

Frequency of Testing for Dyslipidemia: OHTAC Recommendation

Ontario Health Technology Advisory Committee

May 2014

Suggested Citation

This report should be cited as follows:

Ontario Health Technology Advisory Committee (OHTAC). Frequency of testing for dyslipidemia: OHTAC recommendation [Internet]. Toronto: Queen's Printer for Ontario; 2014 May. 11 p. Available from: <http://www.hqontario.ca/evidence/publications-and-ohtac-recommendations/ontario-health-technology-assessment-series/frequency-of-testing-for-dyslipidemia>.

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Conflict of Interest Statement

All authors in the Evidence Development and Standards branch at Health Quality Ontario are impartial. There are no competing interests or conflicts of interest to declare.

About Health Quality Ontario

Health Quality Ontario (HQO) is an arms-length agency of the Ontario government. It is a partner and leader in transforming Ontario's health care system so that it can deliver a better experience of care, better outcomes for Ontarians, and better value for money.

Health Quality Ontario strives to promote health care that is supported by the best available scientific evidence. The Evidence Development and Standards branch works with advisory panels, clinical experts, developers of health technologies, scientific collaborators, and field evaluation partners to provide evidence about the effectiveness and cost-effectiveness of health interventions in Ontario.

To conduct its systematic reviews of health interventions, the Evidence Development and Standards branch examines the available scientific literature, making every effort to consider all relevant national and international research. If there is insufficient evidence on the safety, effectiveness, and/or cost-effectiveness of a health intervention, HQO may request that its scientific collaborators conduct economic evaluations and field evaluations related to the reviews. Field evaluation partners are research institutes focused on multicentred clinical trials and economic evaluation, as well as institutes engaged in evaluating the safety and usability of health technologies.

About the Ontario Health Technology Advisory Committee

The Ontario Health Technology Advisory Committee (OHTAC) is a standing advisory subcommittee of the Board of Directors of Health Quality Ontario. Based on the evidence provided by Evidence Development and Standards and its partners, OHTAC makes recommendations about the uptake, diffusion, distribution, or removal of health interventions within the provincial health system. When making its recommendations, OHTAC applies a unique decision-determinants framework that takes into account overall clinical benefit, value for money, societal and ethical considerations, and the economic and organizational feasibility of the health care intervention in Ontario.

Publishing Health Quality Ontario Research

When the evidence development process is nearly completed, draft reviews, reports, and OHTAC recommendations are posted on HQO's website for 21 days for public and professional comment. For more information, please visit: <http://www.hqontario.ca/evidence/evidence-process/evidence-review-process/professional-and-public-engagement-and-consultation>.

Once finalized and approved by the Board of Directors of Health Quality Ontario, the research is published as part of the *Ontario Health Technology Assessment Series*, which is indexed in MEDLINE/PubMed, Excerpta Medica/Embase, and the Centre for Reviews and Dissemination database. Corresponding OHTAC recommendations and associated reports are also published on the HQO website. Visit <http://www.hqontario.ca> for more information.

When sufficient data are available, OHTAC tracks the ongoing use of select interventions it has previously reviewed, compiling data by time period and region. The results are published in the Ontario Health Technology Maps Project Report.

Disclaimer

This report was prepared by the Evidence Development and Standards branch at Health Quality Ontario or one of its research partners for the Ontario Health Technology Advisory Committee and was developed from analysis, interpretation, and comparison of scientific research. It also incorporates, when available, Ontario data and information provided by experts and applicants to HQO. The analysis may not have captured every relevant publication and relevant scientific findings may have been reported since the development of this recommendation. This report may be superseded by an updated publication on the same topic. Please check the Health Quality Ontario website for a list of all publications: <http://www.hqontario.ca/evidence/publications-and-ohdac-recommendations>.

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Background

Overuse, underuse, and misuse of interventions are important concerns in health care and lead to individuals receiving unnecessary or inappropriate care. In April 2012, under the guidance of the Ontario Health Technology Advisory Committee's Appropriateness Working Group, Health Quality Ontario (HQO) launched its Appropriateness Initiative. The objective of this initiative is to develop a systematic framework for the ongoing identification, prioritization, and assessment of health interventions in Ontario for which there is possible misuse, overuse, or underuse.

For more information on HQO's Appropriateness Initiative, visit our website at www.hqontario.ca.

The Evidence Development and Standards branch at Health Quality Ontario conducted an evidence-based analysis (1) to answer the following research question:

- What is the effective and cost effective frequency of testing for dyslipidemia?

The analysis focused on adults not diagnosed with dyslipidemia and adults being treated for dyslipidemia.

