

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

Nature: [How do vaccinated people spread Delta? What the science says](#) (August 12, 2021)

“Data from COVID-19 tests in the United States, the United Kingdom and Singapore are showing that vaccinated people who become infected with Delta SARS-CoV-2 can carry as much virus in their nose as do unvaccinated people. This means that despite the protection offered by vaccines, a proportion of vaccinated people can pass on Delta, possibly aiding its rise. The findings underscore the importance of protective measures such as wearing masks indoors to reduce transmission. Researchers stress that COVID-19 vaccines are protective against serious illness and death, but the data on Delta transmission show that “people who are vaccinated still need to take precautions”, O’Connor says, a virologist at the University of Wisconsin–Madison.” [LINK](#)

Nature: [The four most urgent questions about long COVID](#) (June 9, 2021)

“Scientists are starting to get insights into the lingering disorder that affects some people infected with SARS-CoV-2 — but many mysteries remain unsolved; How many people get long COVID and who is most at risk? What is the underlying biology of long COVID? What is the relationship between long COVID and other post-infection syndromes? What can be done to help people with long COVID?” [LINK](#)

JAMA Network Open: [Short-term Reactions Among Pregnant and Lactating Individuals in the First Wave of the COVID-19 Vaccine Rollout](#) (August 17, 2021)

“This large prospective cohort study found that COVID-19 vaccines were well-tolerated among individuals who were pregnant, lactating, or planning pregnancy.” [LINK](#)

NEJM: [Household Transmission of SARS-CoV-2 from Children and Adolescents](#) (July 21, 2021)

“This retrospective study showed that the efficient transmission of SARS-CoV-2 from school-age children and adolescents to household members led to the hospitalization of adults with secondary cases of Covid-19. In households in which transmission occurred, half the household contacts were infected.” [LINK](#)

JAMA Pediatric: [Association of Age and Pediatric Household Transmission of SARS-CoV-2 Infection](#) (August 16, 2021)

“This study suggests that younger children may be more likely to transmit SARS-CoV-2 infection compared with older children, and the highest odds of transmission was observed for children aged 0 to 3 years. Differential infectivity of pediatric age groups has implications for infection prevention within households, as well as schools/childcare, to minimize risk of household secondary transmission. Additional population-based studies are required to establish the risk of transmission by younger pediatric index cases.” [LINK](#)

BBC: [Long-lasting Covid-19 symptoms rare in children](#) (August 4, 2021)

“Children who become ill with coronavirus rarely experience long-term symptoms, with most recovering in less than a week, research suggests. [This peer-reviewed study](#), published in the Lancet Child and Adolescent Health journal, wanted to understand how Covid affected children and how it compared to other respiratory diseases.” [LINK](#)

HEALTH EQUITY AND ETHICS (VULNERABLE GROUPS)

Research Square: [Deaths in Children and Young People in England following SARS-CoV-2 infection during the first pandemic year: a national study using linked mandatory child death reporting data](#) (July 7, 2021)

“SARS-CoV-2 is very rarely fatal in children and young people, even among those with underlying comorbidities. These findings are important to guide families, clinicians and policy makers about future shielding and vaccination.” [LINK](#)

Annals of Vascular Surgery: [The effects of COVID-19 pandemic on patients with lower extremity peripheral arterial disease: a near miss disaster](#) (August 16, 2021)

“During the first state of emergency for COVID-19 pandemic in 2020, less regular medical follow-up and hindered hospital access could have resulted in more acute and advanced clinical presentations of patients with PAD undergoing surgery. Guidelines are needed to provide appropriate care to this vulnerable population and avoid a large-scale disaster.” [LINK](#)

Archives of Public Health: [Disability and COVID-19: ensuring no one is left behind](#) (August 20, 2021)

“In this paper, we argue that persons with disabilities are in a disproportionately vulnerable situation in public health emergencies. By using the example of Coronavirus disease 2019 (Covid-19), we explain why that is and call for the systematic consideration of the needs and rights of persons with disabilities during the response to the outbreak and during the recovery phase. Otherwise, equity will continue to be merely an aspiration during this COVID-19 emergency - as it will in future health emergencies.” [LINK](#)

Vaccine: [Enablers and barriers to COVID-19 vaccine uptake: An international study of perceptions and intentions](#) (August 23, 2021)

