

The Newfoundland & Labrador Centre for Applied Health Research (NLCAHR) sends this COVID-19 e-bulletin to our health system stakeholders on a bi-weekly basis. This e-bulletin includes results from recent searches of health evidence and grey literature on the pandemic under specific subject headings, highlighting those findings considered to be of particular relevance to you.

We welcome your [feedback and suggestions](#).

To subscribe to this e-bulletin, please email: Rochelle.Baker@med.mun.ca

You can find all NLCAHR e-bulletins and COVID-19 *Quick Response Reports* [online here](#).

*Articles about **new COVID-19 VARIANTS** are **highlighted in RED** below.

FEATURE ARTICLE

CBC: [How Canada's pandemic experience has been easier than some](#) (March 2, 2021)

'In Canada, the pandemic has been less intense, less deadly than in many other Western nations.' This article provides statistics that show "how Canada has fared compared to the five other western members of the G7: the United States, the United Kingdom, Germany, France and Italy. The numbers do not explain why one country did better than another — whether it was the policies of the national government, the actions of local governments, the foresight of its health authorities or the nature of its society and the behaviour of its people." [LINK](#)

CLINICAL PRESENTATION AND BIOLOGY

CBC: [What a third wave of COVID-19 could look like in Canada — and how we can avoid it](#) (February 24, 2021)

"COVID-19 levels are declining from the devastating peaks of the second wave across much of Canada, but experts say the threat of more contagious coronavirus variants threatens to jeopardize our ability to prevent a third wave." [LINK](#)

Journal of the American Medical Association (JAMA) Network Open: [Sequelae in Adults at 6 Months after COVID-19 Infection](#) (February 19, 2021)

"A longitudinal prospective cohort of adults with laboratory-confirmed severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection was enrolled at the University of Washington with a concurrent cohort of healthy patients in a control group. In this cohort of individuals with COVID-19 who were followed up for as long as 9 months after illness, approximately 30% reported persistent symptoms. A unique aspect of our cohort is the high proportion of outpatients with mild disease. Persistent symptoms were reported by one-third of outpatients in our study, consistent with a previously reported study, in which 36% of outpatients had not returned to baseline health by 14 to 21 days following infection." [LINK](#)

Alberta Health Services Rapid Brief: [Screening and Preventing Venous Thromboembolic Events](#)

(January 14, 2021)

This brief outlines the evidence for screening and preventing venous thromboembolic events in patients with COVID-19. [LINK](#)

Eurosurveillance: [Antibodies to SARS-CoV-2 protect against re-infection during outbreaks in care homes, September and October 2020](#) (February 4, 2021)

"Two London care homes experienced a second COVID-19 outbreak, with 29/209 (13.9%) SARS-CoV-2 RT-PCR-positive cases (16/103 residents, 13/106 staff). In those with prior SARS-CoV-2 exposure, 1/88 (1.1%) individuals (antibody positive: 87; RT-PCR-positive: 1) became PCR-positive compared with 22/73 (30.1%) with confirmed seronegative status. After four months, protection offered by prior infection against re-infection was 96.2% (95% confidence interval (CI): 72.7–99.5%) using risk ratios from comparison of proportions and 96.1% (95% CI: 78.8–99.3%) using a penalized logistic regression model." [LINK](#)

Journal of the American Medical Association (JAMA) Internal Medicine: [Association of SARS-CoV-2 Seropositive Antibody Test with Risk of Future Infection](#) (February 24, 2021)

"In this cohort study of more than 3.2 million US patients with a SARS-CoV-2 antibody test, 0.3% of those indexed with positive test results had evidence of a positive nucleic acid amplification test beyond 90 days after index, compared with 3.0% indexed with negative antibody test results. Individuals who are seropositive for SARS-CoV-2 based on commercial assays may be at decreased future risk of SARS-CoV-2 infection." [LINK](#)

New Scientist Exclusive: [Two variants have merged into heavily mutated coronavirus](#) (February 16, 2021)

"The hybrid virus is the result of recombination of the highly transmissible B.1.1.7 variant discovered in the UK and the B.1.429 variant that originated in California and which may be responsible for a recent wave of cases in Los Angeles because it carries a mutation making it resistant to some antibodies." [LINK](#)

HEALTH SYSTEM ADMINISTRATION

Evidence Synthesis Network (Ontario): [Best Practices for Caring for Persons under Investigation for COVID-19 in Hospital Settings](#) (December 2, 2020)

