COVID-19 e-bulletin
November 10, 2020

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

BMC Infectious Disease: Impacts of reopening strategies for COVID-19 epidemic: a modeling study in Piedmont region (October 28, 2020)
This article reports on a modelling study that investigated the relative effectiveness and impact of different re-opening strategies on COVID-19 transmission. LINK

Journal of Public Health & Practice: Workflow Solutions for Primary Care Clinic Recovery During the COVID-19 Pandemic: A Primer (November/December, 2020)
This article outlines workflow solutions that may serve as a primer for optimizing primary care within the context of the COVID-19 pandemic. LINK

Journal of Travel Medicine: Strategies at points of entry to reduce importation risk of COVID-19 cases and reopen travel (August 25, 2020)
This study investigates the relative effectiveness of different strategies to reduce travel-related spread of COVID-19 infection. LINK

ANTICIPATING A "SECOND WAVE"

The British Medical Journal News: COVID-19: Is a second wave hitting Europe? (October 28, 2020)
This news article discusses a suspected second wave of COVID-19 in Belgium, France, Germany, Spain, Ireland and the Czech Republic. LINK

TREATMENT

Reviews in Medical Virology: [Efficacy and safety of Remdesivir in hospitalized COVID-19 patients: Systematic review and meta-analysis including network meta-analysis](link) (October 31 2020)
"This study aimed to systematically review the best available evidence and synthesize the results around the role of Remdesivir in coronavirus disease 2019 (COVID-19). There is evidence that Remdesivir can be safely administered for hospitalized COVID-19 patients. It improves the recovery rate in both moderate and severe patients but, the optimal effect is achieved for those who are severely affected but not mechanically ventilated."
[LINK](link)

PLOS Medicine: [Interventions for treatment of COVID-19: A living systematic review with meta-analyses and trial sequential analyses (The LIVING Project)](link) (September 17, 2020)
"A first edition of a living systematic review of randomized clinical trials comparing the effects of all treatment interventions for participants in all age groups with COVID-19. The results show that dexamethasone and Remdesivir might be beneficial for COVID-19 patients, but the certainty of the evidence was low to very low, so more trials are needed. [The authors] exclude the possibility of hydroxychloroquine versus standard care in reducing the risk of death and serious adverse events by 20% or more." [LINK](link)

MedRxiv: [Repurposed antiviral drugs for COVID-19 – interim World Health Organization (WHO) SOLIDARITY trial results](link) (October 15, 2020)
"WHO expert groups recommended mortality trials in hospitalized COVID-19 of four re-purposed antiviral drugs. Study drugs were: Remdesivir, Hydroxychloroquine, Lopinavir (fixed-dose combination with Ritonavir) and Interferon-β1a (mainly subcutaneous; initially with Lopinavir, later not). These drugs appeared to have little or no effect on hospitalized COVID-19, as indicated by overall mortality, initiation of ventilation and duration of hospital stay." [LINK](link)

STAT News: [It may be time to reset expectations on when we'll get a COVID-19 vaccine](link) (October 29, 2020)
"The ambitious drive to produce a COVID-19 vaccine at warp speed seems to be running up against reality. We all probably need to reset our expectations about how quickly we're going to be able to be vaccinated." [LINK](link)

CLINICAL MANAGEMENT

Scientific Reports: [Explaining among-country variation in COVID-19 case fatality rates](link) (November 3, 2020)
The authors of this report aimed to identify key factors that might explain the variability in COVID-19 case fatality rates across countries. They found that temporal trajectories of case fatality rates varied greatly and uncovered several factors associated with temporal changes in case fatality rates, including variables describing comorbidity risk, and among demographic, economic, and political variables. [LINK](link)

Journal of Clinical Medicine: [COVID-19 and Adverse Pregnancy Outcomes: A Systematic Review of 104 Cases](link) (October 26, 2020)
The authors of this report aimed to synthesize the most up-to-date, relevant evidence on the outcomes of pregnant women with laboratory-confirmed COVID-19 infection. They found that pregnancy with COVID-19 has a significantly higher maternal mortality ratio compared to that of pregnancy without the disease. However, the evidence is too weak to state definitively that COVID-19 results in poorer maternal outcomes. The number of COVID-19 pregnancy outcomes was not large enough for the authors to draw a firm conclusion." [LINK](link)

EvidenceAid: [Hypertension and COVID-19 (multiple reviews)](#) (October 26, 2020)
These reviews looked at patients with COVID-19 who had pre-existing high blood pressure or hypertension – conditions that might affect the impact of COVID-19. The findings summarized several relevant systematic reviews, noting that hypertension was associated with poorer outcomes for COVID-19 patients. Four reviews also assessed a particular group of patients receiving anti-hypertensive treatment: the authors did not report any increased risk of COVID-19 infection, severity of infection or mortality from infection with the use of anti-hypertensive medications. Some reviews reported a protective effect from ACE inhibitors or ARB anti-hypertensive treatment in COVID-19 patients. [LINK](#)

