## VISION CHECKLIST for DEVELOPMENTAL ASSESSORS

## OCULAR TERMINOLOGY for RECORDS REVIEW



Below is a list of frequently occurring terms indicating a vision impairment. If these terms are found while reviewing records or by parent/caregiver report, the checklist is not passed.

Achromatopsia (ay-kroh-muh-TAHP-see-uh) ~ Rare inability to distinguish colors. Non-progressive; hereditary.

Amblyopia (am-bee-OH-pee-uh) ~ Decreased vision in one or both eyes without detectable anatomic damage in the eye or visual pathways.

Aniridia (an-uh-RID-ee-uh) ~ Incomplete formation of the iris. Associated with glaucoma, nystagmus, sensitivity to light, and poor vision.

Aphakia (ay-FAY-kee-uh) ~ Absence of the eye's crystalline lens, e.g., after cataract extraction.

<u>Cataract</u> ~ Opacity or cloudiness of the crystalline lens.

<u>Coloboma</u> (kah-luh-BOH-muh) ~ Cleft or defect in normal continuity of a part of the eye, e.g., absence of lower segment of optic nerve head, choroids, ciliary body, iris, lens or eyelid. Caused by improper fusion of fetal fissure during gestation. May be associated with other abnormalities, including a small eye (microphthalmia).

<u>Cortical Visual Impairment - CVI (also called Cortical Blindness)</u> ~ Absence of vision caused by damage to the blood supply of the visual areas in the occipital cortices of the brain. Retina appears normal; visually-evoked electrical response (VER) is markedly diminished.

 $\underline{\underline{\text{Duane's syndrome}}}$  ~ Eye muscle abnormality characterized by inability to move one eye outward past the midline (abduction) and retraction of that eye into the orbit, with narrowing of the eyelid fissure on attempted movement of that eye toward the nose (adduction).

 $\underline{\text{Esotropia (ET)}}$  (ee-soh-TROH-pee-uh) (uncorrected) ~ Eye misalignment in which one eye deviates inward (toward nose) while the other fixates normally. Present even when both eyes are uncovered.

 $\underline{\text{Exotropia (XT)}}$  (eks-oh-TROH-pee-uh) (uncorrected) ~ Eye misalignment in which one eye deviates outward (away from nose) while the other fixates normally.

Glaucoma (glaw-KOH-muh) ~ Diseases characterized by increased intraocular pressure causing damage to optic nerve and retinal nerve fibers.

High hyperopia (or Extreme Farsightedness) (hi-pur-OH-pee-uh) ~ Focusing defect in which an eye is underpowered.

High myopia (or Extreme Nearsightedness) (mi-OH-pee-uh) ~ Focusing defect in which the eye is overpowered.

<u>Keratoconus</u> (kehr-uh-toh-KOH-nus) ~ Degenerative corneal disease affecting vision. Characterized by generalized thinning and cone-shaped protrusion of the central cornea, usually in both eyes.

<u>Leber's congenital amaurosis</u> (am-uh-ROH-sis). ~ Blindness or near-blindness in both eyes. May be accompanied by nystagmus, sensitivity to light and sunken eyes. Marked reduction in retinal function seen on an electroretinogram.

<u>Light perception (LP)</u> ~ Low level of visual acuity / ability to distinguish light from darkness and to determine the direction of a light source. <u>Microphthalmia</u> (mi-krahf-THAL-mee-uh) ~ Abnormally small eyeball.

<u>Möbius' (or Moebius) syndrome</u> (MEE-bee-us or MOH-bee-us) ~ Bilateral malformation in the cranial nuclei of the 6<sup>th</sup> (abducens) and 7<sup>th</sup> (facial) nerves. Results in inability to move either eye outward past the midline or close to the eyelids, a large inward eye deviation (esotropia), and an expressionless facial appearance.

Monocular (mon-AHK-yu-lur) ~ Located in (or referring to) one eye.

Nystagmus (ni-STAG-mus) ~ Involuntary, rhythmic side-to-side or up and down (oscillating) eye movements

Optic nerve ~ Second cranial nerve. Largest sensory nerve of the eye; carries impulses for sight from the retina to the brain. Composed of retinal nerve fibers that exit the eyeball through the optic disc and exit the orbit through the optic foramen.

Optic nerve hypoplasia (hi-poh-PLAY-zhuh) ~ Small optic disc; sometimes surrounded by a double ring (scleral halo) and often a pigment epithelium halo.

<u>Ptosis</u> (TOH-sis)  $\sim$  Drooping of upper eyelid. May be congenital or caused by paralysis or weakness (paresis) of the  $3^{rd}$  (oculomotor) cranial nerve or sympathetic nerves.

Rod-cone dystrophy ~ Progressive retinal degeneration in both eyes. Night blindness, usually in childhood, is followed by loss of peripheral vision (initially as a ring-shaped defect), progressing over many years to tunnel vision and finally blindness.

"Setting sun" phenomenon (also called "Sunset eyes") ~ Down-gaze eye position with upper eyelid retraction, exposing the upper white part of the eye (sclera); creates a staring expression. Associated with congenital hydrocephalus.

<u>Strabismus</u> (struh-BIZ-mus) (uncorrected) ~ Eye misalignment caused by extraocular muscle imbalance: one fovea is not directed at the same object as the other. Present even when both eyes are uncovered. Usually correctable when diagnosed and treated at an early age.

Retinopathy of Prematurity (ROP) (ret-in-AHP-uh-thee) ~ An eye disease which results from abnormal development of the retina in premature babies. Not all premature infants develop ROP and, for many, it resolves without treatment in the early stages. However, for those babies in whom ROP progresses, treatment is necessary. Continued follow up per the ophthalmologist's recommendations is critical since changes may occur. Later, there is a risk of developing amblyopia, strabismus, and/or needing early correction with glasses. Although informed by the ophthalmologist, parents sometimes misunderstand the need for timely follow up or misunderstand the signs of vision difficulty to look for as their baby gets older. Premature birth brings many, many details for parents to keep track of. Sometimes, the ROP ,although resolved, has altered the inside of the eye or how efficiently the eyes function. Once again, continued follow up per the ophthalmologist's recommendations is important. There are a variety of patient education materials available to help families increase their understanding of ROP. Pediatric Vision Specialists and other Educators of the Visually Impaired can assist in records review and the identification of a child's use of vision for learning when a history of ROP is indicated. If ROP develops, it usually appears between 35 and 45 weeks of conceptive age. It is usually bilateral.