CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Plastic or Reusable Aerochambers in Multi-Dose Inhalers: Clinical Effectiveness and Guidelines

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Funding: CADTH receives funding from Canada’s federal, provincial, and territorial governments, with the exception of Quebec.

Questions or requests for information about this report can be directed to requests@cadth.ca
Research Questions

1. What is the clinical effectiveness of plastic or reusable aerochambers in multi-dose inhalers for patients requiring medication administration?

2. What are the evidence-based guidelines regarding the use of reusable aerochambers for multi-dose inhalers?

Key Findings

No relevant literature was identified regarding the clinical effectiveness of plastic or reusable aerochambers in multi-dose inhalers for patients requiring medication administration. Additionally, no relevant evidence-based guidelines were found regarding the use of reusable aerochambers for multi-dose inhalers.

Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concept was inhaler spacers. 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, 2015 and April 17, 2020. Internet links were provided, where available.

Selection Criteria

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

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<th>Table 1: Selection Criteria</th>
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<td><strong>Population</strong></td>
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<td><strong>Intervention</strong></td>
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<td><strong>Comparator</strong></td>
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| **Outcomes** | Q1: Clinical Effectiveness  
Q2: Recommendations regarding the use of reusable aerochambers for MDIs |
| **Study Designs** | Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, evidence-based guidelines |

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Normally, health technology assessment reports and systematic reviews are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.
No relevant health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, or evidence-based guidelines were identified.

References of potential interest that did not meet the inclusion criteria are provided in the appendix.

**Overall Summary of Findings**

No relevant literature was identified regarding the clinical effectiveness of plastic or reusable aerochambers in multi-dose inhalers for patients requiring medication administration. Additionally, no relevant evidence-based guidelines were found regarding the use of reusable aerochambers for multi-dose inhalers; therefore no summary can be provided.

**References Summarized**

**Health Technology Assessments**

No literature identified.

**Systematic Reviews**

No literature identified.

**Randomized Controlled Trials**

No literature identified.

**Non-Randomized Studies**

No literature identified.

**Guidelines and Recommendations**

No literature identified.
Appendix — Further Information

Previous CADTH Reports


Non-Randomized Studies

Unclear Comparator


Alternative Study Design


Clinical Practice Guidelines – Non-Systematic Methodology


Review Articles