

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 AND BIOLOGY

The Economist: [Our COVID-19 model estimates odds of hospitalization and death](#) (March 13, 2021)

"Death rates depend mostly on age, whereas comorbidities sharply raise chances of hospitalization in young people." [LINK](#)

Nature: [Increased mortality in community-tested cases of SARS-CoV-2 lineage B.1.1.7](#) (March 15, 2021)

"Based on 4,945 deaths with known Spike Gene Target Failure (SGTF) status, we estimate that the hazard of death associated with [B.1.17 variant] is 55% (95% CI 39–72%) higher after adjustment for age, sex, ethnicity, deprivation, care home residence, local authority of residence and test date. This corresponds to the absolute risk of death for a 55–69-year-old male increasing from 0.6% to 0.9% (95% CI 0.8–1.0%) within 28 days after a positive test in the community. Correcting for misclassification [and incomplete data], we estimate a 61% (42–82%) higher hazard of death associated with B.1.1.7. Our analysis suggests that B.1.1.7 is not only more transmissible than preexisting SARS-CoV-2 variants, but may also cause more severe illness." [LINK](#)

The Atlantic: [Unlocking the Mysteries of Long COVID](#) (April, 2021)

"Today, informal estimates suggest that 10 to 30 percent of those infected with the novel coronavirus have long-term symptoms. 'What people need to know is the pandemic's toll is likely much higher than we are imagining... It is an area that merits urgent attention. There will be people living with the impact of COVID long after the pandemic is over. This is not made up or in the minds of people who are sickly. This is real.'" [LINK](#)

Centres for Disease Control and Prevention (CDC): [Body Mass Index and Risk for COVID-19–Related Hospitalization, Intensive Care Unit Admission, Invasive Mechanical Ventilation, and Death — United States, March–December 2020](#) (March 12, 2020)

"Among 148,494 U.S. adults with COVID-19, a nonlinear relationship was found between body mass index (BMI) and COVID-19 severity, with lowest risks at BMIs near the threshold between healthy weight and overweight in

most instances, then increasing with higher BMI. Overweight and obesity were risk factors for invasive mechanical ventilation. Obesity was a risk factor for hospitalization and death, particularly among adults aged <65 years." [LINK](#)

STAT News: [FDA authorizes new test, built with machine learning, to detect past COVID-19 infections](#) (March 5, 2021)

"Unlike tests that detect bits of SARS-CoV-2 or antibodies to it, the new test, called T-Detect COVID, looks for signals of past infections in the body's adaptive immune system — in particular, the T cells that help the body remember what its viral enemies look like. Developed by Seattle-based Adaptive Biotechnologies, it is the first test of its kind." [LINK](#)

HEALTH SYSTEM ADMINISTRATION

Canadian Institutes for Health Information (CIHI) Webinar: [Impact of COVID-19 on Canada's health care systems](#) (December 20, 2021)

"Wondering about the impact of the first wave of COVID-19 on Canada's health care systems? We've lined up a diverse group of panelists who will discuss the findings of our latest analysis, their experience and how data can support the management of health systems and decision-making in times of crisis. They will take a deep dive into COVID-19's impact on: Emergency department visits; Hospital care (including surgery cancellations, intensive care unit stays and ventilator use); Home care; and Physician services (including virtual care)". [See here](#) for more CIHI research on the impacts of COVID-19 on the Canadian health care system. [LINK](#)

Science Table COVID-19 Advisory for Ontario: [Update on COVID-19 Projections](#) (March 11, 2021)

"Vaccination in long-term care has paid off... Variants of concern continue to spread across Ontario. Our ability to control the rate of spread will determine whether we return to normal or face a third wave of infection... High volumes of postponed care and missed screening and preventative care mean that there will be a substantial and prolonged surge in need for care across sectors. Our actions now will affect our ability to access care later." [LINK](#)

Colorectal Disease Journal: [Delay to elective colorectal cancer surgery and implications on survival: a systematic review and meta-analysis](#) (March 13, 2021)

"COVID-19 has delayed elective colorectal cancer (CRC) surgery... This study suggests that postponing elective CRC surgery by more than four weeks, after diagnosis is associated with a poorer outcome." [LINK](#)

Nature Medicine: [Dismantling the anti-vaxx industry](#) (March 15, 2021)

