

Ageing and vision loss: looking to the future



With an ageing global population, vision impairment has risen to the forefront as a pronounced public health concern.¹ In 2020, 1.1 billion people had distance vision impairment or uncorrected presbyopia.² By 2050, this figure is expected to increase to 1.8 billion people. Common causes of vision impairment, including cataract, glaucoma, age-related macular degeneration, diabetic retinopathy, and presbyopia, occur more frequently in later life (>60 years). Although the age-standardised prevalence of blindness and vision impairment has decreased in the past 30 years, this decrease has been offset by a rapidly ageing population, which has resulted in an increasing number of individuals, mostly adults older than 60 years, with blindness and vision impairment globally.² Consequently, achieving the UN Sustainable Development Goals and objectives of the UN Decade of Healthy Ageing (2020–30) will require coordinated action to attend to the growing number of people impacted by poor vision, particularly in later life.³

Over the past 30 years there have been important changes in the leading causes of vision loss. Infectious causes such as trachoma and onchocerciasis have declined, whereas chronic eye diseases such as glaucoma, age-related macular degeneration, and diabetic retinopathy now account for a greater proportion of blindness and vision impairment globally.⁴ *The Lancet Global Health Commission on Global Eye Health*,⁵ highlights how this epidemiological transition necessitates a refocused public health and clinical response.

Vision needs to be recognised as a key part of overall health. There is mounting evidence indicating that vision loss affects more than how people see,⁶ and has implications for physical, cognitive, and mental health, and can exacerbate inequities in employment, health-care access, and income.⁷ As a result, research cannot be limited to prevention, treatments, and cures, because there is an urgent need to identify strategies that will equitably maximise the health and opportunities of people with vision impairment as they age. Such an approach is consistent with the goals of the UN Decade of Healthy Ageing, which seeks not only to promote healthy ageing, but also to reduce inequities related to ageing.³

The role that society plays in the interaction between vision and ageing also cannot be ignored. Ageing research has increasingly adopted the perspective that society and the environment shape health and wellbeing; however, this perspective has not been as comprehensively integrated into vision and eye health research. The WHO *World report on ageing and health* calls for a “rights-based approach to healthy ageing” to address the social, structural, and legal barriers to health for older adults.⁸ Similarly, *The Lancet Global Health Commission*⁵ outlines a need to frame vision loss within a human rights context, and highlights that the UN places a heavy emphasis on realisation of the Sustainable Development Goals by, for, and with people with disabilities, which includes people with vision loss. However, there remains a gap in connecting these efforts to achieve health equity and strengthen human rights for people ageing with vision loss.

Eye care needs to be included as a crucial component of health care for older adults. Vision and eye health are often not well integrated within primary health and prevention strategies in efforts to improve health-care outcomes, quality, and safety or when developing health interventions and behavioural change programmes.⁷ Because the prevalence of vision loss increases with age, these areas represent missed opportunities to optimise the health and wellbeing of older adults.

Collaboration is key to meeting these challenges. Research that brings gerontological principles and expertise on eye health issues is needed to identify and address health inequities that arise as people age with vision impairment. These cross-disciplinary collaborations can create new opportunities for data use, innovative research methods, and crucial holistic perspectives on the impact of vision loss during the whole lifespan. But this work cannot be limited to reporting study results, as there is also a need for translation of findings to stakeholders and policy makers who represent ageing and vision perspectives. For evidence to become action, vision researchers need to disseminate results for communities with a focus on ageing, and vice versa.

*The Lancet Global Health Commission*⁵ is a clear call to action for better integration of vision and ageing research, policy, and clinical care. The high prevalence

Lancet Glob Health 2021

Published Online
February 16, 2021
[https://doi.org/10.1016/S2214-109X\(21\)00031-0](https://doi.org/10.1016/S2214-109X(21)00031-0)

See Online/The Lancet Global Health Commission
[https://doi.org/10.1016/S2214-109X\(20\)30488-5](https://doi.org/10.1016/S2214-109X(20)30488-5)

of vision loss at older ages, and its impact on health, wellbeing, and existing inequities remains substantial, and will increase as the global population ages. Accordingly, the eye care and ageing communities need to come together to recognise that our world will only truly be ageing friendly once it is vision friendly.

We declare no competing interests.

Copyright © 2021 The Author(s). Published by Elsevier Ltd. This is an Open Access article under the CC BY 4.0 license.

***Bonnielin K Swenor, Joshua R Ehrlich**
bswenor@jhmi.edu

Wilmer Eye Institute, Johns Hopkins School of Medicine (BKS), Disability Health Research Center (BKS), Center on Aging and Health (BKS), and Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health (BKS), Johns Hopkins University, Baltimore, MD 21218, USA; Department of Ophthalmology and Visual Sciences (JRE) and Institute for Healthcare Policy and Innovation (JRE), University of Michigan, Ann Arbor, MI, USA

- 1 WHO. World report on vision. 2019. <https://www.who.int/publications/i/item/world-report-on-vision> (accessed Jan 13, 2021).
- 2 GBD 2019 Blindness and Vision Impairment Collaborators, on behalf of the Vision Loss Expert Group of the Global Burden of Disease Study. Trends in prevalence of blindness and distance and near vision impairment over 30 years: an analysis for the Global Burden of Disease Study. *Lancet Glob Health* 2020; published online Dec 1. [https://doi.org/10.1016/S2214-109X\(20\)30425-3](https://doi.org/10.1016/S2214-109X(20)30425-3).
- 3 WHO. Decade of healthy aging: 2021–2030. 2020. <https://www.who.int/initiatives/decade-of-healthy-ageing> (accessed Jan 13, 2021).
- 4 GBD 2019 Blindness and Vision Impairment Collaborators on behalf of the Vision Loss Expert Group of the Global Burden of Disease Study. Causes of blindness and vision impairment in 2020 and trends over 30 years, and prevalence of avoidable blindness in relation to VISION 2020: the Right to Sight: an analysis for the Global Burden of Disease Study. *Lancet Glob Health* 2020; published online Dec 1. [https://doi.org/10.1016/S2214-109X\(20\)30489-7](https://doi.org/10.1016/S2214-109X(20)30489-7).
- 5 Burton MJ, Ramke J, Marques AP, et al. The Lancet Global Health Commission on Global Eye Health: vision beyond 2020. *Lancet Glob Health* 2021; published online Feb 16. [https://doi.org/10.1016/S2214-109X\(20\)30488-5](https://doi.org/10.1016/S2214-109X(20)30488-5).
- 6 Swenor BK, Lee MJ, Varadaraj V, Whitson HE, Ramulu PY. Aging with vision loss: a framework for assessing the impact of visual impairment on older adults. *Gerontologist* 2020; **60**: 989–95.
- 7 National Academies of Sciences, Engineering, and Medicine. Making eye health a population health imperative: vision for tomorrow. Washington, DC: National Academies Press, 2016.
- 8 WHO. World report on ageing and health 2015. 2015. <https://www.who.int/ageing/events/world-report-2015-launch/en/> (accessed Jan 13, 2021).