“This research examines individuals’ psychological beliefs that may act as enablers and barriers to vaccination intentions... The findings have implications for improving communication strategies targeting individuals about the merits of vaccination, particularly focusing on younger individuals and expanded message framing to include altruistic considerations, and to improve government transparency regarding the effectiveness and side effects of vaccines.” [LINK](#)

Health Promotion International: [Leveraging built environment interventions to equitably promote health during and after COVID-19 in Toronto, Canada](#) (August 23, 2021)

“This paper outlines four built environment interventions in Toronto, Canada that seek to address the challenges in navigating urban space safely in the short term, including street design that prioritizes pedestrians, protected cycling infrastructure, access to inclusive green space and safe, affordable housing. Longer-term strategies to

create health-promoting urban environments that are equitable are discussed and may be valuable to other cities with similar urban equity concerns.” [LINK](#)

HEALTH SYSTEM ADMINISTRATION

ES Network: [Strategies to Encourage Vaccine Acceptance and Address Vaccine Hesitancy](#) (November 18, 2020)

“Multi-component interventions that focus on information or education provision, behaviour-change support, and skills and competencies development are likely to encourage vaccine acceptance and uptake.” [LINK](#)

PLoS 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](#)

The Atlantic: [The Coronavirus Is Here Forever. This Is How We Live With It](#) (August 17, 2021)

“That future may be hard to imagine with intensive-care units filling up yet again during this Delta surge. But the pandemic will end. One way or another, it will end. The current spikes in cases and deaths are the result of a novel coronavirus meeting naive immune systems. When enough people have gained some immunity through either vaccination or infection — preferably vaccination — the coronavirus will transition to what epidemiologists call “endemic.” It won’t be eliminated, but it won’t upend our lives anymore.” [LINK](#)

NY Mag: [Don’t Panic, But Breakthrough Cases May Be a Bigger Problem Than You’ve Been Told: Current public-health messaging may understate the scale and risk](#) (August 12, 2021)

“The message that breakthrough cases are exceedingly rare and that you don’t have to worry about them if you’re vaccinated — that this is only an epidemic of the unvaccinated — that message is falling flat,” Harvard epidemiologist Michael Mina told me in the long interview that follows below. “If this was still Alpha, sure. But with Delta, plenty of people are getting sick. Plenty of transmission is going on. And my personal opinion is that the whole notion of herd immunity from two vaccine shots is flying out the window very quickly with this new variant.” [LINK](#)

INFECTION PREVENTION AND CONTROL

NPR. [It's Time To Up Your Mask Game](#). (August 12, 2021).

“Masks still work, but with delta, we need better-performing masks,” says Linsey Marr, a researcher at Virginia Tech who studies airborne virus transmission. The delta variant transmits more than twice as easily as the original strain of the coronavirus. It’s now one of the most contagious respiratory viruses we know of. And it also replicates quickly in the noses and throats of infected people, so they could be walking around with 1,000 times more virus in their body than with the original strain. All of that means it’s imperative that you make sure your mask is protective, and not simply a bedazzled decoration for your face.” [LINK](#)

Clinical Infectious Diseases. [Reconsidering Assumptions of Adolescent and Young Adult Severe Acute Respiratory Syndrome Coronavirus 2 Transmission Dynamics.](#) (August 1, 2021)

“Evidence regarding the important role of adolescents and young adults (AYA) in accelerating and sustaining coronavirus disease 2019 (COVID-19) outbreaks is growing. Furthermore, data suggest that 2 known factors that contribute to high severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmissibility—presymptomatic transmission and asymptomatic case presentations—may be amplified in AYA. However, AYA have not been prioritized as a key population in the public health response to the COVID-19 pandemic. Policy decisions that limit public health attention to AYA and are driven by the assumption of insignificant forward transmission from AYA pose a risk of inadvertent reinvigoration of local transmission dynamics. In this viewpoint, we highlight evidence regarding the increased potential of AYA to transmit SARS-CoV-2 that, to date, has received little attention, discuss adolescent and young adult–specific considerations for future COVID-19 control measures, and provide applied programmatic suggestions.” [LINK](#)

American Journal of Infection Control. [Unintended consequences of infection prevention and control measures during COVID-19 pandemic.](#) (April, 2021)