EvidenceAid: [Children and COVID-19 (multiple reviews)](#) (October 29, 2020)
This report summarizes 21 systematic reviews of the evidence on COVID-19 and children. "Several rapid reviews have noted that children are less likely to experience severe COVID-19 infection, with many children experiencing mild symptoms. The most common symptoms reported were fever and cough. Overall, the prognosis of COVID-19 infection in children was noted to be good." [LINK](#)

Imperial College London: [Real-time Assessment of Community Transmission (REACT) Findings](#)
(October 9, 2020) See the following media articles for descriptions:
- Wall Street Journal: "Study Shows COVID-19 Antibodies Waning Over Time, Suggesting Immunity Might Wear Off. If confirmed, results suggest widespread long-term herd immunity will be difficult to achieve". (October 26, 2020) [LINK](#)
- The Guardian: "Proportion of people in England with COVID antibodies has fallen, study says. Figure has dropped by over a quarter in three months, fueling concerns over reinfection" (October 27, 2020) [LINK](#)
- BBC: "COVID: Antibodies 'fall rapidly after infection'" (October 27, 2020) [LINK](#)

MedRxiv: [Broadly-targeted autoreactivity is common in severe SARS-CoV-2 Infection](#) (October 23, 2020)
"Severe SARS-CoV-2 infection is linked to the presence of autoantibodies against multiple targets, including phospholipids and type-I interferons. [The authors] recently identified activation of an autoimmune-prone B cell response pathway as correlate of severe COVID-19, raising the possibility of de novo autoreactive antibody production during the antiviral response. Here, [the authors] identify autoreactive antibodies as a common feature of severe COVID-19, identifying biomarkers of tolerance breaks that may indicate aggressive immunomodulation." [LINK](#)

Science: [COVID-19 can affect the heart](#) (October 23, 2020)
"Recent findings of heart involvement in young athletes, including sudden death, have raised concerns about the current limits of our knowledge and potentially high risk and occult prevalence of COVID-19 heart manifestations." [LINK](#)

MedRxiv: [Multi-organ impairment in low-risk individuals with long COVID](#) (October 16, 2020)
"In a young, low-risk population with ongoing symptoms, almost 70% of individuals have impairment in one or more organs four months after initial symptoms of SARS-CoV-2 infection. There are implications not only for burden of long COVID but also public health approaches which have assumed low risk in young people with no comorbidities." [LINK](#)

King's College London: [New research identifies those most at risk from 'long COVID'](#) (October 21, 2020)
"… the team estimated that around one in seven (14.5%) of people with symptomatic COVID-19 would be ill for at least 4 weeks, one in 20 (5.1%) for 8 weeks, and one in 45 (2.2%) for 12 weeks or more. Long COVID affects around 10% of 18-49 year olds who become unwell with COVID-19, rising to 22% of over 70s. Weight also plays a role, with people developing long COVID having a slightly higher average BMI than those with short COVID. Women were 50

percent more likely to suffer from long COVID than men (14.5% compared with 9.5%), but only in the younger age group." LINK

American College of Cardiology: [Thromboembolism, CV Complications Common in Hospitalized COVID-19 Patients](#) (October 26, 2020)
"Patients with COVID-19 have a high frequency of major arterial or venous thromboembolism, major adverse cardiovascular events and symptomatic venous thromboembolism, despite routine thromboprophylaxis."
- Original research: Piazza et al., Registry of Arterial and Venous Thromboembolic Complications in Patients with COVID-19. Journal of the American College of Cardiology, October 2020. LINK

Reuters: [COVID's cognitive costs? Some patients' brains may age 10 years](#) (October 27, 2020)
"A non-peer-reviewed study of more than 84,000 people… found that, in some severe cases, coronavirus infection is linked to substantial cognitive deficits for months. "Our analyses ... align with the view that there are chronic cognitive consequences of having COVID-19… People who had recovered, including those no longer reporting symptoms, exhibited significant cognitive deficits."" LINK

INFECTION CONTROL

BBC News: [COVID: Antibodies 'fall rapidly after infection'](#) (October 27, 2020)
This news article reports and highlights findings of a recent study which suggest that levels of antibodies in people with COVID-19 wane rapidly, post- infection, thus calling into question the notion of 'herd immunity.' LINK

The Conversation: [Why young people tune out government COVID-19 messaging](#) (October 27, 2020)
This opinion piece argues that COVID-19 public health messaging is not achieving the desired objectives among young people, largely because governments are not communicating in ways that resonate with them. The article provides recommendations to improve such messaging. LINK

