

Emerging scientific evidence – con't

Risk Factors and Effect of Vaccination

- **Females** appear to be disproportionately impacted
 - A recent [white paper](#) from the US found that 60% of those diagnosed with post COVID-19 condition were females (compared to 40% in males)
- A recent [systematic review and meta-analysis](#) found that risk factors included:
 - female sex
 - those who experienced severe acute COVID-19 or having been hospitalized for acute COVID-19 infection
- Preliminary research suggests that **vaccination (2 doses) may reduce the risk** of developing post COVID-19 condition if infected. (however, more research is needed as findings are based on a few studies)

Social Impact

- Evidence about the **impact on employment** is emerging
 - Based on a review of global studies:
 - between 9-22% of individuals were not working 3 months or more after acute infection
 - 10-46% had to reduce their work schedule

New variants

- Based on a new survey in the UK, the odds of self-reporting long COVID symptoms four to eight weeks after a first coronavirus (COVID-19) infection were 49.7% lower in infections compatible with the Omicron BA.1 variant than those compatible with the Delta variant among adults who were double-vaccinated when infected (Note: official definition of long COVID is 12 weeks +).

Findings from Canada so far...

- A recent [survey](#), supported by the Ministère de la santé et des services sociaux du Québec and was conducted in **health care workers in QC**, found that 40% among non-hospitalized cases and 68% among hospitalized cases had post COVID-19 condition 12 weeks after initial infection (*pre-print*)
- Another [study](#) that used retrospective chart reviews in a tertiary care setting in Toronto found that 27% of patients (of which 61% were outpatients and 39 percent were admitted to hospital) reported 2 or more persistent symptoms 90 days or more after a positive PCR test.
- A recent pan-Canadian [survey](#) (*non-peer-reviewed*) conducted by Viral Neuro Exploration (VINEx), COVID Long-Haulers Support Group Canada, and Neurological Health Charities Canada in March and April of 2022 among 1,050 individuals with post COVID-19 condition found that:
 - 88% have experienced long COVID symptoms for 12 weeks or longer (and 58% for more than a year)
 - 60% received a long COVID diagnosis from a health care provider
 - more than 87% of respondents identified as women.
 - Over 80% of respondents reported a negative or very negative impact of long COVID on their brain health, such as difficulty concentrating and thinking, sleep disturbances, memory loss, headaches, anxiety and depression
 - Close to 75% of those surveyed sought medical care for their neurological or psychiatric symptoms
 - nearly 70% of respondents had to take leave from work

... There is a lack of peer-reviewed research on post COVID-19 condition in Canada at this time. However, other studies and surveys are underway and results are forthcoming.

Current International Context

USA

- No robust estimate about common post COVID-19 condition is, but a recent [White paper](#) presents evidence about the characteristics of individuals diagnosed with long COVID:
 - 75.8% had not been hospitalized for COVID-19; Individuals aged 36 to 50 years old were more likely to be diagnosed with long COVID compared to other age groups; 30.7% of patients with long COVID had no identified pre-existing comorbidities
- The Biden Administration announced an [accelerated whole-of-government effort](#) to prevent, detect and treat long COVID, including:
 - Delivering high-quality care, services, and supports for individuals experiencing Long COVID
 - Research to understand, prevent, diagnose, treat, Long COVID

UK

- It is estimated that 1.3 million people were experiencing self-reported long COVID symptoms 12 weeks after initial infection
- Guidelines to support clinicians: “COVID-19 rapid guideline: managing the long-term effects of COVID-19” (May 2022)
- Support for specialized interdisciplinary clinics
 - UK: NHS England and NHS Improvement funded the establishment of long COVID assessments clinics for adults and children. CAD \$230 million so far

International cooperation to address knowledge gaps

- G7 Science Ministers meeting in June 2022 to strengthen international cooperation to address post COVID-19 condition

Examples of CIHR investments in Long COVID Research

- **CIHR** has already invested **\$17.7M** to fund **41 targeted research studies** on post COVID-19 condition
- **Canadian COVID-19 Prospective Cohort Study (CANCOV) (\$2.1M)**
 - Canadian research consortium studying the full scope of COVID health impacts and risk factors
 - Preliminary findings show a range of symptoms associated with post COVID-19 condition
 - Studying how post COVID-19 condition may cause longer-term disability and implications for Canadians who contracted COVID-19
- **Canadian Longitudinal Study on Aging (ongoing investment of \$8M per year)**
 - 20+ year long research tracking the health of > 50,000 Canadian adults
 - In 2020 pivoted to study the effects of COVID-19 on older adults, studying physical and mental health impacts, and changes to access to healthcare services
- **COVID-19 Evidence Network to support Decision-making** and the **Strategy for Patient-Oriented Research Evidence Alliance** are reviewing the best-available evidence about [care models for people living with post COVID-19 condition](#)

PHAC Current Evidence Synthesis & Dissemination

Ongoing scans of evidence and policy responses

- Biweekly scans of new / emerging research on post COVID-19 condition
- COVID-END/SPOR Living Synthesis – potential role for regular updates on long COVID

Rapid reviews and evidence briefs (PHAC / PHAC-funded)

- Living evidence brief on the associations and safety of COVID-19 vaccination and post COVID-19 condition
- Update 1 – April 14, 2022 (currently being finalized for distribution in this week's tracker)

Systematic reviews (PHAC)

- [Risk factors and preventative interventions for post COVID-19 condition: living systematic review \(Pre-print March 2022\)](#)
- [Prevalence of long-term effects in individuals diagnosed with COVID-19: a living systematic review \(Pre-print June 2021; under peer-review\)](#)

Knowledge exchange and translation events and products

- Best Brains Exchange (May 2021)
- Web content on Canada.ca