

*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](mailto:Rochelle.Baker@med.mun.ca)*

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

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

## CLINICAL PRESENTATION AND BIOLOGY

**CBC: [The lambda COVID-19 variant is now spreading in Canada — here's what you need to know](#)** (July 8, 2021)

“Multiple variants of the virus behind COVID-19 are circulating in Canada, and lambda has now joined their ranks. While only a small number of cases have been reported countrywide so far, public health officials are keeping a close eye on this variant of interest first identified in South America. 11 cases of variant reported so far across the country, public health officials say. So what do Canadians need to know about lambda? Here's the latest.” [LINK](#)

**CBC: [COVID-19 deaths in Canada may be two times higher than reported, study finds](#)** (June 29, 2021)

“A new study suggests Canada has vastly underestimated how many people have died from COVID-19 and says the number could be two times higher than reported. Tara Moriarty, working group lead for the study commissioned by the Royal Society of Canada, said in an interview while most accounts have put the majority of deaths in long-term care, the new data analysis suggests the toll of COVID-19 was also heavily felt outside the homes, in the community.” [LINK](#)

**Public Health England: [SARS-CoV-2 variants of concern and variants under investigation in England - Technical briefing](#)** (June 11, 2021)

“This report has been published to continue to share detailed surveillance of Delta (VOC21APR-02, B.1.617.2) Some Key points:

- For the first time this week, published figures include genotyping assay data, using a highly specific mutation as an indicator of a probable Delta variant case.
- The most recent data show 74% of sequenced cases and 96% of sequenced and genotyped cases are Delta.

- The 28-day case fatality rate for Delta remains low (0.1%), though mortality is a lagged indicator and the vast majority of cases are still within the 28 days of follow-up required.
- Secondary attack rates have been iterated and remain higher for Delta than Alpha in both traveler and non-traveler cases and amongst both household and non-household contacts.
- Early data from both England and Scotland demonstrate an increased risk of hospitalization with Delta compared to Alpha.
- The majority of outbreaks managed by health protection teams and exposure settings identified through contact tracing are attributed to Delta variant. " [LINK](#)

**The Lancet Psychiatry: [6-month neurological and psychiatric outcomes in 236,379 survivors of COVID-19: a retrospective cohort study using electronic health records](#) (April 6, 2021)**

"This study provides evidence for substantial neurological and psychiatric morbidity in the 6 months after COVID-19 infection. Risks were greatest in, but not limited to, patients who had severe COVID-19. This information could help in service planning and identification of research priorities. Complementary study designs, including prospective cohorts, are needed to corroborate and explain these findings." [LINK](#)

## HEALTH EQUITY AND ETHICS (VULNERABLE GROUPS)

**Archives of Disease in Childhood: [Double-edged sword of limiting healthcare provision for children in times of COVID-19: the hidden price we pay](#) (June 23, 2021)**

"Two children at our institution have received the clinical/presumptive diagnosis of Crohn's disease and were subsequently started on treatment without the diagnostic certainty of endoscopy or MRI. The 2-year-old boy was discussed in a virtual multidisciplinary team meeting, where—as an exception—the decision was made to list the child for diagnostic gastrointestinal endoscopy on the only pediatric emergency theatre list. Surprisingly, esophagogastroduodenoscopy and colonoscopy revealed a single juvenile rectal polyp that was endoscopically removed. The remainder of the procedure was normal, and the boy was discharged without further medical treatment. This case represents a crucial aspect that goes missing in the omnipresent public debate around the coronavirus pandemic: COVID-19 also hurts the Sars-CoV-2 negative—not only economically." [LINK](#)

**BioMed Central Public Health: [Reach, engagement and effectiveness of in-person and online lifestyle change programs to prevent diabetes](#) (July 5, 2021)**

"COVID-19 has accelerated interest in and need for online delivery of healthcare. We examined the reach, engagement and effectiveness of online delivery of lifestyle change programs (LCP) modelled after the Diabetes Prevention Program (DPP) in a multistate, real-world setting." [LINK](#)

**Obesity Reviews: [Effects of the coronavirus disease 2019 pandemic and the policy response on childhood obesity risk factors: Gender and sex differences and recommendations for research](#) (June 28, 2021)**

