

January 23, 2020

Robert R. Redfield, MD  
Director  
Centers for Disease Control and Prevention  
1600 Clifton Road, NE  
Atlanta, Georgia 30333

**RE: Priority Topics for the Community Preventive Services Task Force Request for Information**

Dear Dr. Redfield:

On behalf of Prevent Blindness and the millions of people of all ages whom we represent across the country who live with low vision, vision impairment, and vision-related eye diseases, we appreciate the opportunity to respond to the Centers for Disease Control and Prevention's Request for Information regarding Priority Topics for the Community Preventive Services Task Force (CPSTF) [Docket No. CDC-2019-0112]. We look forward to working with the CDC to ensure that Americans of all ages can live productively, age successfully, and engage fully with a lifetime of healthy vision.

Prevent Blindness is the nation's leading nonprofit, voluntary organization committed to preventing blindness and preserving sight. Prevent Blindness is primarily a public health organization. We strive to improve our nation's vision and eye health by enhancing state and community capacities through our core competencies of early detection, improved access to eye care, patient support, care coordination, public policy, research, advocacy, public awareness, and health education. As well, protecting and expanding access to sight-saving care is our priority for patients across the age continuum.

Below, we provide additional insight using the questions that the CDC has included in its RFI.

***What public health topics should be prioritized for CPSTF systematic reviews assessing the effectiveness and economic merits of public health programs, services, and other interventions?***

We urge the CPSTF to prioritize our national vision and eye health in its work over the coming 5 years. We note that the CPSTF has not conducted extensive vision or eye health-related work since its inception in 1996; yet, vision and eye health touches on several topics that the CPSTF has previously reviewed including diabetes management, intervention, and community health engagement, health equity, school-based health, care coordination, tobacco use, provider-patient relationships and interventions, and others. The year 2020 represents an opportune time to elevate vision and eye health into current public health practices, and we stand ready to work with the CPSTF on this important aspect of overall health and well-being.

Below are specific areas that we believe the CPSTF would be effective in taking on.

**Community health centers:** Communities and public health leaders need a stronger understanding of how to use existing infrastructure available in community health centers and established relationships with underserved and low-income communities to achieve improved access to vision services and overall eye health in high-risk populations. Currently, only 20% of FQHC's have an onsite optometrist or ophthalmologist. As well, in 2011, 24% of counties in the United States (754 of 3,143) do not have an

ophthalmologist or an optometrist<sup>1</sup>; thus, making community health interventions especially critical to preventing avoidable vision loss.

*Recommendation:* The CPSTF's findings should include an assessment of community health centers capacity to provide access to eye care, identify factors that influence whether screening programs lead to improved eye and vision health, and explore policy and funding strategies to expand the role of community health centers to improve access to eye and vision care services.

**Early detection methods:** Existing research has indicated that low-income, ethnic minorities, residents in rural areas, and individuals with special health care needs have less access to eye care and treatment. Studies should evaluate innovative models of care delivery to improve access to appropriate diagnostics, follow-up treatment, and rehabilitation services that contribute to prevention or delayed progression of refractive and retinal disorders.

*Recommendation:* Community leaders need a better understanding of effective methods for screening, early diagnoses and treatment for all treatable vision conditions for those living in varying ethnic, geographic, and economic populations throughout the United States. Outcomes from the CPSTF's findings would contribute to more effective public health protocols to reduce vision impairment and reduce current health disparities.

**Vision loss and mental-social-emotional health:** Vision loss can be devastating to the patient, but also to the patient's family and personal community. There is opportunity to understand how vision loss and impairment can affect mental health, emotional well-being, social isolation, caregiver stress, community engagement, and other long-term health outcomes. Research identifying and addressing the long-term health impact of visual impairments is necessary to achieve health and social participation.

*Recommendation:* We ask the CPSTF to issue findings that will contribute to increased referral and access to vision rehabilitative services, promote community activities for those with impaired vision, and guide health interventions to promote early detection and treatment of depression and other mental health issues at the time of vision loss.

