Newfoundland & Labrador Centre for APPLIED HEALTH RESEARCH
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COVID-19 e-bulletin

November 9, 2021

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

Centres for Disease Control: Severity of disease among adults hospitalized with laboratory-confirmed COVID-19 before and during the period of SARS-CoV-2 B.1.617.2 (Delta) predominance | COVID-NET | 14 States | January–August 2021 (October 29, 2021)
"Analysis of COVID-NET data from 14 states found no significant increases in the proportion of hospitalized COVID-19 patients with severe outcomes during the Delta period. The proportion of hospitalized unvaccinated COVID-19 patients aged 18–49 years significantly increased during the Delta period." LINK
See also:

- Centres for Disease Control: Laboratory-confirmed COVID-19 among adults hospitalized with COVID-19–like illness with infection-induced or mRNA vaccine-induced SARS-CoV-2 immunity — Nine States, January–September 2021 (October 29, 2021)

Centres for Disease Control: COVID-19 Vaccination and Non–COVID-19 Mortality Risk — Seven Integrated Health Care Organizations, United States, December 14, 2020–July 31, 2021 (October 29, 2021)
"During December 2020–July 2021, COVID-19 vaccine recipients had lower rates of non–COVID-19 mortality than did unvaccinated persons after adjusting for age, sex, race and ethnicity, and study site. There is no increased risk for mortality among COVID-19 vaccine recipients. This finding reinforces the safety profile of currently approved COVID-19 vaccines in the United States. All persons aged ≥12 years should receive a COVID-19 vaccine." LINK

Journal of the Royal Society of Medicine: Association between multi-morbidity and mortality in a cohort of patients admitted to hospital with COVID-19 in Scotland (October 21, 2021)
"We investigated the association between multi-morbidity among patients hospitalized with COVID-19 and their subsequent risk of mortality. We also explored the interaction between the presence of multi-morbidity and the

requirement for an individual to shield due to the presence of specific conditions and its association with mortality. Multi-morbidity is an independent risk factor of mortality among individuals who were hospitalized due to COVID-19. Individuals with multi-morbidity could be prioritized when making preventive policies, for example, by expanding shielding advice to this group and prioritizing them for vaccination." LINK

The Guardian: COVID-19 virus does not infect human brain cells, study suggests (November 3, 2021)
"The virus that causes COVID-19 does not infect human brain cells, according to a study published in the journal Cell. The findings will raise hopes that the damage caused by Sars-CoV-2 might be more superficial and reversible than previously feared. The study contradicts earlier research that suggested the virus infects neurons in the membrane that lines the upper recesses of the nose." LINK

CBC: Why 'waning immunity' from COVID-19 vaccines isn't as bad as it sounds (October 23, 2021)
"It's "entirely normal" for antibody levels to drop initially after vaccination and your immune response to the virus to become "contracted" over time, said University of Toronto immunologist Jennifer Gommerman. But your body is also creating "highly efficient" memory B cells to fight off COVID-19 long term. B cells work quickly to generate large quantities of antibodies in the weeks after vaccination, but they typically produce more effective antibodies as time goes on, helping sharpen the long-term response to a virus." LINK
See also:

- New England Journal of Medicine: Waning Immunity after the BNT162b2 Vaccine in Israel (October 27, 2021)
- The Guardian: Without COVID-19 jab, 'reinfection may occur every 16 months' (October 19, 2021)

The Lancet Microbe: The durability of immunity against reinfection by SARS-CoV-2: a comparative evolutionary study (October 1, 2021)
"The timeframe for reinfection is fundamental to numerous aspects of public health decision making. As the COVID-19 pandemic continues, reinfection is likely to become increasingly common. Maintaining public health measures that curb transmission—including among individuals who were previously infected with SARS-CoV-2—coupled with persistent efforts to accelerate vaccination worldwide is critical to the prevention of COVID-19 morbidity and mortality." LINK
See also:

- The Lancet: Does infection with or vaccination against SARS-CoV-2 lead to lasting immunity? (October 21, 2021).
- Office for National Statistics: Coronavirus (COVID-19) Infection Survey technical article: analysis of reinfections of COVID-19: June 2021 (June 29, 2021)
- Stat News: Politics is derailing a crucial debate over the immunity you get from recovering from COVID-19 (October 19, 2021)

