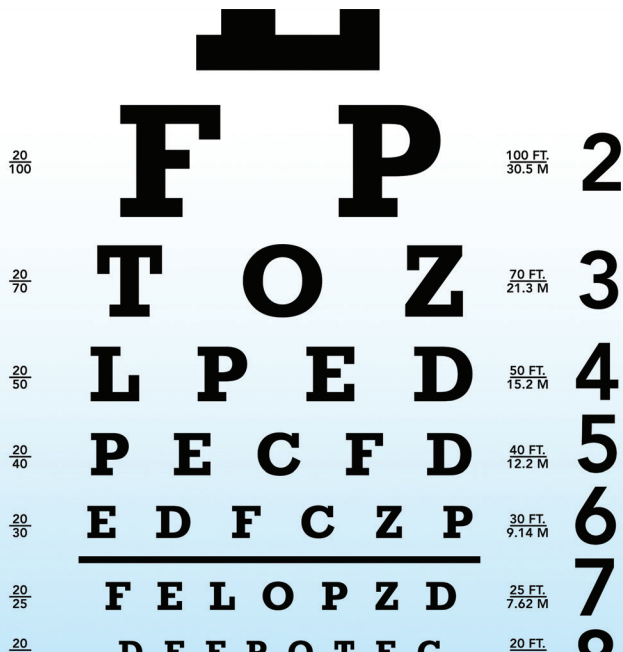




VISION SCREENING AND US POPULATION HEALTH, PART 2: WHAT YOU NEED TO KNOW



A deeper dive into accessing care and why comprehensive eye examinations remain the best approach to improving population health.

BY LORI LATOWSKI GROVER, OD, PHD

In my last article,¹ I highlighted the lack of national evidence-based recommendations for vision screening in the United States for improving population health. Here, I take a deeper dive into other existing factors relative to vision screening and the nuances related to accessing eye care that affect population health.

UNDERSTANDING ACCESS TO CARE

In the world of health services research, which is within the realm of public health, there is a plethora of evidence on understanding the facets of access to health care. In simple terms, we can think about two groups of health care access factors: those that involve *potential access* to

care, and those that involve *realized access* to care.

Potential Access

These factors affect the availability of health care services to the public, such as having health insurance coverage, geographic ability to reach a health care provider, and other key determinants such as an individual's level of education, employment, and health literacy.

Realized Access

These factors affect the actual use and uptake of health care and have been described as “the Five As:” availability, accessibility, accommodation, affordability, and acceptability.²

Access Barriers

Barriers related to accessing and using health care in the United States, including health care equity, have been identified and acknowledged within the public health, research, and health care communities. The recognition of barriers should not be used to justify complacency and inaction when aiming to improve the nation's health. Advances in reducing barriers to optometric eye care are progressing thanks to decades of strong policy, regulatory, and other advocacy efforts.³ For example, health insurance

coverage, the primary access barrier to all health care, was mandated in the United States for children's eye examinations as an essential health benefit in 2011, and Medicaid and the State Children's Health Insurance Program expansion has significantly increased children's access to eye care. In understanding the effects of health care access barriers, health services researchers investigate ways to implement effective interventions that improve care uptake by minimizing these influences.

There is a great need for all eye care stakeholders to recognize and understand the existing body of knowledge specific to health care access and to assist in expanding our knowledge base of the nuances of population eye and vision health.⁴ A robust body of evidence is required to fill the gaps in primary eye care and continue to inform on future best practices, improve upstream access to primary eye and other health care, and to identify how to achieve optimal health outcomes.

THE DEADLY SEVEN

Below are seven key elements associated with vision screening that

further highlight critical shortcomings in improving population health relative to the availability of eye care in the United States.



Lack of Evidence

There continues to be no recommended vision screening in the United States for children or adults that is known to provide the same health equivalent to that of a comprehensive primary eye examination. In addition, the National Academies of Sciences, Engineering, and Medicine (NASEM) report⁵ highlighted this lack of evidence in support of eye and vision-related screening in the United States. The report emphasized existing gaps in evidence and the need for national research and development efforts that may eventually result in effective future vision screening protocols.



Potential Harms to Health

Future research investigating the population health effects of screening required to fill evidence gaps may reveal benefits, but may also in fact identify harms. US Preventive Services Task Force

health screening recommendations are based on findings of both measurable risks/benefits and harms substantiated by effective evidence. This is how current and future population health recommendations gain national endorsement, and why there is a lack of national endorsement for vision screenings. As the health risks of vision screening may outweigh demonstrable benefit for US populations, support or recommendation for it at the population level remains unsubstantiated by evidence.^{1,6}



Undocumented Health Benefits

Comparative effectiveness research (CER) is a valuable health services research approach that identifies what works best in health care for improving population health, direct clinical care, innovations in health care delivery, and public health interventions in the community.

