

COVID-19 CADTH REFERENCE LIST

# Face Shields in Pre-hospital Settings: Clinical Effectiveness and Guidelines

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## Research Questions

1. What is the comparative clinical effectiveness of face shields made from varying materials for infection prevention?
2. What is the comparative clinical effectiveness of face shields of varying designs for infection prevention?
3. What are the evidence-based guidelines regarding the use of face shields in outdoor or winter settings?

## Key Findings

No relevant literature was identified regarding the comparative clinical effectiveness of face shields made from varying materials or of varying designs for infection prevention. In addition, no relevant evidence-based guidelines were identified regarding the use of face shields in outdoor or winter settings.

## Methods

### Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including Medline, PubMed, 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 face shields and pre-hospital settings. No search filters were applied to limit retrieval by publication 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 July 28, 2020. Internet links were provided, where available.

### Selection Criteria and Summary Methods

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. The Overall Summary of Findings was based on information available in the abstracts of selected publications. Open access full-text versions of evidence-based guidelines were reviewed when abstracts were not available.

**Table 1: Selection Criteria**

<b>Population</b>	Patients or health care providers in pre-hospital settings (e.g., ambulance setting), especially in cold or winter settings
<b>Intervention</b>	Disposable or reusable face shields of any design made of any material (e.g., acetate, Mylar, PETm polycarbonate, plastic, Lexan) worn by health care providers
<b>Comparator</b>	Q1: Face shields made from a different material (e.g., acetate, Mylar, PETm polycarbonate, plastic, Lexan) Q2: Face shields with a different design (e.g., form fitting face shields, visor-like face shields) Q3: Any face shield designed for infection prevention

<b>Outcomes</b>	Q1 to 2: Clinical effectiveness (e.g., infection prevention), patient and caregiver comfort while wearing shield, failure rate (e.g., breakdown of shield, cracking of shield) Q3: Recommendations regarding the use of face shields in a cold setting (e.g., winter), recommendations regarding wearing face shields with other warm clothing (e.g., hats, scarves)
<b>Study designs</b>	Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, evidence-based guidelines

## Results

No relevant health technology assessments, systematic reviews, randomized controlled trials, or non-randomized studies were identified regarding the comparative clinical effectiveness of face shields made from varying materials or of varying designs for infection prevention. In addition, no relevant evidence-based guidelines were identified regarding the use of face shields in outdoor or winter settings.

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

## Overall Summary of Findings

No relevant literature was found regarding the comparative clinical effectiveness of face shields made from varying materials or of varying designs for infection; therefore, no summary can be provided.

No relevant evidence-based guidelines were identified regarding the use of face shields in outdoor or winter settings; 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

### Review Article

1. Roberge RJ. Face shields for infection control: a review. *J Occup Environ Hyg.* 2016;13(4):235-242. [PubMed: PM26558413](#)