

# COVID-19 PANDEMIC – RAEB'S EVIDENCE UPDATE

Highlights of health research evidence synthesized by the  
Research, Analysis and Evaluation Branch (RAEB)

• February 1, 2021 •

## FEATURED

- RAEB'S Rapid Responses for Ontario's health sector
- Evidence Products from our Evidence Synthesis Network Partners
- Research evidence and jurisdictional experience
- Trusted resources

## ABOUT RAEB

Through research funding, brokering, translating, and sharing, we promote an enhanced evidence use capacity that supports all aspects of health policy, programming, and investment decision making. Services include:

- Literature reviews
- Jurisdictional scans
- Economic analysis
- Evaluation planning
- Research fund management
- Knowledge translation services

## CONTACT RAEB

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## RAEB'S RAPID RESPONSES FOR ONTARIO'S HEALTH SECTOR

Please contact [Evidence Synthesis Unit](#) for the full read of these rapid responses.

### • Data Collection on Ethnicity and COVID-19 across Jurisdictions

Ethnicity data, along with other socio-demographic data (e.g., race, household income), is collected to better understand and strengthen capacity to address whether COVID-19 may be disproportionately affecting certain population groups. Ethnicity or ethno-racial categories for data collection were identified from seven jurisdictions. For example:

- **Toronto Public Health:** 1) Arab, Middle Eastern, or West Asian; 2) Black; 3) Latin American; 4) South Asian or Indo-Caribbean; 5) Southeast Asian; and 6) White.
- **British Columbia:** 1) First Nations; 2) Métis; 3) Inuit; 4) White (European descent); 5) Chinese; 6) South Asian (e.g., East Indian, Pakistani, Sri Lankan); 7) Black (e.g., African or Caribbean); 8) Filipino; 9) Latin American/Hispanic; 10) Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian); 11) Arab; 12) West Asian (e.g., Iranian, Afghan); 13) Korean; 14) Japanese; 15) other; and 16) prefer not to answer. These categories are collapsed into broader categories for data analyses.
- **United States:** Ethno-racial data for COVID-19 test results must be available in all reporting to state/local public health departments, and subsequently the Centers for Disease Control and Prevention. The COVID-19 Racial Data Tracker by The Atlantic, the American Medical Association, and the National Academy for State Health Policy uses this publicly available data to track states' reporting. For example, as of January 27, 2021, 51 of 56 states/territories report race/ethnicity data for COVID-19 cases and deaths. In some states (e.g., Alabama), ethnicity categories are separated from race categories and include: 1) Hispanic or Latino; and 2) Not Hispanic or Latino. In other states (e.g., Arizona), race and ethnicity categories are combined together: 1) Black or African American alone; 2) Hispanic or Latino; 3) Asian alone; 4) Hawaiian and Pacific Islander alone; 5) American Indian or Alaska Native alone; 6) two or more races; 7) White alone; and 8) some other race alone.
- **United Kingdom:** 1) White (White British, Irish, Gypsy or Irish Traveller, and other White); 2) Mixed/Multiple Ethnic Groups (White and Black Caribbean, White and Asian, White and Black African, and other mixed); 3) Indian; 4) Bangladeshi and Pakistani; 5) Chinese; 6) Black (Black Caribbean; Black African; and Black other); and 7) other ethnic group (Asian other, Arab, and other ethnic group).

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## EVIDENCE PRODUCTS FROM OUR EVIDENCE SYNTHESIS NETWORK PARTNERS

Ministry research partners are actively working with leading agencies and organizations on questions related to COVID-19. McMaster Health Forum has recently published a living evidence profile on vaccine roll-out:

- [Current Stance and Challenges Ahead for COVID-19 Vaccines](#)

The roll-out of the COVID-19 vaccine is arguably one of the largest health-system initiatives ever conducted. As such, there are many activities that vaccine roll-out plans will need to consider; these are summarized in the framework laid out in this living evidence profile. The framework is used to organize key findings from evidence documents and experiences from other countries and from Canadian provinces and territories. This living evidence profile will be updated every two weeks.

## RESEARCH EVIDENCE/JURISDICTIONAL EXPERIENCE

The research evidence profiled below was selected from highly esteemed academic journals and grey literature sources, based on date of publication and potential applicability or interest to the Ontario health sector.