**Integrating vision into overall health:** Emerging research is showing a bi-directional benefit for vision-based interventions within the overall health care system, including the potential for earlier detection of Alzheimer's disease, cognitive decline, and related dementias through specific eye examination procedures. Additionally, maintaining good vision and adhering to recommended vision treatments can have a beneficial effect on chronic disease management, risk of falls, mental health, cognitive health, and even mortality risk. Further, optimal health care for patients with visual impairments must consider the patient's visual functioning. For example, issues of polypharmacy may compound for patients with low vision who struggle with visual management of multiple medications. Without integrating vision care to other aspects of the health care system, patients with visual impairments will remain disadvantaged in these settings and health disparities will remain.

*Recommendation:* We ask the CPSTF to issue findings and develop guidance for community leaders to utilize when integrating vision into overall health approaches. Such examples of potential integration

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<sup>1</sup> Gibson DM. The geographic distribution of eye care providers in the United States: Implications for a national strategy to improve vision health. *Preventive Medicine*. 2015;73:30–36. Accessed 20/01/23 from: <https://www.ncbi.nlm.nih.gov/books/NBK402365/>

include chronic disease management, smoking cessation, patient awareness of risk factors, aging health, and workplace and school programs and policies (i.e. eye safety, successful use of digital screens, physical activity and mobility).

**Vision and aging health:** As we age, our eyes undergo many changes that can affect their function and our ability to see clearly. Loss of sight, whether it occurs suddenly or gradually, can be a distressing and life-altering experience. Adapting to one's daily lifestyle absent the most critical sensory enabler of independent living requires that patients work toward acceptance of their "new normal" but also the assistance that may be required to learn their old routines in different ways. Commonly, individuals may be unaware that their vision and visual function may be deteriorating, especially when it does not affect common tasks like reading. Changes in vision as we age can lead to differentiating between colors, a decrease in visual field (or loss of side vision), difficulty focusing on nearby objects, dry eye, and adjusting to glare when entering dark rooms from outdoors. Vision diseases can further affect these changes in visual function without early identification and effective, timely treatment. Decreasing vision does not have to be an inevitable consequence of aging.

*Recommendation:* Streamlining services and bringing them into primary care settings, community health centers, senior centers, pharmacies or other local outlets can make initial screenings accessible. We believe that healthy aging is a process, not an outcome, and we ask the CPSTF to consider interventions that encourage patients to prioritize their vision health through the aging process and direct community leaders toward strategies that include vision health as an aging health imperative.

**Children's vision and eye health:** In children, vision impairments caused by refractive error, amblyopia, strabismus, and/or astigmatism are common conditions among children. Vision disorders in children can affect development in areas of motor function, cognition, emotion, and socialization. These impacts can in turn affect school readiness, learning, quality of life, and potentially future employment and independence if left unaddressed for some time. Children and their families face a fragmented public health infrastructure that is not adequately addressing their eye care needs. According to data from the CDC, only 63.5% of children ages 3 to 5 (which is typically just as children are entering the school system), had their vision tested by a provider.<sup>2</sup>

*Recommendation:* Recommendations on early intervention techniques like screening, detection and diagnosis, and treatment protocols will contribute to an effective public health and community health infrastructure while lowering health disparities. The CPSTF's recommendations pertaining to school-based health centers indicate that children from low-income and racial or ethnic minority populations often face disparities in care and worse outcomes than their peers who may not have similar disadvantages. We agree that school-based health centers can play essential roles in community health, and we ask that the CPSTF explore how these centers can help close gaps in vision care.

**Economic implications:** Vision impairments are not only potentially devastating to the patient, but they can be incredibly costly if left unaddressed. **Vision impairment, including private and public payments for medical care long-term care, patients' out-of-pocket costs, direct and indirect costs, lost productivity, and consequential lost tax revenue cost the United States \$167 billion in 2019<sup>3</sup>. This figure will increase to \$274 billion by 2032, just as the last ranks of the baby boomer**

<sup>2</sup> Vision Testing Among Children Aged 3-5 Years in the United States, 2016-2017 <https://www.cdc.gov/nchs/products/databriefs/db353.htm>

