

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

CLINICAL PRESENTATION & BIOLOGY

The Conversation: Massive numbers of new COVID-19 infections, not vaccines, are the main driver of new coronavirus variants (September 9, 2021)

“Even though vaccinated people can still get infected with the Delta variant, they tend to experience shorter, milder infections than unvaccinated individuals. This greatly reduces the chances of any mutated virus – either one that makes the virus more transmissible or one that could allow it to get past immunity from vaccines – from jumping from one person to another.” [LINK](#)

CBC: From mu to C.1.2, here are the latest coronavirus variants scientists are watching closely (September 2, 2021)

“Scientists have warned the coronavirus will keep evolving as it spreads around the world, and there are now multiple new variants being watched closely by global research teams. One of those, B.1.621, also known as mu, has been dubbed the latest variant of interest by the World Health Organization (WHO). Another, C.1.2, is the subject of headline-making new research exploring how it behaves. Other variants are likely waiting in the wings, yet to be detected.” [LINK](#)

The Guardian: Delta variant doubles risk of hospitalisation, new study finds (August 27, 2021)

“In the study, researchers analyzed healthcare data from 43,338 COVID-19 cases in England between 29 March and 23 May 2021. Only 1.8% of the cases, regardless of variant, had received both doses of the vaccine, 24% had been vaccinated once and the majority (74%) were unvaccinated. About one in 50 patients were admitted to hospital within 14 days of their first positive COVID test – 2.2% of Alpha cases vs 2.3% of Delta cases, the study found. However, after accounting for key factors such as age, ethnicity and vaccination status, the researchers found the risk of being admitted to hospital was more than doubled with the Delta variant compared with the Alpha variant (a 2.26-fold increase in risk), according to the [paper](#) published.” [LINK](#)

CBC: Why it's now more likely you'll face coronavirus — even if you're vaccinated against COVID-19
(August 18, 2021)

“The reassuring bottom line is if you're young, healthy and fully vaccinated, the risk of falling seriously ill from Delta remains low, even if cases continue to surge overall, said Morris, with Sinai Health System. But as the Delta variant continues to spread, it will find the vulnerable. Dr. Theresa Tam, Canada's chief public health officer, noted last week that the number of people being treated for COVID-19 in Canadian hospitals rose by 12 per cent compared with the week before, following recent increases in overall infections reported in multiple provinces.”

[LINK](#)

Science: Having SARS-CoV-2 once confers much greater immunity than a vaccine—but vaccination remains vital (August 26, 2021)

“The natural immune protection that develops after a SARS-CoV-2 infection offers considerably more of a shield against the Delta variant of the pandemic coronavirus than two doses of the Pfizer-BioNTech vaccine, according to a large Israeli [study](#) that some scientists wish came with a “Don’t try this at home” label. The newly released data show people who once had a SARS-CoV-2 infection were much less likely than never-infected, vaccinated people to get Delta, develop symptoms from it, or become hospitalized with serious COVID-19.” [LINK](#)

Clinical Infectious Disease: Twelve-month systemic consequences of COVID-19 in patients discharged from hospital: a prospective cohort study in Wuhan, China (August 14, 2021)

“Physiological, laboratory, radiological or electrocardiogram abnormalities, particularly those related to renal, cardiovascular, liver functions are common in patients who recovered from COVID-19 up to 12months post-discharge.” [LINK](#)

The Lancet: One-year outcomes in hospital survivors with COVID-19: a longitudinal cohort study
(August 28, 2021)

“Most COVID-19 survivors had a good physical and functional recovery during 1-year follow-up and had returned to their original work and life. The health status in our cohort of COVID-19 survivors at 12 months was still lower than that in the control population.” [LINK](#)

HEALTH EQUITY AND ETHICS (VULNERABLE GROUPS)

Internal Medicine Journal: A systematic review and meta-analysis of the characteristics and outcomes of readmitted COVID-19 survivors (September 6, 2021)