### HEALTH EQUITY AND VULNERABLE POPULATIONS

- ***JAMA: Association between unemployment insurance and food insecurity in the United States***  
[Jan 29, 2021](#). In this study of adults who lost work during the COVID-19 pandemic, unemployment insurance was associated with a 35% relative decline in food insecurity and a 48% relative decline in eating less due to financial constraints. The USD \$600 per week federal supplement was associated with additional reductions in food insecurity. These findings suggest that expanding the amount and duration of unemployment insurance may be an effective approach to reducing food insecurity. [Read](#).
- ***Nature Reviews Endocrinology: Obesity, impaired metabolic health, and COVID-19***  
[Jan 21, 2021](#). This review highlights how obesity and impaired metabolic health increase complications and mortality among patients with COVID-19. In addition, data indicate that the COVID-19 pandemic could have serious consequences for the obesity epidemic, as obesity and impaired metabolic health are both accelerators and consequences of severe COVID-19, and might adversely influence the efficacy of COVID-19 vaccines. [Read](#).
- ***International Long-Term Care Policy Network: The impacts of COVID-19 on unpaid carers of adults with long-term care needs***  
[Jan 15, 2021](#). This rapid review (pre-print) of 40 studies from international jurisdictions indicated that the impact for unpaid carers of people living in the community include: changes in care responsibilities; concerns of COVID-19 infections; changes in the availability of formal and informal support; and financial, physical, and mental health implications. Unpaid carers of people in residential care settings report difficulties in communicating with residents, concerns about quality of care, and COVID-19 entering the care home. The study suggests that technology, financial assistance, and support for working carers can help mitigate these effects. [Read](#).

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### HEALTH EQUITY AND VULNERABLE POPULATIONS

- ***PLOS: #Caremongering: A community-led social movement to address health and social needs during COVID-19***  
[Jan 14, 2021](#). This study examined the spread and use of #Caremongering, a Facebook social media movement in Canadian communities designed to address health and social needs of vulnerable individuals in their communities. As of May 4, 2020, researchers identified a total membership of 194,879 in 130 unique groups from 13 provinces and territories in Canada. Content analysis identified four major themes: personal protective equipment, offer, need, and information. The #Caremongering Facebook groups spread across the nation in a matter of days, engaging hundreds of thousands of Canadians. The study suggests that social media may be a useful tool for spreading community-led solutions to address health and social needs. [Read](#).
- ***Emerging Infectious Diseases: COVID-19 among workers in food processing, food manufacturing, and agriculture workplaces***  
[Jan 2021](#). Between March 1 and May 31, 2020, the US Centers for Disease Control and Prevention (CDC) collected cumulative aggregate data from state health departments on COVID-19 among US food processing, food manufacturing, and agricultural workers. Among 742 food and agriculture workplaces in 30 states, 8,978 workers had confirmed COVID-19; 55 workers died. Overall, 83.2% of cases occurred among racial and ethnic minority workers. Racial and ethnic minority workers could be disproportionately affected by COVID-19. [Read](#).

### FRONTLINE WORKERS

- ***JAMA: Outcomes of COVID-19 among hospitalized health care workers (HCWs) in North America***  
[Jan 28, 2021](#). This study reported that HCW status was not associated with poorer outcomes among hospitalized patients with COVID-19 and was instead associated with a shorter length of hospitalization and decreased likelihood of intensive care unit admission. Further research is needed to elucidate the proportion of HCW infections acquired in the workplace and to assess whether HCW type is associated with outcomes. [Read](#).

### PUBLIC HEALTH MEASURES

- ***JAMA: Change in reported adherence to nonpharmaceutical interventions (NPIs) during COVID-19***  
[Jan 22, 2021](#). Drawing on national surveillance data from the US Coronavirus Tracking Survey collected from 7,707 participants, this study examined adherence to protective NPIs and explored apathy or resistance toward adherence to NPIs—'pandemic fatigue'. Between April 1 and November 24, 2020, protective behaviours that had the largest decreases in participant adherence were: remaining in residence except for essential activities or exercise (79.6% to 41.1%); having no close contact with non-household members (63.5% to 37.8%); not having visitors over (80.3% to 57.6%); and avoiding eating at restaurants (87.3% to 65.8%). The wearing of a mask or other face-covering showed a significant increase among participants (39.2% to 88.6%). Results indicate the need for strategic approaches to combat pandemic fatigue, such as precision in government mandates and consistent communication from authorities. [Read](#).