Reuters: Children with mild COVID-19 may not develop antibodies; oral vaccine booster shows promise in monkey study (October 20, 2021)
"Children who contract a mild case of COVID-19 may not develop antibodies to the virus afterward, a study from Australia suggests. Researchers compared 57 children and 51 adults with mild COVID-19 or asymptomatic infections. Only 37% of children appeared to develop antibodies, compared to 76% of adults – even though viral loads were similar in the two groups, researchers found. Children's bodies also did not appear to produce second-line cellular immune responses to the virus in the same way as adults, said study leader Paul Licciardi of Murdoch Children's Research Institute in Melbourne." LINK

International Journal of Molecular Science: Evidence for Biological Age Acceleration and Telomere Shortening in COVID-19 Survivors (June 22, 2021)
"The results show a consistent biological age increase in the post-COVID-19 population. A significant telomere shortening parallels this finding in the post-COVID-19 cohort compared with COVID-19-free subjects ($p < 0.0001$). Additionally, ACE2 expression was decreased in post-COVID-19 patients, compared with the COVID-19-free population, while DPP-4 did not change. In light of these observations, we hypothesize that some epigenetic alterations are associated with the post-COVID-19 condition, particularly in younger patients (< 60 years)." LINK

HEALTH EQUITY AND ETHICS

CBC: Why doctors are so worried about pregnant people getting COVID-19 (November 4, 2021)
"But during the last several months, there has been growing consensus among experts that not only are COVID-19 vaccines safe for pregnant people, but also that pregnant people are among the groups at highest risk of serious illness if they are infected with the virus — and there can be consequences for their babies too. CBC News talked to obstetrician-gynecologists, immunologists and an infectious disease expert to get the most up-to-date facts" LINK
See also:

- Archives of Gynecology and Obstetrics: Unexpected changes in birth experiences during the COVID-19 pandemic: Implications for maternal mental health (November 1, 2021)
- Archives of Gynecology and Obstetrics: Prenatal distress during the COVID-19 pandemic: clinical and research implications (October 30, 2021)
- Journal of the American Medical Association Network Open: Immune Response of Neonates Born to Mothers Infected With SARS-CoV-2 (November 3, 2021)

E-Clinical Medicine: Risk factors for poor prognosis in children and adolescents with COVID-19: A systematic review and meta-analysis (October 19, 2021)
"We report that congenital heart disease, chronic pulmonary disease, neurological diseases, obesity, having multisystem inflammatory syndrome, shortness of breath, acute respiratory distress syndrome, acute kidney injury, gastrointestinal symptoms, elevated C-reactive protein and D-dimer are associated with unfavourable prognosis in children and adolescents with COVID-19." LINK

British Medical Journal Open: Diabetes, hypertension, body mass index, smoking and COVID-19-related mortality: a systematic review and meta-analysis of observational studies (October 25, 2021)
"We conducted a systematic literature review and meta-analysis of observational studies to investigate the association between diabetes, hypertension, body mass index (BMI) or smoking with the risk of death in patients with COVID-19 and to estimate the proportion of deaths attributable to these conditions. Our findings suggest that diabetes, hypertension, obesity and smoking were associated with higher COVID-19 mortality, contributing to nearly 30% of COVID-19 deaths." LINK
See also:

- Communications Biology: Smoking is significantly associated with increased risk of COVID-19 and other respiratory infections (October 28, 2021)

Journal of the American Medical Association Psychiatry: Association between Mental Health Disorders and Mortality among Patients with COVID-19 in 7 Countries. A Systematic Review and Meta-analysis (July 27, 2021)
"In this systematic review and meta-analysis of 16 observational studies in 7 countries with 19 086 patients, mental health disorders were associated with increased COVID-19 mortality according to both pooled crude and adjusted odds ratios. Patients with severe mental health disorders had the highest odds ratios." LINK

Reviews in Medical Virology: Hospitalized versus outpatient COVID-19 patients' background characteristics and comorbidities: A systematic review and meta-analysis (October 21, 2021)
"This study aimed to systematically assess COVID-19 patient background characteristics and pre-existing comorbidities associated with hospitalization status. The meta-analysis included cross-sectional, cohort, and case-series studies with information on hospitalization versus outpatient status for COVID-19 patients, with background characteristics and pre-existing comorbidities. In this systematic review/meta-analysis for patients with COVID-19, Black patients, males, persons who smoke, and those with pre-existing comorbidities were more likely to be hospitalized than their counterparts. Findings provide evidence of populations with higher odds of hospitalization for COVID-19." LINK