“We conducted a rapid review to evaluate the incidence, characteristics, and outcomes of patients who re-presented to the hospital emergency departments or required readmission following an index hospitalization with a diagnosis of COVID-19. Readmitted patients following an index hospitalization for COVID-19 were more commonly male with multiple comorbidities. Shorter initial hospital length of stay and unresolved primary illness may have contributed to readmission.” [LINK](#)

Diabetology & Metabolic Syndrome: Impact of COVID-19 lockdown on glycemic control in patients with type 1 and type 2 diabetes mellitus: a systematic review (September 7, 2021)

“[The authors] examined the impact of the COVID-19 lockdown on glycemic control in patients with type 1 diabetes (T1D) and type 2 diabetes (T2D). Glycemic values in people with T1D significantly improved during COVID-19 lockdown, which may be associated with positive changes in self-care and digital diabetes management. In contrast, lockdown determined a short-term worsening in glycemic parameters in patients with T2D. Further research is required, particularly into the causes and effective T2D management during lockdown.” [LINK](#)

European Eating Disorders Review: [Effects of COVID-19 lockdown on eating disorders and obesity: A systematic review and meta-analysis](#) (August 30, 2021)

“This systematic review and meta-analysis aimed to examine: the pooled prevalence of symptomatic behaviours and mental health deterioration amongst individuals with eating disorders (EDs) and obesity during the COVID-19 confinement. Moreover, we examined changes in EDs and distress before and during the confinement, and the association between psychosocial factors and eating disorder symptoms. The majority of individuals with EDs and obesity reported symptomatic worsening during the lockdown. However, further longitudinal studies are needed to identify vulnerable groups, as well as the long-term consequences of COVID-19.” [LINK](#)

Ageing Research Reviews: [Underrepresentation of older adults in clinical trials on COVID-19 vaccines: a systematic review](#) (September 3, 2021)

“During the COVID-19 pandemic older subjects have been disproportionately affected by the disease. Vaccination is a fundamental intervention to prevent the negative consequences of COVID-19, but it is not known if the needs and vulnerabilities of older people are adequately addressed by their inclusion in randomized clinical trials (RCTs) evaluating the efficacy of vaccines for COVID-19. Our systematic review demonstrates that, in published and ongoing phase II-III randomized clinical trials evaluating the efficacy of COVID-19 vaccines, only a tiny fraction of the most vulnerable group of older people was included, although they clearly were the first population that had to be vaccinated.” [LINK](#)

Journal of Women’s Health: [Sex and Gender-Related Differences in COVID-19 Diagnoses and SARS-CoV-2 Testing Practices During the First Wave of the Pandemic: The Dutch Lifelines COVID-19 Cohort Study](#) (September 1, 2021)

“We investigated associations between sex and gender-related variables, and COVID-19 diagnoses and testing practices in a large general population cohort during the first wave of the pandemic when testing capacity was limited. We found no sex differences in COVID-19 diagnoses and testing in the general population. Among health care workers, a male preponderance in COVID-19 diagnoses and testing was observed. This could be explained by more pronounced COVID-19 symptoms in males or by gender inequities.” [LINK](#)

Journal of the American Medical Association: [Examining Power Relations to Understand and Address Social Determinants of Vaccine Uptake](#) (September 8, 2021)

“In our view, the mistrust of vaccines for SARS-CoV-2 emerges largely from the enactment of power differences [...] We propose that it is in the context of enduring power differences that a socio-historically induced mistrust emerges. This mistrust spreads to and includes scientific and governmental actors advocating for vaccine uptake, allowing such mistrust to join access issues as another major source of vaccine inequality. However, the sources of the mistrust are necessarily distinct for different groups with lower power.” [LINK](#)

HEALTH SYSTEM ADMINISTRATION

The Atlantic: [Americans Are Losing Sight of the Pandemic Endgame](#) (August 28, 2021)

“Doctors and scientists need to have an honest conversation with the American people about what the goals of COVID-19 vaccination are and how the pandemic will end [...] Americans have to recalibrate our expectations about what makes a vaccine successful. The public discussion of the pandemic has become distorted by a presumption that vaccination can and should eliminate COVID-19 entirely. Under such an unattainable standard, each breakthrough infection looks like evidence that the vaccines are not working. But in reality, they continue to perform extremely well.” [LINK](#)