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### CASE TESTING AND SCREENING

- ***Annals of Internal Medicine***: The proportion of SARS-CoV-2 infections that are asymptomatic [Jan 22, 2021](#). This systematic review found that at least one-third of SARS-CoV-2 infections are asymptomatic. Studies suggest that nearly three-quarters of persons who receive a positive PCR test result, but have no symptoms at the time of testing, will remain asymptomatic. Control strategies for COVID-19 should be altered, taking into account the prevalence and transmission risk of asymptomatic SARS-CoV-2 infection. [Read](#).

### UNDERSTANDING THE DISEASE

- ***JAMA***: Prevalence of SARS-CoV-2 infection in children and their parents in Southwest Germany [Jan 22, 2021](#). This study reported that the spread of SARS-CoV-2 infection during a period of lockdown in Southwest Germany was particularly low in children aged one to 10 years. The low seroprevalence of SARS-CoV-2 antibodies in young children in this study may indicate that they do not play a key role in SARS-CoV-2 spread during the current pandemic. This SARS-CoV-2 prevalence study, which appears to be the largest focusing on children, is instructive for how ad-hoc mass testing provides the basis for rational political decision-making in a pandemic. [Read](#).

### DISEASE MANAGEMENT

- ***National Institute for Health Care and Excellence***: Sarilumab for COVID-19 vaccines [Jan 20, 2021](#). This rapid review discussed sarilumab, which has a marketing authorization for moderate-to-severe rheumatoid arthritis in adults whose condition has not responded adequately to one or more disease-modifying antirheumatic drugs. It is licensed for use in combination with methotrexate, or as monotherapy if methotrexate is inappropriate or not tolerated. Use of sarilumab for COVID-19 is off-label. Preliminary evidence from one pre-publication study, with a small number of patients randomized to sarilumab (n=48), suggested that it is beneficial in adults with severe COVID-19 who are critically ill and receiving respiratory or cardiovascular organ support in an intensive care setting. [Read](#).
- ***Nature***: Current stance and challenges ahead for COVID-19 vaccines [Jan 21, 2021](#). This review notes that the free availability of basic science data has allowed vaccine development based on very innovative platforms and directed towards well-defined sensible targets. High financial support both from private consortia and the governments of several nations have made it possible to develop the new vaccines extremely quickly. The possibility of having numerous vaccines based on different technologies will allow for the selection of those that can be most effective in specific phases of the pandemic and different parts of the world. However, the production and distribution of billions of doses of COVID-19 vaccines is the new, difficult challenge. The review suggests that more than one vaccine will be needed to ensure equitable global access, protection of diverse subjects, and immunity against viral variants. [Read](#).

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### DATA ANALYTICS, MODELLING AND MEASUREMENT

- ***Nature***: Estimating worldwide effects of non-pharmaceutical interventions (NPIs) on COVID-19 incidence and population mobility patterns  
[Jan 21, 2021](#). Using daily data from 175 countries in a statistical model, this study showed that, even after controlling for other concurrent lockdown policies, cancelling public events, imposing restrictions on private gatherings, and closing schools and workplaces had significant effects on reducing COVID-19 infections. Restrictions on internal movement and public transport had no effects because the aforementioned policies, imposed earlier on average, had already de facto reduced human mobility. International travel restrictions, although imposed early, had a short-lived effect failing to prevent the epidemic from turning into a pandemic because they were less stringent. [Read](#).
- ***Lancet***: Quarantine and testing strategies in contact tracing for SARS-CoV-2  
[Jan 20, 2021](#). This modelling study found that testing might allow for a substantial reduction in the length of, or replacement of, quarantine with a small excess in transmission risk. Decreasing test and trace delays and increasing adherence will further increase the effectiveness of these strategies. Further research is required to empirically evaluate the potential costs (e.g., increased transmission risk, false reassurance) and benefits (e.g., reduction in the burden of quarantine, increased adherence) of such strategies before adoption as policy. [Read](#).

### TRUSTED RESOURCES

- The Evidence Synthesis Network (ESN) is a collaborative COVID-19 response initiative by Ontario's research and knowledge production community. The [ESN website](#) is a portal where research evidence requests can be made and includes previously completed ESN briefing notes.
- An up-to-date and comprehensive list of sources, organized by type of research evidence, is available on McMaster Health Forum's COVID-19 Evidence Network to support Decision-making (COVID-END) [website](#).
- The [Ontario COVID-19 Science Advisory Table](#) is a group of scientific experts and health system leaders who evaluate and report on emerging evidence relevant to the COVID-19 pandemic, to inform Ontario's response to the pandemic.