United European Gastroenterology Journal: COVID-19 and digestive health: Implications for prevention, care and the use of COVID-19 vaccines in vulnerable patients (October 30, 2021)
"This position paper serves to inform policy makers, patients, healthcare professionals and the general public of the latest evidence on the impacts of the SARS-CoV-2 pandemic on digestive health. In the same vein, it aims to improve understanding of the clinical considerations on the use of COVID-19 vaccines in patients with chronic digestive conditions and to present UEG's latest recommendations to support evidence-informed decision making." LINK

The British Medical Journal: COVID-19: Just a third of blood cancer patients had antibodies against delta variant after two vaccine doses, study finds (October 27, 2021)
"The researchers found that just 31% of infection naive patients with blood cancer developed neutralizing antibodies against the delta variant, compared with 62% of patients with solid cancers. The response was 68% overall in patients who had received the Pfizer-BioNTech vaccine and 50% in recipients of the Oxford-AstraZeneca vaccine... The researchers said these findings suggested that a third vaccine dose could effectively boost immunity in these vulnerable patients." LINK
Original Study:

- Adaptive immunity and neutralizing antibodies against SARS-CoV-2 variants of concern following vaccination in patients with cancer: the CAPTURE study

Nursing and Health Policy Perspective: What COVID-19 has taught us about social inequities and the urgent need for systemic change (October 29, 2021)
"The paper critically reviews the impact of the COVID-19 pandemic on the most marginalized and vulnerable in UK society and highlights the interconnected risk factors of COVID-19 and its secondary impacts to demonstrate how these are linked to political ideology, policy, and practice. We conclude with recommendations informed through a looking back at the key tenants and purposes of universal healthcare to apprise what is needed in this moment of crisis and beyond." LINK

Public Library of Science One: Occupational exposures and mitigation strategies among homeless shelter workers at risk of COVID-19 (November 1, 2021)
"The objective of this study is to describe the work environment and COVID-19 mitigation measures for homeless shelter workers and assess occupational risk factors for COVID-19. Homeless shelter workers may be at risk of being exposed to individuals with COVID-19 during the course of their work. Frequent close contact with clients was associated with SARS-CoV-2 infection. Protecting these critical essential workers by implementing mitigation measures and prioritizing for COVID-19 vaccination is imperative during the pandemic." LINK

Vox EU: Poverty and exposure to COVID-19: The role of income support (October 09, 2021).
"The spread of COVID-19 and consequent restrictions on economic activity, notably through containment policies, pose a serious threat to the livelihoods of many of the most vulnerable families on the planet. Governments have responded to this with an unprecedented expansion of their social protection programs and new transfers. Admittedly, government assistance was insufficient to sustain pre-crisis living standards and to prevent a sharp increase in food insecurity. Yet, we show that emergency support provided in response to the pandemic has substantially helped to reduce the exposure of the poor to the virus itself." LINK
News report:

- Income support during lockdown didn't just battle poverty – it might have helped combat COVID-19, too

HEALTH SYSTEM ADMINISTRATION

Canadian Journal on Aging: How Will COVID-19 Alter the Politics of Long-Term Care? A Comparative Policy Analysis of Popular Reform Options (October 29, 2021)
"This policy analysis reviews three popular proposals with significant political endorsement to enhance long-term care (LTC), here defined broadly to include residential care facilities, home care, and community care, in the wake of the coronavirus disease (COVID-19) crisis: national standards, provincial autonomy, and de-privatization." LINK

Research Analysis and Evaluation Branch, Ministry of Health Ontario: Design Strategies to Prevent Respiratory Infection in Congregate Care Settings (October 18, 2021)
"Protecting residents during infectious disease events is best accommodated by including a mechanical system in facility planning and design, which provides adequate ventilation, filtration, and temperature and humidification controls [...] When HVAC systems cannot be upgraded in LTC homes, recommended strategies include: using portable high-efficiency particulate air (HEPA) filters, installing upper room ultraviolet (UV) air disinfection (where safe and feasible), increasing natural ventilation (e.g., opening windows), and using ventilated headboards. Portable non-exhaust fans or air conditioning units should be carefully positioned to avoid creating direct air flow between residents, and require routine cleaning." LINK

