

Refractive error strategy

2017



Sightsavers

A message from our Chief Executive

One of my earliest memories is standing by a window peering out whilst my mother tried desperately to point out the cows in a nearby field.

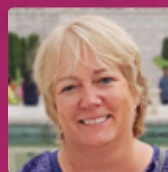
For the life of me I couldn't see what she was trying to show me. She became very irritated with me, thinking I was just being difficult. This was around the time I started school. Fortunately there was a school eye screening programme in place and at the end of my first year they examined my class. I remember being six years old and standing in a dusty old school hall trying to match my hands to signs the nurse was holding up and finding that I was far worse at this than any of my classmates. Unsurprisingly, perhaps, as I had quite severe myopia.

Thank heavens for that school screening. Yes, I struggled with my glasses – which back then were heavy and not very comfortable. And yes, I was teased. But without them I would not have been able to see the blackboard, and I would definitely not be where I am today. As time went on my sight deteriorated even more and I can no longer see the big letter at the top of an optometrists' chart without corrective lenses.

If I had lived in a remote village in a developing country I would never have had access to glasses, and certainly not the contact lenses I now wear. I would probably have dropped out of school.

So this refractive error strategy has personal resonance for me. Given that refractive error accounts for 42% of all visual impairment, it is essential that Sightsavers plays a leading role in tackling the problem if we are to see ourselves as a world-leading NGO in the eye health space.

Making the strategy reality will mean forming new and different partnerships, particularly with the private sector, and I am pleased to see this is already happening. I hope these partnerships continue to grow, and that we are able to find the funding so desperately needed to ensure adults and children are able to get glasses if they need them – and to have proper eye examinations to check for other eye problems.



Caroline Harper
Chief Executive

Introduction

Sightsavers' vision is of a world where no one is blind or visually impaired from avoidable causes and where people with disabilities participate equally in society.

Uncorrected refractive error (URE) is the leading cause of global visual impairment, accounting for 42% of the global burden¹ (diagram, right). Therefore, a renewed emphasis on URE is critical for Sightsavers to achieve our strategic vision.

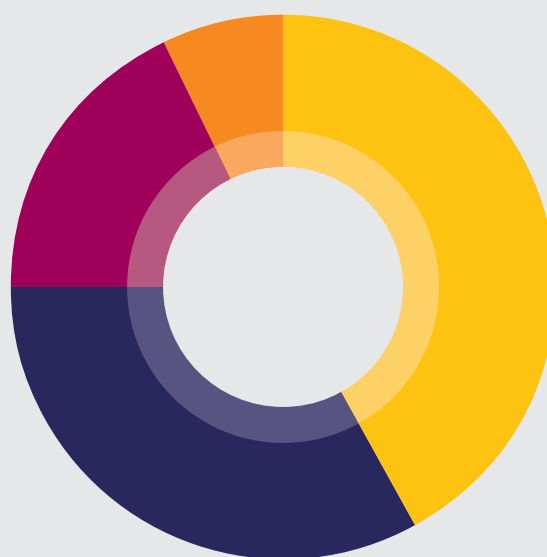
Sightsavers has a wealth of experience working in eye health and is ideally positioned to take a leadership role in addressing the problem of URE. We will apply learning and evidence to identify and deliver URE interventions, using a twin-track approach focused on children and adults.

This strategy is a component of our thematic Eye Health Strategy (2013-2018)² and is aligned with our organisational Strategic Framework: Making the Connections (2012-2018)³. The strategy supports the International Agency for the Prevention of Blindness (IAPB) Strategy for the Elimination of Visual Impairment from URE (2009)⁴ which highlights several areas that are pivotal to the global effort to address URE.

This Refractive Error Strategy defines:

- Our aspirations and goals based on where we are currently and what we aim to achieve
- How and where we choose to invest resources
- How we plan to leverage existing opportunities to deliver this strategy

Global causes of visual impairment¹ (WHO 2012)



42% Uncorrected refractive error

33% Cataract

18% Undetermined

7% Other causes

Cover image:

Khadija, 18, receiving a refraction for glasses during a project in Tanzania.

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Global context

Globally 123 million people, including 19 million children, are visually impaired as a result of URE⁵ and an additional 517 million people are functionally impaired by presbyopia⁶.

As the leading cause of visual impairment globally, URE has a significant negative impact on individuals' and communities' social, economic, and educational development⁷. It has been estimated that as much as 80% of learning is done visually, with most school tasks focused on reading from the blackboard; therefore children with visual impairments are educationally disadvantaged⁸.

