



■ Full Report

■ Summary



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# Post-COVID-19 Scoping Review

## Key Messages

**There are many studies** on the topic of post-COVID-19 condition. This scoping review includes 892 studies.

**Most of the research** we found focused on characteristics or outcomes of having post-COVID-19 condition and predictors for developing post-COVID-19. There are fewer studies on preventing or treating post-COVID-19 condition. Ongoing studies, according to published protocols, plan to look at ways to prevent or treat this condition.

**We did not find** much evidence about post-COVID-19 condition as it relates to:

- people living in rural or remote areas
- children and adolescents
- and vaccination status.

**We found only a** few economic studies, qualitative studies, and studies assessing health systems issues related to post-COVID-19 condition.

**Most of the guidelines** we found for treating and managing post-COVID-19 condition, including all the Canadian guidelines, were not specific to people who meet the WHO's definition of post-COVID-19 condition. These guidelines will need continual updates as new evidence emerges.

## Context

Post-COVID-19 condition, also known as long COVID, is a condition where people experience new or persisting symptoms after an initial COVID-19 illness. CADTH uses the WHO's definition of long COVID. According to this definition, long COVID is when people experience symptoms more than 12 weeks after an initial COVID-19 infection. People with post-COVID-19 may experience a range of symptoms. Some symptoms include fatigue, shortness of breath, muscle aches, and cognitive and mental health challenges.

## What Is a Scoping Review?

A scoping review is a type of evidence synthesis that helps us understand the body of evidence about a certain topic. It can be used to look at key concepts related to that topic and assess how much research there is for each concept. Scoping reviews can help to identify key concepts for which there is a lot of research, and where there are gaps in the available evidence.

The goal of this scoping review was to map out the current evidence landscape on long COVID and to identify evidence gaps.

## Where Did CADTH Look for Information?

- In published and grey literature, including a targeted search for preprints of systematic reviews, and in clinical trial registries from January 1, 2019 to December 20, 2021.

## What Information Did CADTH Look for?

CADTH read each study, and extracted data on:

- study characteristics (e.g., country where the study was conducted, date of publication)
- how the study was done (e.g., study design)
- information about the study participants (e.g., number of participants, age, sex, vaccination status)
- concept (i.e., risk factors and prevention, diagnostic tests, treatment, and management)
- context (e.g., rural, urban, site of treatment during acute illness).

## What Did CADTH Find?

We found 892 studies.

- 637 were published commercially or as grey literature (71.4%)
  - 584 primary studies
  - 40 systematic reviews
  - 12 guidelines
  - 1 economic evaluation
- 247 were protocols or clinical trial registries (27.7%)
- 8 were preprints of systematic reviews (0.9%).

## State of the Evidence at the Time of CADTH's Scoping Review

### Study Characteristics

There were 37 studies included participants from Canada. Most studies came from the US (180 studies), followed by Italy (96), the UK (81), Spain (66), China (56), France (46), and Germany (43). Of the studies, 30 or fewer included participants from Africa, South America, Australia, New Zealand, and much of Asia.

### Information About the Study Participants

The number of people participating in each study varied widely. The median sample size was 103 people. Studies ranged from 1 participant to 886,228 participants.

Of the included studies, 503 reported the age of participants. Ages of participants ranged from 8.5 months to 89 years. Most of these studies were about adults 18 years to 64 years old. Fewer studies looked at children or adolescents, or adults older than 65 years.

Of the studies, 547 reported on the sex of participants. While the proportion of female to male participants varied in each study, a median of 50% (interquartile range = 36.4% to 63.7%) of the population was male.

**Table 1: Amount of Evidence by Study Concept**

Study concepts and populations	Amount of evidence
Characteristics or symptoms of post-COVID-19 condition	More than 50 primary studies, and more than 10 systematic reviews
Risk factors for developing post-COVID-19 condition	
Prognostic factors assessed at less than 12 weeks	More than 50 primary studies, but less than 10 systematic reviews
Imaging and laboratory diagnostic tests used at 12 weeks or later	
Preventive interventions, including those provided during the initial illness or less than 12 weeks after symptom onset or diagnosis (drug, rehabilitation, other [e.g., supplements])	Evidence expected soon (i.e., there are fewer than 50 published primary studies and/or fewer than 10 systematic reviews, but several study protocols)
Treatment or management interventions provided at or more than 12 weeks after symptom onset or diagnosis (drug, rehabilitation, other [e.g., supplements])	

**Table 2: Study Types, Concepts, and Participant Demographics With Fewer Than 50 Published Primary Studies<sup>a</sup> and 50 Protocols**

Category	Evidence Gaps
<b>Study types</b>	Economic evaluations Qualitative studies Health systems issues
<b>Concepts</b>	Differences between variants of severe acute respiratory syndrome coronavirus 2 (the virus that causes COVID-19 illness) related to post-COVID-19 condition Subtypes of post-COVID-19 condition based on symptoms, progress of the condition, and other factors
<b>Participant demographics</b>	Children and adolescents (except regarding characteristics, symptoms, and risk factors) People living in rural or remote areas People who were asymptomatic during their initial infection with COVID-19 (except regarding characteristics/symptoms and risk factors) People who have or have not received the COVID-19 vaccine

<sup>a</sup> Many of which were case studies, or case series, meaning the study included very few participants.



■ Contact

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