<sup>3</sup> "The Future of Vision: Forecasting the Prevalence and Costs of Vision Problems;" NORC University of Chicago (2014)

**generation will become Medicare-eligible.** By 2050, national expenditures on vision impairments and eye disease will surpass \$717 billion. The proportion of these costs paid by government programs will, as based on cost projections, increase from 32.6% to 41.4% by 2050. Furthermore, a recent analysis of 24,000 hospitalized patients determined that patients with vision loss experienced longer hospital stays and high readmission rates, resulting in \$500 million in excess costs. The same study indicated a readmission rate of 23.1% for Medicare enrollees with severe vision loss compared to those without vision loss at 18.7%.<sup>4</sup> Children’s vision problems cost our country \$10 billion annually, with families shouldering 45% of these costs.

*Recommendation:* Putting off our national vision and eye health until costs are enormous on the back end represents a significant missed opportunity, given that the most severe incidents of vision loss and eye disease are largely preventable. We ask the CPSTF to seriously consider these economic implications and determine how its findings can help address this burgeoning crisis with small scale, community-based interventions.

### ***What is the rationale for choosing these topics?***

Vision and eye health is a critical aspect of daily living for people of all ages, racial and ethnic backgrounds, and socio-economic circumstances. Attention to vision and eye health is critical at all stages in life: from early in life as a part of healthy childhood development, for those in their working years, and for older adults as they seek to maintain independence and a high quality of life through the aging process. Vision and eye health, however, is often an afterthought until a patient notices changes to his or her eyesight, and by this point, lost vision resulting from the most serious diseases and conditions is typically permanent and irreversible. Prevention and early detection is a key strategy in preventing avoidable vision loss. Thus, a health strategy that emphasizes early detection, prevention, intervention, integration, and health promotion is especially critical.

Vision in young children represents a profound intersection between early development and learning success with that of good health. Healthy sight plays a role in reducing poverty, improving reading readiness, increased graduation rates, attainment of developmental milestones, and positive social relationships; therefore, it must be addressed in an evidence-based way within diverse health and educational settings. Further, there are disparities in access to and utilization of eye care among minority populations, resulting in higher incidence of vision problems without resolution.

Below, we address the additional domains outlined in this RFI as they relate to vision and eye health.

### ***Burden of disease and preventability***

The reality is that 75% of incidents of avoidable vision loss are preventable and treatable through early detection, intervention, and health promotion efforts as well as through improved access to quality eye care. A Robert Wood Johnson Foundation study<sup>5</sup> ranks eye disorders as the fifth leading chronic condition—requiring ongoing treatment and management over one’s lifetime—among those aged 65

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<sup>4</sup> Morse AR, et al. *JAMA Ophthalmol.* 2019;doi:10.1001/jamaophthalmol.2019.0446. Accessed 20/01/23 from: <https://www.ncbi.nlm.nih.gov/pubmed/30946451>

<sup>5</sup> “Chronic Care: Making the Case for Ongoing Care” Robert Woods Johnson Foundation, 2010. <https://www.rwjf.org/content/dam/farm/reports/reports/2010/rwjf54583>

years and up and seventh across all age groups. According to the CDC's Vision Health Initiative (VHI), available prevalence estimates of serious vision impairments, including blindness and severe vision loss, and eye diseases show that 1.02 million people were blind, 3.22 million people had vision impairment, and 8.2 million people had uncorrected refractive error in 2015.<sup>6</sup> **The VHI also estimates that, by 2050, incidence of diabetes-related eye disease will increase by 72%, rates of cataracts will spike to 87%, and age-related macular degeneration and glaucoma rates will both increase 100% while vision impairment and blindness will increase 150%.**<sup>7</sup> Our rapidly aging population and changes in demographics are key drivers of increasing rates of vision disease and loss; yet, patients continue to face significant barriers in accessing quality, preventive eye care across our national health system.

Vision disorders affect nearly 13.5 million children in the United States, and are the fourth most common disability in children in the U.S. One in four school-age children and 1 in 17 preschool-aged children have some form of vision problem requiring treatment. Serious childhood vision disorders like amblyopia and strabismus can lead to permanent vision loss if left undetected and untreated, which could lead to significant costs to the individual, community, and system over the course of a lifetime.