Public Library of Science One: [What support do frontline workers want? A qualitative study of health and social care workers' experiences and views of psychosocial support during the COVID-19 pandemic](#) (September 2, 2021)

"The results of this qualitative thematic analysis found that workers' experiences and views about support were complex and nuanced. Workers for the most part tended to adopt a "just get on with it" attitude which often led to them not recognizing or subjugating their own psychological wellbeing. They valued emotional and practical support from family and friends but often worried about them and felt they could not relate to their experiences as they were "not in the same boat." They valued the shared experience with colleagues who were "in the same boat" and often looked to peers as their first line of support. However, peer relationships could also be complicated, and many staff did not want to burden, or be burdened by, colleagues. Workers were ambivalent about support shown by organizations, media and the public. Whilst they valued psychological support services, there were many disparities in provision and barriers to access." [LINK](#)

The Conversation: [High rates of COVID-19 burnout could lead to shortage of healthcare workers](#) (August 29, 2021)

"The healthcare system urgently needs system-level measures that protect its professionals from harm, and compensate them for hazards. These may include manageable hours, adequate time off, appropriate staff-to-patient ratios and workplace safety measures. Some organizations will try to recruit new health professionals to manage shortages, but recruitment into a harmful environment is not sustainable." [LINK](#)

Public Library of Science One: [Health knowledge, health behaviors and attitudes during pandemic emergencies: A systematic review](#) (September 7, 2021)

"This systematic review identified 13 eligible studies that evaluated measures of knowledge, behavior, and health attitudes in adult cohorts during pandemic outbreaks of MERS-CoV, H1N1, and COVID-19. The synthesis result of the evidence suggests that health knowledge has a significant effect on the acquisition of health behaviors and attitudes, reflecting the efforts of the health system, the government and the community to face the negative impact of pandemic emergencies. Thus, these results show people with adequate knowledge of health perform good preventive practices and present appropriate perception of health emergency, which favor the consolidation of effective rapid responses to face the risk of pandemic infection." [LINK](#)

Public Library of Science One: [Patient prioritization methods to shorten waiting times for elective surgery: A systematic review of how to improve access to surgery](#) (August 30, 2021)

"Concern about long waiting times for elective surgeries is not a recent phenomenon, but it has been heightened by the impact of the COVID-19 pandemic and its associated measures. This comprehensive systematic review will synthesis global evidence on policy strategies with a unique insight to patient prioritization methods to reduce waiting times for elective surgeries. This will provide evidence that might help with the tremendous burden of surgical disease that is now apparent in many countries because of operations that were delayed or cancelled due to the COVID-19 pandemic and inform policy for sustainable healthcare management systems." [LINK](#)

BioMed Central Health Services Research: [Experiences of frontline healthcare workers and their views about support during COVID-19 and previous pandemics: a systematic review and qualitative meta-synthesis](#) (September 6, 2021)

"Healthcare workers across the world have risen to the demands of treating COVID-19 patients, potentially at significant cost to their own health and wellbeing. There has been increasing recognition of the potential mental health impact of COVID-19 on frontline workers and calls to provide psychosocial support for them. However, little attention has so far been paid to understanding the impact of working on a pandemic from healthcare workers' own perspectives or what their views are about support. The experiences of healthcare workers during the COVID-

19 pandemic are not unprecedented; the themes that arose from previous pandemics and epidemics were remarkably resonant with what we are hearing about the impact of COVID-19 globally today. We have an opportunity to learn from the lessons of previous crises, mitigate the negative mental health impact of COVID-19 and support the longer-term wellbeing of the healthcare workforce worldwide." [LINK](#)

INFECTION PREVENTION AND CONTROL

The Atlantic: [The Masks Were Working All Along](#) (September 4, 2021)