Journal of the American Medical Association Health: National Academies Offers Guidance for Boosting Confidence in COVID-19 Vaccine for Children (October 26, 2021)
"These are not unreasonable concerns for parents to have given the novelty of COVID-19 and the newness of the vaccines," the authors noted. "Developing communications that include specific facts about side effects, such as comparisons of the frequencies of adverse consequences of vaccines in comparison with the adverse consequences of contracting COVID-19, and presented in a way that is easy to understand, such as using graphics or analogies, could help to address these concerns." LINK
Original Report: Communication Strategies for Building October Confidence in COVID-19 Vaccines: Addressing 2021 Variants and Childhood Vaccinations

CBC: New data suggests Canada's 'gamble' on delaying, mixing and matching COVID-19 vaccines paid off (October 9, 2021)
"New Canadian data suggests the bold strategy to delay and mix second doses of COVID-19 vaccines led to strong protection from infection, hospitalization and death — even against the highly contagious Delta variant — that could provide lessons for the world. The analysis of close to 250,000 people in B.C. from May 30 to September 11 found two doses of any of the three available COVID-19 vaccines in Canada were close to 95 per cent effective against hospitalization — regardless of the approved vaccination combination. In Quebec, the results of a twin study that will be published alongside the B.C. data were astonishingly similar." LINK

Medical Journal of Australia: Cancer Australia consensus statement on COVID-19 and cancer care: embedding high value changes in practice (October 25, 2021)
"Health systems and health care professionals have demonstrated a remarkable ability to rapidly adapt or modify care practices to deliver optimal cancer care, while minimizing risk of SARS-CoV-2 infection and optimizing health system resources. A range of strategies has been identified to enhance and embed these high value changes in cancer care during the pandemic and in a post-pandemic environment. These strategies allow flexibility for jurisdictions, organizations and individuals to address these priorities in ways that suit their local context and workforce capacity. Regular and ongoing review of health care practices, underpinned by clear documentation of changes in practice and learnings, will be critical to maintaining optimal and sustainable value-based cancer care into the future." LINK

Journal of the American Medical Association Health Forum: Incidence of SARS-CoV-2 Infection among Health Care Personnel, First Responders, and Other Essential Workers during a Pre-vaccination COVID-19 Surge in Arizona (October 22, 2021)
"This prospective cohort study of 1766 unvaccinated seronegative Arizona workers using self-administered reverse-transcription polymerase chain reaction testing found that first responders had a significantly higher incidence of SARS-CoV-2 infection than health care personnel, even after controlling for sociodemographic characteristics and underlying health and exposure indicators. The findings of this cohort study indicate that first responders warrant greater public health attention in context of the COVID-19 pandemic given their higher rates of SARS-CoV-2 infection." LINK
See also:

- The New England Journal of Medicine. COVID-19 Breakthrough Infections in Vaccinated Health Care Workers (October 21, 2021)

INFECTION PREVENTION AND CONTROL

STAT News: Three takeaways from the emergence of the 'Delta Plus' coronavirus variant (October 27, 2021)
"Yet another version of the coronavirus is getting global attention, this one dubbed AY.4.2. It appears that it could be slightly more transmissible than the Delta variant — a marginal difference that experts say is more of a headache than a devastating game changer in the scope of the pandemic. AY.4.2 is itself a descendant of the original Delta variant and is sometimes called "Delta Plus." It's appeared as Delta has continued to circulate around the world, branching into a number of sub-lineages as it has acquired additional mutations." LINK

Indoor Air Journal: **The COVID-19 pandemic is a global indoor air crisis that should lead to change: A message commemorating 30 years of Indoor Air** (October 18, 2021)
"The dominant view in public health toward fearful airborne transmission fails to account for the power of dilution. Sufficient dilution of airborne infectious aerosols is the key to reducing inhalation transmission, both at close range and at room scale. Sufficient ventilation and filtration reduce infection to be as low as outdoors. A paradigm shift is needed toward a new ventilation standard accounting for managing infection risk. This goal should also apply to other respiratory viruses, such as influenza and the common cold." LINK
See also:

- MedRxiv: Airborne transmission of SARS-CoV-2 over distances greater than two metres: a rapid systematic review (October 20, 2021).