URE in adults results in a \$227 billion per year loss to the global economy due to lost productivity⁹. In addition, there is a link between poor vision and road traffic accidents: a study in India showed a 30% higher incidence of road traffic accidents in drivers with visual impairment correctable by spectacles¹⁰ and a study in Ghana showed that more than 12% of commercial drivers had vision below the minimum standards¹¹.

The prevalence of myopia (difficulty seeing at distance) is rising globally, with especially high increases expected in sub-Saharan Africa and South Asia. The prevalence is expected to increase from 3.2% in 2000 to 8.4% in 2020 in East Africa, from 5.2% to 9.6% in West Africa, and from 14.4% to 28.6% in South Asia, during the same time period. By 2050, it is expected that one in two people in South Asia, and one in four in sub-Saharan Africa, will require correction for myopia¹².

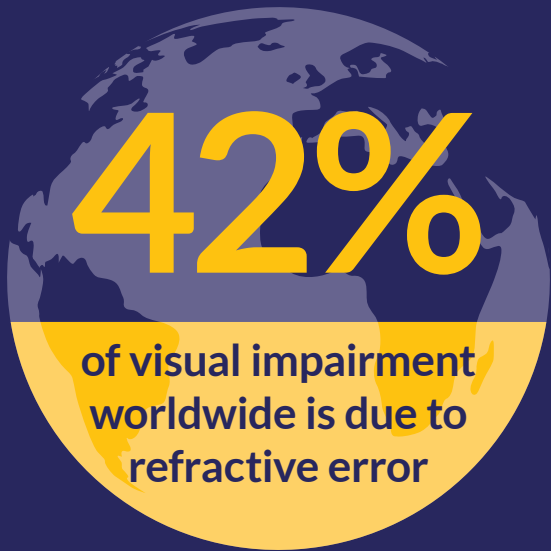


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A man in Tanzania has vision measured.


Our work in URE is an integral part of health systems and poverty alleviation efforts and is strongly aligned with the Sustainable Development Goals (SDGs) focusing on health, education, poverty, sustainable development and global partnerships.

The challenges in effective delivery of refractive error services result from constraints in supply and demand systems. Supply challenges include a lack of adequately trained human resources to meet the needs of the population, affordability and availability of essential equipment, alongside supply chain limitations which severely impact the provision of quality and affordable spectacles. Fundamental demand challenges include a lack of awareness of the benefits of spectacle wearing, and issues related to stigma and discrimination. Financial considerations cut across both supply and demand, where the cost of services and spectacles can impact demand, creating constraints based on competing health priorities for individuals and households.



123 
million
people globally



80%
 of learning
is visual



19 million
children 

Leaving these children
**educationally
disadvantaged**



67%
of eye care
professionals
in sub-Saharan Africa



are based in 
CAPITAL CITIES
leaving a shortage in rural areas

Sightsavers' response to URE

Addressing URE is not a new area for Sightsavers. Since the organisation began collecting URE statistics in 2004, we have dispensed almost three million pairs of spectacles across Africa, Asia and the Caribbean.

Between 2004 and 2015, we have supported the training of 726 optometrists and 417 optometric technicians through our partnerships with local and regional training institutes in Cameroon, Malawi, Mozambique, The Gambia, Zambia and the Caribbean. We have established refraction services, school screening programmes, and vision centres in Africa, Asia and the Caribbean.

We have also contributed new knowledge and evidence to the sector through undertaking joint research on refractive error and developing and publishing an evidence gap map¹³ presenting the state of evidence relevant to URE in low and middle income countries. From a learning perspective, we have carried out numerous evaluations of our URE programmes and the key findings from these have been taken on board for future project design and implementation. For example, these findings helped shape a reconceptualisation of vision centres in India and South Asia, and an increased emphasis on demand generation in our African programmes.

Despite these achievements, we continue to experience significant challenges and barriers within our global URE work, resulting from:

- A fragmented approach to programmatic work in URE and school screening
- A lack of integration between our school health initiatives and our inclusive education programmes
- A lack of sustainability of interventions
- A lack of understanding of market drivers in addressing demand

The challenges, both on organisational and global levels, stem from a lack of understanding of the scope of and approaches addressing URE. The lack of understanding is due to an absence of epidemiological data on the need for spectacles, in contrast to the data available on surgical conditions, like cataract. In addition, access to refractive error services is inequitable, illustrated by the fact that 67% of ophthalmologists and 66% of optometrists in sub-Saharan Africa are based in capital cities¹⁴, leaving a shortage of trained eye care professionals in rural areas. The provision of spectacles has been viewed as primarily a private sector activity, where most optical companies are concentrated in cities, targeting high-income consumers. This has resulted in governments and development agencies not prioritising refractive error services and access to affordable, properly prescribed spectacles¹⁵.

