

World report on vision Executive Summary



**World Health
Organization**



Globally, at least 2.2 billion people have a vision impairment.

The global need for eye care is projected to increase dramatically in the coming decades posing a considerable challenge to health systems. Despite concerted action during the past 30 years, significant challenges remain. The *World report on vision* seeks to stimulate action in countries to address these challenges by proposing integrated people-centred eye care (IPCEC) as an approach to health system strengthening that builds the foundation for service delivery to address population needs. IPCEC refers to eye care services that are managed and delivered to assure a continuum of promotive, preventive, treatment and rehabilitative interventions against the spectrum of eye conditions, coordinated across the different levels and sites of care within and beyond the health sector, and according to their needs throughout the life course. IPCEC will also contribute to achieving universal health coverage (UHC) and Sustainable Development Goal 3 (SDG3): “Ensure healthy lives and promote well-being for all at all ages”.

Vision, eye conditions and vision impairment

Vision plays a critical role in every facet and stage of life.

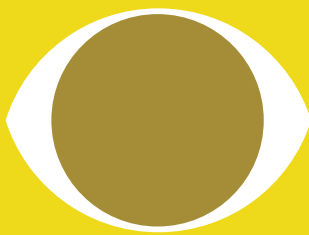
Vision, the most dominant of our senses, plays a critical role in every facet and stage of our lives. We take vision for granted, but without vision, we struggle to learn to walk, to read, to participate in school, and to work.

Vision impairment occurs when an eye condition affects the visual system and one or more of its vision functions. Vision impairment has serious consequences for the individual across the life course. Many of these consequences can, however, be mitigated by timely access to quality eye care and rehabilitation.

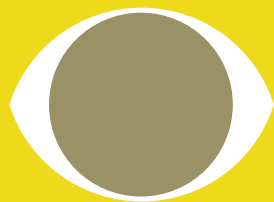
Eye conditions that can cause vision impairment and blindness – such as cataract, trachoma and refractive error – are, for good reasons, the main focus of prevention and other eye care strategies; nevertheless, the importance of eye conditions that do not typically cause vision impairment – such as dry eye and conjunctivitis – must not be overlooked. These conditions are frequently among the leading reasons for presentation to eye health care services all countries.



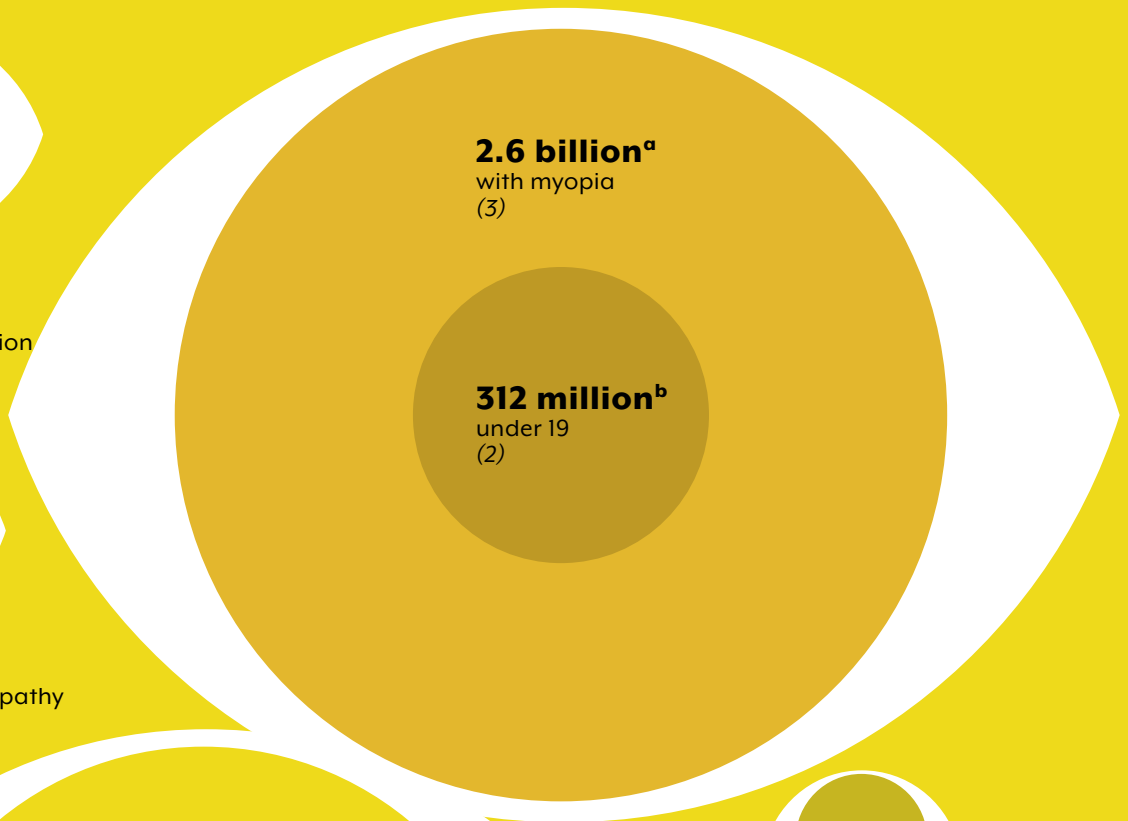
Global estimates of numbers of people affected by selected eye conditions that can cause vision impairment



