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**Recent studies of children and eyesight point to risk factors
severely impacting quality of life for future generations**

LOS ANGELES – The University of Southern California (USC) Eye Institute, one of the nation’s Top 10 ophthalmologic programs according to *U.S. News & World Report*, is announcing a call to action for all parents and educators to ensure children ages two and above have an annual eye exam. Through awareness, education and early interventions, the USC Eye Institute believes we can stem the tide of recent pediatric eyesight issues that are contributing to possible risk factors for the younger generation’s quality of life.

Two studies released last month point to alarming trends in pediatric eyesight that impact health, wellness and learning ability for our nation’s children.

One study conducted by the National Eye Institute (NEI) linked hyperopia (farsightedness) in preschoolers ages 4-5 with poor literacy scores. The second study, the Multi-Ethnic Pediatric Eye Disease Study (MEPEDS), conducted by the USC Eye Institute and NEI was the largest study of its kind exploring several health risks including multi-ethnic disparities with the growing trend of childhood myopia (nearsightedness). A lack of physical outdoor exercise spent in natural light instead of indoors doing hours of near-work in low light not only increases myopia but can be a contributing factor to the childhood diabetes epidemic that over a lifetime can lead to possible blindness.

“There needs to be greater focus on children's eye health and screening in preschools and elementary schools to detect early need for eye glasses,” said Rohit Vamra, MD, MPH and director of the USC Eye Institute. “In addition, parents need to tune into their children’s need for more physical exercise by unplugging the computers, video games and smartphones for a short time but on a daily basis or we risk having younger generations suffer from not just myopia but an increase in obesity and related health risks.”

The recently NEI-funded study, Vision in Preschoolers-Hyperopia in Preschoolers (VIP-HIP), conducted a literacy test among 492 preschool-age children to determine reading skills. Researchers discovered children ages 4 and 5 with uncorrected farsightedness (hyperopia) performed poorly on literacy tests relative to those with normal vision.

In addition, the study found children with moderate hyperopia and reduced near visual function such as depth perception, had significant challenges in the print knowledge domain of the test, which assesses the ability to distinguish letters and words.

In the NEI press release, Elise Ciner, O.D., professor at the Pennsylvania College of Optometry at Salus University in Philadelphia, and co-investigator of the study stated, “Preschool children with moderate hyperopia and decreased near vision may benefit from referral for assessment of early literacy skills.” Ciner also indicated that early interventions in these children might provide a better educational outcome.

Dr. Varma, who is also chair of the American Academy of Ophthalmology’s Public Health Committee and a member of the Institute of Medicine’s Roundtable on the Promotion of Health Equity and the Elimination of Health Disparities, added that in addition to being linked to poor literacy outcomes, even low levels of farsightedness can be linked to other eye diseases in children including strabismus known as crossed eyes and amblyopia known as lazy eye – issues that can be addressed with early eyeglass prescriptions.

“The NEI study adds to the growing concern surrounding the incidence of eye conditions such as hyperopia in children,” says Dr. Varma

The USC Eye Institute MEPEDS study assessed childhood eye disease in over 9,000 Los Angeles area children ages 6-72 months. The MEPEDS study found that children in specific racial/ethnic groups and age groups are at higher risk of having both myopia and hyperopia.

While 4-14 percent of children are found to have moderate hyperopia, the MEPEDS study found the prevalence of hyperopia (spherical equivalent of +2 diopters or greater) was highest in Hispanic (26.9 percent) and Non-Hispanic White children (25.7 percent), but lower in African American (20.8 percent) and Asian children (13.5 percent). Compared to African-American children, non-Hispanic white and Hispanic children were more likely to be hyperopic. Researchers also found astigmatism, ≥ 1.5 diopters at any axis, was associated with myopia and hyperopia.

“Studies such as these are crucial,” advised Dr. Varma. “Disparities in health, particularly for young children, should be addressed early as many issues such as myopia and hyperopia are correctable. If not corrected, they can have lifelong impact.”

About the USC Eye Institute

The USC Eye Institute, part of the Keck Medicine of USC university-based medical enterprise, has been a leader in scientific research and innovative clinical treatments for 40 years. Among the top three funded academic-based medical centers by the National Eye Institute (NEI) research grants and ranked in the Top 10 ophthalmology programs in *U.S. News & World Report's* annual "Best Hospitals" issue for more than 20 years, the USC Eye Institute is headquartered in Los Angeles with clinics in Arcadia, Beverly Hills and Pasadena.

Patients from across the country come to see the USC Eye Institute experts who treat a comprehensive array of eye diseases across the life spectrum from infants to aging seniors. The USC Eye Institute is known for its scientific research and clinical innovation including: creation of the Argus implant (also known as the "bionic eye") for retinitis pigmentosa (RP) patients; stem cell therapies for those who have age-related macular degeneration; discovery of the gene that is the cause of the most common eye cancer in children; treatment for eye infections for AIDS patients; inventors of the most widely used glaucoma implant in the world; pioneers of a device for long-term intraocular drug delivery; and the first to use telesurgery to train eye doctors in developing countries. For more information visit: eye.keckmedicine.org. or usceye.org.

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