Strategic goals

We aim to use our existing organisational skills and capabilities, and explore new opportunities to further develop our technical competency as a leader in this area. We will work with a range of stakeholders and partners to increase access to quality, acceptable and affordable refractive error services and provision of spectacles for both children and adults. This translates to children with URE being able to participate equally in the classroom, improving their educational opportunities. For adults with URE, this translates to greater ability to participate in economic activity.

Specifically, Sightsavers will:

- Improve the quality of the URE components within our wider eye health programmes
- Influence and learn from the broader health and education sectors in order to develop standardised approaches and practices that can be integrated into school health programmes
- Improve the sustainable delivery of refractive error services
- Support linkages with Sightsavers' Education and Social Inclusion thematic strategies, with a particular emphasis on ensuring that women, children, and people with disabilities have access to refractive error services, as part of our inclusive eye health approach

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Saukat, 8, and Liakat, 10, are given glasses at a clinic in India.

Programme approach

Sightsavers' overall programme approach is to:

- Address both supply and demand challenges in the delivery of refractive error services
- Be open to innovative approaches
- Work in partnership to achieve shared goals and objectives

This strategy describes the twin-track approach that Sightsavers will use to develop models for the design and delivery of refractive error programmes. This twin-track method will target children through integrated school health approaches, and adults through a health system strengthening approach.

URE in children and youth: integration into school health

We will work to integrate vision screening and refractive error management into national school health programmes, as a proven, cost-effective means to address URE in children¹⁶.

We will focus on **improving the quality** of school eye health programmes through implementation of our Quality Standard Assessment Tools and Sightsavers' Refractive Error and Vision Screening principles (Appendix A). In addition, we will develop and implement standardised approaches to vision screening, based on best practice and guidelines, within our school eye health programmes.

We aim to **influence the broader child health sector** through broadening our programmatic partnerships to include development partners with expertise in child-based interventions. This will allow us to learn from and participate in these partnerships. Specifically, we will contribute through the dissemination of our vision screening guidelines, and through a greater understanding of the costs of implementing school-based vision screening programmes as a part of integrated school health. We will collaborate with global initiatives that target child health to strengthen the platform for advocacy, awareness and resource mobilisation.

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A student from St Roses Junior High School, Denkyembour, Ghana.

In order to strengthen our URE work with children, we will work to **strengthen programmatic partnerships** and **support innovative approaches** to tackle supply and demand challenges. This will be accomplished by engaging with a variety of stakeholders, including the child-focused development partners, as described above, and the private sector. We will work with the private sector to support the provision of low-cost, quality, and acceptable children's spectacles. We will increase our understanding of issues related to stigma associated with wearing spectacles in order to develop approaches to address demand in children and parents.

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Mohammed, 16, on Tumbatu Island, Tanzania, gets measured for spectacles in a school eye health programme.

URE in adults: system strengthening approaches

Within this strategic period, we will improve the **quality of our programmes** by ensuring alignment with organisational quality standards and refractive error principles (Appendix A). We will work to increase access to refractive error services by all adult population groups, including poor and marginalised communities who have low capacity to pay for services and spectacles. We will place an emphasis on groups with a high risk of exclusion, particularly women and people with disabilities, in alignment with Sightsavers' Social Inclusion Strategy and our inclusive eye health approach.

We will accomplish this goal through **two strands** of work.

The first strand will ensure that quality refractive error services are available to patients who have undergone cataract surgery. We will work to ensure that a post-operative refraction examination and spectacles are available as part of the cataract surgery package.

The second strand will address URE in other population groups through utilisation of a market systems (M4P)¹⁷ approach. This will facilitate our understanding of the spectacle market, including the broader development context, communities' needs, values, and barriers to seeking care. In addition to service provision, we will also focus on developing solutions to improve/increase demand generation and health-seeking behaviour of target communities. By using an M4P approach, we will gain a better understanding of population segmentation, customer-perceived value, price structure and mechanisms for cross-subsidy, which will help shape our models and approach to address URE in these groups.