Barriers for effective preventative vision and eye health exist on multiple levels:

- **Individuals:** Barriers include lack of access to transportation or technological means to access a care setting, cost of obtaining care from a provider and the prescribed course of treatment, understanding care information in one's language or as it is relative to one's culture, or having enough providers in enough care settings to treat patients. Consequential to aging is deteriorating eye health. Attitudes about aging and accepting poor health outcomes as inevitable with getting older preclude early detection and treatment efforts. In addition, one's ability to prioritize eye health among other costly and burdensome conditions may also pose an access challenge. In children, parents may not understand or even be aware that their child is experiencing a vision problem. Children also may not understand their own visual experience and thus may not inform their parents that they cannot see "clearly."
- **Community:** At the community level, barriers could include lack of public awareness about risk factors for eye disease like family history or behaviors such as smoking, health promotion efforts that exclude vision and eye health information, or public policies that are misaligned with goals for a broader population.
- **Systems:** At the systems level, lack of adequate surveillance, variations in data collection methods, and no measures of accountability related to vision health, impairment and eye disease make it difficult to track and measure progress, close gaps in access, and achieve equity. National surveillance of children's vision and eye health is a significant public health challenge as there is currently no system in place to track screenings, follow-up eye exams, treatment, or outcomes; thus, making it difficult to measure progress and facilitate coordinated care across systems.

### *Presence of important health disparities*

Numerous studies and measures indicate where disparities in access to care exist along racial, ethnic, and socioeconomic lines. Rural populations and low-income groups appear to be at higher risk for vision

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<sup>6</sup> Centers for Disease Control and Prevention Vision Health Initiative: "The Burden of Vision Loss" (2017).

<https://www.cdc.gov/visionhealth/risk/burden.htm>

<sup>7</sup> Centers for Disease Control and Prevention Vision Health Initiative: "Looking Ahead: Improving Our Vision for the Future" (2017).

<https://www.cdc.gov/visionhealth/resources/infographics/future.html>

problems compared to wealthier and urban Americans. In addition to general financial and insurance coverage barriers, the lack of access to qualified vision care professionals also presents a major challenge for persons in low-income communities and geographically isolated and medically underserved areas, including rural areas. Age-adjusted rates of service utilization are highest among those with private insurance (67 percent) and lower for those with public (55 percent) or no health insurance (42 percent).<sup>8</sup> A major driver of the growth in prevalence is not only the current population with each disease, but the age and racial prevalence of each condition. When stratified by racial populations and disease prevalence, by 2050, 20% of glaucoma patients will be black or Hispanic while Hispanics will exhibit the fastest rate of growth in cataract incidence and diabetic retinopathy.<sup>9</sup>

In children, white children and children from families with higher incomes are more likely to have a detected, diagnosed, and treated eye condition, which suggests higher access to diagnostic care. Meanwhile, among children with diagnosed eye conditions, black children have lower overall health care expenditures than their white peers do. However, expenditures on vision and eye care in the emergency setting indicates that regular access to office-based care is unavailable. This pattern is also evident when comparing families with incomes at 400% below the federal poverty level to children from families with higher incomes.<sup>10</sup> Data from the 2016-2017 National Health Interview Survey indicates that Hispanic children (58.6%) were less likely to have ever had their vision tested compared to white children (65.4%).<sup>11</sup>

### *Alignment with national efforts (e.g., Healthy People 2020/2030)*

Healthy People 2020's goal for vision is to "improve the visual health of the nation through prevention, early detection, timely treatment, and rehabilitation."<sup>12</sup> Objectives for achieving this goal include evidence-based approaches to prevent blindness and preserve sight through screenings and examinations, early detection and treatment, and rehabilitation for those who live with low vision or a vision loss. For Healthy People 2030, which we understand is nearing completion and public release, we outlined specific recommendations related to vision. Summarized below:

- **Topic: Access to Health Services** – Propose new objective: Reduce the proportion of persons who are unable to, or experience a delay in, obtaining necessary vision care. Propose new core objective. Increase the proportion of persons with vision insurance. Propose developmental objective Increase the proportion of Federally Qualified Health Centers (FQHCs) that provide comprehensive vision health services.
- **Topic: Dementias, including Alzheimer's Disease** – Proposed developmental objective: Increase the proportion of persons diagnosed with Alzheimer's Disease or other types of dementia who receive a comprehensive eye examination and counseling for increasing/maintaining visual functioning.
- **Topic: Diabetes** – Support the continued inclusion of the related vision objective: Increase the proportion of adults with diabetes who have an annual eye exam.

