INTRODUCTION
- Lay data is valuable in diagnoses found or treatments prescribed as a result of preschool vision screenings in Oregon.
- Vision screenings are broadly viewed as important, yet only about 1/3 of pre-kindergarten children are screened nationally.
- Amblyopia and other vision problems go undetected in many children, especially in those at higher risk due to limited access to medical care, lower socioeconomic status or a migrant lifestyle.
- This lay screening program is a collaboration of Casey Eye Institute and the Oregon State Elks targeting this demographic.
- The screening partners with the Oregon Head Starts in approximately 100 Elks Children’s Eye Clinic screening stations throughout the state.

METHODS
- Approval obtained from the IRB at OHSU to use personal health information in data collection and reporting.
- Standardized lay vision screening utilizing Elks volunteers.
- Distance monocular crowded Lea acuity (+4 of 5 correct trials = fail).
- Randot E stereopsis (< 4 of 5 correct trials = fail).
- Head Start students age 36 to 59 months.
- Those failing any component received a recommendation for a complete dilated eye examination.
- Charts were retrospectively reviewed for 492 children who presented to a community optometrist or ophthalmologist.
- Parents were contacted on multiple occasions through preschool, by phone and letter to encourage examination.
- Those failing any component received a recommendation for a complete dilated eye examination.
- Charts were retrospectively reviewed for 492 children who presented to a community optometrist or ophthalmologist.
- Data reported for 294 children who received a complete dilated exam.

RESULTS
- 4,973 consented students were screened.
- 1,356 were referred by the screening.
- 1335 were referred by the screening.
- Chart notes from dilated exams analyzed on 22% of the referrals.

DIAGNOSES
- Refractive Error.
- Amblyopia.
- Strabismus.
- Other Ocular Condition.
- Severe Error.

In this group of full exams, 21% had amblyopia and 16% strabismus (1.2% and 1% of all screened, respectively), 67% had significant refractive error, and 27% had no significant diagnoses. Another significant ocular condition was found in 7%, including Horner’s syndrome, glaucoma, myopia, hyperopia, aphakia, cataract, retinal detachment, and retinal membrane. At least one significant ocular condition, other than refractive error, was found in 31%.

REFRACTIVE ERROR

Of those who received a dilated exam, 11% had at least -0.75D myopia, 35% had at least +2.00D hyperopia, 20% at least +3.50D hyperopia, 38% had at least 1.50D myopia, 35% had at least +2.00D hyperopia, and 16% had at least 1.00D anisometropia. No significant refractive error was found in 33%.

TREATMENT PRESCRIBED

At the initial visit, 63% received at least one form of treatment: 60% received spectacles, 5% patching, and 4% referred to a specialist. Three percent received another treatment, including 1% each of vision therapy, atropine penalization, and surgery. No treatment other than monitoring was prescribed for 37%.

CONCLUSIONS
- Only 58% of the referred children who went to an eye doctor received a dilated eye exam. Of those receiving a dilated eye examination after failing a lay preschool vision screening:
- 67% had significant refractive error.
- 31% had a significant ocular condition other than refractive error.
- Almost 2/3 were found to need some form of treatment, most commonly spectacles.

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REFERENCES

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