

COVID-19 CADTH HEALTH TECHNOLOGY REVIEW

COVID-19 Infection Risk Related to Visitors in Long-Term Care Facilities: Synopsis of Reference Search Results

This report was published on November 11, 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: November 2020
Report Length: 7 Pages

Cite As: *COVID-19 Infection Risk Related to Visitors in Long-Term Care Facilities: Synopsis of Reference Search Results*. Ottawa: CADTH; 2020 November. (CADTH health technology review).

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 are those of CADTH and do not necessarily represent the views of Canada's federal, provincial, or territorial governments 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.

What is the connection between family or caregiver presence in long-term care facilities and the risk of spread of infection and/or increased infection rates?

Key Messages

- Overall, the evidence linking visitors' and caregivers' presence in long-term care (LTC) facilities to COVID-19 infection rates in LTC settings is limited.
- One observational study from the Netherlands by Verbeek et al.¹ noted no new cases of COVID-19 three weeks following the re-opening of 26 nursing homes to visitors with designated guidance. However, the results of this study must be interpreted with caution due to the short time frame and the multitude of factors that could affect the COVID-19 transmission risk from visitors in the LTC facilities (including the baseline prevalence of COVID-19 in the community, the precautions taken during visits, and more).
- The Canadian Institute for Health Information (CIHI) published a report comparing Canada to 16 other countries using Organisation for Economic Co-operation and Development (OECD) data on the impact of COVID-19 in LTC facilities (case numbers and deaths) related to various levels of policy responses.² Level 2 policy responses included LTC visitor restrictions. The results showed that countries that implemented visitor restrictions had fewer COVID-19–related deaths in their LTC facilities. However, these results must be interpreted with caution due to a number of limitations, including differences with adherence to and implementation of policies, the promptness with which policies were implemented following the declaration of a pandemic, the fact that more than one intervention was bundled together in different “levels” of policy responses, differences in the baseline prevalence of COVID-19 in different countries and regions, different definitions of LTC [and different demographics within these settings], rapidly evolving case numbers, and differences in reporting practices.
- Although fewer person-to-person interactions may reduce the likelihood of COVID-19 transmission (e.g., via visitor restrictions in LTC facilities),³ this must also be balanced with the effects of social isolation on residents' and their families' overall quality of life and well-being.⁴

Purpose and Context

As of September 22, 2020, there were 146,663 confirmed cases of COVID-19 in Canada, and 9,274 deaths.⁵ More than 80% of the COVID-19–related deaths in Canada were residents of LTC facilities.²

Because LTC facilities in Canada have been disproportionately affected by the COVID-19 pandemic, there is a need for evidence and guidance on best practices for reducing the risk of COVID-19 transmission and spread in these settings. There are several strategies that can help decrease the risk of COVID-19 transmission, such as physical distancing, the use of masks and personal protective equipment [PPE], frequent cleaning and disinfection of surfaces, and limiting LTC staff to working at one facility. Another area of interest has been visitors (and potential visitor restrictions) in LTC settings.

The risk of transmission of infectious diseases such as COVID-19 increases with person-to-person interactions.³ Therefore, limiting contacts would reduce transmission rates. During the COVID-19 pandemic, visitors in LTC facilities have frequently been categorized as *essential* (i.e., those providing essential services such as health care workers) and *non-essential* (i.e., general visitors who are visiting primarily for social reasons), although specific definitions may vary in different facilities and jurisdictions.⁴ Many LTC centres have implemented varying degrees of restrictions on non-essential visitors with the goal of decreasing the risk of COVID-19 transmission and spread. However, such restrictions can also negatively affect other aspects of residents' and their families' well-being, such as residents' mental health and quality of life.⁴ Social isolation and disconnection from loved ones — some of whom play key supportive or caregiving roles in residents' lives — are not without their own consequences.⁴

As a result, there has been interest in reviewing the evidence with the aim of determining the connection between family and/or caregiver presence in LTC facilities (i.e., non-essential visitors) and the associated increase in the risk of spread of COVID-19 (or increase in infection rates). The purpose of this report is to summarize the evidence on this topic to help inform decision-making.

Process

A limited literature search was conducted by an information specialist on key resources, including MEDLINE via OVID, PubMed, the Cochrane Library, the University of York Centre for Reviews and Dissemination databases, the websites of Canadian and major international health technology agencies, as well as a focused internet search (CADTH COVID-19 Grey Literature Resources checklist, <https://covid.cadth.ca/literature-searching-tools/cadth-covid-19-grey-literature-resources/>). The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were visitor or patient isolation and long-term care. 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, 2014 and July 31, 2020. Recent peer-reviewed and grey literature (non-research) documents related to COVID-19 from Canadian or comparable health systems were prioritized.

Members of CADTH's Implementation Support and Knowledge Mobilization (ISKM) team screened the identified literature. After reviewing titles and abstracts, resources deemed relevant to the question of interest were selected for full-text review, data extraction, and inclusion. Specifically, resources (studies or other reports and/or documents) that specified long-term care and drew a quantifiable connection between visitors and COVID-19 infections were included. Those studies (or other reports and/or documents) that provided commentary on visitors to LTC facilities and COVID-19 but did not provide a measurable connection between the two were excluded because they did not answer the question of interest.

The final selection of resources and extracted data was reviewed by two ISKM members, and the resources and data were further reviewed by another ISKM member who developed a summary document with relevant information from each resource as well as key messages to assist the reader with interpreting the information. Resources included in this report were not critically appraised for their quality.

