TITLE: Blunt Needles for Withdrawing from Multi-dose Vials: Safety and Guidelines

DATE: 13 December 2016

RESEARCH QUESTIONS

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

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

KEY FINDINGS

No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, and evidence-based guidelines were identified regarding the safety of using blunt needles to withdraw medication or vaccines from multi-dose vials.

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. For question 1, no methodological filters were applied to limit the retrieval by study type. For question 2, methodological filters were applied to limit retrieval to guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2006 and December 6, 2016. 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 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Patients in any clinical setting where multi-dose vials 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</td>
</tr>
<tr>
<td>Comparator</td>
<td>Other needle types (e.g., sharp needles); No comparator</td>
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| Outcomes                    | Q1: safety (e.g., adverse events related to contamination risk, harms due to cap fragmentation, etc.)
                             | Q2: 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, and evidence-based guidelines were identified regarding the safety of using blunt needles to withdraw medication or vaccines from multi-dose vials.

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; 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.

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APPENDIX – FURTHER INFORMATION:

Non-Randomized Studies – Alternate Outcomes


Clinical Practice Guidelines and Position Papers – Methodology Not Specified


See: Preparing vaccine for administration, page 39


See: Injection Safety Checklist, page 25


See: Vaccine Preparation


Additional References