"The study encompassed roughly 350,000 people in 600 villages [...] The randomly assigned pro-masking policy reduced the number of confirmed, symptomatic COVID-19 cases in the intervention group by nearly 10 percent, relative to the control group. That might not sound like a huge effect. But the intervention increased masking from 14 percent to only 43 percent; 100 percent masking would have likely had a much larger effect. Even more impressively, the villages that implemented pro-masking policies saw a 34 percent decline in COVID-19 among seniors, for whom the disease is most deadly." [LINK](#)

- Original Research: [The Impact of Community Masking on COVID-19: A Cluster-Randomized Trial in Bangladesh](#)
- Additional Commentary: [Are We Wearing the Wrong Masks?](#)

The Atlantic: [What We Actually Know About Waning Immunity](#) (September 3, 2021)

"Vaccines don't last forever. This is by design: like many of the microbes they mimic, the contents of the shots stick around only as long as it takes the body to eliminate them [...] What *does* have staying power, though, is the immunological impression that vaccines leave behind. Defensive cells study decoy pathogens even as they purge them; the recollections that they form can last for years or decades after an injection. The learned response becomes a reflex, ingrained and automatic, a "robust immune memory" that far outlives the shot itself." [LINK](#)

The Guardian: [Classrooms in England to get CO₂ monitors to help with ventilation](#) (August 21, 2021)

"Classrooms in England are to be fitted with CO₂ monitors when state schools and colleges reopen after the summer holidays, in an effort to improve ventilation and combat the spread of COVID-19. Starting in September, the Department for Education will spend £25m on providing 300,000 CO₂ monitors to alert staff and students if CO₂ levels rise, meaning that fresh air is failing to circulate." [LINK](#)

Public Library of Science One: [Association between COVID-19 outcomes and mask mandates, adherence, and attitudes](#) (June 23, 2021)

"We show that mask mandates are associated with a statistically significant decrease in new cases (-3.55 per 100K), deaths (-0.13 per 100K), and the proportion of hospital admissions (-2.38 percentage points) up to 40 days after the introduction of mask mandates both at the state and county level. These effects are large, corresponding to 14% of the highest recorded number of cases, 13% of deaths, and 7% of admission proportion. We also find that mask mandates are linked to a 23.4 percentage point increase in mask adherence in four diverse states. Given the recent lifting of mandates, we estimate that the ending of mask mandates in these states is associated with a decrease of -3.19 percentage points in mask adherence and 12 per 100K (13% of the highest recorded number) of daily new cases with no significant effect on hospitalizations and deaths." [LINK](#)

Public Health Ontario: [Environmental Scan and Rapid Review of COVID-19 Symptom Screening Tools for Adults in the Post-vaccination Era](#) (August 31, 2021)

"Jurisdictions have different approaches regarding COVID-19 like symptoms. Some jurisdictions, similar to Ontario, have a very sensitive approach using an exhaustive list of symptoms and individuals with any one of these

symptoms are advised to self-isolate and get tested. Other jurisdictions have a more specific approach and recommend self-isolation and testing to those experiencing any symptom included on a shorter symptom list or symptoms they consider key or main symptoms. None of the jurisdictions scanned, to date, have made changes to their screening tools based on individual vaccination status, overall increasing vaccination rates in the community or presence of Delta and other variants." [LINK](#)

Public Health Ontario: [Considerations for Ontario Fall and Winter 2021 COVID-19 Planning](#) (August 10, 2021)

"It is important to consider the biological context of when and why the epidemiology of COVID19 might shift to increasing incidence, hospitalizations and deaths. For example, waning immunity is most likely to manifest first in long-term care (LTC) residents, older age groups and/or immunosuppressed individuals, due to their vaccination earlier in the pandemic and their underlying health status impacting their initial response to vaccination. Boosters of the same vaccine product for waning immunity may be required in this context... Maintenance of some less restrictive public health measures (e.g. indoor masking in public settings) can support prevention, and may have corollary benefits against expected non-COVID19 respiratory virus circulation in the fall." [LINK](#)

TREATMENT

Vox: [How a cheap antidepressant emerged as a promising COVID-19 treatment](#) (August 26, 2021)

"This study, called the TOGETHER study, is a lot bigger — more than 3,000 patients across the whole study, with 800 in the fluvoxamine group — and supports the promising results from those previous studies. The authors released it this week as a [preprint](#), meaning that it is still under peer review.

