

*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 hope you will find this information to be helpful.*

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

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

## REOPENING AFTER LOCKDOWN

**Early Human Development: COVID-19: [The possible seasonal shape of things to come](#)** (November 12, 2020)

This paper attempts to provide an overview of potential seasonal trends for COVID-19 transmission. The authors conclude that the key to effective infection control will be to consider public health as a necessary driver for the economy and to ensure that all re-opening plans and activities are driven by evidenced-based public health advice.

[LINK](#)

**Chaos, Solitons & Fractals: [Dynamics of epidemics: Impact of easing restrictions and control of infection spread](#)** (November 12, 2020)

The authors of this study investigate how easing public health measures might have an impact on COVID-19 infection spread. They propose a series of control strategies to mitigate against potential spikes in COVID-19 cases while easing restrictions and re-opening society. [LINK](#)

## ANTICIPATING A “SECOND WAVE”

**Journal of Infection: [First and second COVID-19 waves in Japan: A comparison of disease severity and characteristics](#)** (November 2, 2020)

This letter to the editor discusses the first and second waves of COVID-19 in Japan, comparing disease severity and overall characteristics of the first and second waves. [LINK](#)

## TREATMENT

**Cochrane: [Is plasma from people who have recovered from COVID-19 an effective treatment for people with COVID-19?](#)** (October 12, 2020)

“The aim of this study was to know whether plasma from people who have recovered from COVID-19 is an effective treatment for people with COVID-19, and whether this [treatment] causes any unwanted effects. The authors searched and included 19 completed studies with 38,160 participants; 36,081 participants received convalescent plasma. The authors concluded that it was uncertain whether plasma from people who have recovered from COVID-19 is an effective treatment for people hospitalized with COVID-19 and whether convalescent plasma affects the number of serious unwanted effects.” [LINK](#)

**Canadian Agency for Drugs and Technologies in Health (CADTH): [Ongoing Trials for Drugs in the Prevention and Treatment of COVID-19](#)** (November 3, 2020)

“This report provides information on ongoing randomized controlled trials of drugs being investigated to treat or prevent COVID-19. It will be updated every two weeks. Ongoing trials of vaccines and plasma-based therapies are addressed in separate CADTH reports.” [LINK](#)

**Lilly Newsroom: [Lilly's neutralizing antibody bamlanivimab \(LY-CoV555\) receives FDA emergency use authorization for the treatment of recently-diagnosed COVID-19](#)** (November 9, 2020)

“Bamlanivimab is authorized for treatment of recently diagnosed, mild to moderate COVID-19 in high-risk patients. The U.S. government will allocate 300,000 doses of bamlanivimab to high-risk patients, with no out-of-pocket costs for the medication.” [LINK](#)

**The Hill: [Five things to know about the Pfizer vaccine news](#)** (November 9, 2020)

1. “The results are better than expected: Experts had been girding the public that many vaccines are not close to 100 percent effective. The Food and Drug Administration (FDA) had set a minimum of 50 percent effectiveness for a coronavirus vaccine to be approved.”
2. “It won’t be available right away: The Company [Pfizer] needs to wait until the third week of November to finish gathering the two months of safety data required by the FDA, and then plans to apply for emergency authorization.”
3. “It’s still important to take precautions: Because the vaccine will not be available to the general public for some number of months, it is crucial that people take precautions like wearing a mask, maintaining distance from others and washing their hands.”
4. “There’s political maneuvering over the credit: Republicans were quick to credit the Trump administration’s Operation Warp Speed effort for helping speed the vaccine along.”
5. “Distribution is still a challenge: Even once the vaccine itself is authorized by the FDA, there is still the daunting undertaking of getting shots into the arms of hundreds of millions of Americans. The Pfizer vaccine has the added complication that it must be stored at extremely cold temperatures, beyond what a normal freezer provides.” [LINK](#)

## CLINICAL MANAGEMENT

**Proceedings of the National Academy of Sciences (PNAS): [In fatal COVID-19, the immune response can control the virus but kill the patient](#)** (November 11, 2020)

An analysis of autopsy findings in China indicate that the pathogenesis of late severe COVID-19 pneumonia involves a dysregulated immune response, rather than direct viral damage. [LINK](#)

**The Guardian Online:** [Damage to multiple organs recorded in 'long COVID' cases](#) (November 15, 2020)  
“Young and previously healthy people with ongoing symptoms of COVID-19 are showing signs of damage to multiple organs four months after the initial infection, a study suggests.” See also:

- Original study (preliminary data): [Multi-organ impairment in low-risk individuals with long COVID](#) (n=201);
- Corroborating study (preliminary data): [New study reveals medium-term impact of COVID-19](#) (n=58);
- National Health Service, UK: [NHS Launches 40 Long COVID Clinics to tackle persistent symptoms](#) (n=40).

