Photoscreening

Photoscreening is a form of pediatric vision screening that uses a special-purpose camera to look for focusing problems that could indicate a child is not seeing well with one or both eyes and might need glasses. It is an alternative to a standard vision test with an eye chart and is most often used in young children. By detecting special light reflexes from each eye the devices produce images that can help identify refractive errors (like a prescription for glasses) and ocular misalignments (strabismus). When present, these conditions place a child at risk for amblyopia (lazy eye). The camera images can be interpreted by a trained test administrator or by software incorporated into the equipment. If the images show a condition that may lead to amblyopia a referral should be made by the person performing the photoscreening to a pediatric ophthalmologist for further evaluation. As part of a complete eye examination, the ophthalmologist will dilate the pupils with eye drops and measure the focusing power of the eyes. This is called a cycloplegic refraction and determines if a child needs glasses.

Photoscreening is particularly useful with preverbal children (under age 3 yrs), young children (age 3-5 yrs) and older, non-cooperative or non-verbal children. The photoscreening process usually takes less than a minute to perform. Thus, only brief cooperation is required, for the child to look at the camera. As such, photoscreening offers an alternative to traditional visual acuity screening, providing earlier detection of potential vision problems than has been possible with traditional testing. However, photoscreening cannot determine exactly how well a child’s visual acuity is developing. Visual acuity screening thus remains an important component of a child’s preventative health care and should still be done when a child is sufficiently mature to respond to this testing (usually age 4-6 years).

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