

COVID-19 PANDEMIC

RAEB'S Evidence Update

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

March 7, 2022

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Evidence Products Produced with Our Partners

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision makers as the pandemic continues. Please contact [Evidence Synthesis Unit](#) for the full read of these evidence products.

The Impact of the COVID-19 Pandemic on Chronic Disease Risk Factors (Nutrition, Physical Activity [PA], and Substance Use [i.e., alcohol and tobacco])

(Produced in collaboration with McMaster Health Forum)

- **Nutrition:** Negative dietary habits associated with the lockdown included decreases in healthy eating behaviour, weight gain, mental health issues, and limited PA. Positive dietary habits associated with the lockdown in many European countries included an increased consumption of Mediterranean food items. Food insecurity is suggested to be more prevalent during the COVID-19 pandemic than before, particularly among low-income populations.
- **PA:** A decrease in PA levels and/or an increase in sedentary behaviour was associated with the COVID-19 pandemic. Studies reported decreases in PA and increases in sedentary behaviours during lockdowns across several populations, including children and patients with a variety of medical conditions (e.g., eating disorders, diabetes).

- **Alcohol Use:** An increase in alcohol use in the general population was observed during the pandemic across international settings. Studies indicated that people who consumed alcohol in risky ways before the pandemic were more likely to increase their substance use during the pandemic. Mental health factors were noted as the most common correlates or triggers for increased use of both alcohol and other substances, including cannabis for various groups (e.g., general population, older adults, Indigenous peoples).
- **Tobacco Use:** There was no clear direction on the effect the COVID-19 pandemic has had on use of tobacco or vaping products.
- **Future Research:** Future research topics currently underway include the effects of the COVID-19 pandemic on the general populations' mental health, alcohol/substance abuse and violence, and lifestyle factors (i.e., smoking, body mass index, PA, and dietary habits).

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.

Disease Management

***Nature:* Long COVID in hospitalized and non-hospitalized patients in a large cohort in Northwest Spain**

March 1, 2022. In this study, clinical and epidemiological characteristics were collected from 248 patients six months following COVID-19 diagnosis, finding that: 69.4% of patients required hospitalization, and 10.2% of them needed critical care. Overall, 48.0% of patients described one or more persisting symptoms of which the most prevalent were: extra-thoracic symptoms (39.1%), chest symptoms (27%), dyspnoea (20.6%), and fatigue (16.1%). These symptoms were more common in hospitalized patients (52.3% vs. 38.2%) and in women (59.0% vs. 40.5%). Findings suggest that hospitalized COVID-19 patients with previous lung diseases, tobacco consumption, and women should receive special attention and clinical follow-up. [Article](#).

***Perfusion:* Efficacy of treatments tested in COVID-19 patients with cardiovascular disease (CVD)**

February 27, 2022. This systematic review and meta-analysis found that the most frequent CVDs were coronary artery disease (9.09%) and peripheral arterial disease (5.4%), and the most frequent cardiovascular risk factors were hypertension (86.7%) and diabetes (23.7%). COVID-19 is associated with a high in-hospital mortality rate (20%) in patients with CVD. Overall, this

study shows that previous CVD determines mortality, regardless of the type of COVID-19 administered therapy. [Article](#).

Canadian Medical Association Journal: Remdesivir for the treatment of patients in hospital with COVID-19 in Canada

February 22, 2022. This study randomized patients (n=1,282) across 52 Canadian hospitals between August 2020 and April 2021 to treatment with 10 days of Remdesivir. Remdesivir, when compared with standard care, had a modest but significant effect on the need for mechanical ventilation and other outcomes important to patients and health systems. [Article](#).

Frontline Workers

Home Health Care Services Quarterly: A case study of pandemic support calls for home health aides

February 25, 2022. This study examined the impact of providing phone-based support calls to nine home health aides working at a home care agency in New York City during the COVID pandemic. Based on semi-structured interviews and analysis of notes from the calls, results suggest that the calls resulted in multidirectional communication between agency staff and aides, an increased sense of empathy among staff, and a greater integration of aides into the agency's overall decision-making. [Article](#).

