

*The Newfoundland & Labrador Centre for Applied Health Research (NLCAHR) sends this COVID-19 e-bulletin to 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](mailto:Rochelle.Baker@med.mun.ca)

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## CLINICAL PRESENTATION & BIOLOGY

**Journal of the American Medical Association (JAMA): [Even Mild COVID-19 May Change the Brain](#)**  
(March 23, 2022)

"A large [study](#) comparing brain scans from the same individuals before and after SARS-CoV-2 infection suggests that brain changes could be a lingering outcome of even mild COVID-19. Writing in Nature, researchers at Oxford University's Wellcome Centre for Integrative Neuroimaging reported that several months after study participants had SARS-CoV-2 infections, they had more gray matter loss and tissue abnormalities, mainly in the areas of the brain associated with smell, and more brain size shrinkage than participants who hadn't been infected with the virus." [LINK](#)

See also:

- Alzheimer's & Dementia: [Changes in cognitive functioning after COVID-19: A systematic review and meta-analysis](#) (March 17, 2022)
- JAMA Psychiatry: [Neuropsychiatric and Cognitive Outcomes in Patients 6 Months After COVID-19 Requiring Hospitalization Compared With Matched Control Patients Hospitalized for Non-COVID-19 Illness](#) (March 23, 2022)
- Nature: [SARS-CoV-2 is associated with changes in brain structure in UK Biobank](#)
- Science The Wire: [Even a Mild COVID Infection Can Shrink the Brain: Study](#) (March 08, 2022)

**Nature Medicine: [Long-term cardiovascular outcomes of COVID-19](#)** (February 7, 2022)

"The authors show that, beyond the first 30 d after infection, individuals with COVID-19 are at increased risk of incident cardiovascular disease spanning several categories, including cerebrovascular disorders, dysrhythmias, ischemic and non-ischemic heart disease, pericarditis, myocarditis, heart failure and thromboembolic disease. These results provide evidence that the risk and 1-year burden of cardiovascular disease in survivors of acute COVID-19 are substantial." [LINK](#)

See also:

- **Scientific American:** [Even Mild COVID Can Increase the Risk of Heart Problems](#) (March 16, 2022)

**Signal Transduction and Targeted Therapy: [ACE2-independent infection of T lymphocytes by SARS-CoV-2](#)** (March 11, 2022)

"The authors confirmed a SARS-CoV-2 infection of T cells, in a spike-ACE2-independent manner, which shed novel insights into the underlying mechanisms of SARS-CoV-2-induced lymphopenia in COVID-19 patients." [LINK](#)

**See also:**

- Igor's Newsletter: [Sars-Cov-2 Kills T-Cells, Just Like HIV](#) (March 14, 2022)
- Science: [The immunology and immunopathology of COVID-19](#) (March 10, 2022)

**MedRxiv: [The mystery of COVID-19 reinfections: A global systematic review and meta-analysis of 577 cases](#)** (July 15, 2021)

"COVID-19 first infections and reinfections observe a similar clinical spectrum and management regimen with a slightly higher severity reported during reinfection in the form of requirement for mechanical ventilation and ICU admission. There lies a need for much closer scrutiny of reinfections globally with individual patient data analysis to derive determinants of reinfection incidence and disposition to a severe infection." [LINK](#)

**See also:**

- Sky News: [COVID-19: Dozens of people in UK have had coronavirus four times and thousands have been infected three times, official figures show](#) (March 17, 2022)

**CNBC: [Omicron's 'stealth' sub-variant BA.2 could go 'wild' in Europe before going global, top epidemiologist says](#)** (March 23, 2022)

"The rise in cases across the continent, from the U.K. and France to Italy and Austria, is being driven by several factors: The lifting of most — if not all — COVID restrictions, waning immunity from vaccines and booster shots, and the spread of the more transmissible omicron sub variant, BA.2." [LINK](#)

**See also:**

- Eurosurveillance: [Molecular epidemiology of the SARS-CoV-2 variant Omicron BA.2 sub-lineage in Denmark, 29 November 2021 to 2 January 2022](#) (March 10, 2022)