In addition, well-designed CER studies that are focused on filling existing vision screening evidence gaps may assist vision screening advocates in identifying a high-value screening method grounded in evidence.^{7,8} CER can provide new insights into what may emerge as an effective evidence-based vision screening method (ie, one that provides the best opportunities to deliver evidence-based preventive services in primary health care) that may eventually serve as an adjunct to comprehensive eye examinations and children's primary eye care.

The US Preventive Services Task Force states that "well-designed trials are needed to better understand the effects of [vision] screening vs. no screening."^{1,6} Support for vision screening as a preventive health measure requires subsequent investigation of the existing value of comprehensive eye examinations to better understand any complementary

AT A GLANCE

- ▶ There is a need for all eye care stakeholders to recognize and understand the existing body of knowledge relative to health care access and to assist in expanding our knowledge base relative to the nuances of population eye and vision health.
- ▶ A robust body of evidence is required to fill the gaps and continue to inform on future best practices, improve upstream access to primary eye care, and identify how to achieve optimal health outcomes.
- ▶ Support for access to comprehensive eye examinations for children identified as an essential health benefit, covered by health insurance, and required in statute is expanding in a growing number of states and regions.

effects. However, this approach diverts attention away from these efforts and resultant evidence that can further support health care policies, reinforcing the benefits of primary optometric eye care as an essential national population health approach. CER detracts from the need for this US clinical research agenda called for in the NASEM report, one that should be prioritized by schools and colleges of optometry, medicine, and public health regarding the need for national evidence on vision screening, primary eye care, and population health.



Limitations in Diagnostic Efficacy and Follow-Through Care

In children, amblyopia is only one of a myriad eye diseases and disorders that can be identified through a comprehensive eye examination.⁹ Aside from documented false negatives and health-related problems missed with vision screening, a persistent deficiency of ongoing school and community-based vision screenings perpetuates the cycle of incomplete referrals for children identified as those “in need” of eye care. Rates of children undergoing vision screening who receive appropriate referral for a comprehensive eye examination and active follow-through to an eye doctor remain dismal, delaying necessary care required to treat and prevent vision loss and improve health outcomes (see *10 Steps to Enhance Vision Care in Children*).¹⁰⁻¹³



Lack of Standardized Criteria

An effective health screening must be valid, sensitive, specific, and reliable. It must accurately represent targeted health outcomes of a group of individuals and properly assess the distribution of outcomes within the targeted group. Without more substantive data, there is limited opportunity to effectively

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identify targeted health problems or conditions for intervention.



Lack of Nationally Recognized Definition

There is no universally accepted definition or process of vision screening amongst clinicians, researchers, health care professionals, states, school districts, or service organizations. Existing vision screening data remain disparate and fragmented due to subjective methodologies and interpretations. These disparities create a false sense of security for parents and stakeholders regarding a child’s eye health and visual function. This cloudiness in “defining what you mean when you say screen” has contributed to existing gaps in evidence supporting vision screening benefits versus risks in children and adults.^{1,6,14} Concerns identified by the US Preventive Services Task Force, the NASEM, and others require resolution to ensure an effective and equitable approach to children’s health is found, which is of primary importance to vision screening advocates.



Conflating Vision Screening With Optometric Eye Care

Words matter when differentiating eye care from other health and non-health care services.

Persistent use of terminology that frames an eye examination as a screening is all too common. It misrepresents the care being provided and diminishes the value of comprehensive optometric eye care. It is therefore critical for all eye care professionals to clarify these misperceptions of comprehensive eye examinations framed as vision screenings, not only to minimize confusion, but also to differentiate high-value optometric care from other types of care, such as low value screening methods.

ADVOCATING FOR EYE AND VISION HEALTH EQUITY

The NASEM report included nine overarching recommendations for the nation’s health. The summarized goals identified a need for the nation to:

- Eliminate correctable and avoidable vision impairment by 2030,
- Delay the onset and progression of

10 STEPS TO ENHANCE VISION CARE IN CHILDREN

1. Enhance data collection.
2. Ensure proper terminology.
3. Allocate new resources.
4. Ensure availability and accessibility of vision care services.
5. Maintain comprehensive vision care.
6. Reach underserved populations.
7. Deliver vision care for children with learning and developmental difficulties.
8. Enhance public education.
9. Establish a collaborative response to children's vision issues.
10. Reinforce sports eyewear considerations.