Patients given fluvoxamine within a few days after testing positive for COVID-19 were 31 percent less likely to end up hospitalized and similarly less likely to end up on a ventilator. (Death from COVID-19 is rare enough that the study has wide error bars when it comes to how much fluvoxamine reduces death, meaning it's much harder to draw conclusions.) It's a much larger effect than any that has been found for an outpatient COVID-19 treatment so far." [LINK](#)

European Archives of Psychiatry and Clinical Neuroscience: [Old drug fluvoxamine, new hope for COVID-19](#) (August 12, 2021)

"This letter discusses the emergent use of the old antidepressant fluvoxamine which may block clinical deterioration in mild to moderate patients infected with SARS-CoV-2." [LINK](#)

- Original Research in JAMA: [here](#)
- Original research in Open Forum of infectious Diseases [here](#).

Eurosurveillance: [Vaccine effectiveness against infection with the Delta \(B.1.617.2\) variant, Norway, April to August 2021](#) (September 2, 2021)

"Data on protection against infection and severe disease are crucial to guide future vaccination strategy. Effectiveness of COVID-19 vaccines against SARS-CoV-2 infection with both the Delta and Alpha variants appears to be considerable among fully vaccinated people in Norway. Suboptimal protection against infection after the first dose supports efforts to ensure high uptake for the second dose." [LINK](#)

Focused Communication: [A primer for primary care professionals - Myocarditis and Pericarditis after COVID-19 Vaccination](#) (August 12, 2021)

"This document was developed to support primary care clinicians encountering patients with possible myocarditis or pericarditis after COVID-19 vaccination." [LINK](#)

Association of American Physicians and Surgeons: [Letter to the American Medical Association Re: Ivermectin and COVID](#) (September 4, 2021)

“The American Medical Association (AMA) has taken the startling and unprecedented position that American physicians should immediately stop prescribing, and that pharmacists should stop honoring their prescriptions for, Ivermectin for COVID-19 patients. The AMA is thus contradicting the professional judgment of a very large number of physicians, who are writing about 88,000 prescriptions per week. It also contradicts the Chairman of the Tokyo Medical Association, Haruo Ozaki, who recommended that all doctors in Japan immediately begin using Ivermectin to treat COVID....Our members [the Association of American Physicians and Surgeons] would appreciate clarification of the AMA’s stand on the following questions: What are the criteria for advocating that pharmacists override the judgment of fully qualified physicians who are responsible for individual patients? What are the criteria for forbidding off-label use of long-approved drugs, which constitute at least 20 percent of all prescriptions? On what basis does AMA demand use only within a clinical trial for Ivermectin, but call for virtually universal vaccination outside of controlled trials, despite FDA warnings of potential cardiac damage in healthy young patients, and no information about long-term effects? We believe that these questions get to the heart of issues of physician and patient autonomy, as well as scientific principles such as the need for a control group in experiments.” [LINK](#)

Journal of Pharmacy and Pharmaceutical Sciences: [Evaluation of Ivermectin as a Potential Treatment for Mild to Moderate COVID-19: A Double-Blind Randomized Placebo-Controlled Trial in Eastern India](#) (July 15, 2021)

“Inclusion of Ivermectin in the treatment regimen of mild to moderate COVID-19 patients could not be said with certainty, based on our study results, as it had shown only marginal benefit in successful discharge from the hospital with no other observed benefits.” [LINK](#)

MENTAL HEALTH & WELLNESS

Statistics Canada: [The financial resilience and financial well-being of Canadians during the COVID-19 pandemic](#) (September 9, 2021)