Public Health Ontario: COVID-19 Guidance for Youth Sports (October 25, 2021)
"In the context of increasing vaccination coverage and the Delta variant's prevalence, alongside reopening and loosening of public health measures in many community settings, it is important to examine guidance for youth sports that considers this context [...] When developing public health measures for youth sports activities, it is important to consider the context in which the activity occurs, including the rate of transmission in the community, as well as vaccination status among the individuals participating in the group. It is also important to consider the activities that occur before and after the sporting activity (e.g., after game/event socialization or transit to and from the activity)." LINK

Public Health Ontario: "Test-to-Stay" SARS-CoV-2 Rapid Antigen Testing Strategies in K-12 Schools (October 22, 2021)
"School-based testing strategies like "Test to Stay" (TTS) provide options for the initiation of daily (or frequent) severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) antigen testing to decrease loss of in-person learning without increasing in-school transmission risks. Evidence suggests that TTS for exposed cohorts allows students to use rapid daily SARS-CoV-2 antigen testing (+/- PCR testing) as an alternative to quarantine, leading to a reduction in school days missed. However, there is mixed evidence about their effectiveness in mitigating SARSCoV-2 transmission in schools when compared to other test and isolate/quarantine policies." LINK

The Harvard Gazette: **Children could be dangerous carriers of virus** (October 14, 2021)
"By studying 110 children aged two weeks to 21 years who tested positive for COVID-19 at Massachusetts General Hospital (MGH) or urgent care clinics, researchers confirmed earlier findings that infants, children and adolescents are equally capable of carrying high levels of live, replicating SARS-CoV-2 in their respiratory secretions .[The researchers] then showed that these high levels of virus correspond with live, infectious virus, and that levels are highest early in the illness in both symptomatic and asymptomatic children. They found no correlation between the age of the children and the amount of their viral load... Reassuringly, they also found that viral load had no correlation to severity of disease in the kids themselves, but concerns remain for them and those around them." LINK

Centers for Disease Control and Prevention: **Mask Effectiveness for Preventing Secondary Cases of COVID-19, Johnson County, Iowa, USA** (October 12, 2021)
"In September of 2020, the Iowa Department of Public Health released guidance stating that persons exposed to someone with coronavirus disease (COVID-19) need not quarantine if the case-patient and the contact wore face masks at the time of exposure. This guidance differed from that issued by the Centers for Disease Control and Prevention. To determine the best action, we matched exposure information from COVID-19 case investigations with reported test results and calculated the secondary attack rates (SARs) after masked and unmasked exposures. Mask use by both parties reduced the SAR by half, from 25.6% to 12.5%. Longer exposure duration significantly increased SARs. Masks significantly reduced virus transmission when worn by both the case-patient and the

contact, but SARs for each group were higher than anticipated. This finding suggests that quarantine after COVID-19 exposure is beneficial even if parties wore masks." LINK

National Bureau of Economic Research: Financial Incentives and Other Nudges Do Not Increase COVID-19 Vaccinations among the Vaccine Hesitant (October 31, 2021)
"In mid-2021, we randomly assigned unvaccinated members of a Medicaid-managed care health plan to $10 or $50 financial incentives, different public health messages, a simple appointment scheduler, or control to assess impacts on SARS-CoV-2 vaccination intentions and vaccine uptake within 30 days of intervention. While messages increased vaccination intentions, none of the treatments increased overall vaccination rates. Consistent with backlash concerns, financial incentives and negative messages decreased vaccination rates for some subgroups." LINK

TREATMENT

CBC: UK First Country to Authorize Use of Merck's Coronavirus Antiviral Pill (November 4, 2021)
"Britain has granted a conditional authorization to Merck's coronavirus antiviral, the first pill shown to successfully treat COVID-19. It is the first country to OK the treatment, although it was not immediately clear how quickly the pill would be available. The pill was licensed for adults 18 and older who have tested positive for COVID-19 and have at least one risk factor for developing severe disease. The drug, known as molnupiravir, is intended to be taken twice a day for five days by people at home with mild to moderate COVID-19." LINK

