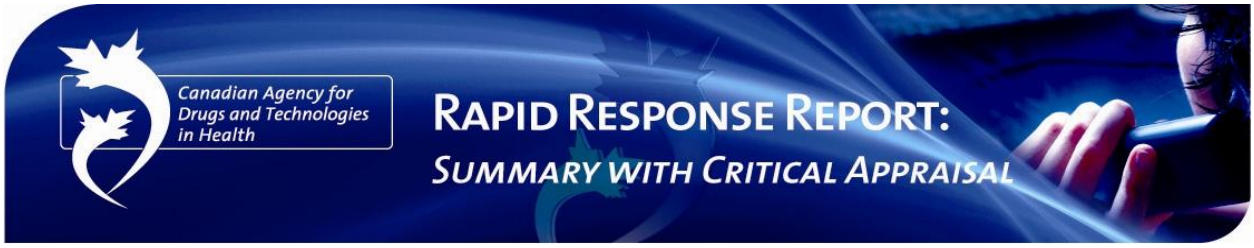

TITLE: Populations Requiring Foldable Lenses for Cataract Surgery: A Review of Clinical Evidence and Guidelines

DATE: 20 October 2011

CONTEXT AND POLICY ISSUES:

A cataract is a clouding of the lens of the eye that causes blindness.[1,2] Normal vision is restored with intraocular lens (IOL) implantation.[1] Two techniques are commonly used for cataract extraction. Standard extracapsular cataract extraction involves a 10 to 14 mm incision through which the intact lens is removed and a rigid plastic polymethylmethacrylate lens is inserted.[1] In contrast, during phacoemulsification or small incision surgery, the lens is fragmented with ultrasound and aspirated from the eye through a small 2 mm to 4 mm incision. A foldable plastic or silicon lens is then inserted through the small incision requiring one or no sutures.[1]

The Canadian Ophthalmological Society evidence-based clinical practice guidelines for cataract surgery recommend that foldable IOLs should be available to all patients because they are placed through smaller incisions, resulting in improved final postoperative visual acuity, less early postoperative inflammation, and reduced surgically induced astigmatism.[2]

In 2008, six of thirteen jurisdictions responded to a Canadian survey of cataract surgery. New Brunswick and Ontario fully funded foldable lenses as part of insured cataract surgery; Newfoundland and Prince Edward Island partially funded foldable lenses, and Manitoba and British Columbia allowed patients to purchase their own foldable lenses.[3] Two of the jurisdictions were contemplating changes in coverage and Manitoba implemented foldable lenses as standard of care in March 2011.[4]

The purpose of this report is to review the clinical evidence and evidence-based guidelines for the appropriate patient populations who require foldable lenses as their only option for cataract surgery.

RESEARCH QUESTIONS:

1. What is the clinical evidence for the appropriate patient populations who require foldable lenses for cataract surgery?

2. What are the evidence-based guidelines for the appropriate patient populations who require foldable lenses for cataract surgery?

KEY MESSAGE:

No clinical evidence or evidence-based guidelines were identified regarding the appropriate patient populations who require foldable lenses for cataract surgery.

METHODS:

Literature search strategy

A limited literature search was conducted on key resources including PubMed, Ovid EMBASE, The Cochrane Library (2011, Issue 9), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and abbreviated list of major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between Jan 1, 2006 and Sep 27, 2011.

Selection Criteria and Methods

One reviewer (LM) screened citations to identify clinical evidence and evidence-based guidelines regarding the appropriate patient populations who require foldable lenses for cataract surgery. Potentially relevant articles were ordered based on titles and abstracts, where available. Full-text articles were considered for inclusion based on the selection criteria listed below.

Table 1: Selection Criteria

Population	Patients undergoing cataract surgery
Intervention	Foldable lenses (any kind)
Comparator	No comparator
Outcomes	Guidelines, medical specifications or conditions such as the patient's vision and eye anatomy (ie. optic size, degree of astigmatism, etc)
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, and guidelines

Exclusion Criteria

Articles were excluded if they did not meet the selection criteria in table 1 or if no methods were provided to describe how the result or guidance was reached.

SUMMARY OF EVIDENCE:

Quantity of Research Available

The process of study selection is outlined in the PRISMA flowchart (Appendix 1). No Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies or evidence-based clinical practice guidelines were identified for the appropriate patient populations who require foldable lenses for cataract surgery.

CONCLUSIONS AND IMPLICATIONS FOR DECISION OR POLICY MAKING:

No conclusions can be drawn regarding the most appropriate patient population who require foldable lenses for cataract surgery as no clinical evidence or evidence-based guidelines were found.

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APPENDICES:

APPENDIX 1: Selection of Included Studies