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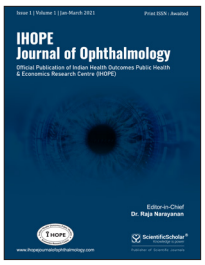

Proceedings of the IHOPE Annual Conference: September 2021

The Lancet Global Health Commission on global eye health: Vision beyond 2020

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Received : 07 December 2021
Accepted : 08 December 2021
Published : 07 January 2022

DOI
10.25259/IHOPEJO_15_2021

Quick Response Code:

KEYNOTE ON PUBLIC HEALTH

The WHO published the first world report on vision in 2019. In 2020, the World Health Assembly passed a resolution on vision, adopting the recommendations from the report. The United Nations General Assembly passed the first resolution ever on vision in July 2021. The Commission explores eye health from several perspectives: From the broad importance of eye health to looking at delivering high-quality eye care for all beyond 2020. This is the work of an interdisciplinary group of 73 academics, national program leaders, and practitioners from 25 countries. In addition to the main report and its appendices, there are multiple subsidiary publications and case studies, which can be accessed through the Commission website (www.globaleyehealthcommission.org).

THE EYE, VISION IMPAIRMENT AND CONDITIONS

This definition of eye health is very inclusive. Eye health is the state in which vision, ocular health, and functional ability are maximized, thereby contributing to overall health and well-being, social inclusion, and quality of life. The Commission examined the importance of eye health from several perspectives including its impact on quality of life, general health, well-being, and mortality.

The starting point was a detailed review of the relationships between improving eye health and advancing the sustainable development goals (SDGs) by recognizing how the SDGs are critical for many countries. A systematic review was done and outcomes examined in studies where eye health interventions were implemented to specific SDG targets. It was found that the provision of eye care services is associated with improvements in income and economic productivity which helped in poverty reduction. Improved vision leading to good educational outcomes for children in school was noticed. In the recent UN resolution, improving eye health was picked up as important for multiple SDGs. Mapping the complex connections between eye health and general health showed that impaired eye health has widespread direct and indirect impact. Exacerbation of depression and dementia, increased cardiovascular risk, and disease risk through reduced physical activity show that impaired eye health can broadly compromise health and well-being. Vision impairment and eye health are often perceived to have little effect on mortality; therefore, the Commission conducted a systemic review and meta-analysis of the relationship between different levels of vision impairment and the subsequent risk of mortality in cohort studies. Evidence showed that there was 1.29 times increased risk of mortality with mild

visual impairment, 1.43 times increased risk with moderate visual impairment, and a 1.89 times increased risk with severe visual impairment.

MAGNITUDE OF EYE DISEASES WORLDWIDE

New estimates have been published by the Vision Loss Expert Group and the Burden of disease study for the year 2020 and these were summarized by the Commission. Worldwide, there are approximately 1.1 billion people living with vision impairment and of these 43 million are blind, 295 million have moderate or severe vision impairment, 258 million have mild vision impairment, and a further 510 million have unaddressed near vision impairment. There are large inter-regional differences in the prevalence of vision impairment.

From the 21 Global Burden of Disease world regions, by age-standardized prevalence of visual impairment, the highest rate of about 11% is the South Asian region and it declines to around 3% in North America. This is reflected in the number of people living with visual impairment. The largest number, around 170 million people living with visual impairment is South Asia and globally 90% of people who are blind or have low to moderate or severe vision impairment are living in lower-middle-income countries. In every world region, women account for moderate and severe impairment than men. South Asia particularly has large numbers. By 2050 based on the current trends, 1.8 billion people will have vision impairment worldwide.

In terms of causes of visual impairment and blindness, it is seen that cataract dominates as the cause of blindness with nearly 50% in the South Asia region and 50% in the South Asia region with uncorrected refractive error for moderate-severe visual impairment (MSVI). For both the above eye conditions, the largest number is in the South Asia region.

Three distinct groups were identified by the Commission that need eye health services:

1. Manifest or corrected vision impairment group would need ongoing care
2. Early-stage disease who are at increased or higher risk, would develop vision impairment later in life
3. Symptomatic conditions not causing vision impairment but requiring services.