As a specific sub-group, we will target drivers with URE, through increasing awareness and access to services and spectacles, to promote safer drivers and safer roads.

Within both strands of our adult work in URE, we will work to **expand our programmatic partnerships** and **influence the broader health sector** through increased engagement with global initiatives and on going efforts to raise the profile of URE as a public health issue, and share learning from our programmes and approaches through international conferences, blogs, and publications.

The twin-track approach

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A young girl in Colombo, Sri Lanka is having her eyes examined.



Children

- **Integrate** vision screening and refractive error management into national school health programmes
- **Improve** the quality of school eye health programmes
- **Develop** and implement standardised approaches to vision screening
- **Influence** the broader child health sector
- **Collaborate** with global initiatives that target child health to strengthen the platform for advocacy, awareness and resource mobilisation.
- **Increase** our understanding of issues related to stigma in order to develop demand for spectacles in children and parents



A group of people at the vision centre at Mohanager General Hospital in Dhaka, Bangladesh.



Adults

- **Increase** access to refractive error services by all adult population groups, including poor and marginalised communities
- **Ensure** that quality refractive error services are available to patients who have undergone cataract surgery
- **Increase** demand generation and health-seeking behaviour of target communities
- **Target** drivers with URE, through increasing awareness and access to services and spectacles
- **Expand** our programmatic partnerships and influence the broader health sector through increased engagement with global initiatives and on going efforts to raise the profile of URE as a public health issue

Conclusion

Addressing URE is a priority for Sightsavers, given that it is the leading global cause of visual impairment. Targeting URE is aligned with the organisational mission to combat avoidable blindness; thus it is a crucial component of the Eye Health strategy.

There is a growing momentum around the need to address URE as a cause of global visual impairment, and Sightsavers is well positioned to take a leadership role through a concerted effort with our programmatic, research and advocacy work. To be successful, we will need a paradigm shift from our traditional approach to delivering refractive error services, to be in line with the twin-track approach outlined in this Strategy. We will need to forge new partnerships and strengthen existing ones, especially with the broader education sector and the private sector. We will need to increase our internal capacity to understand and leverage market systems approaches and will require additional investment to pilot new approaches.

By leveraging our existing expertise and developing new competencies to emphasise quality, influence the sector and broaden our programmatic partnerships, Sightsavers will deliver on this Strategy, and be one step closer to realising our strategic vision where no one is visually impaired through avoidable causes.



P13: 18-year-old Nachum from Tumbatu Island, Tanzania, is trying on her new glasses which were prescribed to her as a result of a school screening.

Appendix: Sightsavers' key principles for refractive error (RE) services

1. Sightsavers' preferred approach for the delivery of RE services is aligned with and integrated within the health system.
2. Sightsavers supports the development and deployment of appropriate, trained and supported health workforces for the delivery of RE services.
3. Sightsavers will engage in the development of innovative public-private partnerships and market-based approaches to promote access to and sustainability of RE services.
4. Sightsavers will work with its partners to ensure that its programmes meet agreed quality standards for RE services and technical guidelines for screening children.
5. Sightsavers will emphasise eye care services that are available and accessible to those without access to these services, including children, women, and people with disabilities.
6. Sightsavers will engage with and influence broader coalitions, alliances, consortia and professional bodies to promote sustainable approaches for RE services.
7. Sightsavers will prioritise good quality evidence and operational research on demonstration approaches for RE services that can be scaled up.

Sightsavers will not endorse:

- Screening without the availability of examination including refraction and spectacle provision
- Sporadic refraction camps independent of the health system
- The use of recycled spectacles
- Self-refraction with adjustable spectacles
- The use of personnel who are inadequately trained, supported or supervised

Sightsavers' additional key principles on school eye health programmes:

1. Sightsavers will work with its partners to ensure teachers receive standardised training, support and tools.
2. Sightsavers will ensure that all children who need spectacles receive them.
3. Sightsavers will work with its partners to ensure that its supported programmes offer a choice of affordable, age-appropriate frames of appropriate quality.
4. Sightsavers will work with its partners to ensure that its supported programmes follow the Sightsavers child safeguarding policy.
5. Sightsavers' preferred approach for the delivery of school screening for refractive error programmes is through the integration of school screening programmes into school health programmes.

Sightsavers will not endorse:

The use of glass lenses for children, and strongly recommends the use of polycarbonate/plastic lenses where possible.

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We work with partners
in developing countries to
eliminate avoidable blindness
and promote equal opportunities
for people with disabilities

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