us/id\\_028848](http://www.dhs.state.mn.us/id_028848)
- Minnesota Department of Human Services. Child and Teen Checkups Screening Components Standards and Guidelines [Online]: <http://edocs.dhs.state.mn.us/lfserver/Legacy/DHS-4813A-ENG>
- Minnesota Parents Know [Online]: <http://www.parentsknow.state.mn.us/parentsknow/index.html>

#### **References:** (Accessed January 2011)

1. American Academy of Pediatrics Vision and Hearing. Online: <http://www.aap.org/healthtopics/visionhearing.cfm>.
2. American Academy of Ophthalmology Pediatric Ophthalmology/Strabismus Panel. (2007). Preferred Practice Pattern Guidelines. Pediatric Eye Evaluations. San Francisco, CA: American Academy of Ophthalmology; 2007. Available at: <http://www.aaio.org/ppp>.
3. U.S. Public Health Service. (1998). Clinician’s handbook of preventive services (2<sup>nd</sup> Ed.) McLean, VA: International Medical Publishing. [Online]: <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat6.chapter.4489>
4. Minnesota Department of Education; Early Childhood Screening Program, FY 2009 Participant Data.
5. U.S. Preventive Services Task Force (2011). Screening for Visual Impairment in Children 1- 5 Years. Online: <http://www.uspreventiveservicestaskforce.org/uspstf/uspsvsch.htm>
6. Committee on Practice and Ambulatory Medicine, Section on Ophthalmology, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus and American Academy of Ophthalmology. (Pediatrics Vol. 111 No. 4, April 2003, reaffirmed in 2007), *Policy Statement: Eye examination in infants, children, and young adults by pediatricians*. 902-907. [On-line] available: <http://aappolicy.aappublications.org/cgi/content/full/pediatrics%3b111/4/902>.
7. Minnesota Statute 121A.17 Online: <https://www.revisor.leg.state.mn.us/statutes/?id=121A.17>