The second and the third groups are almost overlooked during large population-based surveys, which only report vision impairment.

THE ECONOMICS OF VISION

The Commission undertook a systematic review of eye health economic literature and highlighted that for many world regions, there are very little data on economic productivity loss analysis. For the year 2020, it was found that there was a global annual economic productivity loss estimate of around about 411 billion dollars with purchasing power parity. South Asia had the second highest regional economic productivity loss in terms of dollars at around 60 billion. Studies which are largely from South Asia – India and Nepal show excellent cost-effectiveness in terms of the cost per disability-adjusted life-year (DALY) averted or the quality-adjusted life-year (QALY) gained in the US dollars. A similar finding was seen with refractive errors though there were fewer studies. It was seen that the lowest cost for DALY averted and QALY gained was in South Asia, which is very encouraging due to the huge need in this region.

The Commission identified key actions and suggested future steps to increase the use of standardized methodological approaches across different regions.

GLOBAL EYE HEALTH RESEARCH

Over 256,000 publications of primary data studies, excluding reviews and case reports were published from 2000 to 2019. A substantial increase of 15% was observed in the second decade. About 4% of the studies were clinical trials. Around 10,000 publications in primary research studies were a major contribution from India during this period.

"The grand challenges in global eye health" was a three-round Delphi exercise conducted as part of the work of the Commission. About 320 people contributed from over 120 countries and suggested key challenges in their context, curated the list, and voted priorities. Based on this, the Commission generated a global list and then regional lists of the key challenges.

The top five grand challenges identified by the panel are as follows:

1. The demand and access to refractive error services
2. An improvement in cataract surgical services, particularly around quality, equity, and access
3. Strengthened and better integrated child eye health services
4. Design services to prioritize people who are being left behind, marginalized groups
5. Reduce the out-of-pocket costs for eye care which can be an enormous barrier, the big need in many regions.

LOOKING BEYOND 2020 – DELIVERING HIGH-QUALITY UNIVERSAL EYE CARE

A major part of the Commission's report is on looking beyond 2020 and the current decade. The Commission urges countries to consider eye health as an essential part of Universal Health Coverage (UHC) and argues that UHC is not universal without affordable high-quality equitable eye care and it needs to be included in national health policies, financing workforce planning, and health-care delivery.

Integration of eye health services with relevant components of the health service delivery, at all levels of the health system was looked at.

Strengthening of the eye health workforce is the key to delivery of eye care. There is a trend in the relationship between eye health workforce members and the prevalence of blindness and MSVI. Increased availability of staff to serve the population resulted in lower levels of blindness. The report also explores aligning the workforce to the needs of the population, development of enabling environments, and the sharing of different tasks, as they are going to be key for the future.

Top seven indicators were arrived at after they were assessed against the dimensions of UHC in terms of access, quality, financial risk protection, and equity. The WHO's core indicator, that has been adopted and drawn into UHC monitoring, is effective cataract surgical coverage and effective refractive error coverage. It is a combination of the quality of outcome and an effective coverage indicator. This was explored worldwide to access the level of progress on the delivery of universal eye health coverage within UHC. With the new standards adjusted to 6/12, this will dramatically reduce the current effective cataract surgical coverage or recovery. Using data from Vietnam, it was seen that if the old definition was used, the effective cataract surgical coverage was around 40%, and if the new definition is used, it is around 15%. This is going to provide a big challenge for countries to step up to the mark and drive forward effective cataract surgical coverage over the next decade. The target is having a 30% increase. This should be linked with actions to increase quality and key actions around governing for quality, redesigning services to maximize quality, transformation of the workforce, and the working environment to promote quality and ignite demand in the population for quality services.

A key area explored by the Commission is equity and access to eye care. It is important to understand in detail about groups that are being left behind as we deliver services that are designed to promote equity. The most important message of Commission is to invest in Universal Eye Health in a cost-effective way. This can be achieved by reframing eye health as an enabling cross-cutting issue within the SDG framework. There is now compelling evidence in favor of urgent global action on eye health.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

How to cite this article: Burton M. The Lancet Global Health Commission on global eye health: Vision beyond 2020. IHOPE J Ophthalmol 2022;1:16-8.