CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Cataract Surgery Performed without an Anesthesiologist: Clinical Effectiveness and Guidelines
Authors: Charlotte Wells, Sarah Jones


Acknowledgments:

Disclaimer: The information in this document is intended to help Canadian health care decision-makers, health care professionals, health systems leaders, and policy-makers make well-informed decisions and thereby improve the quality of health care services. While patients and others may access this document, the document is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose. The information in this document should not be used as a substitute for professional medical advice or as a substitute for the application of clinical judgment in respect of the care of a particular patient or other professional judgment in any decision-making process. The Canadian Agency for Drugs and Technologies in Health (CADTH) does not endorse any information, drugs, therapies, treatments, products, processes, or services.

While care has been taken to ensure that the information prepared by CADTH in this document is accurate, complete, and up-to-date as at the applicable date the material was first published by CADTH, CADTH does not make any guarantees to that effect. CADTH does not guarantee and is not responsible for the quality, currency, propriety, accuracy, or reasonableness of any statements, information, or conclusions contained in any third-party materials used in preparing this document. The views and opinions of third parties published in this document do not necessarily state or reflect those of CADTH.

CADTH is not responsible for any errors, omissions, injury, loss, or damage arising from or relating to the use (or misuse) of any information, statements, or conclusions contained in or implied by the contents of this document or any of the source materials.

This document may contain links to third-party websites. CADTH does not have control over the content of such sites. Use of third-party sites is governed by the third-party website owners’ own terms and conditions set out for such sites. CADTH does not make any guarantee with respect to any information contained on such third-party sites and CADTH is not responsible for any injury, loss, or damage suffered as a result of using such third-party sites. CADTH has no responsibility for the collection, use, and disclosure of personal information by third-party sites.

Subject to the aforementioned limitations, the views expressed herein are those of CADTH and do not necessarily represent the views of Canada’s federal, provincial, or territorial governments or any third party supplier of information.

This document is prepared and intended for use in the context of the Canadian health care system. The use of this document outside of Canada is done so at the user’s own risk.

This disclaimer and any questions or matters of any nature arising from or relating to the content or use (or misuse) of this document will be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, and all proceedings shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario, Canada.

The copyright and other intellectual property rights in this document are owned by CADTH and its licensors. These rights are protected by the Canadian Copyright Act and other national and international laws and agreements. Users are permitted to make copies of this document for non-commercial purposes only, provided it is not modified when reproduced and appropriate credit is given to CADTH and its licensors.

About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada’s health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.
Research Questions

1. What is the clinical effectiveness of cataract surgery performed without an anesthesiologist present?

2. What are the evidence-based guidelines regarding the delivery and monitoring of local anesthesia during cataract surgery?

Key Findings

One evidence-based guideline was identified regarding the delivery and monitoring of local anesthesia during cataract surgery.

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. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2012 and July 13 2017. 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>Table 1: Selection Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population</strong></td>
</tr>
</tbody>
</table>
| **Intervention** | Q1: Cataract surgery performed without an anesthesiologist present in a non-hospital (clinic) setting  
Q2: Cataract surgery performed under local anesthesia |
| **Comparator** | Q1: Surgery performed with an anesthesiologist present in a hospital (operating room) setting  
Q2: No comparator |
| **Outcomes** | Q1: Clinical benefits and harms (e.g., patient safety, pain control)  
Q2: Evidence-based guidelines, including recommendations for surgical setting and which health care professionals can provide and monitor anesthesia |
| **Study Designs** | Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines |
Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One evidence-based guideline was identified regarding the delivery and monitoring of local anesthesia during cataract surgery. No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, or non-randomized studies were identified.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

One evidence-based guideline published jointly by the Royal College of Anaesthetists and the Royal College of Ophthalmologists was identified regarding the delivery and monitoring of local anesthesia during cataract surgery.1 Regarding pre-operative checks for suitability of anesthesia for cataract surgery, it is recommended that the specific WHO checklist for cataract surgery be used.1

It is recommended that local anesthesia be used for ophthalmologic procedures, with the choice of technique depending on both surgical and patient factors. Anesthesia such as orbital blocks should be administered by a trained anesthetist or ophthalmologist but subconjunctival or sub-Tenon’s blocks during cataract surgery can be administered by a trained non-medical staff member.1 However, level C evidence indicates that non-medical staff should not administer anesthesia for difficult cataract surgeries or other complex procedures.1

Patients should be monitored at all times during the procedure, with the minimum being clinical observation, communication, and pulse oximetry. In at risk patients or patients undergoing sedation, level C evidence indicates that an electrocardiogram and non-invasive blood pressure should be monitored in addition to the minimum monitoring requirements.1 The monitoring should be performed by a staff member who is solely responsible for the monitoring of the patient and remains with them throughout the procedure.1 All individuals who are responsible for monitoring patients should be regularly trained in basic life support.1

In an ideal situation, an anesthetist would be available in the theatre complex and, if they are not available, peribulbar or retrobulbar techniques would not be used unless by fully trained personnel.1

Sedation is recommended only for the alleviation of anxiety and not to cover inadequate blocks or provide more pain relief; however, the evidence is limited on the use of sedation during ophthalmologic surgeries.1

References Summarized

Health Technology Assessments

No literature identified.
Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials
No literature identified.

Non-Randomized Studies
No literature identified.

Guidelines and Recommendations
Appendix — Further Information

Previous CADTH Reports


Non-Randomized Studies – Alternate Comparator


Clinical Practice Guidelines – Uncertain Methodology


Review Articles


Additional References