

COVID-19 PANDEMIC

RAEB'S Evidence Update

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

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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.

Effective Approaches for Delivering Virtual Care to Adults with Mental Health And Addiction Issues

(Produced in collaboration with Mc Master Health Forum, SPOR Evidence Alliance, and CADTH)

- **Effectiveness:** Virtually delivered psychotherapy is generally as effective as face-to-face (FTF) care for people with mood, anxiety, and traumatic stress disorders, but a relationship between a therapist and a client may be weaker than in FTF care. Less is known about the effectiveness of remote clinician-led interventions for people with severe mental illness (e.g., eating disorders, personality disorders), but acceptability is high and remote medication reminders in this population may be effective. Group-based, clinician-led virtual care is also feasible and effective. There is substantial evidence supporting virtual cognitive assessment for diagnosing dementia, but there are critical gaps in diagnostic certainty.
- **Approaches to Implementation:** Asynchronous telepsychiatry is potentially a key part of stepped mental health interventions available in primary care. In the United States, there

are four telemental health delivery models: 1) hub-and-spoke; 2) integrated care; 3) direct-to-consumer; and 4) mobile applications.

- **Cost-Effectiveness:** Telepsychiatry is not more expensive than FTF delivery of mental health services, and it is more cost-effective in most studies reviewed. internet-delivered cognitive behavioural therapy (iCBT) is good value for money.
- **Acceptability and Equitable Access:** People with mild to moderate depression or anxiety disorders report that iCBT provides greater control over the time, pace, and location of therapy, and also improves access. People living with dementia are consistently satisfied with telemedicine visits during COVID-19. For Indigenous community members, virtual mental services are difficult to access during COVID-19 and not satisfying.
- **Challenges:** Mental health providers highlight persistent barriers to virtual care during COVID-19, including required changes in workflows and scheduling, initial set-up, troubleshooting and other technology-related challenges, and increased provider effort.

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

Journal of the American Medical Association (JAMA): Effect of high-titer convalescent plasma (CP) on progression to severe respiratory failure or death in hospitalized patients with COVID-19 pneumonia

Nov 29, 2021. This study reported that in patients with moderate to severe COVID-19 pneumonia, high-titer anti-SARS-CoV-2 CP did not reduce the progression to severe respiratory failure or death within 30 days, when compared to a control group that received standard therapy alone (e.g., remdesivir, glucocorticoids). [Article](#).

JAMA: Assessment of four doses of SARS-CoV-2 mRNA-based vaccine in recipients of a solid organ transplant

Nov 24, 2021. This French study found that solid organ transplant recipients receiving a fourth dose of a SARS-CoV-2 vaccine was associated with a slightly improved humoral response among patients with a weak response after three doses, and was associated with no improvement among those with no response after three doses. No serious adverse event or acute rejection was observed after the fourth dose. A limitation of the study was the small number of patients (n=37). [Article](#).

Centres for Disease Control and Prevention (CDC): Incidence of SARS-CoV-2 infection, emergency department (ED) visits, and hospitalizations because of COVID-19 among persons aged ≥ 12 Years, by COVID-19 vaccination status in Oregon and Washington (July 4 to September 25, 2021)

Nov 19, 2021. Among persons aged ≥ 12 years enrolled in a Pacific Northwest health plan, unvaccinated persons with SARS-CoV-2 infection were approximately twice as likely to receive ED care or to be hospitalized than were vaccinated persons with COVID-19. Among unvaccinated persons with SARS-CoV-2 infections, 18.5% had an ED encounter, and 9.0% were hospitalized, compared with 8.1% and 3.9%, respectively, of vaccinated patients. The findings in this report support the CDC's current recommendation that all persons aged ≥ 5 years should receive full COVID-19 vaccination, including additional and booster doses. [Article](#).

Data Analytics, Modelling and Measurement

BMC Infectious Disease: Vaccination threshold for SARS-CoV-2 depends on the indoor setting and room ventilation

Nov 26, 2021. This modelling study estimated that if vaccination rates are limited to a minimum of approximately two-thirds of the population, enhanced ventilation above minimum standards for acceptable air quality is needed to reduce the frequency and severity of SARS-CoV-2 superspreading events in high-risk indoor environments. Airborne infection risk was calculated in three settings (a classroom, prison cell block, and restaurant), with ventilation levels ranging from a low of 40% for a mechanically ventilated classroom to a high of 85% for a naturally ventilated restaurant. [Article](#).