**The Lancet: [Effectiveness and safety of pulse oximetry in remote patient monitoring of patients with COVID-19: a systematic review](#)** (April, 2022)

"This systematic review substantiates the safety and potential of pulse oximetry for monitoring patients at home with COVID-19, identifying the risk of deterioration and the need for advanced care. The use of pulse oximetry can potentially save hospital resources for patients who might benefit the most from care escalation; however, the authors could not identify explicit evidence for the effect of RPM with pulse oximetry on health outcomes compared with other monitoring models such as virtual wards, regular monitoring consultations, and online or paper diaries to monitor changes in symptoms and vital signs." [LINK](#)

**See also:**

- eClinicalMedicine: [The impact of remote home monitoring of people with COVID-19 using pulse oximetry: A national population and observational study](#) (March 05, 2022)

## HEALTH EQUITY AND ETHICS

**The Journal of Maternal-Fetal & Neonatal Medicine: [Health disparities, COVID-19, and maternal and childbirth outcomes: a meta-epidemiological study of equity reporting in systematic reviews](#)** (March 13, 2022)

"Pregnant women with COVID-19 are at increased risk for adverse maternal and pregnancy outcomes, and birth complications. Given the health outcome disparities among pregnant women of racial and ethnic minorities and

the reliance of medical practice on systematic reviews and meta-analyses (SRMAs)—as they are the apical component in the hierarchy of evidence in medical research—the primary objective of the study is to examine the inclusion of the equity reporting in SRMAs focused on pregnancy outcomes and COVID-19 using PROGRESS-Plus equity framework. PROGRESS represents equity measures of Place, Race, Occupation, Gender, Religion, Education, Social capital, and Socio-economic status.” [LINK](#)

**The Journal of Maternal-Fetal & Neonatal Medicine: [Obstetric and perinatal outcomes of pregnancies with COVID 19: a systematic review and meta-analysis](#)** (March 13, 2022)

“This meta-analysis aimed at comparing obstetric and perinatal outcomes in laboratory-tested pregnant women for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection before delivering. Positive SARS-CoV-2 tested pregnant women had higher odds for preeclampsia/hypertensive disorders of pregnancy, NICU admissions, stillbirths and perinatal mortality.” [LINK](#)

**Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report: [Hospitalization of Infants and Children Aged 0-4 Years with Laboratory-Confirmed COVID-19 - COVID-NET, 14 States, March 2020-February 2022](#)** (March 18, 2022)

“COVID-19 can cause severe illness in infants and children, including those aged 0–4 years who are not yet eligible for COVID-19 vaccination. During Omicron variant predominance beginning in late December 2021, U.S. infants and children aged 0–4 years were hospitalized at approximately five times the rate of the previous peak during Delta variant predominance. Infants aged <6 months had the highest rates of hospitalization, but indicators of severity (e.g., respiratory support) did not differ by age group. Important strategies to prevent COVID-19 among infants and young children include vaccination of currently eligible populations such as pregnant women, family members, and caregivers of infants and young children.” [LINK](#)

**BioMed Central Pediatrics: [Impact of the COVID-19 pandemic on management of children and adolescents with Type 1 diabetes](#)** (March 10, 2022)

“The coronavirus disease-2019 (COVID-19) pandemic had widespread impacts on the lives of parents and children. We determined how the pandemic affected Type 1 diabetes patients at a large urban pediatric teaching hospital. Hospitalization frequency, glycemic control and depression screening were unchanged in our large urban pediatric teaching hospital during the COVID pandemic. Increased utilization of CGM and rapid adoption of telemedicine may have ameliorated the impact of the pandemic on disease management.” [LINK](#)

**Diabetologia: [Incidence of newly diagnosed diabetes after COVID-19](#)** (March 16, 2022)

“The aim of this work was to investigate diabetes incidence after infection with coronavirus disease-2019 (COVID-19). Individuals with acute upper respiratory tract infections (AURI), which are frequently caused by viruses, were selected as a non-exposed control group. COVID-19 confers an increased risk for type 2 diabetes. If confirmed, these results support the active monitoring of glucose dysregulation after recovery from mild forms of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection.” [LINK](#)