Source: APHA urges preservation of children's access to comprehensive vision care. American Optometric Association. November 4, 2020. www.aoa.org/news/clinical-eye-care/public-health/apha-urges-preservation-of-children-access-to-comprehensive-vision-care?sso=y. Accessed February 17, 2022.

unavoidable chronic eye diseases and conditions,

- Minimize the effect of chronic vision impairment, and
- Achieve eye and vision health equity by improving care in underserved populations.

Health equity is achieved when every child has the opportunity to attain their full health potential and requires the elimination of health disparities.¹⁵ If there are unfair and avoidable or remediable differences in health among population groups defined socially, economically, demographically, or geographically, then health equity does not exist. Based on the evidence regarding comprehensive eye examinations and accessing optometric eye care, choosing to advocate for divergent and variable approaches in children's eye and vision health only reinforces health disparities.

Support for much-needed access to comprehensive eye examinations for children—identified as an essential health benefit, covered by health insurance, and required in statute—is expanding in a growing number of states and regions. Is there justification for advocating for primary optometric eye care for some children while viewing it as unachievable for others (ie, underserved populations)? No. Doctors of optometry, as the nation's primary eye care doctors, must ensure that the high-value, effective, and equitable care they provide is recognized as the unequivocal standard of care for all populations.

THE TAKE HOME

Until future vision screening research demonstrates evidence-based population benefit outweighing health risks and improved health outcomes comparable to those achieved

by front-line optometric eye care and comprehensive eye examinations, promoting advocacy for vision screening remains a risky, low-value approach to population health and health equity. Although we may not yet have all the answers, we do know better from what the evidence tells us regarding vision screening versus a comprehensive eye examination. ■

1. Grover LL. Vision screening and US population health: what you need to know. *Modern Optometry*. 2021;3(7):55-58.
2. McLaughlin CG, Wyszewianski L. Access to care: remembering old lessons. *Health Serv Res*. 2002;37(6):1441-1443.
3. AOA efforts towards access to eye and vision care. American Optometric Association. www.aoa.org/AOA/Documents/Advocacy/HPI/HPI-AOA-Efforts-Towards-Access-to-Eye-and-Vision-Care.pdf. Accessed February 17, 2022.
4. Grover LL. Access to health care, eye care and vision rehabilitation care for older adults with chronic vision impairment in the United States. The Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, November 2012.
5. National Academies of Sciences, Engineering, and Medicine. Making Eye Health a Population Health Imperative: Vision for Tomorrow. *The National Academies Press*; 2016.
6. Vision in children ages 6 months to 5 years: screening. United States Preventive Services Taskforce. September 5, 2017. www.uspreventiveservices-taskforce.org/uspstf/recommendation/vision-in-children-ages-6-months-to-5-years-screening. Accessed February 17, 2022.
7. What is CER? Harvard TH Chan. www.hsph.harvard.edu/comparative-effectiveness-research-initiative/definition/. Accessed January 7, 2022.
8. About Us. Johns Hopkins Bloomberg School of Public Health. June 28, 2018. www.jhsph.edu/research/centers-and-institutes/health-services-outcomes-research/about-us/. Accessed February 17, 2022.
9. Systemic conditions with ocular and visual manifestations. American Optometric Association. December 2014. www.aoa.org/assets/documents/EBO/Systemic-Conditions-Ocular-Visual-Manifestations.pdf. Accessed February 17, 2022.
10. APHA urges preservation of children's access to comprehensive vision care. American Optometric Association. November 4, 2020. www.aoa.org/news/clinical-eye-care/public-health/apha-urges-preservation-of-children-access-to-comprehensive-vision-care?sso=y. Accessed February 17, 2022.
11. Why comprehensive eye and vision examinations are critical for school-aged children. American Optometric Association. March 2018. www.aoa.org/AOA/Documents/Advocacy/HPI/Why%20Comprehensive%20Eye%20and%20Vision%20Examinations%20are%20Critical%20for%20School-aged%20Children.pdf. Accessed February 17, 2022.
12. Jacobson J. Why can't Johnny read? The Abell Report. 2010;23(7):1-9.
13. Hartmann EE, Block SS, Wallace DK; National Expert Panel to the National Center for Children's Vision and Eye Health. Vision and eye health in children 36 to <72 months: proposed data system. *Optom Vis Sci*. 2015;92(1):24-30.
14. Comprehensive pediatric eye and vision examination. American Optometric Association. February 12, 2017. www.aoa.org/AOA/Documents/Practice%20Management/Clinical%20Guidelines/EBO%20Guidelines/Comprehensive%20Pediatric%20Eye%20and%20Vision%20Exam.pdf. Accessed February 17, 2022.
15. Health equity. Centers for Disease Control and Prevention. www.cdc.gov/chronicdisease/healthequity/index.htm. Accessed February 17, 2022.

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- Financial disclosure: None