

Reviewing Vision Care Guidelines: Establishing What Works

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**Public Health Approaches to Reduce Vision
Impairment and Promote Eye Health**

Institute of Medicine

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Washington, DC

Outline

Evidence -based Guidelines for Eye Examinations and Treatment of Major Eye Diseases

- The Cochrane Eyes and Vision Group
- E-Gap Project
 - Partnering with professional societies
 - Partnering with patient groups
- Lessons learned



The Cochrane Eyes and Vision Group (CEVG) is an international network of individuals working to prepare, maintain and promote access to systematic reviews of interventions to treat or prevent eye diseases or visual impairment.

<http://eyes.cochrane.org/>

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Cochrane Library

Combined glaucoma and cataract surgery versus cataract surgery alone for eyes with cataract and glaucoma

Published:
14 July 2015

Authors:
Zhang M, Hirunyachote P,
Jampel H

Review question

The aim of this [systematic review](#) was to compare the [effectiveness](#) and safety of combined glaucoma and [cataract](#) surgery compared with [cataract](#) surgery alone.

Background

Cataract and glaucoma are leading causes of blindness worldwide. Good vision requires a transparent lens in the eye. Cataract is a clouding of the lens that is



Cochrane Review -
How can it help you?

The American Academy of Ophthalmology (AAO) has 20 clinical practice guidelines -- (**Preferred Practice Patterns-PPPs**)

CEVG@US is examining the evidence underpinning the guidelines, and together with professional societies and patients, are prioritizing the systematic reviews that are needed:

- Primary open angle glaucoma (Tianjing Li)
- Primary angle closure glaucoma (Tsung Yu)
- Age-related macular degeneration (Kristina Lindsley)
- Diabetic retinopathy (Susan Hutfless, Jimmy Le)
- Dry eye syndrome (Susan Hutfless, Jimmy Le)
- + 13 others

E-Gap (1) :

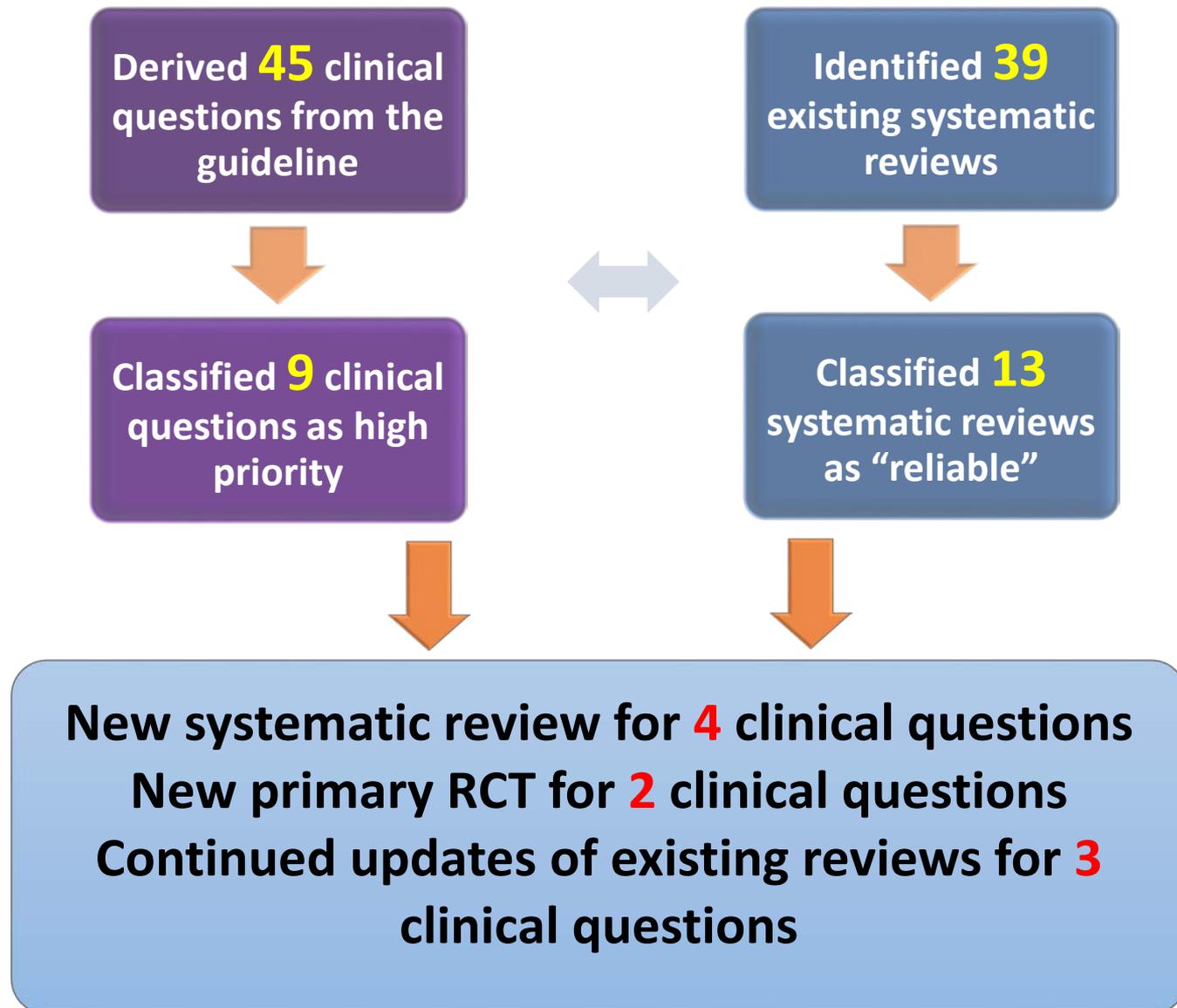
What evidence is needed?

