Quick Reference Guide:

Hearing and Vision Screening

E-Learning Training Programs for Hearing and Vision Screening:
http://www.health.state.mn.us/divs/cfh/program/ctc/elearning.cfm

Hearing Screening Procedures

Refer to MDH Hearing Screening Training Manual for more information

1. Family and individual history (all ages)
   ✓ Joint Commission on Infant Hearing risk factors reviewed with the parent or caregiver – A positive response indicates a need for referral
   ✓ Observation of behavior and symptoms by parent/caregiver/teacher/child
   ✓ Risk of noise-induced hearing loss for ages 11-21 years

2. Visual inspection (all ages)
   ✓ External structures
   ✓ Internal structures (by otoscopic exam)*

3. Pure tone audiometry for children 3 years and older
   ✓ Play Audiometry may be more effective for 3-4 year-olds

4. Otoacoustic Emissions (OAE) or Auditory Brainstem Response (ABR)*
   ✓ For children birth to 3 years who have risk factors
   ✓ For children 3 years and older who are unable to perform pure tone audiometry

5. Tympanometry*
   *Advanced level skills/screening; ABR requires referral to audiologist

Required/recommended ages

Child and Teen Checkups:
   ✓ Newborn Hearing Screening result on file; follow up if not done or not passed
   ✓ Risk assessment: Birth –3 years
   ✓ Pure tone audiometry: Recommended at 3 years; required at 4-6, 8, 10,12, 14, and 18 years

School:
   ✓ Pure tone audiometry: Early Childhood Screening required once at 3-4 years
   ✓ Pure tone audiometry recommended for grades K, 1, 2, 3, 5, 8, 11

PASS criteria for pure tone audiometry hearing screening

Responds to all 4 tones in each ear (500 Hz at 25 dB; 1000, 2000, and 4000 Hz at 20 dB)

Equipment needed

 ✓ Pure tone audiometer (with small toy for play audiometry) for ages 3 and older
 ✓ Otoscope with insufflator bulb for internal inspection
 ✓ Optional: tympanometer, otoacoustic emissions (OAE) equipment

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Vision Screening Procedures

Refer to MDH Vision Screening Procedures Manual for more information

Personnel

Lay screeners with recommended training

1. Vision History and Risk Assessment (post newborn to 5 years, or if family history is unknown)
   ✓ Concerns about the eyes; complaints or unusual visual behavior the child may exhibit
   ✓ Family history of significant visual problems
2. External inspection and observation (six months through 20 years of age)
3. Binocular Fix and Follow (4 months to 3 years of age or when visual acuity can be measured)
4. Corneal Light Reflex (zero months through 20 years of age)
5. Unilateral Cover Test – At Near (six months through 20 years of age)
6. Unilateral Cover Test – At Distance (three years through 20 years of age)
7. Stereo Acuity Screening (optional; three through 8 years of age)
8. Color Vision Deficiency Screening (kindergarten males)
9. Visual Acuity (four months to 3 years or until visual acuity can be measured)
10. Plus Lenses (five years and older)
11. Instrument-based vision screening (three through 5 years of age)
12. Monocular Visual Acuity (three years to 6 years of age)

Nurses

1. Pupillary Light Response (zero months to 3 years of age or until visual acuity can be measured)
2. Retinal (Red Light) Reflex (zero months through 20 years of age) Required ages

Child and Teen Checkups:
   ✓ Risk assessment and exam as indicated in the vision screening sections above
   ✓ Visual acuity screening required at 3, 4, 5, 6, 8, 10, 12, 14, and 18 years of age

School:
   ✓ Early Childhood Screening visual acuity screening required once at 3-4 years
   ✓ Visual acuity screening recommended for grades 1, 3, 5, 7, 10

PASS criteria for visual acuity screening

Age 3 year:
   ✓ 10/25 (20/50) or better in each eye and a 1 or no-line difference between eyes in the PASS range

Age 4 years:
   ✓ 10/20 (20/40) or better in each eye and a 1 or no-line difference between eyes in the PASS range

Age 5 years and older:
   ✓ 10/16 (20/30) or better in each eye and a 1 or no-line difference between eyes in the PASS range

Equipment needed

✓ Charts: LEA or HOTV for 3-6 years (at 10 feet) or Sloan for 6 years and older (at 10 feet)
✓ Occluder glasses: Specially constructed occluder glasses are recommended for visual acuity screening for children younger than 10 years of age. Plastic occluders with lips can be purchased online for screening children 10 years of age and older.

For more information, contact:
Maternal Child Health Section
Child and Teen Checkups Program
651-201-3760
Health.childandteencheckups@state.mn.us

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