"Investigations show that those spreading misinformation that undermines the rollout of vaccines against COVID-19 are well financed, determined and disciplined. To counter their activities, we need to understand them as an industry actively working to sow doubts about the deadliness of COVID-19, vaccines and medical professionals' integrity." [LINK](#)

INFECTION PREVENTION AND CONTROL

The Lancet: [School reopening without robust COVID-19 mitigation risks accelerating the pandemic](#) (March 10, 2021)

Recommendations include: "Ventilation: Open windows and doors; Teach outdoors (or in large halls) wherever possible; Use CO2 monitors to assess air quality; Install High Efficiency Particulate Air filters with air cleaning devices; All physical education outdoors; No high-risk lessons (e.g., singing, brass or wind instruments), except remotely" [LINK](#)

The British Medical Journal: [Children and the return to school: how much should we worry about COVID-19 and long COVID?](#) (March 15, 2021)

"Given the strong imperative to get children back into full time, face-to-face teaching after the disruptions of the past year, the key challenge is to maximally offset the risks of community transmission and pediatric cases of COVID-19 and long COVID. Analysis has shown that the protective impact of mitigation measures is cumulative as one adds in mask wearing, ventilation, regular testing, small class sizes, and spaced classrooms." [LINK](#)

Centers for Disease Control and Prevention: [Guidance for Operating Child Care Programs during COVID-19](#) (March 12, 2021)

"This guidance outlines strategies that child care programs can use to maintain healthy environments and operations, lower the risk of COVID-19 spread in their programs, prepare for when someone is sick with COVID-19, and support coping and resilience." [LINK](#)

Politico: [Six Feet Isn't Enough. Workers Need More Ventilation](#) (March 8, 2021)

"Surgical masks and cloth face coverings stop droplet spray but don't perform as well in preventing exhalation or inhalation of tiny aerosols. They may be fine for a quick trip to the store where shoppers keep six feet apart, but workers who spend many hours in crowded indoor settings, especially settings with inadequate ventilation and jobs that involve being close to other people, need much more protection. And it's exactly those working conditions that are driving the high rates of Covid-19 among workers in nursing homes, correctional facilities, transportation, food processing, grocery stores and similar jobs involving long hours in poorly ventilated spaces." [LINK](#)

Diagnostics: [Diagnosis of SARS-Cov-2 Infection by RT-PCR Using Specimens Other Than Naso- and Oropharyngeal Swabs: A Systematic Review and Meta-Analysis](#) (February 21, 2021)

"Our meta-analysis shows that saliva samples from the oral region provide a high sensitivity and specificity; therefore, these appear to be the best candidates for alternative specimens to NPS/OPS in SARS-CoV-2 detection...Saliva testing may increase testing capacity, ultimately promoting the implementation of truly deployable COVID-19 tests, which could either work at the point-of-care (e.g. hospitals, clinics) or at outbreak control spots (e.g., schools, airports, and nursing homes)." [LINK](#)

New England Journal of Medicine: [Mass-Vaccination Sites — An Essential Innovation to Curb the COVID-19 Pandemic](#) (March 10, 2021)

"Many mass-vaccination plans relied on leveraging existing community-based health care sites to administer vaccines: clinics, pharmacies, and local governmental public health clinicians. The use of conventional healthcare sites, however, is not sufficient to achieve rapid enough vaccination to stop the pandemic. A hybrid approach using conventional vaccination sites and high-throughput, large-venue mass vaccination sites — stadiums, arenas, convention centers — has proven essential." [LINK](#)

The National Collaborating Centre for Methods and Tools: [Rapid Review Update 1: What are best practices for risk communication and strategies to mitigate risk behaviours?](#) (March 21, 2021)

This rapid review provides updated recommendations and evidence for effective risk communication to mitigate the spread of COVID-19, especially with growing concerns of individuals relaxing adherence to public health measures partly due to confusion around changing public health restrictions. [LINK](#)

STAT News: [The curious case of AstraZeneca's COVID-19 vaccine](#) (March 15, 2021)

"Side effect scares are common with vaccines, but they also very often do not pan out. The reason is that so many people receive vaccines that some will experience what seems like a side effect by chance when, really, it is not related to the vaccine at all." [LINK](#)

The Conversation: [COVID-19 vaccine FAQs: Efficacy, immunity to illness vs. infection \(yes, they're different\), new variants and the likelihood of eradication](#) (March 9, 2021)