"Using Dahlgren and Whitehead's model of the main determinants of health, this paper aims to provide a roadmap for future research on sex, gender, and childhood obesity during the time of COVID-19. It examines how COVID-19 has led to important changes in children's general socioeconomic, cultural, and environmental conditions, social and community networks, and individual lifestyle factors and how these may affect a child's risk for obesity. It focuses on the influence of gender and sex and outlines key considerations and indicators to examine in future studies concerned with promoting health and gender equity and equality. We need to understand the differential impact of COVID-19 related measures on girls' and boys' risk for obesity to adequately react with preventive measures, policies, and programs." [LINK](#)

**Maclean's:** [The COVID outbreaks that Ontario wasn't counting](#) (July 1, 2021)

"Nora Loreto: It was clear that COVID-19 infection was more deadly for disabled adults. So how many died in care facilities, and why wasn't Ontario reporting the number?" [LINK](#)

**ABC Science Collaborative:** [COVID-19 and Schools: The year in review and a path forward](#)

(June 30, 2021)

"To further assist leaders in these decisions, the ABC Science Collaborative coordinated a comprehensive review of the current scientific literature and available data on COVID-19 transmission and mitigation strategies for K–12 schools. The following summary of current findings provides an informational resource and practical guidance for school leaders and policy makers to consider as they plan a path forward for safely resuming full in-person instruction in the new school year." [LINK](#)

## HEALTH SYSTEM ADMINISTRATION

**Nature:** [COVID and schools: the evidence for reopening safely](#) (July 07, 2021)

"The bulk of the literature on transmission in schools, however, suggests that kids aren't driving viral spread. Investigations in Germany, France, Ireland, Australia, Singapore and the United States show no, or very low, secondary attack rates within school settings." [LINK](#)

**The British Medical Journal:** [We should shift our focus from COVID-19 mortality to morbidity, particularly in children](#) (July 6, 2021)

"We have heard much about how vaccination is breaking—or weakening—the link between SARS-CoV-2 and the clinical manifestations of COVID-19. We consider the nature of this link from the perspective of quantitative modelling—and what it means for risks following exposure to the virus. In brief, it suggests we should shift our focus from mortality to morbidity, particularly in children." [LINK](#)

**The New England Journal of Medicine:** [Confronting Our Next National Health Disaster — Long-Haul COVID](#) (June 30, 2021)

"To understand why long COVID represents a looming catastrophe, we need look no further than the historical antecedents: similar post-infection syndromes. Experience with conditions such as myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS), fibromyalgia, post-treatment Lyme disease syndrome, chronic Epstein–Barr virus, and even the 19th-century diagnosis of neurasthenia could foreshadow the suffering of patients with long COVID in the months and years after infection." [LINK](#)

**Canadian Medical Association Journal:** [Changes in family medicine visits across sociodemographic groups after the onset of the COVID-19 pandemic in Ontario: a retrospective cohort study](#)

(June 15, 2021)

"We included 365 family physicians and 372,272 patients. Compared with the previous year, visitor rates during the pandemic period dropped by 34.5%, from 357 visitors per 1,000 people to 292 visitors per 1,000 people. Declines in visit volume during the pandemic were less pronounced (21.8% fewer visits), as the mean number of visits per patient increased during the pandemic (from 1.64 to 1.96). The declines in visitor rate and visit volume varied based on patient age and sex, but not socioeconomic status." [LINK](#)

**Royal Society of Canada Task Force on COVID-19: [Excess All-Cause Mortality during the COVID-19 Epidemic in Canada](#)** (June 29, 2021)

"It is widely assumed that 80 per cent of Canada's deaths due to COVID-19 occurred among older adult residents of long-term care homes, a proportion double the 40-per-cent average of peer countries in the Organization for Economic Co-operation and Development (OECD). But an in-depth analysis of all deaths that have so far been reported across Canada during the pandemic casts doubt on this estimate. It reveals evidence that at least two thirds of the deaths caused by COVID-19 in communities outside of the long-term care sector may have been missed." [LINK](#)