196 million^g
with age-related
macular degeneration
(6)

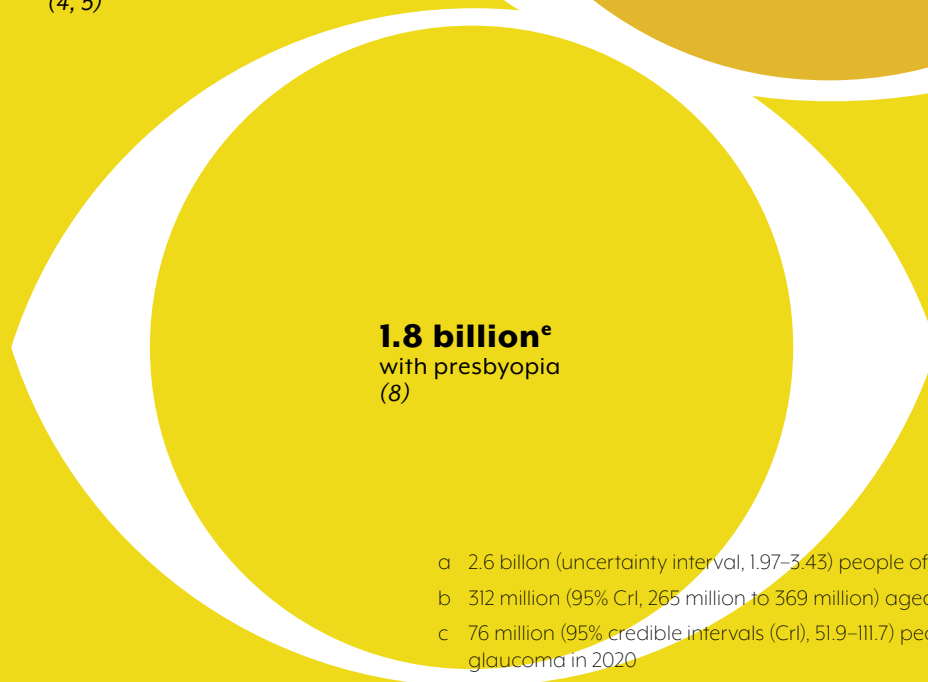


146 million^f
with diabetic retinopathy
(4, 5)



2.6 billion^a
with myopia
(3)

312 million^b
under 19
(2)



1.8 billion^e
with presbyopia
(8)



76 million^c
with glaucoma
(1)