Evidence to Date

A total of 47 citations were retrieved through the literature search. After screening of the titles and abstracts, and full-text reviews of potentially relevant documents, two sources^{1,2} were identified that directly addressed the question of interest. All 47 citation sources are available for review in Extraction Chart documents (Excel).

Bottom Line:

At the current time, the evidence linking visitors' and caregivers' presence in LTC facilities to COVID-19 infection rates in LTC settings is limited. Although fewer person-to-person interactions may reduce the likelihood of COVID-19 transmission (e.g., via visitor restrictions in LTC facilities), this must also be balanced with the effects of social isolation on residents' and their families' overall quality of life and well-being.

Verbeek et al.; Multi-Centre, Mixed-Methods, Cross-Sectional Study

The first source was a multi-centre, mixed-methods, cross-sectional study by Verbeek et al. that was published in June 2020. The study was conducted in the Netherlands, where a Dutch guideline had been developed to cautiously allow visitors back into nursing homes during the COVID-19 pandemic. The objectives of the study were:

- to report on the application of the guideline in local contexts (e.g., the degree of compliance with safety protocols for visitors in LTC);
- to report on the number of new COVID-19 infections diagnosed three weeks after the re-introduction of visitors into LTC facilities; and
- to comment on the observed impact on the overall well-being of residents, family caregivers, and staff following the re-introduction of visitors into LTC facilities.

A total of 26 nursing homes were included in the study. The conditions for visitors in LTC facilities that were specified in the Dutch guideline included a maximum of one designated visitor per resident, physical distancing, the use of hand sanitizer at the entrance, the use of a mask in certain situations, COVID-19 symptom screening, a temperature check, and the spreading out of visiting times throughout the day and week, among other measures. One contact was interviewed from each centre following the re-introduction of visitors into LTC facilities, and data were collected on the number of new COVID-19 infections for all participating centres.

In the results, the compliance with local guidelines was noted to be sufficient to good. No new COVID-19 infections were reported during the three-week time period. Contacts interviewed from nursing homes commented on the positive impact that visitors had on the overall well-being of residents, family caregivers, and staff.

Although it appears promising that the re-introduction of visitors into Dutch LTC facilities over a three-week period did not lead to any new COVID-19 infections, the results of this study need to be interpreted with caution. There are many factors that could contribute to the infection risk from visitors in these LTC facilities, including the baseline prevalence of COVID-19 in the surrounding community, the precautions taken (and adherence to those precautions) during visits, the total number of visitors and the number of other contacts each visitor had been exposed to, and the time frame of the study, and more.

CIHI; COVID-19 in LTC Country-to-Country Comparison Based on OECD Data²

The second source was a CIHI analysis published in June 2020. The analysis used OECD data to compare the relationship between various levels of policy responses and COVID-19 cases and deaths in LTC facilities in Canada and 16 other countries. Countries that had sufficient data for this analysis included Australia, Austria, Belgium, France, Germany, Hungary, Ireland, Israel, Italy, the Netherlands, Norway, Portugal, Slovenia, Spain, the United Kingdom, and the United States.

Regarding visitors specifically, countries that implemented visitor restrictions in LTC settings as part of their policy response had fewer COVID-19 deaths in LTC facilities compared with those that did not implement restrictions. (COVID-19 deaths in LTC facilities as a percentage of all COVID-19 deaths were 47% for countries with LTC visitor restrictions versus 52% for countries without visitor restrictions.) However, the addition of further policy responses (e.g., hazard pay, surge staffing, LTC recruitment, PPE funding, LTC isolation wards, broad LTC testing, infection control training and auditing, and rapid response control and prevention teams) led to further decreases in COVID-19–related deaths in LTC facilities.

Countries that implemented visitor restrictions in LTC facilities did have fewer COVID-19–related deaths. However, these data have many limitations, including differences in adherence to and implementation of policies, the promptness with which policies were implemented following the declaration of a pandemic, the fact that more than one intervention was bundled together in different “levels” of policy responses, differences in the baseline prevalence of COVID-19 in different countries and regions, different definitions of LTC (and different demographics within these settings), rapidly evolving case numbers, and differences in reporting practices.

References

1. Verbeek H, Gerritsen DL, et al. Allowing visitors back in the nursing home during the COVID-19 crisis: a Dutch national study into first experiences and impact on well-being. *J Am Med Dir Assoc*. 2020;21(7):900-904.
2. Pandemic experiences in the long-term care sector: how does Canada compare with other countries? Ottawa (ON): Canadian Institute for Health Information; 2020: <https://www.cihi.ca/sites/default/files/document/covid-19-rapid-response-long-term-care-snapshot-en.pdf>. Accessed 2020 Sep 24.
3. Centers for Disease Control and Prevention. How COVID-19 spreads. 2020; <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html>. Accessed 2020 Sep 24.
4. Finding the right balance: guidance to support the re-opening of Canadian long-term care homes to family caregivers and visitors during the COVID-19 pandemic. Toronto (ON): National Institute on Ageing; 2020; <https://ltccovid.org/2020/07/19/finding-the-right-balance-an-evidence-informed-guidance-document-to-support-the-re-opening-of-canadian-long-term-care-homes-to-family-caregivers-and-visitors-during-the-covid-19-pandemic/>. Accessed 2020 Sep 24.
5. Seglins D, Wesley A, Rocha R. We looked at every confirmed COVID-19 case in Canada. Here's what we found. *CBC News*. 2020; <https://www.msn.com/en-ca/news/canada/we-looked-at-every-confirmed-covid-19-case-in-canada-heres-what-we-found/ar-BB19kHCf?ocid=ientp>. Accessed 2020 Sep 24.