Introduction to Preschool Children’s Eye Screening

History of Preschool Screening in District 24-D. Preschool vision screening began in the district about 25 years ago when the Western Branch Lions Club began doing it with the help of Prevent Blindness in Richmond. After the 24-D Charity Foundation bought an MTI Photoscreener™ for nurses in Gloucester in 1996, its success in screening prompted the purchase of one for the District in 1999. Eventually many clubs began using the several photoscreeners in the district. Direct measure of vision (a subjective method) using the HOTV and stereopsis methods was begun in 2005 and the introduction of the latest technology, PediaVision™ or SPOT™, began in the fall of 2010. The ease and speed of screening with this latest device has reactivated the entire district’s interest in this important community service.

Why screen the vision/eyes of preschool children? Like many of our body’s functions – hearing, balance, speech – vision is learned. The newborn brain is not just adapting to its new world, it is also learning to use its body and senses. Vision is an extremely complex sense involving about a half of all the brain does. If for some reason the brain cannot use an eye well, e.g. clarity of focus or direction of gaze, the chances of learning to see rapidly decrease. If the two eyes have not yet learned to be used together with clear focus by the age of five, the optimal time to correct any problem has passed. While some improvement may result with treatment after that, success is not assured. Therefore, the sooner a good measure of vision or eye condition can be made the better – hence the importance of such testing prior to starting school. Vision testing after the kindergarten year is certainly of benefit, but it mostly just determines whether an aid to visual acuity like eyeglasses is necessary.

How are children’s eyes screened? Direct measure of vision is a common subjective method – not subjective in the sense of opinion, but meaning it requires a response from the subject. Useful in non-verbal children are objective methods that require no interpretation by the child. Objective methods have the advantage of by-passing the need for a response, but suffer from not actually measuring visual acuity. The new SPOT device is 98% accurate and requires very little from either the examiner or child being tested. The scans and analysis by the SPOT are done automatically with only a brief single fixation by the child. Visual acuity is not measured, but most conditions causing poor vision or preventing the development of vision are accurately detected.

What is amblyopia? Amblyopia literally translated means some vision. This condition, often called lazy eye in lay terms, usually refers to the lack of development in vision in the early years of life. If the brain cannot ‘see’ a clear image, or is confused by what would be a double image, it may not learn to process visual information. Conditions like strabismus (crossed eyes), childhood cataract (cloudy lens), inability to sharply focus an image for optical reasons (astigmatism, hyperopia, and myopia) (curved optics, far-sightedness, near-sightedness) can all prevent visual development. These conditions, and others like eye tumors, may be found with a SPOT scan.

What is the purpose of this website description? Good results of screening come from careful planning and consistency. This website will give a Lions Club the background and detailed “how to do it” necessary for a successful screening program. Most important with the exciting new SPOT device by Welch Allyn is that all Lions use it in an consistent and uniform manner, especially reporting results using the Lions District 24-D Preschool Eye Screening Report, a sample of which is included in this website.

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