The Conversation: [How to prevent COVID-19 'superspreader' events indoors this winter](#) (October 27, 2020)
This article highlights the various factors and strategies that could help prevent major COVID-19 outbreaks as people move indoors during the winter months. LINK

Nature: [The false promise of herd immunity for COVID-19](#) (October 21, 2020)
This expert opinion piece reviews the concept of herd immunity as an infection control strategy for COVID-19, and highlights the inconsistencies and dangers in the idea, as currently proposed. LINK

The Lancet: [The temporal association of introducing and lifting non-pharmaceutical interventions (NPIs) with the time-varying reproduction number (R) of SARS-CoV-2: a modelling study across 131 countries](#) (October 22, 2020)
"Individual NPIs, including school closures, workplace closures, public events bans, bans on gatherings of more than ten people, requirements to stay at home, and internal movement limits, are associated with reduced transmission of SARS-CoV-2, but the effect of introducing and lifting these NPIs is delayed by 1–3 weeks, with this delay being longer when lifting NPIs." LINK

MedRxiv: [Face Masks, Public Policies and Slowing the Spread of COVID-19: Evidence from Canada](#) (October 16, 2020)
"We find that mask mandates were associated with a 25 percent or larger weekly reduction in new COVID-19 cases in July and August, relative to the trend in the absence of a mask mandate. Additional analysis with province-level

data provides corroborating evidence. Counterfactual policy simulations suggest that mandating indoor masks nationwide in early July could have reduced the number of new cases in Canada by 25 to 40 percent in mid-August, which corresponds to 700 to 1,100 fewer cases per week." LINK

MedRxiv: Integrated Single-Cell Atlases Reveal an Oral SARS-CoV-2 Infection and Transmission Axis (October 27, 2020- Preprint)
"COVID-19 infections are now widely accepted to involve airborne droplet transmission based on guidance from the World Health Organization and Centres for Disease Control. However, the presence of SARS-CoV-2 infectious particles in the salivary glands, the oral mucosa, and in saliva raises the possibility that the oral cavity actively participates in SARS-CoV-2 infection and transmission. Finally, these data provide strong evidence in support of universal public health measures, including mask wearing, social distancing, and hand washing, to limit exposure to potentially infectious droplets, aerosols, and fomites generated from the oral cavity." LINK

COVID-19 & HEALTHCARE WORKERS

Centers for Disease Control and Prevention: COVID-19–Associated Hospitalizations among Health Care Personnel — COVID-NET, 13 States, March 1–May 31, 2020 (October 30, 2020)
This report provides updated data on the characteristics of, and outcomes for, healthcare workers hospitalised with COVID-19 infections. The report highlights the need for continued infection control and prevention measures in healthcare settings. LINK

Australian Journal of General Practice: SARS-CoV-2 and the nose: Risks and implications for primary care (November 01, 2020)
This article discusses the nose-related features of SARS-CoV-2 that can place General Practitioners at risk. The authors provide recommendations to promote the safety and protection of primary healthcare physicians during the COVID-19 pandemic. LINK

The World Health Organization (WHO): Infection prevention and control health- care facility response for COVID-19- Interim Guidance (October 20, 2020)
This assessment tool from the WHO is intended to help health care facilities appraise infection prevention and control capacities, and the ability to maintain essential services while continuing to manage COVID-19 cases. LINK

The World Health Organization (WHO): Prevention, identification and management of health worker infection in the context of COVID-19 (October 30, 2020)
This guidance document from the WHO suggests a multi-pronged approach to preventing, identifying and managing COVID-19 infections among healthcare workers. LINK

Pulmonology: Challenges for the female healthcare workers during the COVID-19 pandemic: the need for protection beyond the mask (October 05, 2020)
This commentary piece argues that the COVID-19 pandemic has worsens the gender disparity among the general population, and especially healthcare workers, and that women in the healthcare profession require protection beyond just PPE. LINK

Healthcare: The reality of virtual care: Implications for cancer care beyond the pandemic (October 22, 2020)
This article reports on the impact of virtual care, due to the COVID-19 pandemic, on cancer care and how the lessons from this experience can be integrated to 'usual' care to improve oncology practices post-pandemic. LINK

Journal of Anxiety Disorders: [Fear and avoidance of healthcare workers: An important, under-recognized form of stigmatization during the COVID-19 pandemic](#) **(**October 2020)
This study reports that fear and avoidance of healthcare workers for fear of COVID-19 transmission, is a rising but under-recognised form of stigmatisation and highlights interventions to reduce this form of stigma. LINK

Journal of Safety and Health at Work: C[OVID-19 Risk Factors Among Health Workers: A Rapid Review](#) (September 2020)
This review article highlights the various risk factors for COVID-19 infection among healthcare workers and measures that might improve the safety of this vulnerable population. LINK

