

COVID-19 CADTH REFERENCE LIST

Pre-Treatment Mouth Rinses for Dental Patients With Suspected SARS or COVID-19: Clinical Effectiveness and Guidelines

This report was published on April 17, 2020.

To produce this report, CADTH used a modified approach to the selection, appraisal, and synthesis of the evidence to meet decision-making needs during the COVID-19 pandemic. Care has been taken to ensure the information is accurate and complete, but it should be noted that international scientific evidence about COVID-19 is changing and growing rapidly.

Version: 1.0
Publication Date: April 2020
Report Length: 7 Pages

Authors: Camille Dulong, Nina Frey, Melissa Walter

Cite As: *Pre-Treatment Mouth Rinses for Dental Patients with Suspected SARS or COVID-19: Clinical Effectiveness and Guidelines*. Ottawa: CADTH; 2020 Apr. (CADTH Reference List).

Disclaimer: The information in this document is intended to help Canadian health care decision-makers, health care professionals, health systems leaders, and policy-makers make well-informed decisions and thereby improve the quality of health care services. While patients and others may access this document, the document is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose. The information in this document should not be used as a substitute for professional medical advice or as a substitute for the application of clinical judgment in respect of the care of a particular patient or other professional judgment in any decision-making process. The Canadian Agency for Drugs and Technologies in Health (CADTH) does not endorse any information, drugs, therapies, treatments, products, processes, or services.

While care has been taken to ensure that the information prepared by CADTH in this document is accurate, complete, and up to date as at the applicable date the material was first published by CADTH, CADTH does not make any guarantees to that effect. CADTH does not guarantee and is not responsible for the quality, currency, propriety, accuracy, or reasonableness of any statements, information, or conclusions contained in any third-party materials used in preparing this document. The views and opinions of third parties published in this document do not necessarily state or reflect those of CADTH.

CADTH is not responsible for any errors, omissions, injury, loss, or damage arising from or relating to the use (or misuse) of any information, statements, or conclusions contained in or implied by the contents of this document or any of the source materials.

This document may contain links to third-party websites. CADTH does not have control over the content of such sites. Use of third-party sites is governed by the third-party website owners' own terms and conditions set out for such sites. CADTH does not make any guarantee with respect to any information contained on such third-party sites and CADTH is not responsible for any injury, loss, or damage suffered as a result of using such third-party sites. CADTH has no responsibility for the collection, use, and disclosure of personal information by third-party sites.

Subject to the aforementioned limitations, the views expressed herein do not necessarily reflect the views of Health Canada, Canada's provincial or territorial governments, other CADTH funders, or any third-party supplier of information.

This document is prepared and intended for use in the context of the Canadian health care system. The use of this document outside of Canada is done so at the user's own risk.

This disclaimer and any questions or matters of any nature arising from or relating to the content or use (or misuse) of this document will be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, and all proceedings shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario, Canada.

The copyright and other intellectual property rights in this document are owned by CADTH and its licensors. These rights are protected by the Canadian *Copyright Act* and other national and international laws and agreements. Users are permitted to make copies of this document for non-commercial purposes only, provided it is not modified when reproduced and appropriate credit is given to CADTH and its licensors.

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.

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

Questions or requests for information about this report can be directed to requests@cadth.ca.

Research Questions

1. What is the clinical effectiveness of pre-dental treatment mouth rinses for patients with suspected severe acute respiratory syndrome or coronavirus disease?
2. What are the evidence-based guidelines regarding the use of pre-dental treatment mouth rinses in patients with suspected severe acute respiratory syndrome or coronavirus disease?

Key Findings

No literature was identified regarding the clinical effectiveness of pre-dental treatment mouth rinses for patients with suspected severe acute respiratory syndrome or coronavirus disease. Additionally, no evidence-based guidelines were identified regarding the use of pre-dental treatment mouth rinses in patients with suspected severe acute respiratory syndrome or coronavirus disease.

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 OR SARS) and (mouthwashes OR dentistry). No search filters were applied to limit retrieval. Where possible, retrieval was limited to the human population. No date parameters were used.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

Population	Patients with suspected severe acute respiratory syndrome (SARS) or coronavirus disease (COVID-19) receiving dental care
Intervention	Pre-treatment mouth rinse
Comparator	No pre-treatment mouth rinse
Outcomes	Q1: Laboratory outcomes (e.g., salivary virus load) and clinical outcomes (e.g., transmission of severe acute respiratory syndrome coronavirus [SARS-CoV] or severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2]) Q2: Recommendations regarding pre-treatment mouth rinses
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 and systematic reviews are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

No literature was identified regarding the clinical effectiveness of pre-dental treatment mouth rinses for patients with suspected severe acute respiratory syndrome or coronavirus disease. Additionally, no evidence-based guidelines were identified regarding the use of pre-dental treatment mouth rinses in patients with suspected severe acute respiratory syndrome or coronavirus disease.