"This note summarizes best practices on how to house and care for persons under investigation (PUIs) in hospital settings, with the goal of maximizing hospital bed use and minimizing the potential for COVID-19 outbreaks. PUIs are symptomatic people who are admitted to the hospital who have had a COVID-19 test, but for whom the result is pending." [LINK](#)

Health Technology Assessment Unit (University of Calgary): [Preventing the Transmission of COVID-19 in Older Adults Aged 60 Years and Above Living in Long-Term Care: Rapid Review Update](#) (October 30, 2020)

"The majority of these studies showed that infection control measures such as favourable staffing policies, training, screening, social distancing, isolation, and use of PPE significantly improved residents and staff related outcomes." [LINK](#)

ANZ Journal of Surgery: [Proposed delay for safe surgery after COVID-19](#) (March 3, 2021)

This study evaluated the literature and produced evidence-based guidance regarding the period of delay necessary for adequate recovery of patients following COVID-19 infection before undergoing surgery. [LINK](#)

INFECTION PREVENTION AND CONTROL

Evidence Synthesis Network (Ontario): [Interventions Preventing or Controlling the Spread of COVID-19 in Workplaces](#) (February 11, 2021)

"This briefing note provides a summary of recommended interventions that may prevent or control the spread of COVID-19 in workplaces across jurisdictions." [LINK](#)

The Journal of Infection: [SARS-CoV-2 infections in children following the full re-opening of schools and the impact of national lockdown: prospective, national observational cohort surveillance, July-December 2020, England](#) (February 25, 2021)

"In school-aged children, SARS-CoV-2 infections followed the same trajectory as adult cases and only declined after national lockdown was implemented whilst keeping schools open. Maintaining low community infection rates is critical for keeping schools open during the pandemic." [LINK](#)

Public Health Agency of Canada's Emerging Science Group: [Evidence Brief on Adherence to Isolation and Quarantine Recommendations during COVID-19](#) (January 20, 2021)

"This evidence review identifies and summarizes published and pre-published evidence on drivers and barriers, such as sociodemographic characteristics, knowledge and attitudes associated with adherence to COVID-19 isolation and quarantine recommendations. Studies up to January 15, 2021 were included." [LINK](#)

World Health Organization: [Roadmap to improve and ensure good indoor ventilation in the context of COVID-19](#) (January, 2021)

"The roadmap is divided into three settings – health care, non-residential, and residential spaces – and takes into account different ventilation systems (mechanical or natural). The roadmap is aimed at healthcare facility managers, building managers, as well as those members of the general public who are providing home care or home quarantine." [LINK](#)

Proceedings of the National Academy of Sciences: [Mechanistic transmission modeling of COVID-19 on the Diamond Princess Cruise ship demonstrates the importance of aerosol transmission](#) (February 23, 2021)

"We find that airborne transmission likely accounted for >50% of disease transmission on the Diamond Princess cruise ship, which includes inhalation of aerosols during close contact as well as longer range. These findings underscore the importance of implementing public health measures that target the control of inhalation of aerosols in addition to ongoing measures targeting control of large-droplet and fomite transmission, not only aboard cruise ships but in other indoor environments as well. Guidance from health organizations should include a greater emphasis on controls for reducing spread by airborne transmission." [LINK](#)

The Lancet Microbe: [SARS-CoV-2: eye protection might be the missing key](#) (February 23, 2021)

"Eye-protective face shields have been proposed to prevent community transmission. A large study showed that 19% of health-care workers became infected, despite wearing three-layered surgical masks, gloves, and shoe covers and using alcohol rub. After the introduction of face shields, no worker was infected." [LINK](#)

Emerging Infectious Diseases: [Risk for Fomite-Mediated Transmission of SARS-CoV-2 in Child Daycares, Schools, Nursing Homes, and Offices](#) (February 24, 2021)

Using a 'transmission model' to explore the potential for fomite transmission of SARS-CoV-2, this study reports that "fomites might be a substantial source of transmission risk, particularly in schools and child daycares." They suggested that combining "surface cleaning and decontamination with mask wearing can help mitigate this risk."

