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New reports shine light on vision screening for primary care offices

December 7, 2015

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Article type: AAP Clinical Report

A new AAP clinical report and policy statement provide details on validated methods pediatricians can use for examining the eyes and visual system of patients from newborns to adolescents.

The new reports reflect updated guidance for eye examination and vision assessment, including frequency of procedures.

The policy statement *Visual System Assessment in Infants, Children and Young Adults by Pediatricians* is available at www.pediatrics.org/cgi/doi/10.1542/peds.2015-3596, and the clinical report *Procedures for the Evaluation of the Visual System by Pediatricians* is at www.pediatrics.org/cgi/doi/10.1542/peds.2015-3597. Both will be published in the January issue of *Pediatrics*.

The guidance is included in the 2016 Bright Futures/AAP *Recommendations for Preventive Pediatric Health Care*, or Periodicity Schedule (see below) and supplants the following AAP policies: *Eye Examination in Infants, Children and Young Adults by Pediatricians* (2003); *Red Reflex Examination in Neonates, Infants and Children* (2008); and *Instrument-Based Pediatric Vision Screening* (2012).

Regular assessments, timely treatment

Pediatricians should examine newborns using inspection and red reflex testing to check for structural ocular abnormalities such as cataract, corneal opacity and ptosis. When children reach 1-3 years of age, instrument-based screening, if available, can be employed and used thereafter at annual well-child visits until acuity can be tested directly. By age 4, use direct testing of visual acuity with age-appropriate symbols, or optotypes.

Patients with ocular abnormalities or those who fail vision assessment should be referred to a pediatric ophthalmologist or appropriately trained eye care specialist.

The clinical report covers visual system history assessment, ocular exam, external exam (lids, orbit, conjunctiva, cornea, iris), as well as red reflex testing, pupil examination, ocular alignment and motility assessment. Also discussed is use of the ophthalmoscope; assessment of visual acuity in preverbal and older children; and effective screening environments and methodology.

“We wanted to make it easier for pediatricians so they had one document to look at that covers screening and eye exams throughout the entire childhood,” said Sean Donahue, M.D., Ph.D., FAAP, a pediatric ophthalmologist and lead author of both reports.

“What’s nice about this statement is that it goes through all the skills the pediatrician needs,” said Cynthia N. Baker, M.D., FAAP, a lead author of the reports and member of the AAP Committee on Practice and Ambulatory Medicine, which is issuing the statements with the Section on Ophthalmology.

Importance of screening

Besides identifying children who may benefit from early interventions to improve or correct vision, evaluation of the visual system can help identify retinal abnormalities, cataracts, glaucoma, retinoblastoma, strabismus and neurologic disorders, including amblyopia.

Regular vision screening assessments in early childhood, for example, reduce the risk of persistent amblyopia at 7 years of age by more than half, though screening cannot detect all causes of amblyopia, according to the policy.

In some cases, eyes can appear normal and a serious condition overlooked “unless you actually check the child’s vision,” Dr. Donahue noted. One example is anisometropia, a condition where there is unequal refractive power in the two eyes.

Ocular problems detected through screening also can reflect overall systemic health, Dr. Donahue added.

Parents need to be educated on the importance of timely follow-up for vision abnormalities, and that discussion should be included in the medical record.

Instrument-based approach highlighted

A key section in the reports, according to Dr. Donahue, is the discussion of instrument-based screening, which has been endorsed by the Academy and the U.S. Preventive Services Task Force as a valid method for screening very young children.

These instruments can detect the most common conditions producing visual impairment in children: amblyopia, high refractive error and strabismus. This approach to screening, which is quick and requires less attention from the child compared with traditional visual acuity screening, also has the best success in children after 18 months of age and is helpful when screening developmentally delayed children, according to the statements.

Photo-screening is a relatively new technology that has become much more commercially available in the last five to seven years, Dr. Donahue said.

“They are usable devices — very straightforward and with a nice output,” he added.

Photo-screening devices, which might be viewed as expensive for small practices, should pay for themselves in a very short period of time, Dr. Donahue said. Current Procedural Terminology (CPT) code 99174 now is available for use of photo-screening devices, enabling primary care physicians to seek payment for its use. (CPT code 99173 is specific for visual acuity screening.)

The Academy is issuing the new reports in conjunction with the American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus, and American Academy of Ophthalmology.

Vision screening added to new Periodicity Schedule

The 2016 Bright Futures-AAP *Recommendations for Preventive Pediatric Health Care,* or Periodicity Schedule, reflects the new guidance on vision screening as follows:

- The routine screening at age 18 has been changed to a risk assessment.
- Footnote 7 has been updated to read: “A visual acuity screen is recommended at ages 4 and 5 years, as well as in cooperative 3 year olds. Instrument-based screening may be used to assess risk at ages 12 and 24 months, in addition to the well visits at 3 through 5 years of age. See the 2016 AAP statements, *Visual System Assessment in Infants, Children and Young Adults by Pediatricians,* and *Procedures for Evaluation of the Visual System by Pediatricians.”*

The schedule is available at www.pediatrics.org/cgi/doi/10.1542/peds.2015-3908 and is published in the January issue of *Pediatrics*. Access the schedule, with future updates, at www.aap.org/periodicityschedule.

Resource

- The Jaeb Visual Acuity Screener, a computer-based application for use by nonophthalmic health care professionals, incorporates current screening guidelines and can be downloaded free of charge.
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