# Cataract evidence gap map brief | November 2024

**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 November 2024.**

## What is included in the cataract gap map

- Sightsavers' cataract EGM is divided into five sections: burden of disease, biomedical research, service delivery, health systems, and impact/economic evaluation. It includes 285 unique 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.
- Approximately 6% (17/285) of cataract reviews are country-specific, around 30% (87/285) do not report geographic coverage of included studies in the review, and about 69% (199/285) report including primary studies conducted in a variety of countries. 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.
- Almost half (147/285) of reviews on cataract focus on low- and middle-income countries, 13% (37/285) include studies conducted in high-income countries only, and approximately 76% (216/285) of reviews include studies from high-, medium- and low-income countries. Around 30% of the remaining reviews do not report the geographic location of included studies.

## Key messages

- **More evidence is needed on all aspects related to health systems,** including workforce, financing, leadership, health monitoring systems and technology.
- Nearly two-thirds of reviews fall under the biomedical sector, and almost half of all reviews focus on treatment. **Very few reviews cover access, screening, quality of life or economic evaluations.**
- **Almost half (49%, 139/285) of reviews are of low confidence, and future research should focus on employing rigorous and transparent methods.** Out of 285 reviews included in the EGM, only 19% are deemed 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 focus on cataract treatment, encompassing a total of 138 (48%) reviews, however, only 25 (9%) are considered of a high methodological quality.
  - In several sub-themes, including epidemiology and access, strong conclusions are reported despite predominantly low confidence reviews.
- **There is a need for better reporting of the geographic location by review authors.** Nearly 30% of reviews (87/285) do not specify geography or income setting, limiting applicability.
- **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 3% (9/285) of the included reviews have a focus on gender equity.

# Reflections on the update of the cataract EGM

## 2014

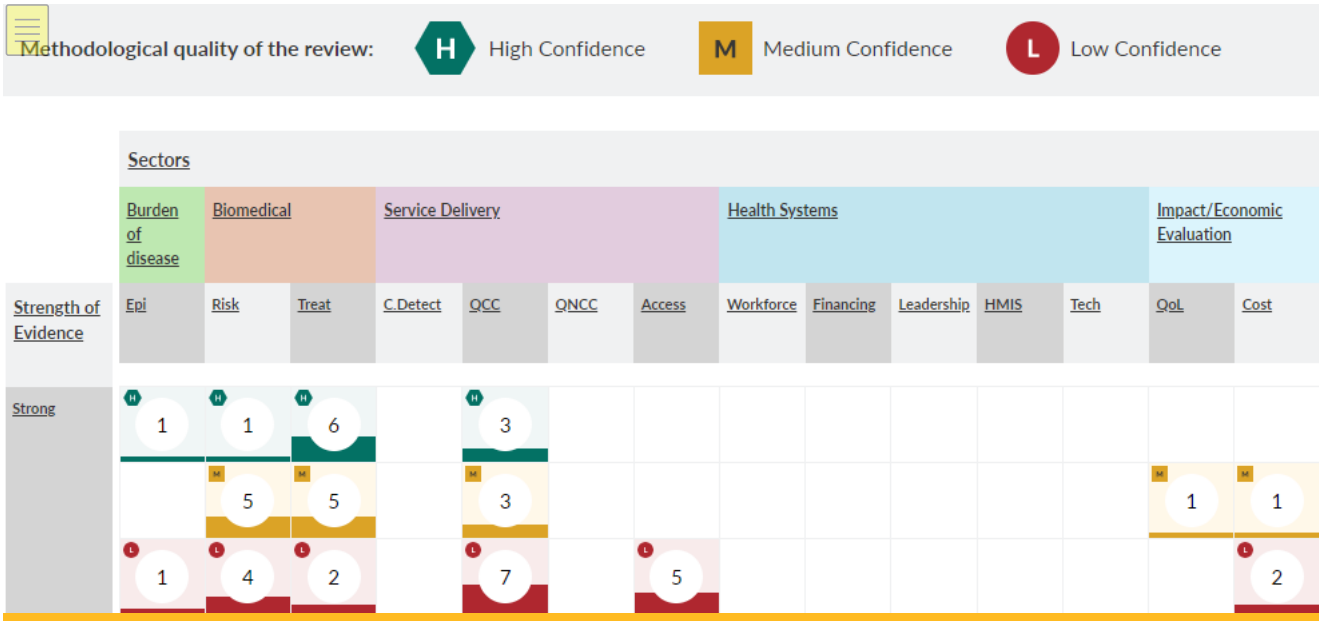
- In 2014, when the EGM was first developed, a total of 58 systematic/literature reviews were included.
- Included reviews mainly focused on cataract treatment and risk/prevention. Service delivery, access to cataract services, and quality of life were rarely addressed. In addition, reporting of the settings of studies included in reviews was often absent.
- The proportion of low confidence reviews was high, but those of medium and low confidence were similar in proportion.

## 2021

- In the 2021 update, cataract-related reviews increased by 18% (18 reviews) since EGM development.
- The main bulk of reviews was on the risk/prevention of cataracts, and research gaps remained in cataract-related health systems.
- Despite the growth of the evidence base, the proportion of reviews on cataracts not reaching any conclusive answer remained almost the same (59%), reviews from low- and middle-income countries remained very low, and the proportion of reviews not reporting the geographic location of included studies remained the same.

## 2024

- In the most recent update (2024), a surge in treatment and epidemiology was observed, with a modest increase in reviews related to access to cataract services and quality of life, but still, few on screening and economic evaluations.
- Although the evidence base has expanded, the proportion of high-confidence reviews declined sharply in 2024, while low confidence reviews increased. This suggests quantity is rising faster than methodological quality.
- Recent reviews (2024) more often report “strong” conclusions, but this coincides with a rise in low-confidence ratings
- Equity remains a major evidence gap.
- Over time, the evidence base expanded (2014–2024), but the 2024 update shows fewer high-confidence reviews (8%) and more strong but potentially overstated conclusions.




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

# How to read the cataract gap map

Research evidence from systematic or literature reviews is displayed in a matrix. The columns show 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 given 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 Gap Map was produced by Bhavisha Virendrakumar, Research Associate for Evidence Synthesis at Sightsavers.

Suggested reference for the gap map:

> **Sightsavers (2020). 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@sightavers.org**.