

FPIN's Help Desk Answers

Community Vision Screening in Older Adults

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Clinical Question

Does community vision screening in patients 65 years and older reduce the prevalence of visual impairment?

Evidence-Based Answer

No, the available evidence does not support screening adults 65 years and older for visual impairment in the primary care setting. Among community-dwelling adults 65 years and older, vision screening produces no significant difference in the prevalence of visual impairment at follow-up compared with no screening. (Strength of Recommendation: A, based on a systematic review of randomized controlled trials [RCTs].)

Evidence Summary

A 2018 systematic review and meta-analysis of 10 RCTs (N = 10,608) evaluated the effect of vision screening on the prevalence of visual impairment in community-dwelling patients 65 years and older.¹ Patients were excluded for being too ill for assessment and living in a long-term residential care facility, although these criteria were not uniformly applied across studies. Screening methods included a vision questionnaire vs. no screening, visual acuity examination vs. no screening, and visual acuity examination as part of a detailed health assessment compared with a one-question vision assessment. The primary

outcome was the degree of visual impairment as measured by patient self-report or visual acuity in the population at the end of each study period (range = one to five years total follow-up). In the subset of six studies comparing a vision questionnaire to no screening, the risk of “not seeing well” at follow-up was similar in patients who were screened and those who were not screened (six RCTs; n = 4,522; relative risk = 1.1; 95% CI, 0.97 to 1.1). Two of the studies comparing a visual acuity examination to no screening found no differences in near distance visual acuity at follow-up using a mean logMAR (Logarithm of the Minimum Angle of Resolution) chart, a standardized visual acuity chart similar to a Snellen chart (n = 653). A single study that evaluated a visual acuity examination as part of a detailed health assessment compared with a one-question assessment found similar risk of impaired vision (visual acuity worse than 20/63 in either eye) at three to five years (n = 1,807). All three comparisons had high-certainty evidence.

In 2018, the Canadian Task Force on Preventive Health Care published an evidence-based guideline following a systematic review of 15 RCTs evaluating the effect of vision screening in a primary care setting for community-dwelling adults 65 years and older (N = 14,979; mean age = 78.5; 63% female).² Nine of the 15 RCTs (n = 9,992) were included in the previous systematic

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review. The task force used the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach to determine the quality of evidence and strength of recommendation. Two types of vision screening were included (self-report of visual function using a questionnaire and objective visual acuity), and the comparison group received a visual assessment without active follow-up. Follow-up lasted 2.5 to 47 months (mean = 19 months) after the initial screening. Outcome measures addressed by the review were mortality, fractures, loss of independence, vision-related function, changes in visual acuity, quality of life, major adverse effects from treatment, and anxiety. In a subset of 10 RCTs reporting visual acuity, there was no difference in self-reported visual outcomes at a median follow-up duration of 20 months (n = 8,683; adjusted relative risk = 0.9% or nine per 1,000 persons screened; number needed to screen to prevent one case of low vision = 111;

95% CI, 16 more to 31 fewer vision issues reported). Evidence was judged as moderate quality. The guideline recommended against screening for impaired vision in primary care settings among community-dwelling adults 65 years and older with a weak recommendation based on low-quality evidence.

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References

1. Clarke EL, Evans JR, Smeeth L. Community screening for visual impairment in older people. *Cochrane Database Syst Rev.* 2018;(2):CD001054.
2. Wilson BJ, Courage S, Bacchus M, et al.; Canadian Task Force on Preventive Health Care. Screening for impaired vision in community-dwelling adults aged 65 years and older in primary care settings. *CMAJ.* 2018;190(19):E588-E594. ■



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