Conclusions

- Two HTAs did not identify any evidence on the frequency of lipid testing.
- The quality of the evidence was considered very low given the methodological and generalizability issues in the 2 observational studies identified in the literature.
- Therefore, conclusions on the frequency of lipid testing could not be made based on the 2 observational studies.
- Based on expert consensus, the Canadian Cardiovascular Society currently recommends annual lipid testing in people at low to high risk of cardiovascular disease and testing every 4-5 years in those in the low-low risk category.
- Our analysis showed that people in Ontario at low-low, low, intermediate, and high risk of cardiovascular disease are being tested once every 4.4, 1.9, 1.4, and 1.0 years, respectively. According to the CCS guidelines, this represents under-testing in the low and intermediate groups. Achieving the recommended rates of testing would cost approximately \$52.2 million.
- Given the cost of implementing such a change and the uncertainty on which CCS guidelines are based, it would be prudent to await the results of further research before making such an investment.

Decision Determinants

OHTAC has developed a decision-making framework that consists of 7 guiding principles for decision making and a decision determinants tool. When making a decision, OHTAC considers 4 explicit main criteria: overall clinical benefit, consistency with expected societal and ethical values, value for money, and feasibility of adoption into the health system. For more information on the decision-making framework, please refer to the *Decision Determinants Guidance Document* available at (<http://www.hqontario.ca/evidence/evidence-process/evidence-review-process/decision-making-framework>).

A summary of the Decision Determinants can be viewed in Appendix 1.

OHTAC Recommendations

- In individuals with normal lipid levels or dyslipidemia (e.g., abnormal levels of fat and/or cholesterol in the blood), or for individuals currently being treated for dyslipidemia, there is insufficient evidence upon which OHTAC can make a recommendation on the frequency of lipid testing.
- Until higher quality evidence becomes available, OHTAC recommends that consideration be given to using the current Canadian Cardiovascular Society Guidelines. (2)

Appendices

Appendix 1 – Decision Determinants

The evaluation of the four explicit criteria (Overall Clinical Benefit, Consistency with Societal & Ethical Values, Value for Money, and Feasibility of Adoption into Health System) are reported in the Decision Determinants table (Table 1).

Table A1: Decision Determinants for Frequency of Lipid Testing

Decision Criteria	Subcriteria	Decision Determinants Considerations
Overall clinical benefit How likely is the health technology/intervention to result in high, moderate, or low overall benefit?	Effectiveness How effective is the health technology/intervention likely to be (taking into account any variability)?	The effectiveness of different intervals of testing for dyslipidemia was the intent of this review. The absence of information precluded the assessment of effectiveness.
	Safety How safe is the health technology/intervention likely to be?	Not applicable
	Burden of illness What is the likely size of the burden of illness pertaining to this health technology/intervention?	The prevalence of abnormal levels of low-density lipoprotein cholesterol is approximately 23% of the population.
	Need How large is the need for this health technology/intervention?	The need for the use of lipid testing is expected to be large.
Consistency with expected societal and ethical values^a How likely is adoption of the health technology/intervention to be congruent with societal and ethical values?	Societal values How likely is the adoption of the health technology/intervention to be congruent with expected societal values?	Uncertain
	Ethical values How likely is the adoption of the health technology/intervention to be congruent with expected ethical values?	Uncertain
Value for money How efficient is the health technology likely to be?	Economic evaluation How efficient is the health technology/intervention likely to be?	Could not be evaluated given the lack of published literature on the topic.
Feasibility of adoption into health system How feasible is it to adopt the health technology/intervention into the Ontario health care system?	Economic feasibility How economically feasible is the health technology/intervention?	Already diffused
	Organizational feasibility How organizationally feasible is it to implement the health technology/intervention?	Already diffused

^aThe anticipated or assumed common ethical and societal values held in regard to the target condition, target population, and/or treatment options. Unless there is evidence from scientific sources to corroborate the true nature of the ethical and societal values, the expected values are considered.

References

- (1) Health Quality Ontario. Frequency of testing for dyslipidemia: an evidence-based analysis. Ont Health Technol Assess Ser [Internet]. 2014 May;14(6):1-30. Available from: <http://www.hqontario.ca/evidence/publications-and-ohtac-recommendations/ontario-health-technology-assessment-series/frequency-of-testing-for-dyslipidemia>.
- (2) Anderson TJ, Gregoire J, Hegele RA, Coutoure P, Mancini GBJ, McPherson R, et al. 2012 Update of the Canadian Cardiovascular Society Guidelines for the Diagnosis and Treatment of Dyslipidemia for the Prevention of Cardiovascular Disease in the Adult. Can J Cardiol. 2013;29:151-167. Available at: <http://dyslipidemia.onlinecjc.ca/Content/PDFs/2012Guidelines.pdf>

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