Health System Impacts

JAMA: Assessment of patient preferences for telehealth in post-COVID-19 pandemic health care

Dec 1, 2021. In this study of 2,080 adults, most respondents were willing to use video visits in the future but, when presented with the choice between an in-person or a video visit for non-emergency care, most preferred in-person care. Willingness to pay for preferred visit modality was higher for those who preferred in-person care, and those who preferred video visits were more sensitive to out-of-pocket cost. The findings of this study suggest that awareness of patient preferences will help define telehealth's role in US health care after the COVID-19 pandemic. [Article](#).

Substance Abuse Treatment, Prevention, and Policy: Impact of the COVID-19 pandemic on drug overdose-related deaths in the US and Canada

Nov 29, 2021. As of September 2020, this systematic review found that drug overdose-related deaths after the onset of COVID-19 were higher compared with the months leading up to the pandemic in 2020 and the comparative months in 2019. Drug overdose-related deaths increased by 2% to 60% in jurisdictions in the US and by 58% in Canada when comparing Q2 and Q1 of 2020. The current situation necessitates a multi-pronged approach, encompassing expanded access to substance use disorder treatment, uninterrupted access to harm reduction services, emphasis on risk reduction strategies, provision of a safe drug supply, and decriminalization of drug use. [Article](#).

Canadian Medical Association Journal (CMAJ): Incidence of childhood cancer in Canada during the COVID-19 pandemic

Nov 29, 2021. Drawing on data collected between March 2016 and November 2020 at a Canadian pediatric oncology centre, this study identified no statistically significant change in the incidence of childhood cancer, or in the proportion of children enrolling in a clinical trial, presenting with metastatic disease (i.e., cancer that has spread from the primary site where it started) or who died early during the first nine months of the COVID-19 pandemic. These results suggest that the COVID-19 pandemic did not substantially reduce access to health care in pediatric oncology in Canada. [Article](#).

BMC Family Practice: High-performing primary care practices during the COVID-19 pandemic in the US

Nov 25, 2021. Interview data collected from 44 providers and staff at 22 primary care practices between March and May 2020 suggests that primary care structures and processes developed for remote chronic disease management and preventive care evolved rapidly during the early COVID-19 pandemic. Emerging adapted care processes, particularly remote provision of care, are promising and may endure beyond the pandemic. However, vulnerable populations (e.g., patients with few resources, lower health literacy, older age) were difficult to reach and manage during the early pandemic, suggesting equity issues must be addressed. [Article](#).

Public Health Measures

Family Practice: Development of a patient decision aid for COVID-19 vaccination with the Comirnaty vaccine

Nov 26, 2021. The French College of Teachers in General Practice developed a French-language patient decision aid (PtDA), to be used in primary care settings for people to decide whether

they will receive the Pfizer-BioNTech Comirnaty vaccine. Part one of the PtDA allows patients to identify their own risk factors; part two provides information on benefits and risks, unknown data, and technical explanations about the vaccine. The development of the PtDA was based on a literature review, semi-structured interviews with 17 patients, and patient and physician expert groups. [Article](#).

Frontline Workers

JAMA: Factors associated with COVID-19 vaccine receipt by health care personnel (HCP) at a major academic hospital during the first months of vaccine availability

Dec 1, 2021. In this study of 12,610 HCP at a major US academic hospital, two-thirds received a first dose within the first four months; 98% of those received two doses. Adjusted for age, sex, job position, and area-level social vulnerability, Black or African American and multiracial HCP were less likely to receive the vaccine compared with White HCP, with narrower disparities observed for nurses and no disparities found among physicians. These findings indicate the presence of racial and ethnic disparities in HCP vaccine uptake, except among physicians.

[Article](#).

JAMA: Morally injurious experiences and emotions of HCP during the COVID-19 pandemic before vaccine availability

Nov 24, 2021. In this study of 1,344 HCP in 2020, respondents reported significant changes in their personal and professional lives during the course of the pandemic. Common themes were feeling isolated from non–health care professionals, alienated from patients, and betrayed by coworkers, administrators, and the public. Moral injury can result from chronic stressors in morally injurious environments; leadership must identify and address these stressors to effectively support health care professionals as COVID-19 continues to strain staff’s physical, mental, and emotional resources. [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 November, contributing Canadian evidence-synthesis teams produced eight newly completed evidence syntheses. From the COVID-END taxonomy, the syntheses focus on public health measures (n=6), clinical management (n=1), and health system arrangements (n=1). Please visit [Canadian Spotlight 11.2](#) 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 scans
- Economic analysis
- Evaluation planning
- Research fund management
- Knowledge translation services

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