**See also:**

- The Lancet Diabetes & Endocrinology: [Risks and burdens of incident diabetes in long COVID: a cohort study](#) (March 21, 2022)

**eClinicalMedicine: [Racial/Ethnic Disparities in Healthcare Worker Experiences during the COVID-19 Pandemic: An Analysis of the HERO Registry](#)** (March 5, 2022)

“The COVID-19 pandemic has highlighted the pervasive nature of structural and systemic racism, and this study shows that significant racial/ethnic disparities exist in COVID-19 outcomes for healthcare workers. Urgent action is needed to create health equity for healthcare workers and better understand the drivers of health disparities.”

**The Lancet Public Health: [COVID-19 vaccine coverage and factors associated with vaccine uptake among 23 247 adults with a recent history of homelessness in Ontario, Canada: a population-based cohort study](#)** (March 9, 2022)

“In Ontario, COVID-19 vaccine coverage among adults with a recent history of homelessness has lagged and, as of Sept 30, 2021, was 25 percentage points lower than that of the general adult population in Ontario for a first dose and 34 percentage points lower for a second dose. With high usage of outpatient health services among individuals with a recent history of homelessness, better utilisation of outpatient primary care structures might offer an opportunity to increase vaccine coverage in this population. Our findings underscore the importance of leveraging existing health and service organisations that are accessed and trusted by people who experience homelessness for targeted vaccine delivery.”

**BioMed Central Geriatrics: [Barriers and facilitators to providing home-based care in a pandemic: policy and practice implications](#)** (March 21, 2022)

“The purpose of this study is to describe the experiences of home-based care providers (HBCP) in providing care to older adults during the pandemic in order to inform future disaster planning, including during pandemics. Data was distilled into four major themes that have potential policy and practice impact. These included disrupted aging-in-place resources, preparedness actions contributing to readiness for the pandemic, limited adaptability in administrative needs during the pandemic and challenges with unclear messaging from public health officials. Home-based care plays an essential role in maintaining the health of older adults in disaster contexts, including pandemics.” [LINK](#)

**See also:**

- Aging and Health Research: [Understanding the unpaid work roles amongst households, during COVID-19](#) (March 18, 2022)

**The Baffler: [Airborne Toxic Events: The Politics of Contagion](#)** (March 2022)

“The stakes then were not different from what they are today: the role of state and commerce in society, the degree to which “free” markets could be permitted to rule. Aerosol transmission was never merely a medical question. Accepting it, as Dr. John Conly, an infectious disease specialist advising the WHO on its COVID guidelines, told Reuters that first summer, “would affect our entire way of life”.” [LINK](#)

**See also:**

- Al Jazeera: [Two years of COVID: The battle to accept airborne transmission](#) (March 11, 2022)

## HEALTH SYSTEM ADMINISTRATION

**International Journal of Environmental Research and Public Health: [From Science to Policy and Practice: A Critical Assessment of Knowledge Management before, during, and after Environmental Public Health Disasters](#)** (February 18, 2022)

“Beyond structures and plans, it is necessary to cultivate relationships and share responsibility for ensuring the safety, health, and well-being of affected communities, while respecting the local culture, capacity, and autonomy. Preparation for and management of EPH disaster risks requires effective long-term collaboration between science, policy, and EPH practitioners at all levels in order to facilitate coordinated and timely deployment of multi-sectoral/jurisdictional resources when and where they are most needed.” [LINK](#)

**Ground Truths: [The Epidemic of COVID Complacency](#)** (March 6, 2022)

“Any proclamation that the pandemic is over ignores the potential recrudescence of a new variant with high transmission and immune escape. We will still benefit from using masks for many situations including protecting immunocompromised and vulnerable people, which also includes nearly 100 million Americans who haven’t been vaccinated, many without infection-acquired immunity. We are still averaging nearly 50,000 confirmed new cases a day, at a time when rapid tests are increasingly being used and not factored in. This is more than 3-fold the level of new cases, and 2-fold the number of COVID hospitalizations, than in June 2021. The metrics do not lend any support to the mission of containment accomplished.” [LINK](#)