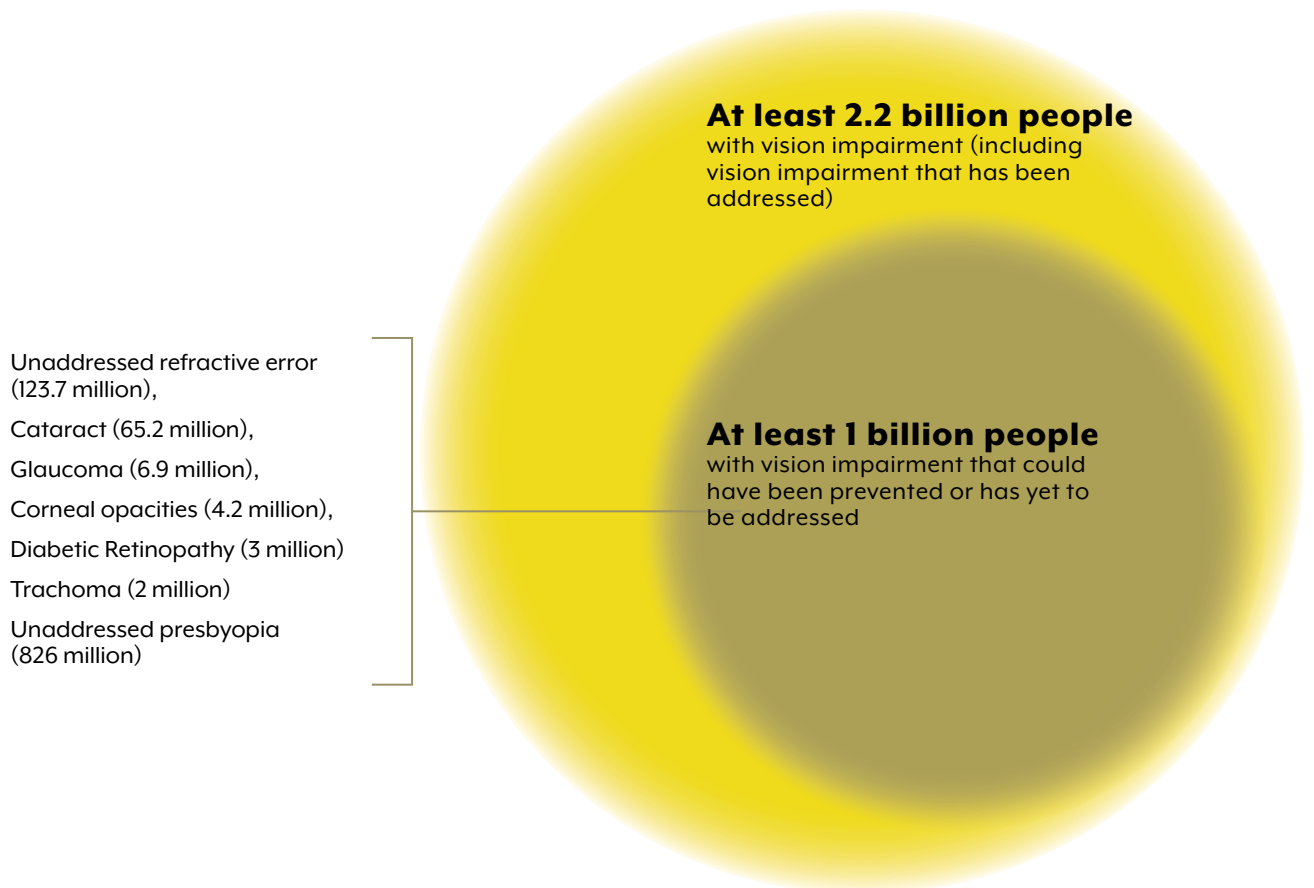
2.5 million^d
with trachomatous
trichiasis
(7)

- a 2.6 billion (uncertainty interval, 1.97–3.43) people of all ages with myopia in 2020
- b 312 million (95% CrI, 265 million to 369 million) aged under 19 years with myopia in 2015
- c 76 million (95% credible intervals (CrI), 51.9–111.7) people (40 to 80 years of age) with glaucoma in 2020
- d 2.5 million people of all ages with trachomatous trichiasis in 2019
- e 1.8 billion (confidence interval [CI], 1.7–2.0) people of all ages with presbyopia in 2015
- f 146 million adults with diabetic retinopathy was calculated by applying the global prevalence of any diabetic retinopathy (34.6%) reported by Yau et al. [2012] to the estimated global number of adults aged over 18 years of age with diabetes in 2014 (422 million) that was reported in the WHO Global Report on Diabetes, 2016.
- g 195.6 million (95% CrI 140–261) people aged 30 to 97 years with age-related macular degeneration in 2020