Lead: Tianjing Li

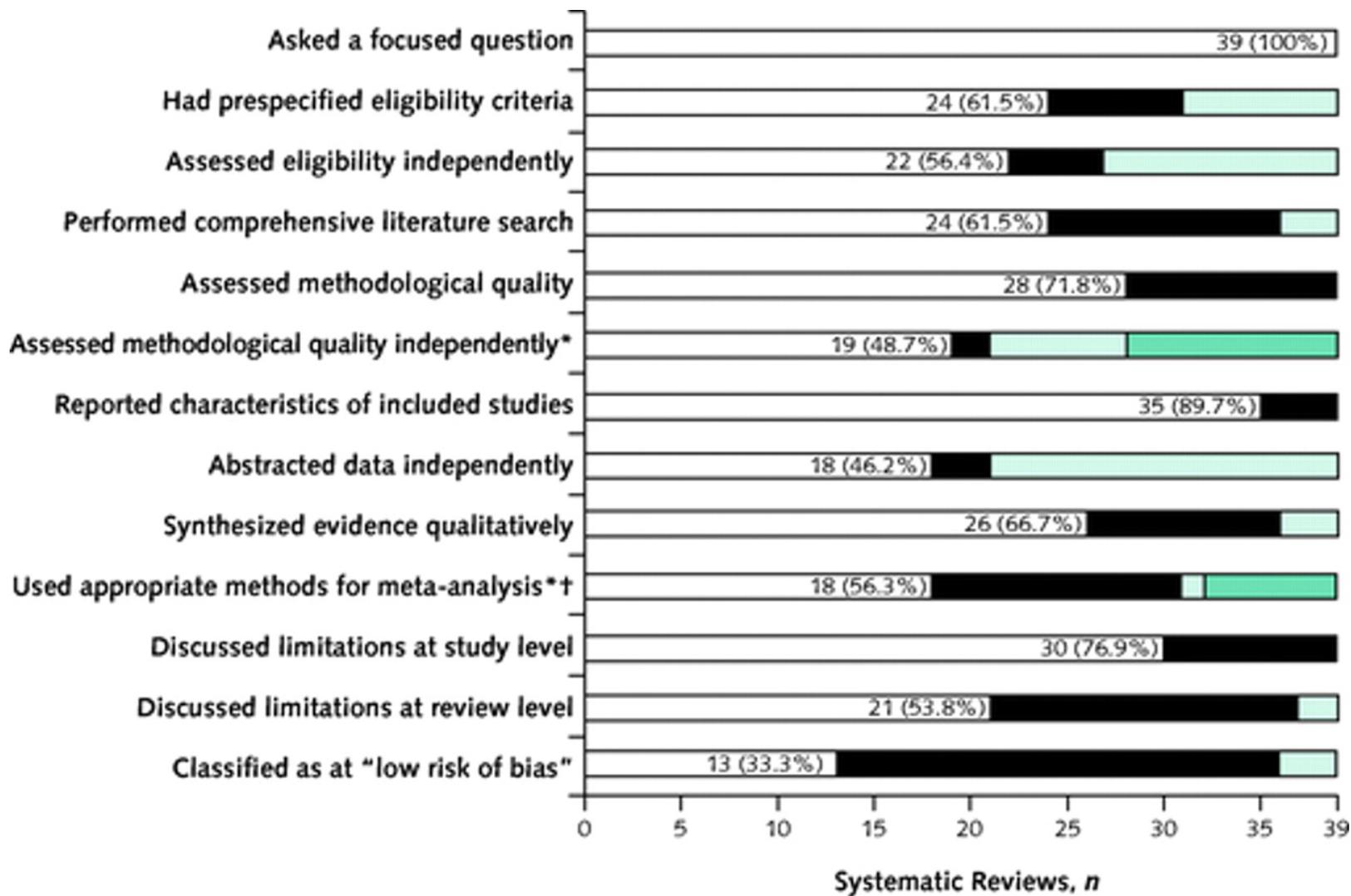
1. Extract guideline recommendations and supporting evidence
2. Compare the guideline recommendations with evidence at the time of the most recent update
3. Transform the recommendations into answerable questions
4. Identify professional organizations and patient groups as partners
5. Conduct survey asking professional partners to prioritize the questions to be answered by research
6. Conduct focus groups or survey patients to prioritize and name patient-important outcomes
7. Map highest ranked priorities to high quality systematic review evidence