"How effective these vaccines may be in ending the COVID-19 pandemic has been equated to their "efficacy rates." It's important to know what these numbers mean to understand what can be expected from these vaccines and the ones that follow." [LINK](#)

CBC: [New outbreak of COVID-19 in B.C. care home where 82% of residents were already vaccinated](#) (March 8, 2021)

"In a live news conference, Provincial Health Officer Dr. Bonnie Henry said being vaccinated doesn't mean transmission will be stopped and that precautions must remain in place for seniors and care homes. 'You can have transmission even when people are fully vaccinated,' she said. 'The illness seems to be milder and doesn't transmit as much [and we] won't see rapid explosive outbreaks.'" [LINK](#)

TREATMENT

BBC: [COVID-19: Evidence does not suggest AstraZeneca jab linked to clots, MHRA says](#) (March 15, 2020)

"People should still get their COVID vaccine despite several EU countries pausing use of the Oxford-AstraZeneca jab amid concern about blood clots, the UK medicines regulator has said." [LINK](#)

Zeynep Tüfekçi: [Is Choice Always Worth the Anxiety?](#) (March 8, 2021)

"I think that we can confidently tell people that all three vaccines are excellent, that they look equally likely to stave off hospitalization and death—to almost completely, if not completely eliminate the possibility of those fates—and it makes sense to take the first available one." [LINK](#)

Eurosurveillance: [Acute onset supraclavicular lymphadenopathy coinciding with intramuscular mRNA vaccination against COVID-19 may be related to vaccine injection technique, Spain, January and February 2021](#) (March 11, 2020)

"Monitoring adverse reactions following immunization is essential, particularly for new vaccines such as those against COVID-19. We describe 20 cases of acute onset of a single supraclavicular lymphadenopathy manifesting between 24 h and 9 days after ipsilateral intramuscular administration of an mRNA-based COVID-19 vaccine, referred to our WHO Collaborating Centre for Vaccine Safety. Our results indicate that the swelling of supraclavicular lymph nodes following immunization may constitute a benign and self-limited condition, related to a higher than recommended injection site." [LINK](#)

New England Journal of Medicine: [Hydroxychloroquine with or without Azithromycin in Mild-to-Moderate COVID-19](#) (November 19, 2020)

"In this multicenter, randomized, open-label, three-group, controlled trial among patients hospitalized with mild-to-moderate COVID-19, the use of hydroxychloroquine, alone or with azithromycin, did not improve clinical status at 15 days as compared with standard care." [LINK](#)

Signa Vitae: [Crying wolf in time of Corona: the strange case of ivermectin and hydroxychloroquine. Is the fear of failure withholding potential life-saving treatment from clinical use?](#) (March 11, 2021)

"A total of 1323 patients were randomized in 7 RCTs per-formed in 6 countries. Four trials were multi-centric. Ivermectin treatment resulted in a lower mortality when compared to placebo: 14/703 (2%) vs 57/620 (9%), $P < 0.01$, odds ratio 0.19 (0.10, 0.34), $I^2 = 13\%$ (Fig.1). The funnel plot was symmetrical at visual inspection. Findings were confirmed at the Influence analysis (removing one study at time). All the mentioned RCTs included only hospitalized patients. Four trials were placebo-controlled." [LINK](#)

SENIORS AND OTHER VULNERABLE GROUPS

British Medical Journal Open: [Strategy to reduce adverse health outcomes in subjects highly vulnerable to COVID-19: results from a population-based study in Northern Italy](#) (March 10, 2021)

This study describes a new strategy to reduce the impact of COVID-19 on the elderly and other clinically vulnerable subjects, where general practitioners (GPs) play an active role in managing high-risk patients, reducing adverse health outcomes. [LINK](#)

International Journal of Quality in Health Care: [COVID-19 in aged care homes: a comparison of effects initial government policies had in the UK \(primarily focusing on England\) and Australia during the first wave](#) (March 2, 2021)

This study compares the impact of initial government policies on this vulnerable older population between the UK and Australia during the first wave of the pandemic. [LINK](#)

Public Health Nursing: [A framework for delivering nursing care to older adults with COVID-19 in nursing homes](#) (March 14, 2021)

Based on evidence-based practices, this paper presents a series of recommendations to modify existing contextual factors in nursing homes to best prepare for the next health disaster. [LINK](#)

Journal of Autism and Developmental Disorders: [COVID-19 Pandemic and Impact on Patients with Autism Spectrum Disorder \(ASD\)](#) (March 10, 2021)