**CBC: [Global rise in COVID-19 cases is 'tip of the iceberg,' WHO warns](#)** (March 17, 2022)

"Figures showing a global rise in COVID-19 cases could herald a much bigger problem as some countries also report a drop in testing rates, the World Health Organization said Wednesday, warning nations to remain vigilant against the virus. After more than a month of decline, COVID-19 cases started to increase around the world last week, WHO said, with lockdowns in Asia and China's Jilin province battling to contain an outbreak. A combination of factors was causing the increases, including the highly transmissible Omicron variant and its BA.2 sub-variant, as well as the lifting of public health and social measures, according to WHO." [LINK](#)

**Nature Reviews Microbiology: [Antigenic evolution will lead to new SARS-CoV-2 variants with unpredictable severity](#)** (March 14, 2022)

“The comparatively milder infections with the Omicron variant and higher levels of population immunity have raised hopes for a weakening of the pandemic. We argue that the lower severity of Omicron is a coincidence and that ongoing rapid antigenic evolution is likely to produce new variants that may escape immunity and be more severe.” [LINK](#)

**UK Health Security Agency: [SARS-CoV-2 variants of concern and variants under investigation in England Technical briefing 38](#)** (March 11, 2022)

“Secondary attack rates amongst contacts exposed in household and non-household settings (adjusted for factors including vaccination status) are higher for BA.2 than other sequenced Omicron cases: 13.6% vs 10.7% in households and 5.3% vs 4.2% in non-household settings. This modest reduction since Technical briefing 37, reflecting the inclusion of cases testing positive during 1 to 14 February 2022, is not due to the new vaccination adjustment.” [LINK](#)

**Canadian Institute for Health Information: [Impact of COVID-19 on patient experience in acute care hospitals](#)** (February 24, 2022)

“In 2020–2021, 65% of patients said that they had a positive experience during their hospital stay, which is similar to the previous year. One of the main drivers of overall patient experience is communication between health care providers and patients, an important component of which is being treated with dignity and respect. During the pandemic and in preceding years, most patients rated their experience communicating with doctors and nurses positively.” [LINK](#)

## INFECTION PREVENTION AND CONTROL

**Science - the Wire:** [Why Protecting the Immunocompromised Is Critical To Ending the Pandemic](#) (March 19, 2022)

“Many of the pleas to protect immunocompromised patients have missed a crucial public health point: by protecting people with weakened immune systems, we protect all of us. Variant creation is driven by the amount of replicating virus in existence. Whether an evolutionary offshoot ultimately takes hold is a product of viral fitness, selection pressures and host susceptibility. When someone who is severely immunosuppressed is infected with the novel coronavirus, large loads of the virus can replicate for weeks or even months.” [LINK](#)

**The Conversation:** [Should public health measures like masking continue beyond the pandemic? Data on viral infections shows their benefits](#) (March 10, 2022)

“Public health measures, such as masking and physical distancing that have been a high-profile part of the COVID-19 response for the past two years are now beginning to lift. However, surprisingly little attention has been paid to the remarkable effects of these measures on other respiratory illnesses that are caused or exacerbated by viral infections.” [LINK](#)

**See also:**

- The Lancet Public Health: [Maintaining face mask use before and after achieving different COVID-19 vaccination coverage levels: a modelling study](#) (March 8, 2022)

**Columbia School of International and Public Affairs:** [Healthy Buildings as Part of a Hierarchy of Controls for the Safe Return to Offices \[Video\]](#) (September 21, 2020)

“Joseph Allen, Associate Professor of Exposure Assessment Science, Harvard T.H. Chan School of Public Health, discussed "Healthy Buildings as Part of a Hierarchy of Controls for the Safe Return to Offices" as part of COVID-19: Policymaking in the Throes of a Global Crisis, an online seminar co-sponsored by the School of International and Public Affairs, the Earth Institute, and the Mailman School of Public Health.” [LINK](#)

