

## **Global Refractive Error Expert Consultation**

**11-12 May 2023**

**WHO Headquarters, Geneva, Switzerland**

Concept Note

### **Background**

Uncorrected refractive error is the leading cause of vision impairment in child and adult populations. Globally, it is estimated that only 36% of people with a distance vision impairment due to refractive error have received access to an appropriate pair of spectacles (1), while more than 800 million people have a near vision impairment (i.e. presbyopia) that could be addressed with a pair of reading spectacles (2). If left uncorrected, refractive error significantly impacts on well-being (3,4) and can contribute to poor academic performance in children (5,6). To confound this problem, the number of people in need of spectacles is expected to increase substantially in the coming decade. This is because presbyopia (2.1 billion in 2030) is part of the ageing process, while life-style related risk factors drive the projected increases in myopia (3.36 billion by 2030) in the younger population (2).

Reduced vision from refractive errors can be fully corrected with the use of spectacles or contact lenses, or corrected by laser surgery on reaching adulthood. Spectacles are a non-invasive assistive product and are part of the WHO Priority Assistive Products List (7). Despite the availability of this simple, sight-correcting intervention, there are several challenges to increasing spectacle coverage, particularly in low- and middle-income countries (LMICs). Firstly, as with many other health conditions, the burden of uncorrected refractive error tends to be greater in typically underserved populations, such as people living in rural areas, those with low incomes, women, indigenous populations, and ethnic minorities (2). Secondly, most LMICs do not perceive spectacles as health/medical items (but rather as cosmetic products) and refractive and optical services are commonly only available in the private sector (8). This results in availability, affordability and quality issues. Other key challenges include insufficient availability of qualified human resources to refract and dispense spectacles, limited government oversight and clinical regulation, scarce services points that are predominantly located in urban areas, and low awareness and acceptance of spectacles among the public.

### **Health economic rationale**

Uncorrected refractive error poses an enormous economic burden on society: annual global productivity losses associated with vision impairment from uncorrected myopia in adults and presbyopia alone are estimated to be US\$244 billion and US\$25.4 billion, respectively (9,10). These figures far outweigh the estimated financial resource gap of addressing the unmet need of vision impairment due to uncorrected refractive error estimated at US\$ 16 billion, thus providing a strong health economic rationale for increasing coverage of spectacles.

### **The 2030 global target on effective coverage of refractive error**

In recognition of the large unmet need for care, coupled with the fact a highly cost-effective intervention exists (i.e. spectacles), WHO Member States endorsed the first-ever global target for refractive error at the Seventy-fourth World Health Assembly (2021). Specifically, the global target is a 40-percentage point increase in effective coverage of refractive error (eREC) by 2030. Given the well-established impact of near vision impairment on quality of life and productivity (11), both, spectacle coverage for distance refractive error and near vision impairment due to presbyopia, will be considered in the global monitoring of eREC. This indicator and related target is intended to drive increases in refractive error coverage in countries while delivering high quality care.

In October 2022, WHO launched the first report on the 2030 targets on effective coverage of eye care which serves as reference point to commence monitoring progress towards the global target for eREC (1).

### **WHO's response**

In order to support Member States to achieve the World Health Assembly endorsed 2030 target on eREC, WHO plans to launch a global initiative in 2023 titled '**WHO SPECS 2030**'. Through WHO SPECS 2030, WHO intends to:

- a. Develop the necessary technical products and guidance to facilitate health planners in strengthening the integration of vision screening and refractive error services within and beyond health systems;
- b. Provide a platform for stakeholders across all relevant programmes and sectors to promote united action and coordinated advocacy towards the achievement of the 2030 global target for refractive error;

- c. Engage in dialogue with the private sector to encourage meaningful contributions for sustainably scaling up the coverage of refractive error services; and
- d. Engage in policy dialogue with Member States to drive evidence-informed decision-making to accelerate progress and bridge the gap between the global eye care commitments and country implementation.

This consultation intends to bring together stakeholders from the United Nations Organizations, and representatives from relevant nongovernmental organizations, philanthropic foundations, and academic institutions.

## **OBJECTIVES OF THE CONSULTATION**

1. To obtain feedback on the proposed objectives, structure and actions of the WHO SPECS 2030 initiative;
2. To discuss and outline the proposed next steps for the WHO SPECS 2030 initiative.

## **METHODS**

1. Presentations by WHO outlining the proposed details of the WHO SPECS 2030 initiative, including its objectives, governance structure, partner engagement and membership, and the proposed workstreams;
2. Plenary and small group discussions.

## **DATES and VENUE**

The meeting will be held in person at WHO headquarters in Geneva on the 11<sup>th</sup> and 12<sup>th</sup> of May 2023.

## **LANGUAGE**

The meeting will be conducted in English.

## REFERENCES

1. World Health Organization. Report of the 2030 targets on effective coverage of eye care [Internet]. Geneva: World Health Organization; 2022 [cited 2022 Oct 22]. Available from: <https://apps.who.int/iris/handle/10665/363158>
2. World Health Organization. World report on vision [Internet]. Geneva: World Health Organization; 2019 [cited 2022 Aug 12]. Available from: <https://apps.who.int/iris/handle/10665/328717>
3. Lamoureux E, Wang J, Aung T, Saw S, Wong T. Myopia and Quality of Life: The Singapore Malay Eye Study (SiMES). *Ophthalmology and Vision Science*. 2008 May 14;49(12):4469.
4. Rose K, Harper R, Tromans C, Waterman C, Goldberg D, Haggerty C, et al. Quality of life in myopia. *Br J Ophthalmol*. 2000;84(9):1031.
5. Ma Y, Congdon N, Shi Y, Hogg R, Medina A, Boswell M, et al. Effect of a Local Vision Care Center on Eyeglasses Use and School Performance in Rural China: A Cluster Randomized Clinical Trial. *JAMA Ophthalmol*. 2018 Jul 1;136(7):731–7.
6. Nie J, Pang X, Wang L, Rozelle S, Sylvia S. Seeing Is Believing: Experimental Evidence on the Impact of Eyeglasses on Academic Performance, Aspirations, and Dropout among Junior High School Students in Rural China. *Econ Dev Cult Change*. 2019 Dec 12;68(2):335–55.
7. World Health Organization, USAID, and International Disability Alliance. Priority assistive products list: improving access to assistive technology for everyone, everywhere [Internet]. 2016 [cited 2022 Aug 12]. Available from: <https://apps.who.int/iris/handle/10665/207694>
8. ATscale: global partnership for assistive technology. A market landscape and strategic approach to increasing access to eyeglasses in low-and middle-income countries. Product narrative: Eyeglasses. [Internet]. 2020 [cited 2022 Mar 17]. Available from: [https://at2030.org/static/at2030\\_core/outputs/Product\\_Narrative-Eyeglasses\\_final.pdf](https://at2030.org/static/at2030_core/outputs/Product_Narrative-Eyeglasses_final.pdf)
9. Smith T, Frick K, Holden B, Fricke T, Naidoo K. Potential lost productivity resulting from the global burden of uncorrected refractive error. *Bull World Health Organ*. 2009;87(6):431.
10. Naidoo KS, Fricke TR, Frick KD, Jong M, Naduvilath TJ, Resnikoff S, et al. Potential lost productivity resulting from the global burden of myopia: systematic review, meta-analysis, and modeling. *Ophthalmology*. 2019 Mar 1;126(3):338–46.
11. Frick KD, Joy SM, Wilson DA, Naidoo KS, Holden BA. The global burden of potential productivity loss from uncorrected presbyopia. *Ophthalmology*. 2015 Aug 1;122(8):1706–10.