This commentary describes various challenges faced by individuals with ASD in the United States including disruptions caused by educational and vocational changes, challenges to home and leisure routines, limited access to behavioral health services and changes in health services delivery due to the pandemic. [LINK](#)

Public Library of Science One: [Prevalence of COVID-19 in adolescents and youth compared with older adults in states experiencing surges](#) (March 10, 2021)

This study examines data from Departments of Health websites in six U.S. states experiencing surges in cases to determine prevalence of COVID-19, and two prevalence-related measures, in adolescents and youth as compared to older adults. [LINK](#)

European Respiratory Journal: [The impact of COVID-19 on patients with asthma](#) (March 4, 2021)

Using the clinical information captured in the electronic health records of patients with asthma and COVID-19, this study assesses the impact of COVID-19 on the clinical course of patients with asthma. [LINK](#)

The Conversation: [A year of COVID-19 lockdown is putting kids at risk of allergies, asthma and autoimmune diseases](#) (March 9, 2021)

"Data suggest that SARS-CoV-2 does not represent a greater danger to children than the annual flu. Yet social interactions of children have been severely limited, including removing them from schools. Most of their extracurricular activities have been cancelled... Even the air they breathe is often filtered by masks and there is prevalent use of hand sanitizer. In short, most COVID-19 policies have maximized the potential for children to develop dysregulated immune systems." [LINK](#)

MENTAL HEALTH & WELLNESS

Public Library of Science One: [Thriving during COVID-19: Predictors of psychological well-being and ways of coping](#) (March 15, 2021)

This study investigates which variables best predict increased psychological well-being (PWB) during this pandemic, and identified which ways of coping are associated with high PWB and low PWB. [LINK](#)

Public Library of Science One: [Prevalence of depression, anxiety and post-traumatic stress disorder in health care workers during the COVID-19 pandemic: A systematic review and meta-analysis](#) (March 10, 2021)

The aim of this systematic review and meta-analysis was to provide updated prevalence estimates for depression, anxiety and post-traumatic stress disorder among health care workers during the COVID-19 pandemic, benefitting from the inclusion of studies published in Chinese. [LINK](#)

Journal of Internal Medicine: [Post-acute cognitive and mental health outcomes amongst COVID-19 survivors: early findings and a call for further investigation](#) (March 13, 2021)

This paper discusses early findings of mental and cognitive health outcomes as a foundation for much-needed longitudinal studies aimed at understanding the nature and trajectory cognitive mental health symptoms following COVID-19 infection across patients of different demographic backgrounds and illness severities. [LINK](#)

International Archives of Occupational and Environmental Health: [Mental health status of health sector and community services employees during the COVID-19 pandemic](#) (March 9, 2021)

This study evaluates the depression, anxiety and stress status of health sector and community service workers who were actively working during the pandemic period. [LINK](#)

Current Psychiatry Reports: [Beyond Burnout: Responding to the COVID-19 Pandemic Challenges to Self-care](#) (March 9, 2021)

This paper is a review of the self-care challenges of the COVID-19 pandemic on the physical and emotional health and well-being of healthcare providers. New self-care practices are presented. [LINK](#)

Canadian Journal of Public Health: [Household- and employment-related risk factors for depressive symptoms during the COVID-19 pandemic](#) (March 15, 2021)

Utilizing Canadian survey data, this study assessed household- and employment-related risk factors for depressive symptoms during the pandemic. [LINK](#)

Social Psychiatry and Psychiatric Epidemiology: [Experiences of living with mental health problems during the COVID-19 pandemic in the UK: a co-produced, participatory qualitative interview study](#) (March 4, 2021)

This participatory study addresses the need for more knowledge about lived experiences by conducting interviews and co-producing knowledge with range of people with pre-existing mental health problems during the COVID-19 pandemic. [LINK](#)

The Atlantic: [The Pandemic Has Given Women a New Kind of Rage](#) (March 10, 2021)

“The past year has forced many women to confront the inequality in their own lives—and every kid sitting on a lap in a Zoom meeting, or bursting in to show off a unicorn, has forced that knowledge on the rest of us. The effects of the pandemic will last for years, even decades. More women than men appear to suffer from “long COVID.” Those who have taken career breaks to care for children are likely to be first in line for redundancies if companies need to downsize.” [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 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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