“As Canada begins the path to recovery from the health and economic impacts of the COVID-19 pandemic, there is a heightened awareness of the need for households to maintain or build their financial resilience. Global uncertainty, increasingly longer life spans, the changing nature of work, changing work-life patterns, housing affordability, high debt loads, and the impact of unplanned life events, amongst other factors, mean that many Canadians are needing to manage and, where possible, improve their financial resilience.” [LINK](#)

The Lancet: [Mental illness and suicide among physicians](#) (September 2, 2021)

“The COVID-19 pandemic has heightened interest in how physician mental health can be protected and optimized, but uncertainty and misinformation remain about some key issues. In this Review, we discuss the current literature, which shows that despite what might be inferred during training, physicians are not immune to mental illness, with between a quarter and a third reporting increased symptoms of mental ill health. Physicians, particularly female physicians, are at an increased risk of suicide. An emerging consensus exists that some aspects of physician training, working conditions, and organizational support are unacceptable. Changes in medical training and health systems, and the additional strain of working through a pandemic, might have amplified these problems. A new evidence-informed framework for how individual and organizational interventions can be used in an integrated manner in medical schools, in health-care settings, and by professional colleagues is proposed. New initiatives are required at each of these levels, with an urgent need for organizational-level interventions, to better protect the mental health and wellbeing of physicians.” [LINK](#)

Statistics Canada: [Self-perceived mental health and mental health care needs during the COVID-19 pandemic](#) (September 8, 2021)

“Throughout the pandemic, various public health measures have been implemented across the country, impacting employment, schooling, family relationships and leisure. For some individuals, these measures, in combination with fears associated with the risks stemming from COVID-19, have contributed to feelings of greater stress, anxiety and loneliness, which in turn, may have an impact on overall mental health and perceived mental health care needs. Health care delivery changed within most jurisdictions during the pandemic, including shifts in the delivery of in-person services and greater reliance on care provided virtually or by telephone. These mitigation strategies to contain the spread of COVID-19 and changes to the availability and accessibility of health care may have had various effects on Canadians’ mental health and the care they received.” [LINK](#)

Child and Adolescent Mental Health: [Mental health impacts of the COVID-19 pandemic on children and youth – a systematic review](#) (August 28, 2021)

“Our objective was to review existing evidence of the COVID-19 pandemic’s global impact on the mental health of children and adolescents <19 years of age and to identify personal and contextual factors that may enhance risk or confer protection in relation to mental health outcomes. This review highlights the urgent need for practitioners and policymakers to attend to and collaborate with children and adolescents, especially those in higher risk subgroups, to mitigate short- and long-term pandemic-associated mental health effects.” [LINK](#)

Statistics Canada: [Use of child care for children younger than six during COVID-19](#) (August 25, 2021)

“The COVID-19 pandemic has had a significant impact on many aspects of the lives of Canadians, including the ability to secure and provide child care. This article examines the use of child care for children younger than 6, based on results from the 2020 Survey on Early Learning and Child Care Arrangements, collected between November 2020 and January 2021. Findings suggest that 52% of children younger than 6 were in regulated or unregulated child care, 8 percentage points lower than pre-pandemic levels. Although patterns in the types of care used, reasons parents selected that care and difficulties finding care were similar before and during the pandemic, some parents did cite pandemic-specific reasons for their use of care. For example, 14% of parents using care reported that at least one of the reasons they were using their current arrangement was because of limited availability during the pandemic. Furthermore, among parents not using child care, more than one-quarter (28%) felt that using child care was unsafe during the pandemic.” [LINK](#)

Greater Good Magazine: [Stumbling Into the Next Stage of Your Pandemic Life](#) (September 1, 2021)

“A therapist explores the psychology of coming back from the big pandemic pause. This is hard, what we are trying to do. The pandemic continues to rage, but adults live in a post-vaccination world. Kids are returning to school; their parents are returning to work. We’re all socializing more. We should be happier, right? But in the offices of the group psychotherapy practice I founded, people of all ages aren’t sure what chapter we’re in, or how to feel about it. How do we make this kind of comeback?” [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 August and September 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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