

# COVID-19 PANDEMIC

## RAEB'S Evidence Update

Highlights of health research synthesized by the Research, Analysis and Evaluation Branch

May 9, 2022

### Featured

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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.

### Jurisdictional Scan on the Roles of Pharmacists

- **Prescribing Authority:** Information on the prescribing authority of pharmacists was identified from Canada, Australia, Croatia, Germany, Ireland, Italy, Netherlands, Spain, Switzerland, Turkey, and UK:
  - Prescribing Authority: Some prescribing authority roles include renewing prescriptions, as well as prescribing drugs for: minor ailments; emergencies; continued maintenance therapy; incomplete prescriptions; physicians' absence; an indication approved by regulatory agencies (e.g., Health Canada); and preventative medicine.
  - No Prescribing Authority: Pharmacists are only permitted to dispense drugs that are prescribed by a registered health care practitioner (i.e., physician).
- **Drug Administration:** Pharmacists generally administer drugs that do not require a prescription (i.e., over-the-counter drugs) and drug administration is usually accompanied by professional advice given by a pharmacist for safe use.
- **Public Health Roles/Functions:** All internationally identified jurisdictions and Quebec (Canada) noted the general and COVID-19-specific vaccination functions of pharmacists, as well as their public health support and advocacy responsibilities (e.g., vaccine preparation, vaccine, and rapid antigen test roll-out, logistics).

- **General Responsibilities:** Aside from prescribing and/or dispensing drugs and administering vaccines, pharmacists may have other responsibilities which include but are not limited to: providing drug advice and patient counselling; engaging in public health advocacy, assessment, and treatment (e.g., Lyme disease, birth control); facilitating complex supply arrangements, such as staged supply, dose administration aids, and remote supply; undertaking research that improves medicinal use; and developing and leading education and training processes in quality use of medicines.

## Research Evidence and 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 System Impacts

#### ***Journal of the American Medical Association (JAMA): Evaluation of trends in alcohol use disorder (AUD)-related mortality in the US before and during the COVID-19 pandemic***

**May 4, 2022.** In this study, data from 2012 to 2019 to project 2020 and 2021 mortality rates found that AUD-related mortality rates increased among all ages and sexes during the pandemic. Younger persons, particularly those aged 25 to 44 years, had the steepest upward trend. The small proportion of COVID-19–related deaths suggests that excess deaths were more likely attributable to indirect effects of the pandemic such as stay-at-home policies and reduced medical and social resources for patients with AUD. [Article](#).

#### ***Journal of Patient Experience: Experiences of patients undergoing emergency surgery during the COVID-19 pandemic***

**April 27, 2022.** This study reported positive and negative experiences among patients (n=15) undergoing emergency surgery during the COVID-19 pandemic. Positive experiences included trust in hospital staff and health workers and negative experience included fears associated with contracting hospital-acquired COVID-19. Study results contribute to informing and training nurses about identifying patient needs, such as training about the surgery and discharge process, healthy communication, and psychological support. [Article](#).

## Transmission

### ***Canadian Medical Association Journal: Impact of population mixing between vaccinated and unvaccinated subpopulations on infectious disease dynamics***

**April 25, 2022.** This study reported that the risk of infection was markedly higher among unvaccinated people than among vaccinated people under all mixing assumptions (i.e., ranging from random mixing to complete like-with-like mixing). Unvaccinated people contributed to infections among those who were vaccinated at a rate higher than would have been expected based on contact numbers alone. As like-with-like mixing increased, attack rates among vaccinated people decreased from 15% to 10% (and increased from 62% to 79% among unvaccinated people). [Article](#).

## Health Equity and Vulnerable Populations

### ***JAMA: Association of SARS-CoV-2 infection during pregnancy with maternal and perinatal outcomes in Canada (Mar 2020 – Oct 2021)***

**May 2, 2022.** This study found that SARS-CoV-2 infection during pregnancy was significantly associated with increased risk of adverse maternal outcomes and preterm birth. Being pregnant was associated with a significantly increased risk of SARS-CoV-2-related hospitalization compared with SARS-CoV-2 cases among all women aged 20-49 years in the general population of Canada, as well as an increased risk of intensive care unit/critical care unit admission. Increasing age, pre-existing hypertension, and greater gestational age at diagnosis were significantly associated with worse maternal outcomes. [Article](#).