**The Wall Street Journal:** [What to Know About the BA.2 Omicron Variant, the New COVID Strain](#) (March 21, 2022)

“The BA.2 variant of COVID-19 is a relation of the original Omicron variant known as BA.1, according to Theodora Hatzioannou, an associate professor of virology at Rockefeller University. The two variants arose around the same time and come from the same ancestor strain. They have many mutations in common, but around 20 mutations differ between the two variants. The differences between this variant and BA.1 can be seen in the spike protein of the virus, Dr. Hatzioannou said.” [LINK](#)

**See also:**

- The Washington Post: [How fast omicron’s BA.2 variant is spreading around the world](#)
- CityNews: [What we know about BA.2, or 'stealth Omicron'](#)
- [CBC News: Canada's abandoning of COVID-19 testing leaves us vulnerable to future variants, experts say](#)
- CTV News: [Experts weigh in on how the more infectious Omicron sub variant could shape the spring](#)

**Science- the Wire:** [What is the ‘Deltacron’ Variant Found in France?](#) (March 14, 2022)

“The Pasteur Institute in Paris has reported that it has sequenced a genome that appears to be a combination of those of the omicron and delta variants. Such recombinant variants won’t necessarily be more transmissible or more lethal than either of the two ‘parent’ variants – it’s possible, but not a rule. Recombination happens only when two different variants simultaneously enter the same cell in an individual’s body. If they enter different cells, they can’t recombine.” [LINK](#)

## TREATMENT

**New England Journal of Medicine:** [Safety and Efficacy of a Third Dose of BNT162b2 COVID-19 Vaccine](#) (March 23, 2022)

"A third dose of the BNT162b2 vaccine administered a median of 10.8 months after the second dose provided 95.3% efficacy against COVID-19 as compared with two doses of the BNT162b2 vaccine during a median follow-up of 2.5 months." [LINK](#)

**JAMA:** [Association of Homologous and Heterologous Vaccine Boosters with COVID-19 Incidence and Severity in Singapore](#) (February 11, 2022)

"Heterologous boosting was associated with lower SARS-CoV-2 incidence rates than homologous boosting. Severe infections were lower among those receiving a booster after BNT162b2 as the primary series compared with nonboosted individuals, regardless of the type of booster." [LINK](#)

**Kaiser Family Foundation:** [Pfizer CEO Pushes Yearly Shots for COVID. Not So Fast, Experts Say](#) (March 21, 2022)

" 'The last thing we need is to have corporate CEOs in March saying this is what you need in December because 'we know,' said John Moore, professor of microbiology and immunology at Weill Cornell Medical College. "How do you know?" CEO announcements have often been made before scientific evidence supporting the claims has been publicly released, meaning scientists have not had time to evaluate their validity." [LINK](#)

**COVID-END:** [COVID-19 Living Evidence Synthesis #10](#) (March 2, 2022)

The authors aim to answer these 2 questions:

1. How does the level of vaccine efficacy / effectiveness (VE) against COVID-19 infection, hospitalisation, and death change over time (>112 days) in individuals who have received a complete primary COVID-19 vaccine series?
2. How does the level of VE against COVID-19 infection, hospitalisation, and death change over time (>84 days) in individuals who have received a complete primary COVID-19 vaccine series plus an additional dose? [LINK](#)

See also:

- COVID-END: [COVID-19 Living Evidence Synthesis #6: What is the effectiveness of available COVID-19 vaccines for adults, including variants of concern and over time frames up to 120 days?](#) (March 16, 2022)
- COVID-END: [COVID-19 Living Evidence Synthesis #8: What is the effectiveness of available COVID-19 vaccines for children and adolescents, including variants of concern?](#) (March 14, 2022)

**Centres for Disease Control Morbidity and Mortality Weekly Report:** [Effectiveness of Maternal Vaccination with mRNA COVID-19 Vaccine during Pregnancy against COVID-19-Associated Hospitalization in Infants Aged <6 Months - 17 States, July 2021-January 2022](#) (February 18, 2022)