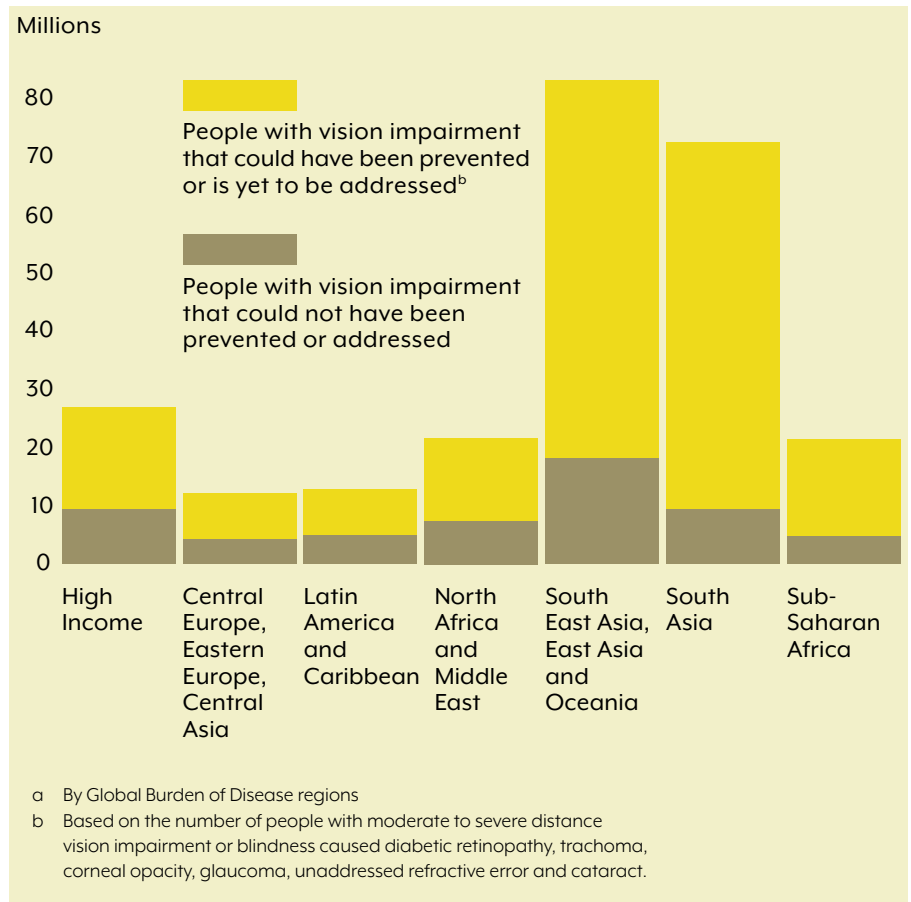
Global magnitude: eye conditions and vision impairment

Eye conditions are remarkably common. Those who live long enough will experience at least one eye condition during their lifetime. Globally, at least 2.2 billion people have a vision impairment or blindness, of whom at least 1 billion have a vision impairment that could have been prevented or has yet to be addressed. More reliable data on the met and unmet eye care needs, however, are required for planning. Also, the burden of eye conditions and vision impairment is not borne equally. The burden tends to be greater in low- and middle-income countries and underserved populations, such as women, migrants, indigenous peoples, persons with certain kinds of disability, and in rural communities. Population growth and ageing, along with behavioural and lifestyle changes, and urbanization, will dramatically increase the number of people with eye conditions, vision impairment and blindness in the coming decades.

Estimated global number of people with vision impairment and those with vision impairment that could have been prevented or is yet to be addressed.



Regional comparison^a of total number of people with bilateral moderate to severe distance vision impairment or blindness and estimated proportion with vision impairment that could have been prevented or has yet to be addressed



The costs of the coverage gap for unaddressed refractive errors and cataract globally are estimated to be \$14.3 billion US dollars.

Adapted from: Flaxman SR, Bourne RRA, Resnikoff S, Ackland P, Braithwaite T, Cicinelli MV, et al. Global causes of blindness and distance vision impairment 1990–2020: a systematic review and meta-analysis. *The Lancet Global Health*. 2017;5(12):e1221–e34

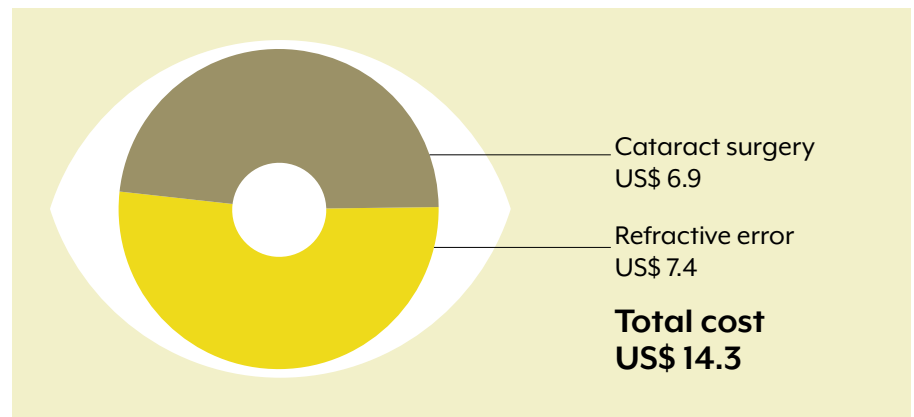
The costs of addressing the coverage gap