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<sup>8</sup> Medical Expenditure Panel Survey, AHRQ

<sup>9</sup> "The Future of Vision: Forecasting the Prevalence and Costs of Vision Problems." NORC University of Chicago (2014)

<sup>10</sup> Ganz M, Xuan Z, Hunter DG. Patterns of Eye Care Use and Expenditures Among Children with Diagnosed Eye Conditions. *Journal of the American Association of Pediatric Ophthalmology and Strabismus*, 2007;11(5):480-487.

<sup>11</sup> Vision Testing Among Children Aged 3-5 Years in the United States, 2016-2017 <https://www.cdc.gov/nchs/products/databriefs/db353.htm>

<sup>12</sup> Healthy People 2020: <https://www.healthypeople.gov/2020/topics-objectives/topic/vision>

- **Topic: Early and Middle Childhood** – Retain the following developmental objective EMC-2030-D01 from Healthy People 2020 with one revision. Increase the proportion of children who are ready for school in all five domains of healthy development: physical development, social-emotional development, approaches to learning, language, and cognitive development to Increase the proportion of children who are ready for school in all five domains of healthy development: sensory/physical development, social-emotional development, approaches to learning, language, and cognitive development.
- **Topic: Injury and Violence Prevention** – Applaud continued inclusion of the objective to “Reduce fall-related deaths among adults age 65 and older. Retain the HP2020 Objectives for personal safety eyewear in youth: From HP2020: V-6 Increase the use of personal protective eyewear in recreational activities and hazardous situations around the home and V-6.1 Increase the use of personal protective eyewear in recreational activities and hazardous situations around the home among children and adolescents aged 6 to 17 years.
- **Topic: Mental Health and Mental Disorders** – Propose new objective: Increase number of people with diagnosed vision loss who receive depression screening and counseling.
- **Topic: Maternal, Infant, and Child Health** – Revise the following objective “Increase the proportion of children (aged 9-35 months) who have completed a developmental screening” to read as “Increase the proportion of children (aged 9-35 months) who have completed a developmental screening, including screening for sensory deficits (vision/hearing).” Revise the following Objective 16: “Increase the proportion of children (aged 9-35 months) who have completed a developmental screening” to “Increase the proportion of children (aged 6-35 months) who have completed a developmental screening, including periodic assessment of core health status components including behavioral and mental health, developmental, dental, hearing or visual impairment and to identify and prevent elevated blood lead levels.
- **Topic: Older Adults** – Propose new objective here or in the IVP topic: Increase the proportion of adults age 65+ who receive an annual comprehensive eye exam.
- **Topic: Occupational Safety and Health** – Move the HP2020 objectives related to occupational eye safety to this section. From HP2020: V-3Reduce occupational eye injuries; V-3.1Reduce occupational eye injuries resulting in lost work days; V-3.2Reduce occupational eye injuries treated in emergency departments (EDs) (Bureau of Labor Statistics).
- **Topic: Vision** – Retain the HP2020 Objectives for personal safety eyewear in youth: From HP2020: V-6 Increase the use of personal protective eyewear in recreational activities and hazardous situations around the home; V-6.1 Increase the use of personal protective eyewear in recreational activities and hazardous situations around the home among children and adolescents aged 6 to 17 years; V-6.2 Increase the use of protective eyewear in recreational activities and hazardous situations around the home among adults aged 18 years and older. Revise the following objective: “Increase the proportion of preschool children aged 3-5 years who receive vision screening” to “Increase the proportion of preschool children birth through age 5 who receive vision screening.” Propose new developmental objective: Increase the number of states and the District of Columbia that have a vision and eye health surveillance system.

