



Cataract evidence gap map brief | December 2021

Cataract is the third cause of vision impairment globally and the leading cause of blindness, affecting an estimated 65.2 million people. People over 70 are at particular risk, but where treatment is not readily available, cataract can also be a major cause of blindness among children. Cataract is, therefore, a primary focus of eye care programmes. However, even though cataract surgery is a cost-effective and relatively simple intervention, the prevalence of the condition remains high and not everyone has access to treatment.

At Sightsavers, our research into eye health includes exploring what opportunities there are for the scale-up of quality cataract services, as well as identifying innovative approaches to strengthen eye care services in the context of broader health systems.

Evidence gap maps bring together systematic or literature reviews that combine the evidence available on a specific topic and presents them in a user-friendly format. These reviews are useful because they identify gaps in knowledge and can help to inform best practice guidance in a specific area. Gap maps provide easy access to these reviews, their methodological quality and the strength of their conclusions.

This brief presents the findings of our cataract evidence gap map as of December 2021.

What is included in the cataract evidence gap map (EGM)

- Sightsavers' cataract EGM is divided into five sections: burden of disease, biomedical research, service delivery, health systems, and impact and economic evaluation. It includes **98 reviews** of research on these topics.
- To reflect the breadth of synthesis work on cataract, the gap map includes reviews focusing on age-related cataract as well as paediatric cataract, with the understanding that these conditions often have different causes and treatment solutions.
- 8% of cataract reviews are country-specific, 4% are global and 29% of the reviews do not report the geographical region of included studies. The large majority (64%) include a mix of countries from different regions. In reading these reviews, it is important to consider if there are factors that make the results only applicable to a specific setting or if they are easily generalisable.
- A third of reviews (33%) on cataract include a mix of income levels (high income and low and middle income countries). 20% of the reviews include studies conducted in high income countries only and 9% of reviews include studies exclusively about low and middle income countries. 38% of the remaining reviews do not report the geographical location of included studies.

Key messages

- **More evidence on all aspects of the delivery of cataract services is needed.** No reviews about health systems were identified, which is an important gap in evidence synthesis as we work towards the goals of universal health coverage and health systems strengthening.
- **Future research should focus on responding to identified gaps.** Out of 98 reviews included in the EGM, only 29 are deemed to be of a high methodological standard. Given the importance of synthesis work for decision-making, this is an important point to consider.
- **The quality of the methodological approach in the available reviews is inconsistent.** Out of 80 reviews included in the gap map, only 24 are deemed to be of a high methodological standard. Given the importance of synthesis work for decision-making, this is an important point to consider. For example:
 - The bulk of the reviews are on biomedical research (risk factors and prevention), with 56 studies, but only 17 of these are considered of a high quality methodologically.
 - Most of the reviews on service delivery focus on the quality of services (29/37), but the majority of quality reviews are unable able to draw clear and strong conclusions.
- There are three reviews on cost, all seemingly providing a useful response to their respective research question, but only one is deemed as methodologically appropriate.

- **High quality evidence is needed from low income settings where the need is greatest.** Reviews that concentrate on evidence from low income countries are mostly of a low methodological quality (66%). The quality is more mixed for reviews that include studies from a range of income levels.
- **A greater focus on equity is needed.** Further research into the prevalence of cataract among different population groups and equity in access to care is needed. For example, only 6% of the included reviews have a focus on gender equity.

Reflections on the update of the cataract EGM

- Based on our inclusion criteria, cataract-related evidence increased by 18% (18 studies) over the period of 2020-2021.
- The main bulk of reviews are on the risk and prevention of cataracts.
- Gaps in research remain on cataract-related health systems.
- In spite of the growth of the evidence base, the proportion of reviews on cataracts not reaching any conclusive answer remains almost the same (59%), which can indicate that the quality and quantity of evidence is probably stagnating.
- This is also reflected in a similarly low proportion of reviews deemed high quality (29% vs 30%).
- The proportion of reviews from low and middle income countries remain very low despite the increase in the evidence base of reviews on cataract, confirming the need for more investment in research in low income settings.
- There is a 36% increase of reviews that do not report the geographical location of included studies, limiting the applicability of findings in terms of region and population.

Methodological quality of the review: **H** High Confidence **M** Medium Confidence **L** Low Confidence

		Sectors														
		Burden of disease		Biomedical			Service Delivery				Health Systems				Impact/Economic Evaluation	
Strength of Evidence		Epi	Risk	Treat	C.Detect	QCC	QNCC	Access	Workforce	Financing	Leadership	HMIS	Tech	QoL	Cost	
Strong	High	1	1	6		3		1								
	Medium		5	6		5								2	1	
	Low	2	4	3		11		5							2	

Sightsavers' **cataract gap map** is available on our **research centre**.

How to read the cataract evidence gap map

Research evidence from systematic or literature reviews is displayed in a matrix. The columns show the thematic areas that are relevant to the theme of cataracts, labelled as sectors and sub-sectors. The rows show the strength of the evidence in each review: strong, inconclusive, or weak. If the authors of a particular review were able to reach a conclusive answer to their research question using the evidence available, the evidence is classed as strong. If they were unable to reach a conclusive answer due to insufficient evidence, the evidence is classed as weak. If the outcome was somewhere in between, the evidence is classed as inconclusive.

The numbers displayed in each box indicate the number of systematic or literature reviews. The reviews are split by confidence level, which is an indicator of the methodological quality of the reviews themselves. We have rated the methodological confidence in each review as strong (green hexagon), medium (yellow square) or low (red circle).

On the research centre, by clicking on one of the hyperlinks, you will be taken to a separate webpage to read a summary of that individual review.

About this brief

This brief was prepared by Anne Roca, global advisor for research uptake and learning at Sightsavers. The cataract evidence gap map was produced by Bhavisha Virendrakumar, research associate for evidence synthesis at Sightsavers.

Suggested reference for the gap map:

Sightsavers (2021). Cataract evidence gap map. [online] available at: <https://research.sightsavers.org/gap-maps/cataract-gap-map/> [add date accessed].

Please address questions/comments about this brief to RUL@sightsavers.org.