“Multimodal IPC strategies can be implemented at scale to successfully mitigate health care-associated transmission of RVIs. Good adherence to personal-protective-equipment and hand hygiene kept other HAI rates stable even during an ongoing pandemic where respiratory infections were prioritized for interventions.” [LINK](#)

Cochrane Review. [International travel-related control measures to contain the COVID-19 pandemic: a rapid review.](#) (March 25, 2021)

“Overall, international travel-related control measures may help to limit the spread of COVID-19 across national borders. Restricting cross-border travel can be a helpful measure. Screening travellers only for symptoms at borders is likely to miss many cases; testing may be more effective but may also miss cases if only performed upon arrival. Quarantine that lasts at least 10 days can prevent travellers spreading COVID-19 and may be more effective if combined with another measure such as testing, especially if people follow the rules.” [LINK](#)

EuroSurveillance: [Contributions of the EURO 2020 football championship events to a third wave of SARS-CoV-2 in Scotland, 11 June to 7 July 2021](#) (August 5, 2021)

“The authors results suggest a clear link between the increase in SARS-CoV-2-positive cases among men aged 20–39 years and the EURO 2020. The behaviour surrounding attendance at EURO 2020-related events rather than match attendance itself may have uniquely contributed to Scotland’s third wave. Increased social mixing and travel to London surrounding the games is likely to have increased cases among young men, who currently have lower vaccination coverage than the older population. Public health messaging that acknowledges the unique types of risks surrounding these events and educates people about how to best manage them is critical when planning for future large sporting events. Early exit of the Scottish football team from the EURO 2020 may have contributed to the subsequent reduction in cases that are now being observed.” [LINK](#)

TREATMENT

NEJM. [Effectiveness of Covid-19 Vaccines against the B.1.617.2 \(Delta\) Variant.](#) (August 12, 2021.)

“Only modest differences in vaccine effectiveness were noted with the delta variant as compared with the alpha variant after the receipt of two vaccine doses. Absolute differences in vaccine effectiveness were more marked after the receipt of the first dose. This finding would support efforts to maximize vaccine uptake with two doses among vulnerable populations.” [LINK](#)

CDC. [Effectiveness of COVID-19 Vaccines in Preventing SARS-CoV-2 Infection Among Frontline Workers Before and During B.1.617.2 \(Delta\) Variant Predominance — Eight U.S. Locations, December 2020–August 2021.](#) (August 24, 2021)

“During December 14, 2020–August 14, 2021, full vaccination with COVID-19 vaccines was 80% effective in preventing RT-PCR–confirmed SARS-CoV-2 infection among frontline workers, further affirming the highly protective benefit of full vaccination up to and through the most recent summer U.S. COVID-19 pandemic waves. The VE point estimates declined from 91% before predominance of the SARS-CoV-2 Delta variant to 66% since the SARS-CoV-2 Delta variant became predominant at the HEROES-RECOVER cohort study sites; however, this trend should be interpreted with caution because VE might also be declining as time since vaccination increases and because of poor precision in estimates due to limited number of weeks of observation and few infections among participants. As with all observational VE studies, unmeasured and residual confounding might be present. Although these interim findings suggest a moderate reduction in the effectiveness of COVID-19 vaccines in preventing infection, the sustained two thirds reduction in infection risk underscores the continued importance and benefits of COVID-19 vaccination.” [LINK](#)

MedRxiv. [Comparison of two highly-effective mRNA vaccines for COVID-19 during periods of Alpha and Delta variant prevalence.](#) (August 21, 2021.)

“Comparing rates of infection between matched individuals fully vaccinated with mRNA-1273 versus BNT162b2 across Mayo Clinic Health System sites in multiple states (Minnesota, Wisconsin, Arizona, Florida, and Iowa), mRNA-1273 conferred a two-fold risk reduction against breakthrough infection compared to BNT162b2 (IRR = 0.50, 95% CI: 0.39-0.64). In Florida, which is currently experiencing its largest COVID-19 surge to date, the risk of infection in July after full vaccination with mRNA-1273 was about 60% lower than after full vaccination with BNT162b2 (IRR: 0.39, 95% CI: 0.24-0.62).” [LINK](#)

Eurosurveillance. [Vaccine effectiveness against SARS-CoV-2 transmission and infections among household and other close contacts of confirmed cases, the Netherlands, February to May 2021.](#) (August 5, 2021)