Journal of Perinatal Medicine: Perinatal bereavement care during COVID-19 in Australian maternity settings

February 23, 2022. This study examined Australian health care providers' (N=35) perspectives on the impact of COVID-19 on the provision of supportive care in clinical settings following stillbirth or neonatal death. Eight of 49 clinical practice guidelines for 'respectful and supportive perinatal bereavement care' were impacted, including reduced: 1) support for mothers due to visitor restrictions; 2) availability of cultural and spiritual support and interpreters; 3) involvement of support people in decision-making; 4) options for memory-making and commemorative rituals; and 5) staff training and supervision. Adaptations to minimize impacts included virtual consultations, online staff training, use of cold cots (a cooling unit that allows parents to spend extra time with their deceased infant), and increased staff support for memory-making. [Article](#).

Health Equity and Vulnerable Populations

The Lancet: The social patterning of COVID-19 vaccine uptake in older adults in Sweden

February 25, 2022. The study found that overall vaccination coverage in Sweden was 87.2% by May 17, 2021. Younger age, male sex, lower income, living alone, and being born outside Sweden were all associated with a lower uptake of vaccination. The lowest COVID-19 vaccination uptake was seen in individuals born in low-or middle-income countries, of which only 60% had received vaccination, with an odds ratio of not being vaccinated of 6.05 compared to individuals born in Sweden. [Article](#).

Transmission

Journal of the American Medical Association: Transmission of and infection with COVID-19 among vaccinated and unvaccinated attendees of an indoor wedding reception in Minnesota

February 25, 2022. In this study of 75 wedding reception attendees, nearly half who were tested were infected with the Delta variant of SARS-CoV-2. Unvaccinated attendees had a higher risk of SARS-CoV-2 infection than vaccinated attendees, secondary transmission from vaccinated attendees to vaccinated and unvaccinated contacts was observed, and the index case was identified as an unvaccinated symptomatic child. These findings suggest that unvaccinated people are at increased risk of contracting SARS-CoV-2 compared with vaccinated people in large social gatherings. [Article](#).

Health System Impacts

The Lancet: Variation in the COVID-19 infection-fatality ratio (IFR) by age, time, and geography during the pre-vaccine era

February 24, 2022. This systematic review noted that the IFR is a metric that quantifies the likelihood of an individual dying once infected with a pathogen. IFRs varied by a factor of more than 30 among 190 countries and territories. The presence of elevated age standardized IFRs in countries with well-resourced health care systems indicates that factors beyond health care capacity are important. Potential extenuating circumstances include outbreaks among care home residents, variable burdens of severe cases, and the population prevalence of comorbid conditions that increase the severity of COVID-19 disease. During the pre-vaccine period, the estimated 33% decrease in median IFR over eight months suggests that treatment for COVID-19 has improved over time. [Article](#).

Case Testing Screening

European Society of Clinical Microbiology and Infectious Diseases: COVID-19 guidelines for diagnostic testing

February 22, 2022. This guideline includes 43 Population, Intervention, Comparison, Outcome (PICO) questions that involve the following types of populations: 1) patients with signs and symptoms of COVID-19; 2) travelers, health care workers, and other individuals at risk for exposure to SARS-CoV-2; 3) asymptomatic individuals; and 4) close contacts of patients infected with SARS-CoV-2. The type of diagnostic test (commercial rapid nucleic acid amplification tests, and rapid antigen detection), biomaterial, time since onset of symptoms/contact with an infectious case, age, disease severity, and risk of developing severe disease are also taken into consideration. [Article](#).

Data Analytics, Modelling and Measurement

The Lancet: Global, regional, and national minimum estimates of children affected by COVID-19-associated orphanhood and caregiver death, by age and family circumstance up to Oct 31, 2021

February 24, 2022. This modelling study found that the number of children affected by COVID-19-associated orphanhood and caregiver death almost doubled in six months compared with the amount after the first 14 months of the pandemic. Over the entire 20-month period, five million COVID-19 deaths meant that 5.2 million children lost a parent or caregiver. [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 first half of February 2022, contributing Canadian evidence-synthesis teams produced nine newly completed evidence syntheses. From the COVID-END taxonomy, these syntheses focus on public health measures (n=6) and clinical management (n=3). Please visit [Canadian Spotlight 14.1](#) 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 scans
- Economic analysis
- Evaluation planning
- Research fund management
- Knowledge translation services

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