

CADTH RAPID RESPONSE REPORT: REFERENCE LIST

Unfiltered Needles for Withdrawing Medication from Glass Ampoules for Intramuscular Injections: Safety and Guidelines

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

Research Questions

1. What is the safety/harm of using non-filtered needles when withdrawing medication from glass ampoules versus vials for intramuscular injections?
2. What are the guidelines regarding the use of unfiltered needles intended for intramuscular administration?

Key Findings

No relevant literature was identified regarding the safety of using unfiltered needles when withdrawing medication from glass ampoules versus vials for intramuscular injections. Additionally, no evidence-based guidelines were identified pertaining to the use of unfiltered needles for intramuscular injections.

Methods

A limited literature search was conducted by an information specialist on key resources including PubMed, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, CINAHL, 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 concepts were use of non-use of filter needles and withdrawing medication from glass ampoules. No filters were applied to limit the retrieval by study type. The search was also limited to English language documents published between January 1, 2014 and May 17, 2019. 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

Population	Patients requiring intramuscular (IM) injection with a medication withdrawn from a glass ampule
Intervention	Unfiltered needles (regular needles) for withdrawing medication from glass ampoules
Comparator	Q1: Needles for withdrawing medication from vials Q2: No comparator
Outcomes	Q1: Safety/harms or adverse events Q2: Guidelines
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, or non-randomized studies were identified regarding the safety of using unfiltered needles when withdrawing medication from glass ampoules versus vials for intramuscular injections. Additionally, no evidence-based guidelines were identified pertaining to the use of unfiltered needles for intramuscular injections.

References of potential interest are provided in the appendix.

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

1. CADTH. Filtered versus non-filtered needles for withdrawing medication from glass ampoules: comparative clinical effectiveness, cost-effectiveness, and guidelines. Ottawa (ON): CADTH; 2015 Jun: <https://www.cadth.ca/sites/default/files/pdf/htis/june-2015/RA0767%20Filtered%20Needles%20Final.pdf> Accessed 2019 May 23.

Clinical Practice Guidelines – Unspecified Methods

2. Winnipeg Regional Health Authority. Drawing medications from a glass ampoule and the use of filter needles: population and public Health (*Practice Guideline*). Winnipeg (MB): Winnipeg Regional Health Authority; 2018 Aug: <http://www.wrha.mb.ca/professionals/immunization/files/SupportMedicationsglassampoulefilterneedles.pdf> Accessed 2019 May 23.

Additional References

3. Merry AF, Gargiulo DA, Fry LE. What are we injecting with our drugs? *Anaesth Intensive Care*. 2017 Sep;45(5):539-542.
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