Fundus Photography in Eye Examinations: Guidelines – An Update
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Questions or requests for information about this report can be directed to requests@cadth.ca
Research Questions
1. What are the evidence-based guidelines for administration of a fundus photography exam in conjunction with a regular eye examination in individuals aged 0 to 19, 20 to 64, or 65 years or older?
2. What are the evidence-based guidelines for administration of a fundus photography exam in conjunction with a regular eye examination in individuals with a family history of diabetes, hypertension, ocular hypertension, cataract(s), glaucoma, and/or age-related macular degeneration?
3. What are the evidence-based guidelines for administration of a fundus photography exam in conjunction with a regular eye examination in individuals diagnosed with diabetes, hypertension, ocular hypertension, cataract(s), glaucoma, and/or age-related macular degeneration?

Key Findings
One evidence-based guideline was identified pertaining to the administration of a fundus photography examination in conjunction with regular eye examinations for relevant patient populations.

Methods
A limited literature search was conducted on key resources including PubMed, the Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to guidelines. The search was also limited to English language documents published between January 1, 2014 and April 9, 2019. Internet links were provided, where available.

Selection Criteria
One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

<table>
<thead>
<tr>
<th>Population</th>
</tr>
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<tbody>
<tr>
<td>Q1: Individuals aged 0 to 19, 20 to 64, or 65 years or older</td>
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<tr>
<td>Q2: Individuals with a family history of diabetes, hypertension, ocular hypertension, cataract(s), glaucoma, and/or age-related macular degeneration</td>
</tr>
<tr>
<td>Q3: Individuals diagnosed with diabetes, hypertension, ocular hypertension, cataract(s), glaucoma, and/or age-related macular degeneration</td>
</tr>
</tbody>
</table>
Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Normally, health technology assessment reports, systematic reviews, and meta-analyses are presented first; however, in reports where guidelines are primarily sought, the aforementioned evidence types are presented in the appendix.

One evidence-based guideline\(^1\) was identified in the literature search pertaining to the administration of a fundus photography examination in conjunction with regular eye examinations for relevant patient populations. Four guidelines\(^3\)\(^6\) included in the main body of the previous CADTH report\(^2\) were moved to the appendix as they did not meet the appropriate selection criteria upon further examination.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

One guideline\(^1\) was identified in the literature search pertaining to the administration of fundus photography examinations in conjunction with regular eye examinations. The identified guideline\(^1\) suggested the use of a fundus examination as part of a regular examination in age-related macular degeneration patient populations. Detailed guideline characteristics are included in Table 2, and a summary of the relevant recommendation is included in Table 3.

<table>
<thead>
<tr>
<th>First Author, Year</th>
<th>Intended Users, Target Population</th>
<th>Relevant Outcomes Considered</th>
<th>Evidence Collection</th>
<th>Evidence Quality Assessment</th>
<th>Recommendations Development and Evaluation</th>
<th>Guideline Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NICE, 2018(^1)</strong></td>
<td>Intended Users: Healthcare professional, social care professionals, commissioners and providers of ophthalmic and optometric services, people with age-related</td>
<td>This guideline offers information regarding diagnosing and managing age-related macular degeneration in adults.</td>
<td>Evidence collection for NICE guidelines includes: - Tailoring the search approach to the eligibility/inclusion criteria of the review question - Selecting GRADE or evidence statements are used to assess the quality of evidence and an overall rating of confidence is provided.</td>
<td>Confidence is rated as: Recommendation development includes: - Structured review questions agreement - Literature search - Call for evidence from stakeholders if necessary - Committee</td>
<td>An equality impact assessment is completed by the developer and committee chair and signed off by a member of NICE staff.</td>
<td></td>
</tr>
</tbody>
</table>
macular degeneration, their families and care takers.

**Target Population:** Adults with age-related macular degeneration.

**Evidence Collection:**
- Using supplementary search techniques
- Continuous review of how best to find evidence and where

**Evidence Quality Assessment:**
- high (authors are confident that the true effect and estimated effect are similar)
- moderate (authors believe that the true effect and estimated effect are probably close)
- low (the true effect and estimated effect might be markedly different)
- very low (the true effect and estimated effect is probably different).

**Recommendations Development and Evaluation:**
- discusses evidence reviews and develops draft recommendations

**Table 3: Summary of Relevant Recommendations of Included Guidelines**

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Strength of Evidence and Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Offer fundus examination as part of the ocular examination to people presenting with changes in vision (including micropsia and metamorphopsia) or visual disturbances.</em> (p 29)¹</td>
<td>NR</td>
</tr>
</tbody>
</table>

GRADE = Grading of Recommendations, Assessment, Development and Evaluations; NICE = National Institute of Health Care Excellence; NR = not reported

References Summarized

**Guidelines and Recommendations**

**Age-Related Macular Degeneration**

1. National Institute for Health and Care Excellence. Age-related macular degeneration *(NICE guideline NG82)* 2018;


   See: 4.1.5 Summary of Recommendations, page 29
Appendix — Further Information

Previous CADTH Report


References Included in Main Body of Previous CADTH Report

*In Combination with Regular Eye Exam Not Specified – Diabetic Population*


*In Combination with Regular Eye Exam Not Specified - Diabetic Retinopathy*


*Recommendation Unclear - Glaucoma Population*


Additional Guidelines and Recommendations

*Regular Eye Exam Not Specified*

In Combination with Regular Eye Exam Not Specified - Diabetic Population

See: Specialist dilated eye exam

See: Retinal Imaging, page 20

See: Table 1; page 121 and Table 2; page 122

Clinical Practice Guidelines – Unspecified Methodology


Age-Related Macular Degeneration

See: C) Moderate to Severe Dry AMD, page 4; Optometrist, page 6

Review Articles


Additional Information