**Science Alert:** [Brain Scans Show a Whole Spectrum of COVID-19 Abnormalities We Can't Fully Explain](#) (October 29, 2020)

“Among the many serious symptoms of COVID-19, the strange neurological effects experienced by many patients count as perhaps the most mysterious. A sudden loss of smell and taste were among the first unusual symptoms reported by COVID-19 patients, but stroke, seizures, and swelling of the brain (called encephalitis) have all been described.” [LINK](#)

**MedRxiv:** [COVID-19 Wastewater Epidemiology: A Model to Estimate Infected Populations](#) (November 7, 2020)

“Composite wastewater samples were collected from three sewersheds and tested for SARS-CoV-2 RNA. A Susceptible-Exposed-Infectious-Removed (SEIR) model based on mass rate of SARS-CoV-2 RNA in the wastewater was developed to predict the number of infected individuals. The SEIR model provides a robust method to estimate the total number of infected individuals in a sewershed based on the mass rate of RNA copies released per day.” [LINK](#)

## INFECTION CONTROL

**New York Times:** [The Coronavirus Is Airborne Indoors. Why Are We Still Scrubbing Surfaces?](#) (November 19, 2020)

“Scientists who initially warned about contaminated surfaces now say that the virus spreads primarily through inhaled droplets, and that there is little to no evidence that deep cleaning mitigates the threat indoors.” [LINK](#)

**Nature:** [Mobility network models of COVID-19 explain inequities and inform reopening](#) (November 10, 2020)

“Our model predicts that a small minority of “superspreader” points of interest (POIs) account for a large majority of infections and that restricting maximum occupancy at each POI is more effective than uniformly reducing mobility. Our model also correctly predicts higher infection rates among disadvantaged racial and socioeconomic groups solely from differences in mobility: we find that disadvantaged groups have not been able to reduce mobility as sharply, and that the POIs they visit are more crowded and therefore higher-risk.” [LINK](#)

**STAT News:** [Is low mask wearing in rural communities a sign of poor health messaging?](#) (November 11, 2020)

“[Not wearing facemasks] may be partly due to public health messaging that hasn’t been tailored to rural communities. Retention of health messaging is lower in rural areas than it is in urban or suburban areas, suggesting that there is no such thing as a “one-size-fits-all” approach when it comes to disseminating crucial health information to the public.” [LINK](#)

**Nature:** [Long-distance airborne dispersal of SARS-CoV-2 in COVID-19 wards](#) (November 11, 2020)

“Detection of SARS-CoV-2 in central ventilation systems, distant from patient areas, indicate that virus can be transported long distances and that droplet transmission alone cannot reasonably explain this, especially

considering the relatively low air change rates in these wards. Airborne transmission of SARS-CoV-2 must be taken into consideration for preventive measures.” [LINK](#)

**Oxera: [On-arrival passenger testing is twice as effective as 14-day quarantine at reducing COVID-19 community transmission](#)** (November 11, 2020)

New modelling in the UK finds a single test on arrival is twice as effective as the 14-day policy. A test three days pre-departure is also 44% more effective than the current policy. If a ‘test and release’ regime is applied, three days of quarantine is significantly more effective to minimize infectious days (by 60%) compared to ‘test and release’ after five days (53%) or seven days (45%). [LINK](#)

**Centers for Disease Control and Prevention: [Transmission of SARS-COV-2 Infections in Households — Tennessee and Wisconsin, April–September 2020](#)** (November 6, 2020)

This report details the implications of a prospective observational study on transmission of COVID-19 within households. “Household transmission of SARS-CoV-2 is common and occurs early after illness onset. Persons should self-isolate immediately at the onset of COVID-like symptoms, at the time of testing as a result of a high risk exposure, or at time of a positive test result, whichever comes first. All household members, including the index case, should wear masks within shared spaces in the household.” [LINK](#)

## COVID-19 & HEALTHCARE WORKERS

**Western Journal of Emergency Medicine: [The Impact of COVID-19 on Healthcare Worker Wellness: A Scoping Review](#)** (September 21, 2020)

