Masks During Aerosol Generating Dental Procedures: Clinical Effectiveness and Guidelines
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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.

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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 effectiveness of masks for dental clinicians exposed to bioaerosols or infectious agents during dental procedures?

2. What are the evidence-based guidelines regarding the selection of respiratory protection during dental procedures for dental clinicians?

Key Findings

One non-randomized study was identified regarding the clinical effectiveness of masks for dental clinicians exposed to bioaerosols or infectious agents during dental procedures. No relevant evidence-based guidelines were identified regarding the selection of respiratory protection during dental procedures for dental clinicians.

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 concepts were COVID-19, dental procedures, and face masks. 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, 2000 and March 23, 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.

Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Any individual performing or requiring aerosol generating dental care (including pediatrics and high-risk individuals [e.g., immunocompromised, &gt; 60 years of age])</th>
</tr>
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</table>
| Intervention | Q1: N95 masks  
Q2: Masks (surgical or N95 masks) |
| Comparator | Q1: Surgical Masks (Levels 1, 2 or 3)  
Q2: Not applicable |
<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Q1: Clinical effectiveness (transmission of infection [to dental clinician from patient], adverse events)</th>
<th>Q2: Recommendations regarding the selection of masks during dental procedures for dental clinicians.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, evidence-based guidelines</td>
<td></td>
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</table>

**Results**

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

One non-randomized study\(^1\) was identified regarding the clinical effectiveness of masks for dental clinicians exposed to bioaerosols or infectious agents during dental procedures. No relevant health technology assessments, systematic reviews, or randomized controlled trials were identified. In addition, no relevant evidence-based guidelines were identified regarding the selection of respiratory protection during dental procedures for dental clinicians.

Additional 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**

   PubMed: PM31770413

**Guidelines and Recommendations**

No literature identified.
Appendix — Further Information

Previous CADTH Reports


Health Technology Assessments – Alternative Population


Systematic Reviews and Meta-Analyses – Alternative Population


Randomized Controlled Trials – Alternative Population

Non-Randomized Studies – No Comparator


**Alternative Mask**


Clinical Practice Guidelines

**Dental-Specific Aerosol Generating Medical Procedures**


General Aerosol Generating Medical Procedures


Review Articles


Additional References