[LINK](#)

Evidence Synthesis Network (Ontario): [Rapid COVID-19 Tests Complementing Lab-based PCR Tests across Select Jurisdictions](#) (December 24, 2020)

"This note provides a summary of Canadian and international experiences with the use of rapid COVID-19 tests (i.e., diagnostic, screening) that have been used to complement lab-based polymerase chain reaction (PCR) testing across jurisdictions, including mass testing, testing target populations, tests used (i.e., rapid molecular, antigen tests), and outcomes of testing programs." [LINK](#)

Evidence Synthesis Network (Ontario): [Youth Compliance with COVID-19 Public Health Measures](#) (December 10, 2021)

"This briefing note provides a summary of jurisdictional experiences on youth and young adults' (i.e., ages 15-29 years) compliance with COVID-19 public health measures across jurisdictions." [LINK](#)

TREATMENT

BBC: [COVID vaccines - 'spectacular' impact on serious illness](#) (February 22, 2021)

"Research led by Public Health Scotland found at four weeks after the first dose, hospital admissions were reduced by 85% and 94% for the Pfizer and AstraZeneca jabs respectively." [LINK](#)

CBC: [Benefits and risks of delaying second doses of COVID-19 vaccine](#) (March 3, 2021)

"Federal and provincial health officials are planning to extend the time between two-dose COVID-19 vaccines to four months. Here are some of the factors they're weighing and why it matters." [LINK](#)

Journal of the American Medical Association: [The Johnson & Johnson Vaccine for COVID-19](#) (March 1, 2021)

"Johnson & Johnson has developed a vaccine that works differently than the Pfizer and Moderna vaccines and is highly effective for preventing moderate to severe COVID-19." [LINK](#)

New England Journal of Medicine: [BNT162b2 mRNA COVID-19 Vaccine in a Nationwide Mass Vaccination Setting](#) (February 24, 2021)

"In this study, data from Israel's largest health care organization were used to evaluate the effectiveness of the BNT162b2 mRNA vaccine. This study in a nationwide mass vaccination setting suggests that the BNT162b2 mRNA vaccine is effective for a wide range of COVID-19-related outcomes, a finding consistent with that of the randomized trial." [LINK](#)

Canadian Agency for Drugs and Technologies in Health (CADTH): [Remdesivir: Evidence Review and Appraisal](#) (February 19, 2021)

"CADTH conducted a Health Technology Review on remdesivir — an antiviral drug currently being used to treat COVID-19. Remdesivir was approved in Canada on July 27, 2020 to treat adults and adolescents with severe symptoms of COVID-19 who have pneumonia and require extra oxygen. Four randomized controlled trials were identified and included in the review." [LINK](#)

SENIORS AND OTHER VULNERABLE GROUPS

National Collaborating Centre for Determinants of Health: [Conversation series: From risk to resilience: A health equity approach to pandemic preparedness, response and recovery](#) (Series runs from February 10, 2021 to April 7, 2021)

This webinar series addressing the social determinants of health during COVID-19 is presented in partnership with the Office of the Chief Public Health Officer of Canada. [LINK](#)

World Health Organization: [WHO and UNICEF warn of a decline in children receiving life-saving vaccinations during COVID-19](#) (July 15, 2020)

“The World Health Organization and UNICEF warned today of an alarming decline in the number of children receiving life-saving vaccines around the world. This is due to disruptions in the delivery and uptake of immunization services caused by the COVID-19 pandemic. According to new data by WHO and UNICEF, these disruptions threaten to reverse hard-won progress to reach more children and adolescents with a wider range of vaccines, which has already been hampered by a decade of stalling coverage.” [LINK](#)

European Journal of Pediatrics: [Multisystem inflammatory syndrome in children related to COVID-19: a systematic review](#) (February 18, 2021)

A systematic review to describe the diagnostic criteria and clinical manifestations of this novel pediatric COVID-19-associated phenotype. [LINK](#)

Journal of Pediatric Nursing: [Social distancing for COVID-19 decreased infectious diseases in children](#) (February 20, 2021)

This study analyzed data from a large private pediatric care network to determine the impact of the COVID-19 social distancing on the incidence of 12 infectious childhood diseases, including acute otitis media, bronchiolitis, common cold, croup, gastroenteritis, influenza, non-streptococcal pharyngitis, pneumonia, sinusitis, skin and soft tissue infections, streptococcal pharyngitis, and urinary tract infections. [LINK](#)

Nature Metabolism: [Consequences of the COVID-19 pandemic for patients with metabolic diseases](#) (February 25, 2021)

“The COVID-19 pandemic has stretched healthcare resources and caused severe knock-on effects on patients with metabolic diseases worldwide. We encourage clinicians and patient-interest groups in the field of diabetes and metabolism to raise their voices to ensure adequate care and admission of patients.” [LINK](#)

International Journal of Obesity: [Obesity in COVID-19 era, implications for mechanisms, comorbidities, and prognosis: a review and meta-analysis](#) (February 26, 2021)

This study reviewed clinical studies to clarify the obesity relationship with COVID-19 severity, comorbidities, and discussed possible mechanisms. [LINK](#)