37 studies were included in this scoping review which revealed consistent reports of stress, anxiety, and depressive symptoms in healthcare workers (HCWs) as a result of COVID-19. The authors describe published data on HCW distress and burnout but urge future research on strategies to enhance HCW well-being. [LINK](#)

**Public Library of Science (PLoS) One: [Exposure to COVID-19 patients increases physician trainee stress and burnout](#)** (August 6, 2020)

This study compared groups of physician trainees who were exposed to COVID-19 patients against trainees who did not have this exposure. The authors found that, compared to the non-exposed group, the exposed group had a higher prevalence of stress and burnout. The exposed group also experienced moderate to extremely high perceived stress regarding childcare and had a lower work-family balance. Multivariable models indicated that trainees who were exposed to COVID-19 patients reported significantly higher stress and were more likely to be burned out. The authors also found that female trainees were more likely to be stressed; while unmarried trainees were more likely to be depressed, and marginally more likely to have anxiety. [LINK](#)

**Clinical Microbiology Reviews: [SARS-CoV-2 and Health Care Worker Protection in Low-Risk Settings: A Review of Modes of Transmission and a Novel Airborne Model Involving Inhalable Particles](#)** (October 28, 2020)

This review evaluates available evidence on potential modes of COVID-19 transmission and appropriate Personal Protective Equipment (PPE) for healthcare workers in low-risk settings. [LINK](#)

**BMJ Open: [Triaging of respiratory protective equipment on the assumed risk of SARS-CoV-2 aerosol exposure in patient-facing healthcare workers delivering secondary care: a rapid review](#)** (October 16, 2020)

This rapid review evaluated current evidence on the comparative effectiveness of surgical masks vs. respirators for COVID-19 protection in healthcare workers who provide secondary care. [LINK](#)

**Journal of Bioethical Inquiry:** [COVID-19, Moral Conflict, Distress, and Dying Alone](#) (November 9, 2020)

This paper explores the concepts of moral conflict and distress among hospital staff when they see their patients dying alone and how a system-wide provider wellness program can make a difference in healing and health. [LINK](#)

## SENIORS AND OTHER VULNERABLE GROUPS

**CBC The National:** [Isolation's devastating impact on dementia patients](#) (November 18, 2020)

"The pandemic has forced the cancellations of many support programs for people with dementia, forcing them further into isolation. New research shows the devastating impact of this isolation, which former MP Lisa Raitt has seen firsthand." [LINK](#)

**Journal of Racial and Ethnic Health Disparities:** [Association between Ethnicity and Severe COVID-19 Disease: a Systematic Review and Meta-analysis](#) (November 12, 2020)

This systematic review and meta-analysis evaluated the association between ethnicity and poor outcomes (mortality, hospitalization, ICU admission, advanced respiratory support and kidney failure) in patients with laboratory-confirmed SARS-CoV-2. [LINK](#)

**European Respiratory Review:** [COVID-19 and COPD: a narrative review of the basic science and clinical outcomes](#) (November 5, 2020)

This review tackled some of the key issues that will have significant impact on the long-term outlook for Chronic Obstructive Pulmonary Disease (COPD) patients in the context of COVID-19. [LINK](#)

**Disability and Health Journal:** [Impact of COVID-19: Nursing challenges to meeting the care needs of people with developmental disabilities](#) (November 4, 2020)

This study assessed the challenges faced by nurses caring for persons with developmental disabilities during the COVID-19 pandemic and how these challenges may impact people with developmental disabilities. [LINK](#)

**Public Library of Science (PLOS) One:** [Prognostic factors for severity and mortality in patients infected with COVID-19: A systematic review](#) (November 17, 2020)

This systematic review assessed prognostic factors that may be used in decision-making related to the care of patients infected with COVID-19. [LINK](#)

**Journal of Internal Medicine:** [Insights into Disparities Observed with COVID-19](#) (November 8, 2020)

The authors of this paper discuss the factors that put some people at high-risk for COVID-19 infection and/or mortality and the disparities observed among those infected, as well as examining disparities in infection severity. [LINK](#)

**Journal of Medical Virology:** [Obesity aggravates COVID-19: an updated systematic review and meta-analysis](#) (November 17, 2020)

This review evaluated the impact of obesity on the onset, exacerbation, and mortality of COVID-19 and compared the effects of different degrees of obesity on these factors. [LINK](#)

**Public Library of Science (PLOS) One:** [Factors associated with disease severity and mortality among patients with COVID-19: A systematic review and meta-analysis](#) (November 18, 2020)