Condition	PPP Year	Professional Organization and Engagement Activities
Primary Open Angle Glaucoma	2005	American Glaucoma Society <ul style="list-style-type: none"> • 2 rounds of Delphi survey 
Primary Angle Closure Glaucoma	2010	Attendees at 2010 Asia-Pacific Glaucoma Congress <ul style="list-style-type: none"> • 1 round survey of those indicating an interest 
Diabetic Retinopathy	2008	DRCRNet <ul style="list-style-type: none"> • 2 rounds Delphi survey • Focus groups with patients 
Age-related Macular Degeneration	2011	American Society of Retina Specialists <ul style="list-style-type: none"> • 2 round Delphi survey of ASRS members • 2 round Delphi survey of “MD Support” members 
Dry Eye Syndrome	2013	Tear and Film Ocular Society <ul style="list-style-type: none"> • 2 round Delphi survey of TFOS members • Two proposals for patient surveys 

A model for evidence-based guidelines



Number (%) of Systematic Reviews Satisfying Each Quality Criterion



- Yes
- No
- Not reported
- Not applicable

E-Gap (2):

Did the 2015 PPP on age-related macular degeneration use the reliable evidence available?

Lead: Kristina Lindsley

- Literature searches for systematic reviews of intervention effectiveness for AMD were updated in May 2014
 - We determined that 33/47 eligible SRs in 2014 were “reliable”
- Literature searches for evidence underpinning the 2015 AAO PPP on AMD were updated in June 2013.
- The AAO PPP cited three systematic reviews that were rated reliable in our study. Many recommendations cited only evidence from individual RCTs and case series.

E-Gap (3):

What would we have known for the 1989-2010
PPPs if we had used systematic reviews?

Lead: Ben Rouse, MHS

Objective: Compare the guideline recommendations with the evidence base determined by network meta-analysis at the time of each major update of the guideline.

Network Meta-analysis

- We looked at which trial data were available at the time each PPP on open angle glaucoma was done
- We combined those data in a network meta-analysis to see which drug worked best for treating glaucoma, at each point in time
 - By **1992**, we would have known the beta-blockers worked best (no specific treatment recommended)
 - By **2003**, we would have known the prostaglandins were best (recommended by the PPP in 2010)
- Although network meta-analysis was not available to researchers until recently, it is a technique that will be useful in the future

Summary

- Guidelines did not make any specific recommendations for first-line treatment until 2010; guidelines made no recommendations at drug level.
- Prostaglandins (current first-line treatment) could have been shown to be the most effective class before the publication of the 2003 guideline if network meta-analysis has been available

Lessons learned

- The IOM 2011 standards for guideline production have been influential in moving the PPPs toward using systematic reviews of available evidence
 - About 1/3 of systematic reviews may be unreliable
- The Cochrane E-Gap project continues to be helpful in prioritizing where solid evidence exists and where it is needed
 - Better linking of PPP recommendations to systematic reviews would be helpful
- The Cochrane E-Gap project has shown that sometimes the evidence existed but was not cited in the PPPs
- The Cochrane E-Gap project has shown that new meta-analysis methods may be useful to address “what works best?” in the PPPs