Blunt Needles for Withdrawing from Multi-dose Vials: Safety and Guidelines
SUMMARY OF ABSTRACTS Blunt Needles for Withdrawing from Multi-dose Vials

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

1. What is the clinical evidence regarding the safety of using blunt needles to withdraw medication or vaccines from multi-dose vials or ampules?

2. What are the evidence-based guidelines regarding needles to withdraw medication or vaccines from multi-dose vials or ampules?

Key Findings

No relevant clinical evidence was identified regarding the safety of using blunt needles to withdraw medication or vaccines from multi-dose vials or ampules. In addition, no relevant evidence-based guidelines were identified.

Methods

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) Canadian and 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, guidelines, and safety data. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2016 and April 17, 2019.

Selection Criteria

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

Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Patients in any clinical setting where multi-dose vials or ampules are used</th>
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<tbody>
<tr>
<td>Intervention</td>
<td>Blunt needles, with or without filters, for withdrawing medication or vaccines from multi-dose vials or ampules</td>
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| Comparator | Q1: Other needle types (e.g., sharp needles); no comparator  
Q2: No comparator required |
| Outcomes | Q1: Safety (e.g., adverse events related to contamination risk, harms due to cap fragmentation)  
Q2: Evidence-based guidelines and recommendations (e.g., what type of needle should be used for withdrawing from multi-dose vials) |
| 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.

No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, or evidence-based guidelines were identified.

References of potential interest are provided in the appendix.

Overall Summary of Findings

No relevant literature was found regarding the safety of using blunt needles to withdraw medication or vaccines from multi-dose vials or ampules; therefore, no summary can be provided.

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
No literature identified.
Appendix — Further Information

Previous CADTH Reports


Non-Randomized Studies

Ex Vivo Study


Intervention Insufficiently Described


Clinical Practice Guidelines

Intervention Insufficiently Described


Unspecified Methodology

Note: Blunt fill needles discussed on page 3.


   Note: Filter needles discussed on page 9.

Review Articles