This systematic review assessed the demographic, clinical, laboratory and radiological factors associated with severity and mortality in COVID-19. [LINK](#)

**Biotechnology and Applied Biochemistry: [A review of COVID-19 vaccines and major considerations for diabetic patients](#)** (November 12, 2020)

The impact of COVID-19 on global health has necessitated the rapid development and production of vaccines to combat the spread of this deadly virus. Given the complications that arise when patients have comorbidities such as diabetes, vaccines should also be designed to provide a safe immune response. The authors review vaccine studies that have been completed to date in an effort to consider effective strategies for producing a safe and ideal vaccine for all, including people with diabetes. [LINK](#)

## MENTAL HEALTH & WELLNESS

**Mental Health Research Canada: [Mental Health During COVID-19 Outbreak: Poll #3](#)** (November 19, 2020)

Summary of Findings: 1) Being outside is the best activity to support positive mental health. 2) Despite evolving COVID-19 case counts and restrictions, the number of people indicating a high degree of anxiety and depression has remained relatively stable since the onset of the pandemic. 3) The small group of Canadians who do not adhere or believe in COVID-19 guidelines and restrictions indicate a higher level of anxiety and depression. This group indicates that the primary driver of their negative mental health is economic concerns." [LINK](#)

**Cochrane Library: [Interventions to support the resilience and mental health of frontline health and social care professionals during and after a disease outbreak, epidemic or pandemic: a mixed methods systematic review](#)** (November 5, 2020)

This study assessed the effects of interventions aimed at supporting the resilience and mental health of frontline health and social care professionals during and after a disease outbreak, epidemic or pandemic. It also identified barriers and facilitators that may impact on the implementation of interventions aimed at supporting this resilience. [LINK](#)

**British Medical Journal Open: [Characteristics and well-being of urban informal home care providers during COVID-19 pandemic: a population-based study](#)** (November 17, 2020)

This study identified patterns of informal home care, characteristics of informal home care providers, and their challenges while working in Hong Kong during the COVID-19 epidemic. The study also examined the knowledge levels and level of preparation for home quarantine among both care providers and the recipients of their care in Hong Kong. [LINK](#)

**Maternal and Child Health Journal: [COVID-19 Quarantine-Related Mental Health Symptoms and their Correlates among Mothers: A Cross Sectional Study](#)** (November 17, 2020)

The authors of this study investigated mental health differences among different demographic and socio-economic groups and examined the lifestyle changes that occurred among mothers impacted by COVID-19 quarantine. [LINK](#)

**International Journal of Environmental Research and Public Health: [Psychological Adjustment of Healthcare Workers in Italy during the COVID-19 Pandemic: Differences in Stress, Anxiety, Depression, Burnout, Secondary Trauma, and Compassion Satisfaction between Frontline and Non-Frontline Professionals](#)** (November 12, 2020)

This study investigated the psychological adjustments required by healthcare professionals during the peak of the COVID-19 pandemic in Italy, evaluating differences between those who worked with patients affected by COVID-19 and those who did not. [LINK](#)

**International Journal of Environmental Research and Public Health: [Stress, Resilience, and Well-Being in Italian Children and their Parents during the COVID-19 Pandemic](#)** (November 10, 2020)



This study analyzed potential risks and protective factors for parent and child well-being during a potentially traumatic event such as COVID-19 quarantine by investigating parents' and children's overall well-being, parental stress, and children's resilience. [LINK](#)

**Journal of Community Psychology:** [Study of resilience and loneliness in youth \(18–25 years old\) during the COVID-19 pandemic lockdown measures](#) (November 10, 2020)

This study evaluated risks and protective factors for the mental health of 825 emerging adults aged from 18 to 25 years old in Belgium and in Italy. [LINK](#)

**European Journal of Physical and Rehabilitation Medicine:** [Psycho-social impact of social distancing and isolation due to COVID-19 containment measures on patients with physical disabilities](#) (November 9, 2020)

This paper describes the overall impact of the pandemic on mental health, social condition and illness perception among patients with disabilities. [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 October and November of 2020. 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:**

**The Newfoundland & Labrador Centre for Applied Health Research**

95 Bonaventure Avenue, Suite 300

St. John's, NL A1B 2X5

[nlcahr@mun.ca](mailto:nlcahr@mun.ca)

[www.nlcahr.mun.ca](http://www.nlcahr.mun.ca)

Newfoundland & Labrador Centre for

**APPLIED  
HEALTH  
RESEARCH**

[www.nlcahr.mun.ca](http://www.nlcahr.mun.ca)