National Collaborating Centre for Infectious Diseases: [Vaccine hesitancy and First Nations, Inuit and Métis populations – Potential implications during COVID-19](#) (January 12, 2021)

In this webinar, Dr. Sarah Funnell, an Associate Medical Officer of Health with Ottawa Public Health, discusses some of the specific challenges for vaccine uptake amongst First Nations, Inuit and Métis populations, including their negative historic and contemporary experiences with mainstream healthcare systems, health care professionals, and vaccine providers in Canada. This is of particular importance within the current context of COVID-19 and the roll out of a vaccine for this disease. [LINK](#)

MENTAL HEALTH & WELLNESS

Journal of Epidemiology & Community Health: [Incidence of psychological illness after coronavirus outbreak: a meta-analysis study](#) (February 25, 2021)

A meta-analysis to evaluate the updated psychological prevalence of COVID-19 and historical coronavirus-related data. [LINK](#)

A FAIR Health White Paper: [The Impact of COVID-19 on Pediatric Mental Health](#) (March 2, 2021)

“The COVID-19 pandemic has had a profound impact on mental health, particularly on that of young people. Defining the pediatric population as individuals aged 0-22 years, and focusing on the age groups 13-18 years and 19-22 years, FAIR Health studied the effects of the pandemic on US pediatric mental health. FAIR Health analyzed data from its database of over 32 billion private healthcare claim records, tracking month-by-month changes from January to November 2020 compared to the same months in 2019. Aspects of pediatric mental health investigated include overall mental health, intentional self-harm, overdoses and substance use disorders, top mental health diagnoses, reasons for emergency room visits, and state-by-state variations.” [LINK](#)

Psychiatry Investigation: [Effects of COVID-19 Outbreak on Children’s Mental Health: A Comparative Study with Children Diagnosed and Isolated from their Parents](#) (February 22, 2021)

This study compared the psychological responses of children exposed to different levels of stress during the COVID-19 outbreak. [LINK](#)

Journal of Sleep Research: [Severe effects of the COVID-19 confinement on young children’s sleep: A longitudinal study identifying risk and protective factors](#) (February 18, 2021)

This study assessed whether the COVID-19 confinement induced acute and/or persisting consequences for young children's sleep, as well as identifying environmental determinants of such changes. [LINK](#)

European Child & Adolescent Psychiatry: [Mostly worse, occasionally better: impact of COVID-19 pandemic on the mental health of Canadian children and adolescents](#) (February 26, 2021)

This large cross-sectional study examined the impact of COVID-19 emergency measures on child/adolescent mental health for children/adolescents with and without pre-existing psychiatric diagnoses. [LINK](#)

Journal of the American Academy of Child & Adolescent Psychiatry: [The Parents Are Not Alright: A Call for Caregiver Mental Health Screening during the COVID-19 Pandemic](#) (February 22, 2021)

“While we applaud the renewed focus on parenting stress and wellbeing, we remain deeply concerned by the absence of a plan for intervening.” [LINK](#)

Journal of Medical Internet Research: [Digital Interventions to Support Population Mental Health in Canada During the COVID-19 Pandemic: Rapid Review](#) (March 2, 2021)

This study evaluated what digital interventions could be used to support the mental health of the Canadian general population during the COVID-19 pandemic. [LINK](#)

National Collaborating Centre for Methods and Tools: Rapid Review: [What is known about the risk of transmission of COVID-19 during musical activities such as singing or playing a wind instrument, and how can these risks be mitigated?](#) (February 3, 2021)

This rapid review was produced to support public health decision makers’ response to the coronavirus disease 2019 (COVID-19) pandemic. This review seeks to identify, appraise, and summarize emerging research evidence to support evidence-informed decision making. [LINK](#)

This **COVID-19 e-bulletin** was prepared by researchers at the Newfoundland & Labrador Centre for Applied Health Research (Kazeem Adefemi, Waseem Abu Ashour, Wendy Lasisi, and Pablo Navarro) to summarize research evidence and grey literature produced by a variety of sources that were accessed online in February and March, 2021. Given the rapidly changing nature of the coronavirus pandemic, some of the references included in this e-bulletin may quickly become out-of-date.

We further caution readers that researchers at the Newfoundland & Labrador Centre for Applied Health Research are not experts on infectious diseases and are relaying work produced by others.

This report has been produced quickly and it is not exhaustive, nor have the included studies been critically appraised.

QUESTIONS/ SUGGESTIONS? CONTACT:

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