**Wired: [The third wave of COVID is here... and it's weird](#)** (June 28, 2021)

"The third wave will be different in characteristics to before, but the situation is so complex to model [...] As a result, McKee believes the government needs to look at vaccinating teenagers as a way of mitigating the threat of the third wave to the old and vulnerable. "This needs to happen at the absolute minimum," says McKee." [LINK](#)

## INFECTION PREVENTION AND CONTROL

**CTV News: [Where is the Delta variant most prevalent in Canada?](#)**

(June 29, 2021)

As of June 29, 2021, there have been more than 4,100 cumulative cases of the Delta variant in Canada, with Ontario accounting for 42 per cent of these cases and British Columbia accounting for 31 per cent. According to Dr. Isaac Bogoch, infectious disease specialist, "As we gradually open up, there will be more and more opportunities for the virus to be transmitted. This virus isn't going anywhere and we know it's not going anywhere, and if it's given opportunities to be transmitted, we'll see cases. But the vaccines work against this variant. A single dose is pretty effective. Regardless of the vaccine, it's pretty effective in keeping people out of the hospital, and of course, two doses are more effective than one." [LINK](#)

**MedRxiv: [Effectiveness of COVID-19 vaccines against variants of concern, Canada](#)**

(July 3, 2021)

"Against symptomatic infection caused by Alpha, vaccine effectiveness with partial vaccination ( $\geq 14$  days after dose 1) was higher for mRNA-1273 than BNT162b2 and ChAdOx1. Full vaccination ( $\geq 7$  days after dose 2) increased vaccine effectiveness for BNT162b2 and mRNA-1273 against Alpha. Protection against symptomatic infection caused by Beta/Gamma was lower with partial vaccination for ChAdOx1 than mRNA-1273. Against Delta, vaccine effectiveness after partial vaccination tended to be lower than against Alpha for BNT162b2 and mRNA-1273, but was similar to Alpha for ChAdOx1. Full vaccination with BNT162b2 increased protection against Delta to levels comparable to Alpha and Beta/Gamma. Vaccine effectiveness against hospitalization or death caused by all studied VOCs was generally higher than for symptomatic infection after partial vaccination with all three vaccines." [LINK](#)

**American Institute of Physics: [Tree pollen carries SARS-CoV-2 particles farther, facilitates virus spread](#)**

(June 22, 2021)

"The authors said the 6-foot distance often cited for COVID-19 recommendations might not be adequate for those at risk for the disease in crowded areas with high pollen. New recommendations based on local pollen levels could be used to manage the infection risk better." [LINK](#)

## TREATMENT

### **The Guardian: [The COVID Delta variant: how effective are the vaccines?](#) (June 15, 2021)**

“According to figures gathered by Public Health Scotland and [published in the Lancet](#), at least two weeks after the second dose of COVID jabs, protection against infection fell from 92% for the Alpha variant to 79% against the Delta variant for the Pfizer/BioNTech vaccine, while for the Oxford/AstraZeneca vaccine the protection fell from 73% to 60% respectively. Protection against symptomatic disease has also been found to differ depending on the variant.” [LINK](#)

### **MarketWatch: [BNT162b2-elicited neutralization of B.1.617 and other SARS-CoV-2 variants](#) (June 4, 2021)**

“The vaccines developed by Pfizer with German partner BioNTech and Moderna using mRNA technology may offer protection against the coronavirus-borne illness COVID-19 for years, according to a new study published Monday. [The study](#), conducted by researchers at Washington University in St. Louis, suggests that people vaccinated with those shots may not need boosters, as long as the virus does not mutate or give rise to new vaccine-resistant variants. It also found that people who have recovered from COVID before being vaccinated “produced the most robust serologic responses,” showing they enjoy a strong immune response.” [LINK](#)