The costs of the coverage gap for unaddressed refractive errors and cataract globally are estimated to be \$14.3 billion US dollars. These are the additional costs that would be required to the current health system using an immediate time horizon. This financial investment is needed immediately; it requires appropriate planning and relies on additional investment to strengthen existing health systems.

Today, millions of people live with vision impairment or blindness that could have been prevented but, unfortunately, was not. While the exact number is unknown, it is estimated that 11.9 million people globally have moderate or severe vision impairment or blindness due to glaucoma, diabetic retinopathy and trachoma that could have been prevented. The estimated costs of preventing the vision impairment in these 11.9

million would have been US\$5.8 billion. This represents a significant opportunity missed in preventing the substantial personal and societal burden associated with vision impairment and blindness.

Breakdown of costs (US\$ billions)



Addressing eye conditions and vision impairment

A range of effective strategies are available to address the needs associated with eye conditions and vision impairment across the life course. These include health promotion, prevention, treatment and rehabilitation strategies, some of which are among the most feasible and cost-effective of all health care interventions to implement.

Successes and remaining challenges in eye care

Concerted action during the past 30 years has yielded many successes: global advocacy efforts have been launched; World Health Assembly resolutions adopted; and actions plans implemented. Recent scientific and technological developments promise to further accelerate these advances. Nonetheless, progress is not keeping pace with population eye care needs. Major challenges lie ahead. Firstly, eye care needs globally will rise sharply due to changes in demographics and lifestyle. Secondly, data are often lacking and health information systems weak, thus hampering planning. Thirdly, eye care is frequently poorly integrated into health systems, for example, in national health strategic plans and health information systems; and the eye care workforce is poorly coordinated.



Integrated people-centred eye care can help address the significant eye care challenges that many countries face.

Advancing universal health coverage through eye care

Making eye care integral to UHC will contribute to reaching SDG target 3.8.¹ For this to happen quality eye care services need to be provided according to population needs and the cost of priority eye care interventions cannot expose the user to catastrophic expenditures. To facilitate the choices that countries must make when implementing UHC, WHO is developing an online data repository detailing WHO-recommended interventions and their resource implications. Part of this repository will also be a package of eye care interventions which will contribute to progressing the agenda of eye care as part of UHC forward.

Integrated people-centred eye care

Integrated people-centred eye care can help address the significant eye care challenges that many countries face. IPCEC adopts a health-system perspective with four strategies: (i) engaging and empowering people and communities; (ii) reorienting the model of care based on a strong primary care; (iii) coordinating services within and across sectors; and (iv) creating an enabling environment, specifically the inclusion of eye care in national health strategic plans, the integration of relevant eye care relevant data within health information systems, and the planning of the eye care workforce according to population needs.

1 SDG 3.8: "Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all."

Conclusion and recommendations

Health systems face significant challenges in meeting the current and projected eye care needs of the world's population. There is no choice but to take on these challenges. The premise of the World Report on Vision is that integrated people-centred eye care has the potential to accelerate action and meet these challenges. For this to become a reality, this report recommends five important actions:

1. Make eye care an integral part of universal health coverage.
2. Implement integrated people-centred eye care in health systems.
3. Promote high-quality implementation and health systems research complementing existing evidence for effective eye care interventions.
4. Monitor trends and evaluate progress towards implementing integrated people-centred eye care.
5. Raise awareness and engage and empower people and communities about eye care needs.



World Health Organization

Department of Noncommunicable Diseases

20 Avenue Appia

1211 Geneva 27

Switzerland

Phone +41 22 791 2881

www.who.int



**World Health
Organization**

www.who.int/publications-detail/world-report-on-vision
WHO/NMH/NVI/19.12

© World Health Organization 2019. Some rights reserved.
This work is available under the CC BY-NC-SA 3.0 IGO licence.