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. Chlorhexidine for oral care: a review of clinical effectiveness and guidelines. (*CADTH Rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2019: <https://www.cadth.ca/sites/default/files/pdf/htis/2019/RC1064%20Chlorhexidine%20for%20oral%20care%20Final.pdf>. Accessed 2020 Apr 15.
2. Chlorhexidine gluconate versus hydrogen peroxide oral hygiene rinse preparations for the prevention of ventilator-associated pneumonia: comparative clinical effectiveness and safety. (*CADTH Rapid response report: summary of abstracts*). Ottawa (ON): CADTH; 2012: <https://www.cadth.ca/sites/default/files/pdf/htis/april-2012/RB0494%20Oral%20Rinses%20Final.pdf>. Accessed 2020 Apr 15.

Systematic Reviews and Meta-Analyses

Alternative Population – SARS and COVID-19 Not Specified

3. Marui VC, Souto MLS, Rovai ES, Romito GA, Chambrone L, Pannuti CM. Efficacy of preprocedural mouthrinses in the reduction of microorganisms in aerosol: A systematic review. *J Am Dent Assoc*. 2019 Dec;150(12):1015-1026.e1011. [PubMed: PM31761015](#)

Randomized Controlled Trials – Ongoing Studies

4. Aga Khan University. NCT04341688: A clinical trial of gargling agents in reducing intraoral viral load in COVID-19 patients (COVID-19). *ClinicalTrials.gov*. Bethesda (MD): U.S. National Library of Medicine; 2020: <https://clinicaltrials.gov/ct2/show/NCT04341688>. Accessed 2020 Apr 15.

Non-Randomized Studies

Alternative Population – SARS and COVID-19 Not Specified

5. Yadav S, Kumar S, Srivastava P, Gupta KK, Gupta J, Khan YS. Comparison of efficacy of three different mouthwashes in reducing aerosol contamination produced by ultrasonic scaler: A pilot study. *Indian J Dental Sciences*. 2018;10(1):6-10. <http://www.ijds.in/article.asp?issn=0976-4003;year=2018;volume=10;issue=1;spage=6;epage=10;aulast=Yadav>. Accessed 2020 Apr 15.

In Vitro Studies

6. Eggers M, Koburger-Janssen T, Eickmann M, Zorn J. In vitro bactericidal and virucidal efficacy of povidone-iodine gargle/mouthwash against respiratory and oral tract pathogens. *Infect*. 2018 Jun;7(2):249-259. [PubMed: PM29633177](#)

Clinical Practice Guidelines – Methodology Not Specified

7. ADA interim guidance for minimizing risk of COVID-19 transmission. Chicago (IL): American Dental Association; 2020: https://www.ada.org/~media/CPS/Files/COVID/ADA_COVID_Int_Guidance_Treat_Pts.pdf. Accessed 2020 Apr 15.
See: Clinical Technique; page 6
8. Alharbi A, Alharbi S, Alqaidi S. Guidelines for dental care provision during the COVID-19 pandemic. *Saudi Dent J*. 2020 Apr 7. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7141449/>. Accessed 2020 Apr 15. *See: Recommendation 2.3.2*
9. Ge Z, Yang L, Xia J, Fu X, Zhang Y. Possible aerosol transmission of COVID-19 and special precautions in dentistry. *J Zhejiang Univ-Sci B (Biomed & Biotechnol)*. 2020 Mar 16. <https://link.springer.com/content/pdf/10.1631/jzus.B2010010.pdf>. Accessed 2020 Apr 15.
10. Joint position statement: Dental practice during COVID-19 pandemic. New Delhi (IN): Indian Endodontic Society; 2020: https://www.ies.org.in/pdf_server.php?file=dental-practice-covid-19. Accessed 2020 Apr 15.
See: Recommendation 4.3; page 15
11. Managing COVID-19 guidelines. St Leonards (AU): Australian Dental Association; 2020: <https://www.ada.org.au/Campaign/COVID-19/Guide-to-Managing-COVID-19/ADA-Managing-COVID-19-Guide-v-2.aspx>. Accessed 2020 Apr 15.
See: page 3
12. Recommendations for dental hygienists during COVID-19 outbreak. Ottawa (ON): Canadian Dental Hygienists Association; 2020: https://files.cdha.ca/newsEvents/SafetyAlerts/Covid19_DH_recommendations.pdf. Accessed 2020 Apr 15.
13. Li RW, Leung KW, Sun FC, Samaranayake LP. Severe acute respiratory syndrome (SARS) and the GDP. Part II: implications for GDPs. *Br Dent J*. 2004 Aug 14;197(3):130-134.
[PubMed: PM15311240](#)

Review Articles

14. Samaranayake LP, Peiris M. Severe acute respiratory syndrome and dentistry: a retrospective view. *J Am Dent Assoc*. 2004 Sep;135(9):1292-1302.
[PubMed: PM15493394](#)

Preliminary Reports — Not Peer-Reviewed

Disclaimer from medRxiv: "Caution: Preprints are preliminary reports of work that have not been certified by peer review. They should not be relied on to guide clinical practice or health-related behavior and should not be reported in news media as established information."

15. Kirk-Bayley J, Challacombe S, Sunkaraneni V, Combes J. The use of povidone iodine nasal spray and mouthwash during the current covid-19 pandemic may protect healthcare workers and reduce cross infection **[non peer-reviewed preprint]**. SSRN; 2020: doi: 10.2139/ssrn.3563092. <http://dx.doi.org/10.2139/ssrn.3563092>. Accessed 2020 Apr 15.