The Lancet Global Health: Effect of early treatment with fluvoxamine on risk of emergency care and hospitalization among patients with COVID-19: the TOGETHER randomised, platform clinical trial (October 27, 2021)
"Treatment with fluvoxamine (100 mg twice daily for 10 days) among high-risk outpatients with early diagnosed COVID-19 reduced the need for hospitalization defined as retention in a COVID-19 emergency setting or transfer to a tertiary hospital." LINK

Scientific Reports: Decreased mortality and increased side effects in COVID-19 patients treated with IL-6 receptor antagonists: systematic review and meta-analysis (November 2, 2021)
"The authors' results showed that IL-6 (receptor) antagonists are effective in reducing mortality in COVID-19 patients, while the risk of side effects was higher. The baseline risk of mortality was an important effect modifier: IL-6 (receptor) antagonists were effective when the baseline mortality risk was high (e.g. ICU setting), while they could be harmful when the baseline mortality risk was low." LINK

Journal of the American Medical Association: Effect of Antithrombotic Therapy on Clinical Outcomes in Outpatients with Clinically Stable Symptomatic COVID-19. The ACTIV-4B Randomized Clinical Trial (October 11, 2021)
"Among symptomatic clinically stable outpatients with COVID-19, treatment with aspirin or apixaban compared with placebo did not reduce the rate of a composite clinical outcome. However, the study was terminated after enrollment of 9% of participants because of an event rate lower than anticipated." LINK
See also:

- Journal of the American Medical Association Network: Antithrombotic Therapy for Outpatients With COVID-19: Implications for Clinical Practice and Future Research (October 11, 2021)

The Guardian: UK launches trial of drug to tackle fatigue in long COVID patients (November 3, 2021)
"The first trial of a drug to target the fatigue and muscle weakness experienced by more than half of people with long COVID has been launched in the UK. It is also the first drug trial in long COVID patients who were not hospitalized during their initial infection. The drug, called AXA1125, targets cellular power plants called mitochondria, which it is thought could be dysfunctional in the subset of long COVID patients with severe fatigue." LINK

Medical Journal of Australia: Clinical care of children and adolescents with COVID-19: recommendations from the National COVID-19 Clinical Evidence Taskforce (October 25, 2021)
"The Taskforce currently recommends corticosteroids as first line treatment for acute COVID-19 in children and adolescents who require oxygen. Tocilizumab could be considered, and remdesivir should not be administered routinely in this population. Non-invasive ventilation or high flow nasal cannulae should be considered in children and adolescents with hypoxemia or respiratory distress unresponsive to low flow oxygen if appropriate infection control measures can be used. Children and adolescents with PIMS-TS should be managed by a multidisciplinary team. Intravenous immunoglobulin and corticosteroids, with concomitant aspirin and thromboprophylaxis, should be considered for the treatment of PIMS-TS." LINK

Stat News: Centres for Disease Control advisers endorse Pfizer's COVID-19 vaccine for kids 5-11 (November 2, 2021)
"Children aged 5 to 11 can begin to be vaccinated against COVID-19 within the next day or two after an expert panel advising the Centers for Disease Control and Prevention recommended Tuesday that Pfizer's pediatric vaccine should be used in this age group. The vaccine is one-third of the size of the adult vaccine doses; children will get two injections containing 10 micrograms of antigen given 21 days apart." LINK
See also:

- CBC: There's a children's COVID-19 vaccine awaiting approval in Canada. What do we know about it? (October 21, 2021)

Stat News: Moderna says its low-dose COVID vaccine works for kids 6 to 11 (October 25, 2021)
"Researchers tested two shots for the 6- to 11-year-olds, given a month apart, that each contained half the dose given to adults. Preliminary results showed vaccinated children developed virus-fighting antibodies similar to levels that young adults produce after full-strength shots, Moderna said in a news release. The study involved 4,753 children ages 6 to 11 who got either the vaccine or dummy shots. Moderna said that like adults, the vaccinated youngsters had temporary side effects including fatigue, headache, fever, and injection site pain." LINK