“This study showed that the COVID-19 vaccines not only protect the vaccinee against SARS-CoV-2 infection, but also offer protection against transmission to close contacts after completing the full schedule. This finding underscores the importance of full vaccination of close contacts of vulnerable persons.” [LINK](#)

StatNews. [A snort or a jab? Scientists debate potential benefits of intranasal Covid-19 vaccines.](#) (August 10, 2021)

“Vaccines that are injected into arm muscles aren’t likely to be able to protect our nasal passages from marauding SARS-CoV-2 viruses for very long, even if they are doing a terrific job protecting lungs from the virus. If we want vaccines that protect our upper respiratory tracts, we may need products that are administered in the nose — intranasal vaccines.” [LINK](#)

MENTAL HEALTH & WELLNESS

Public Health Nursing. [The social determinants of health and health outcomes among adults during the COVID-19 pandemic: A systematic review.](#) August 17, 2021.

“Three synthesized-conclusions were established (a) Vulnerable populations groups, particularly those from a racial minority and those with low incomes, are more susceptible and have been disproportionately affected by COVID-19 including mortality; (b) Gender inequalities and family violence have been exacerbated by COVID-19, leading to diminished wellbeing among women; and (c) COVID-19 is exacerbating existing social determinants of health through loss of employment/income, disparities in social class leading to lack of access to health care, housing instability, homelessness, and difficulties in physical distancing.” [LINK](#)

Gerontology and Geriatric Medicine. [Older Adults' Mental Health Through Leisure Activities During COVID-19: A Scoping Review.](#) (August 9, 2021)

“Older adults are highly vulnerable to mental health stress from COVID-19 restrictions on their typical pre-pandemic activities. Mental health wellbeing encompasses emotional, psychological, and social wellbeing, inclusive of self-efficacy, autonomy, and intergenerational. Leisure and reaction activities are proven mental health support across the life span, which would be different for other older adults with COVID-19 mitigation. We aimed to scope and synthesized emerging evidence of mental health wellbeing in older adults based on their leisure and recreation activities during the COVID-19 pandemic.” [LINK](#)

Canadian Journal of Public Health. [Examining the associations between food worry and mental health during the early months of the COVID-19 pandemic in Canada.](#) (August 12, 2021)

“Little is known about the association between mental health and diminished food worry during the COVID-19 pandemic. This paper examines worry about having enough food to meet household needs and its association with mental health during the early months of the pandemic in Canada.” [LINK](#)

Annals of the American Thoracic Society. [Critical Care Clinician Wellness during the COVID-19 Pandemic: A Longitudinal Analysis.](#) August 13, 2021.

“We sought to longitudinally evaluate burnout, depression, and professional fulfillment – as measures of overall clinician wellness – among critical care healthcare professionals at seven hospitals within our hospital network.” [LINK](#)

Stress & Health. [Stressors associated with the COVID-19 pandemic, disability, and mental health: Considerations from the Intermountain West.](#) (August 12, 2021)

“The first aim of the study was to examine the distribution of pandemic-related stressors across multiple dimensions—employment, personal and family finances, personal relationships, and quality of social life—among individuals with and without disabilities. The second aim of the study was to examine the association between a composite COVID-19 stressor score and two mental health outcomes—depressive and anxiety symptoms—among the two subsamples.” [LINK](#)

BMJ. [Mental health and wellbeing of children and adolescents during the covid-19 pandemic.](#) August 24, 2021.

“The covid-19 pandemic, at the time of writing, affects an estimated 2.59 billion 0-19 year olds, with school closures in 193 countries that have affected more than 1.59 billion. This article—intended for generalists and others—covers common impacts and effects of the pandemic; assessment, including recognition of symptoms suggestive of mental health disorders; and management, including referral and mitigation of the potentially adverse impacts of the covid-19 pandemic.” [LINK](#)

Child Psychiatry & Human Development. [Longitudinal Relations Between Parental Strain, Parent–Child Relationship Quality, and Child Well-Being During the Unfolding COVID-19 Pandemic.](#) August 23, 2021.

“The present research points to parental stress coping and child emotional adjustment as promising avenues for professionals and policy makers in their efforts to ensure child and family well-being throughout the pandemic.” [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 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.

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