SENIORS AND OTHER VULNERABLE GROUPS

Journal of Korean Medical Science: [Coping with Dementia in the Middle of the COVID-19 Pandemic](#) (October 27, 2020)
This study investigated current research on a possible mechanism of central nervous system (CNS) and its involvement in SARS-CoV-2 and proposed strategies for physicians, patients, families and caregivers who are struggling with dementia during the current COVID-19 pandemic. LINK

Expert Review of Anticancer Therapy: [Clinical risk factors for mortality in patients with cancer and COVID-19: a systematic review and meta-analysis of recent observational studies](#) (November 2, 2020)
This systematic review and meta-analysis identifies risk factors for death in patients with cancer and COVID-19. LINK

International Journal of Environmental Research and Public Health: [A Systematic Review and Meta-Analysis of Hospitalized Current Smokers and COVID-19 (](#)October 11, 2020)
A systematic review and a meta-analysis of studies about COVID-19, which extends existing information about a smoking habit (current smokers) to patients hospitalized in China, USA, and Italy, to evaluate the relation between smoking and hospitalization by COVID-19. Possible confounding factors for data interpretation are extensively discussed and the role of nicotine and the cholinergic anti-inflammatory pathway is deeply analyzed. LINK

Current Cardiology Reports: [COVID-19 and Cardiovascular Health among Patients with Cancer](#) (October 10, 2020)
This review summarizes existing evidence on the susceptibility of patients with cancer and/or cardiovascular disease to COVID-19 and its complications. The authors elaborate on the impact of the COVID-19 pandemic on timely cardiovascular and cancer care. LINK

Nutrients[: Evidence Regarding Vitamin D and Risk of COVID-19 and its Severity](#) (October 31, 2020)
This narrative review examined the evidence indicating that Vitamin D could play an important role in reducing the risk and severity of and death from infections, including COVID-19. LINK

Hormones: [Diabetes is associated with increased risk for in-hospital mortality in patients with COVID-19: a systematic review and meta-analysis comprising 18,506 patients](#) (October 29, 2020)
This systematic review and meta-analysis reports on available observational studies that examine the effect of diabetes on mortality among hospitalized patients with COVID-19. LINK

Scientific American: [How Indigenous Communities in Canada Organized an Exemplary Public Health Response to COVID](#) (October 30, 2020)
"The ability of First Nations, Inuit and Métis communities in Canada to prevail during the pandemic was largely

rooted in their shaping their own public health strategies after confronting the toll wrought by previous disease outbreaks and long-running neglect by health authorities." LINK

MENTAL HEALTH & WELLNESS

The Gerontologist: Lessons in Resilience: Initial Coping among Older Adults during the COVID-19 Pandemic (November 2, 2020)
This study explored older adults' coping experiences and strategies during the initial weeks of the COVID-19 pandemic. LINK

Journal of Diabetes & Metabolic Disorders: The mental health of healthcare workers in the COVID-19 pandemic: A systematic review (October 26, 2020)
This systematic review investigates the status of healthcare worker mental health during the SARS-CoV-2 outbreak. LINK

Journal of Clinical Psychology: How the COVID-19 pandemic has changed our lives: A study of psychological correlates across 59 countries (October 30, 2020)
This study examined the impact of the COVID-19 pandemic and subsequent social restrictions or quarantines on the mental health of the global adult population. LINK

The Gerontologist: Social Isolation and Psychological Distress During the COVID-19 Pandemic: A Cross-National Analysis (October 30, 2020)
This study investigates the link between social isolation and mental well-being in older adults, and how it varies across countries. LINK

Journal of Health Psychology: The prevalence of psychological consequences of COVID-19: A systematic review and meta-analysis of observational studies (October 29, 2020)
This systematic review and meta-analysis examined the overall prevalence of psychological health outcomes during COVID-19 in those infected or suspected of having COVID-19 infection, healthcare workers, as well as the general population. LINK

Community Mental Health Journal: Prevalence, Psychological Responses and Associated Correlates of Depression, Anxiety and Stress in a Global Population, During the Coronavirus Disease (COVID-19) Pandemic (October 27, 2020)
This paper evaluated the prevalence, psychological responses, and associated correlates, of depression, anxiety, and stress in a global population during the Coronavirus Disease (COVID-19) pandemic. LINK

Journal of Youth and Adolescence: Risk and Protective Factors for Prospective Changes in Adolescent Mental Health during the COVID-19 Pandemic (October 27, 2020)
This study investigated the impact of the COVID-19 pandemic on adolescents' mental health, and moderators of change, as well as assessing the factors perceived as causing the most distress. 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.

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