### **ArsTechnica: [Here’s all the data on myocarditis cases linked to COVID-19 vaccines](#) (June 24, 2021)**

“With the stakes high and the situation hairy, the CDC and its advisers carefully combed through the myocarditis data they have from various vaccine safety-monitoring systems. In their most firmly worded statement so far, CDC scientists concluded that the “data available to date suggest [a] likely association of myocarditis with mRNA vaccination in adolescents and young adults.” That said, they also determined that the case rates are low and the cases generally very mild. Nearly all of the cases recover quickly with limited treatment, and no deaths have been reported. COVID-19, meanwhile, still poses risks to children and young adults, who can end up hospitalized in the intensive care unit, suffer with long-term symptoms, or even die from the infection. And, as more and more older adults have gotten vaccinated, children and young adults have accounted for a growing chunk of the COVID-19 cases. In May, 33 percent of all COVID-19 cases were in people between 12 and 29 years old.” [LINK](#)

## MENTAL HEALTH & WELLNESS

### **Autism Research: [Psychiatric problems during the COVID-19 pandemic in children with autism spectrum disorder](#) (July 7, 2021)**

“Children with ASD are at high risk for psychiatric problems during the COVID-19 pandemic. We found that 59% of children in our clinical sample are experiencing increased psychiatric problems. The child’s understanding of COVID-19, COVID-19 illness in the family, low family income, and depression and anxiety symptoms in the parent increase the risk for poor mental health during the pandemic. These findings indicate the importance of helping children with ASD access mental health treatment during COVID-19.” [LINK](#)

### **Nature Medicine: [Choosing Wisely for COVID-19: ten evidence-based recommendations for patients and physicians](#) (July 5, 2021)**

“We provide here the ten recommendations with explanations: the first five are directed toward the general public, whereas the remaining five are meant for physicians managing COVID-19. The final recommendations are related to the following: precautionary practices to decrease the risk of being infected; measures to be taken if

someone has symptoms or has been diagnosed with COVID-19; vaccination; judicious use of drugs; investigations in managing COVID-19; and health systems and policies.” [LINK](#)

**Diagnosis:** [An overview of mental health during the COVID-19 pandemic](#) (July 1, 2021)

“In this article, we aim to review and summarize the findings from a variety of studies that have explored the psychosociological effects of the pandemic and its impact on the mental well-being of the general population. We will also examine how various demographic groups, such as the elderly and youth, can be more susceptible or resilient to the pandemic’s mental health effects. We hope to provide a broader understanding of the underlying causes of mental health issues triggered by the pandemic and provide recommendations that may be employed to address mental health issues in the population over the long-term.” [LINK](#)

**Australian Journal of General Practice:** [General practitioner management of mental health during the COVID-19 pandemic](#) (July 7, 2021)

“Psychological issues are common presentations in general practice. The COVID-19 pandemic has created a ‘perfect storm’ for the deterioration of mental health. General practitioners (GPs) are ideally placed to provide supports for people with mental health issues. The objective of this article is to provide an overview of management approaches for mental health issues, paying attention to fostering resilience and lifestyle factors, particularly during the COVID-19 pandemic period.” [LINK](#)

**Health Promotion and Chronic Disease Prevention in Canada- Research, Policy and Practice:** [Protecting vulnerable groups from tobacco-related harm during and following the COVID-19 pandemic](#)

(June 23, 2021)

“Marginalized populations are being disproportionately affected by the current pandemic. Direct effects include higher infection rates with greater morbidity and mortality; indirect effects stem from the societal response to limit the spread of the virus. These same groups also have smoking rates that are significantly higher than the general population. In this commentary, we discuss how the pandemic has been acting to further increase the harm from tobacco endured by these groups by applying the syndemics framework.” (*Definition: A syndemics framework examines the health consequences of identifiable disease interactions and the social, environmental, or economic factors that promote such interaction and worsen disease.*) [LINK](#)

**Journal of Public Health:** [COVID-19 stressors, wellbeing and health behaviours: a cross-sectional study](#)

(June 30, 2021)

“This study had four aims to support this understanding. First, to examine how different participant groups experienced COVID-19 stressors, mental wellbeing and loneliness. Second, to examine how different participant groups engaged in health behaviours during restrictions. Third, to evaluate how adopting positive and negative health behaviours affected the association between COVID-19 stressors and mental wellbeing. Fourth, to evaluate how helping others affected the association between COVID-19 stressors and mental wellbeing, and COVID-19 stressors and loneliness.” [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 June and July of 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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