

CADTH Reference List

Screening for Impaired Vision in Older Adults

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Key Messages

- Three systematic reviews were identified regarding the clinical utility of screening for impaired vision versus no screening in adults aged 65 years and older.
- Three evidence-based guidelines were identified regarding the use of screening for impaired vision in adults aged 65 years and older.

Research Questions

1. What is the clinical utility of screening for impaired vision versus no screening in adults aged 65 years and older?
2. What are the evidence-based guidelines regarding the use of screening for impaired vision in adults aged 65 years and older?

Methods

Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, the Cochrane Database of Systematic Reviews, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were screening for impaired vision, adults 65 years and older, and primary care/community health/non-specialist health care settings. CADTH-developed search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses or network meta-analyses, randomized controlled trials or controlled clinical trials, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English-language documents published between January 1, 2017 and July 8, 2022.

Selection Criteria

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in [Table 1](#). Full texts of study publications were not reviewed. Open access full-text versions of evidence-based guidelines were reviewed when available.

Results

Three systematic reviews¹⁻³ were identified regarding the clinical utility of screening for impaired vision versus no screening in adults aged 65 years and older. Three evidence-based guidelines⁴⁻⁶ were identified regarding the use of screening for impaired vision in adults aged

Table 1: Selection Criteria

Criteria	Description
Population	Adults aged 65 years and older in primary care settings
Intervention	Vision screening tests performed or interpreted by primary health care professionals
Comparator	Q1: No vision screening Q2: Not applicable
Outcomes	Q1: Clinical utility (e.g., mortality, fractures, falls, functionality, quality of life [e.g., overall, vision-related], visual acuity, harms [e.g., rates of adverse events]) Q2: Recommendations regarding best practices (e.g., appropriate patient populations, recommended screening techniques or approaches, screening algorithms)
Study designs	Health technology assessments, systematic reviews, randomized controlled trials, evidence-based guidelines

65 years and older. No relevant health technology assessments or randomized controlled trials were identified.

Additional references of potential interest that did not meet the inclusion criteria are provided in [Appendix 1](#).

References

Health Technology Assessments

No literature identified.

Systematic Reviews

1. Chou R, Bougatsos C, Jungbauer R, et al. Screening for Impaired Visual Acuity in Older Adults: A Systematic Review for the U.S. Preventive Services Task Force (*Evidence Synthesis, No. 213*). Rockville (MD): Agency for Healthcare Research and Quality (US); 2022: <https://www.ncbi.nlm.nih.gov/books/NBK580929/>. Accessed 12 July 2022.
2. Clarke EL, Evans JR, Smeeth L. Community screening for visual impairment in older people. *Cochrane Database Syst Rev.* 2018;2:CD001054. [PubMed](#)
3. Pillay J, Freeman EE, Hodge W, et al. *Screening for impaired visual acuity and vision-related functional limitations in adults 65 years and older in primary health care: systematic review.* Edmonton (AB): Evidence Review Synthesis Centre; 2018: https://canadiantaskforce.ca/wp-content/uploads/2018/06/Systematic-Review_Screening-for-impaired-visual-acuity-and-vision_Final_Nov-2017_v3.pdf.
Note: Supporting document for Wilson BJ, Courage S, Bacchus M, et al. (reference #5)

Randomized Controlled Trials

No literature identified.

Guidelines and Recommendations

4. US Preventive Services Task Force. Screening for Impaired Visual Acuity in Older Adults: US Preventive Services Task Force Recommendation Statement. *JAMA.* 2022;327(21):2123-2128. [PubMed](#)
5. Wilson BJ, Courage S, Bacchus M, et al. Screening for impaired vision in community-dwelling adults aged 65 years and older in primary care settings. *CMAJ.* 2018;190(19):E588-E594. [PubMed](#)
See: Recommendation (pages E590-591)
6. World Health Organization. Integrated care for older people: Guidelines on community-level interventions to manage declines in intrinsic capacity. 2017; <https://apps.who.int/iris/bitstream/handle/10665/258981/9789241550109-eng.pdf>. Accessed 2022 July 11.
See: Section 3.1.3: Visual Impairment (pages 23-35); See Recommendation 3 (page 11)

Appendix 1: References of Potential Interest

Previous CADTH Reports

7. Ndegwa S, MacDougall D. Healthy Aging Interventions, Programs, and Initiatives. (*CADTH Environmental scan no. 92*). Ottawa (ON): CADTH; 2020: <https://www.cadth.ca/healthy-aging-interventions-programs-and-initiatives-environmental-scan>. Accessed 2022 July 12.
See: Table 4 (page 57)

Randomized Controlled Trials

Protocol

8. O'Brien KS, Stevens VM, Byanju R, et al. Cluster-randomised trial of community-based screening for eye disease in adults in Nepal: the Village-Integrated Eye Worker Trial II (VIEW II) trial protocol. *BMJ Open*. 2020;10(10):e040219. [PubMed](#)

Non-Randomized studies

Case Series

9. Leroi I, Simkin Z, Hooper E, et al. Impact of an intervention to support hearing and vision in dementia: The SENSE-Cog Field Trial. *Int J Geriatr Psychiatry*. 2020;35(4):348-357. [PubMed](#)

Guidelines and Recommendations

Alternative Methodology - Consensus

10. Wittich W, Jarry J, Hobler F, McGilton KS. Agreement on the use of sensory screening techniques by nurses for older adults with cognitive impairment in long-term care: a mixed-methods consensus approach. *BMJ Open*. 2019;9(9):e027803. [PubMed](#)

Unclear Methodology

11. British Geriatrics Society. Comprehensive Geriatric Assessment Toolkit for Primary Care Practitioners. 2019; <https://www.bgs.org.uk/resources/resource-series/comprehensive-geriatric-assessment-toolkit-for-primary-care-practitioners>. Accessed 2022 July 12.
See: 3. Patients at risk of falls and fractures under "4. Perform an examination focusing on..." (page 33)

Review Articles

12. Burton MJ, Ramke J, Marques AP, et al. The Lancet Global Health Commission on Global Eye Health: vision beyond 2020. *Lancet Glob Health*. 2021;9(4):e489-e551. [PubMed](#)
See: Eye care delivery in general primary health care (page E524)

Additional References

13. Buys YM. Adopt US recommendation on vision screening in older adults. *CMAJ*. 2018;190(38):E1144. [PubMed](#)