Nature Medicine: BNT162b2 and mRNA-1273 COVID-19 vaccine effectiveness against the SARS-CoV-2 Delta variant in Qatar (November 2, 2021)
"Effectiveness against Delta-induced severe, critical or fatal disease was 93.4% (95% CI, 85.4–97.0%) for BNT162b2 and 96.1% (95% CI, 71.6–99.5%) for mRNA-1273 ≥ 14 d after the second dose. Our findings show robust effectiveness for both BNT162b2 and mRNA-1273 in preventing Delta hospitalization and death in Qatar's population, despite lower effectiveness in preventing infection, particularly for the BNT162b2 vaccine." LINK

Journal of the American Medical Association Network Open: Analysis of the Effectiveness of the Ad26.COV2.S Adenoviral Vector Vaccine for Preventing COVID-19 (November 2, 2021)
"This comparative effectiveness research study found that, through large-scale longitudinal retrospective curation of electronic health records from the multistate Mayo Clinic Health System, the Ad26.COV2.S vaccine had an effectiveness of 74%." LINK

MENTAL HEALTH & WELLNESS

ZME Science: Solitude during the pandemic had positive effects on our well-being, not just negative ones (November 1, 2021)
"We tend to forget how important and healthy it is to just spend some time by ourselves. The pandemic and lockdowns during these last two years have caused major changes in all of our lives. But not all of the consequences have been negative. According to new research, experiencing solitude has been one of the surprising net sources of wellbeing during this time." LINK

BioMed Central Health Services Research: "Surviving to thriving": a meta-ethnography of the experiences of healthcare staff caring for persons with COVID-19 (October 21, 2021)
"Healthcare staff caring for persons infected with the Coronavirus disease are at risk of burnout and compassion fatigue and require ongoing mental health support commensurate to their needs. Staff who contract the disease may require additional support to navigate through the illness and recovery. Policies and concerted efforts are needed to strengthen support systems and build resilience among healthcare staff." LINK

British Medical Journal Open: Youth in a pandemic: a longitudinal examination of youth mental health and substance use concerns during COVID-19 (October 29, 2021)
"Youth mental health symptom levels and concerns are evolving over the course of the COVID-19 pandemic, in line with the evolution of the pandemic itself, and longitudinal monitoring is therefore required. It is also essential that we engage directly with youth to co-create pandemic response strategies and mental health service adaptations to best meet the needs of young people." LINK
See also:

- The Lancet Regional Health - Western Pacific: Young carers in the COVID-19 pandemic: risks for mental health (October 21, 2021)

Current Psychiatry Reports: COVID-19 Pandemic and Eating Disorders: What Can We Learn About Psychopathology and Treatment? A Systematic Review (October 21, 2021)
"Eating Disorder (ED) patients showed a trend toward worsening of ED-specific psychopathology and impairment in general psychopathology. The most common vulnerability mechanisms were social isolation and feelings of uncertainty, while heightened self-care and reduced social pressure were resilience factors. The online treatment, although raising many concerns related to its quality, was considered the best alternative to the face-to-face approach." LINK
See also:

- Journal of Adolescent Health: Acute Care Visits for Eating Disorders Among Children and Adolescents after the Onset of the COVID-19 Pandemic (October 22, 2021)

Journal of Affective Disorders: Stress, coping and silver linings: How depressed perinatal women experienced the COVID-19 pandemic (October 27, 2021)
"Research on perinatal mental health during the COVID-19 pandemic has largely focused on data from community samples. This study sought to understand the experiences of pregnant and postpartum women with histories of clinically elevated symptoms of depression. Although the pandemic upended many aspects of life for perinatal women and raised mental health concerns, many also reported adaptive means of coping and positive experiences or 'silver linings' related to pandemic restrictions. Some coping strategies that were utilized, including wellness-based behaviors, may have helped to mitigate the impact of COVID-19 related stress." LINK

Sleep: **Prevalent, Incident, and Persistent Insomnia in a Population-Based Cohort Tested Before (2018) and during the First-Wave of COVID-19 Pandemic (2020)** (October 26, 2021)
"High rates of sleep and mental health problems have been reported during the COVID-19 pandemic, but most of the evidence is retrospective without pre-pandemic data. This study documented rates of prevalent, incident, and persistent insomnia and psychological symptoms during the COVID-19 pandemic (2020) compared to pre-pandemic data (2018). The COVID-19 pandemic is associated with significant increases in insomnia and psychological symptoms compared to the pre-pandemic period. Large-scale public sleep and mental health intervention programs should be prioritized during and after a pandemic such as the COVID-19." 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 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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