### ***Nature: Trends and associated factors for COVID-19 hospitalization and fatality risk in 2.3 million adults in England***

**April 29, 2022.** This study of 2,311,282 adults with a positive COVID-19 test found that older age groups, males, residents in areas of greater socioeconomic deprivation, and those with obesity had higher odds of hospital admission and death. People with severe mental illness and learning disability had the highest odds of admission and death. This study highlights both the role of external factors in COVID-19 admission and mortality risk and the need for more proactive care in the most vulnerable groups. [Article](#).

### ***Social Psychiatry and Psychiatric Epidemiology: COVID-19 stressors and symptoms of depression and anxiety among Black cisgender sexual minority men (SMM) and Black transgender women in Chicago***

**April 22, 2022.** This study reported that during the initial peak of the COVID-19 pandemic (April 20 – July 31, 2020) symptoms of depression and anxiety among Black cisgender, SSM, and Black

transgender women were associated with COVID-19-related stressors (e.g., loss of income, food, medication, and housing; partner violence). Of the 226 participants, 56.6% experienced anxiety on at least one of the previous 14 days, 48.7% experienced depression, 48.7% experienced loneliness, 42.0% experienced worry, and 51.8% did not experience hope. [Article](#).

## Infection, Prevention and Control in Specific Settings

### ***Journal of Behavioral Medicine: Vaccine hesitancy among grocery workers during the COVID-19 pandemic in Arizona***

**April 30, 2022.** This study assessed the influence of workplace safety conditions alongside the World Health Organization’s model of the “3 Cs” (i.e., confidence, convenience, and complacency) on grocery store workers’ vaccine hesitancy concerning COVID-19. Two aspects of the “3 Cs” model, confidence, and convenience, were correlated with lower levels of vaccine hesitancy while the perceptions of being protected by one’s employer increased hesitancy. These findings underscore the importance of workplace conditions for vaccine hesitancy and the need to include vaccine messaging in employers’ safety practices. [Article](#).

## Public Health Measures

### ***JAMA: Association of large financial incentives with COVID-19 vaccination uptake among employees of a large private company in the US***

**April 29, 2022.** This study found that a workplace-based guaranteed financial incentive (\$1,000) was associated with increased COVID-19 vaccine uptake. A higher percentage of previously unvaccinated female (45.3% [148 of 327]) vs. male (38.2% [66 of 173]) employees were vaccinated after the incentive. Similar patterns were observed in previously unvaccinated Asian employees (52.4% [11 of 21]) compared with White (43.6% [184 of 422]) and Black or African American (15.4% [2 of 13]) employees. There were no significant differences by age groups or salary levels. [Article](#).

## 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.
- 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.
- COVID-19 Evidence Network to support decision-making (COVID-END) in Canada:

- COVID-END is a time-limited network that brings together more than 50 of the world's leading evidence-synthesis, technology-assessment, and guideline development groups to support decision-making. In addition to Living Evidence Profiles, COVID-END hosts an inventory of best COVID-19 evidence syntheses from around the world. An up-to-date and comprehensive list of sources, organized by type of research evidence, is available on McMaster Health Forum's COVID-END [website](#).
- The COVID-19 Evidence Spotlights from COVID-END provide updated information on COVID-19 responses with three types of products from COVID-END in Canada: 1) Canadian spotlights; 2) global spotlights; and 3) horizon scans. To receive an email containing hyperlinks to these products twice a month, [subscribe here](#).
  - In the second half of April 2022, contributing Canadian evidence-synthesis teams shared six newly completed syntheses on public health measures (n=6). Please visit [Canadian Spotlight 16.2](#) to view the evidence, or browse past [Canadian evidence spotlights](#). A complete list of the products is available [here](#).

## 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 scan
- Economic analysis
- Evaluation planning
- Research fund management
- Knowledge translation services

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