### ***Balance across public health topics***

Vision impairment and eye diseases often contribute to or result from serious and chronic health conditions, many of which carry a significant cost to the system. This includes diabetes, stroke, depression, social isolation, cognitive decline, and injuries related to falls. **People with vision**

impairment are more likely to experience other chronic conditions, including hearing impairment, heart problems, chronic kidney disease, hypertension, joint symptoms, chronic low back pain, and stroke as well as falls, injury, motor vehicle collisions, diminished health-related quality of life, and premature death.<sup>13</sup> Untreated strabismus (crossed eye) and amblyopia (loss of or reduced vision in an eye) affects healthy development and will lead to permanent vision loss without early detection and treatment.

*Complementary work of other bodies that provide guidance or recommendations on addressing health issues (e.g., the U.S. Preventative Services Task Force) What are examples of published studies on interventions within these topics?*

The U.S. Preventative Services Task Force (USPTF) recommends vision screening for children ages 3-5 to detect amblyopia.<sup>14</sup> As well, the National Academies of Sciences, Engineering, and Medicine (NASEM) recommends the development of a “single set of evidence-based clinical... and practical guidelines of measures that can be used by eye care professionals, other care providers, and public health professionals to prevent, screen for, detect, monitor, diagnose, and treat eye and vision problems.”<sup>15</sup> In July of 2016, the American Academy of Optometry issued a policy statement titled Childhood Vision Screening, which emphasizes “the value of a continuum of eye care that includes both evidence-based vision screenings and access to comprehensive eye examinations by optometrists or ophthalmologists.”<sup>16</sup> Below, we list several publications that outlined proposed definitions and procedures for screening young children:

- Marsh-Tootle, et.al. (2014) *Vision and Eye Health in Children 36<72 months: Proposed Data Definitions*, Optometry and Vision Science, American Academy of Optometry, Vol. 92, No. 1, pp. 17-23.
- Cotter, et. al. (2014). *Vision Screening for Children 36>72 months: Recommended Practices*, Optometry and Vision Science, American Academy of Optometry, Vol. 92, No. 1, pp. 6-16

A 2016 study from the National Academies of Sciences, Engineering, and Medicine (NASEM), [Making Eye Health a Population Imperative: Vision for Tomorrow](#), points to the critical role that HHS can have in motivating and coordinating federal government action around improving our national vision and eye health. Our nation needs coordinated interventions that support key stakeholders and state-based public health systems to expand early detection, prevention, patient support, and research to lessen the burden of vision disorders on working adults and our nation’s public health infrastructure. We believe that these strategies are critical in stemming the burgeoning tide of preventable vision loss and ensuring that Americans, through optimal vision, continue to engage with the world around them, see to work and learn, and maintain our independence as we age.

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<sup>13</sup> Vision Impairment and Comorbid Conditions, Centers for Disease Control and Prevention, Vision Health Initiative: <https://www.cdc.gov/visionhealth/living/index.html>

<sup>14</sup> U.S. Preventive Services Task Force. Vision screening in children aged 6 months to 5 years of age: U.S. Preventive Services Task Force Recommendation Statement. JAMA 318(9):836–44. 2017.

<sup>15</sup> (National Academies of Sciences, Division, Practice, & Health, 2016)

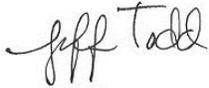
<sup>16</sup> (Ciner, Cotter, & Kulp, 2016)

## Conclusion

Once again, Prevent Blindness appreciates the opportunity to comment on the CDC's RFI regarding priority topics for the CPSTF. The year 2020 represents an opportune time to elevate vision and eye health into current public health practices, and we stand ready to work with the CPSTF on this important aspect of overall health and well-being.

Please do not hesitate to contact Sara D. Brown, Director of Government Affairs, at (312) 363-6031 or email at [sbrown@preventblindness.org](mailto:sbrown@preventblindness.org) if you or your staff would like to discuss these issues further.

Sincerely,



Jeff Todd  
President and Chief Executive Officer  
Prevent Blindness