

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Hand Washing for Patients: Clinical Effectiveness and Guidelines

Service Line: Rapid Response Service
Version: 1.0
Publication Date: March 3, 2020
Report Length: 6 Pages

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Cite As: Hand Washing for Patients: Clinical Effectiveness and Guidelines. Ottawa: CADTH; 2020 Mar. (CADTH rapid response report: summary of abstracts).

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

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Research Questions

1. What is the clinical effectiveness of hand washing with soap and water compared with hand sanitization solutions for patients?
2. What are the evidence-based guidelines regarding the use of hand washing with soap and water for patients?

Key Findings

No relevant clinical evidence or evidence-based guidelines were identified regarding the use of soap and water for hand washing compared with hand sanitization solutions for patients.

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 hand washing and patients. No filters were applied to limit the retrieval by study type for Q1. Search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or network meta-analyses and guidelines for Q2. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2015 and February 18, 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

Population	Q1-2: Any patient in contact with healthcare workers in any setting
Intervention	Q1-2: Hand washing with soap and water
Comparator	Q1-2: Hand sanitization solution (alcohol based and other solutions)
Outcomes	Q1: Clinical effectiveness (e.g., spread of infection, disease progression)

	Q2: Recommendations regarding the use of hand washing with soap and water for patients
Study Designs	Health technology assessments, systematic reviews, 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, and evidence-based guidelines.

No relevant clinical evidence was identified regarding the clinical effectiveness of hand washing with soap and water compared with hand sanitization solutions for patients. In addition, no relevant evidence-based guidelines were identified regarding the use of hand washing with soap and water for patients.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

No relevant literature was found regarding clinical effectiveness or evidence-based guidelines were identified, 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

1. Hand antisepsis procedures: a review of guidelines. (CADTH Rapid response report: summary with critical appraisal). Ottawa (ON): CADTH; 2017:
<https://www.cadth.ca/hand-antisepsis-procedures-review-guidelines>
2. Non-Alcohol-Based Hand Rubs: A Review of Clinical Effectiveness and Guidelines. (CADTH Rapid response report: summary with critical appraisal). Ottawa (ON): CADTH; 2017:
<https://www.cadth.ca/non-alcohol-based-hand-rubs-review-clinical-effectiveness-and-guidelines>

Systematic Reviews

No Comparator

3. Ejemot-Nwadiaro RI, Ehiri JE, Arikpo D, Meremikwu MM, Critchley JA. Hand washing promotion for preventing diarrhoea. *Cochrane Database Syst Rev.* 2015; (9):CD004265.
<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004265.pub3/full>

Method of Hand Hygiene Not Specified

4. Srigley, J.A. et al. Interventions to improve patient hand hygiene: a systematic review. *J Hosp Infect.* 2016;94(1):23-29:
[https://www.journalofhospitalinfection.com/article/S0195-6701\(16\)30064-0/abstract](https://www.journalofhospitalinfection.com/article/S0195-6701(16)30064-0/abstract)

Randomized Controlled Trials – Alternative Outcome

5. Barker AK, Zellmer C, Tischendorf J, et al. On the hands of patients with *Clostridium difficile*: A study of spore prevalence and the effect of hand hygiene on *C difficile* removal. *Am J Infect Control.* 2017;45(10):1154-1156.
[PubMed: PM28964347](https://pubmed.ncbi.nlm.nih.gov/28964347/)

Non-Randomized Studies

Alternative Population

6. Curran KG, Heiman Marshall KE, Singh T, et al. An outbreak of *Escherichia coli* O157:H7 infections following a dairy education school field trip in Washington state, 2015. *Epidemiol Infect.* 2018;146(4):442-449.
[PubMed: PM29271327](https://pubmed.ncbi.nlm.nih.gov/29271327/)

Mixed Intervention

7. Haverstick S, Goodrich C, Freeman R, James S, Kullar R, Ahrens M. Patients' Hand washing and Reducing Hospital-Acquired Infection. *Crit Care Nurse.* 2017 Jun;37(3):e1-e8.
[PubMed: PM28572111](https://pubmed.ncbi.nlm.nih.gov/28572111/)

8. Liu S, Wang M, Wang G, Wu X, Guan W, Ren J. Microbial Characteristics of Nosocomial Infections and Their Association with the Utilization of Hand Hygiene Products: A Hospital-Wide Analysis of 78,344 Cases. *Surg Infect (Larchmt)*. 2017 Aug/Sep;18(6):676-683.
[PubMed: PM28613991](#)

Clinical Practice Guidelines – Unclear Population

9. Mounsey A, Lacy Smith K, Reddy VC, Nickolich S. Clostridioides difficile Infection: Update on Management. *Am Fam Physician*. 2020 Feb 01;101(3):168-175.
[PubMed: PM32003951](#)

Qualitative Studies

10. Srigley JA, Cho SM, O'Neill C, et al. Hand hygiene knowledge, attitudes, and practices among hospital inpatients: A descriptive study. *Am J Infect Control*. 2019.
[PubMed: PM31883730](#)

Additional References

11. Chadwick C. Infection control 4: good hand-hygiene practice for hospital patients. *Nursing Times*; 2019;115(9):27-29: <https://www.nursingtimes.net/clinical-archive/infection-control/infection-control-4-good-hand-hygiene-practice-hospital-patients-29-08-2019/>
12. White J. Why hand hygiene is critical for patients. *Healthcare Business & Technology*. 2016: <http://www.healthcarebusinesstech.com/patient-hand-hygiene/>