"COVID-19 vaccination during pregnancy is recommended to prevent severe illness and death in pregnant women. Infants are at risk for COVID-19-associated complications, including respiratory failure and other life-threatening complications. Effectiveness of maternal completion of a 2-dose primary mRNA COVID-19 vaccination series during pregnancy against COVID-19 hospitalization among infants aged <6 months was 61% (95% CI = 31% to 78%). Effectiveness of completion of the primary COVID-19 vaccine series early and later in pregnancy was 32% (95% CI = -43% to 68%) and 80% (95% CI = 55% to 91%), respectively. Completion of a 2-dose mRNA COVID-19 vaccination series during pregnancy might help prevent COVID-19 hospitalization among infants aged <6 months." [LINK](#)

**See also:**

- American Journal of Obstetrics & Gynecology MFM: [COVID-19 Vaccination among Pregnant People in the U.S.: A Systematic Review](#) (March 10, 2022)

**Nature Communications:** [Comparative effectiveness of the BNT162b2 and ChAdOx1 vaccines against COVID-19 in people over 50](#) (March 21, 2022)

"This study compared with one dose of ChAdOx1, vaccination with BNT162b2 is associated with a 28% (95% CI, 12-42) decreased risk of SARS-CoV-2 infection. Also, two doses of BNT162b2 vs ChAdOx1 confers 30% (95% CI, 25-35) and 29% (95% CI, 10-45) lower risks of both infection and hospitalisation during the study period when the Delta variant is dominant. Furthermore, the comparative protection against the infection persists for at least six months among the fully vaccinated, suggesting no differential waning between the two vaccines. These findings can inform evidence-based COVID-19 vaccination campaigns and booster strategies." [LINK](#)

**Reuters:** [Generic drug makers sign on to make cheap version of Pfizer COVID pill](#) (March 17, 2022)

"Thirty five generic drug makers around the world will make cheap versions of Pfizer Inc's (PFE.N) highly effective COVID-19 oral antiviral Paxlovid to supply the treatment in 95 poorer countries, the U.N.-backed Medicines Patent Pool (MPP) said on Thursday. Pfizer struck a deal last year with the group to allow generic drug makers to make the pills for 95 low- and middle-income countries. They have been working since then to select the drug makers they will license." [LINK](#)

**JAMA:** [Thromboinflammation and Antithrombotics in COVID-19. Accumulating Evidence and Current Status](#) (March 22, 2022)

"At this juncture in the global pandemic, all hospitalized patients with COVID-19 and low risk of bleeding should receive at least prophylactic-dose anticoagulation with a heparin anticoagulant, with consideration of therapeutic-dose heparin in some cases, but there is no proven efficacy supporting the addition of traditional antiplatelet therapies to prevent progressive thromboinflammatory complications of COVID-19. Nontraditional targeting of alternative platelet function pathways with agents like crizanlizumab, a P-selectin inhibitor (NCT04435184), or glenzocimab, a platelet glycoprotein VI inhibitor (NCT04659109), is under investigation. The clinical goal, however, should be to avoid thromboinflammation and hospitalization in the first place, an objective largely achievable through aggressive vaccination." [LINK](#)

**JAMA:** [Effect of Antiplatelet Therapy on Survival and Organ Support–Free Days in Critically Ill Patients With COVID-19: A Randomized Clinical Trial](#) (March 23, 2022)

"In this Bayesian randomized clinical trial that included 1557 patients, antiplatelet therapy with either aspirin or a P2Y12 inhibitor, compared with no antiplatelet therapy, resulted in a 95.7% posterior probability of futility with regard to the odds of improvement in organ support–free days within 21 days. Meaning that among critically ill patients with COVID-19, there was a low likelihood that treatment with an antiplatelet agent provided improvement in organ support–free days within 21 days." [LINK](#)

## MENTAL HEALTH & WELLNESS

**British Journal of Psychiatry Open:** [Factors shaping the mental health and well-being of people experiencing persistent COVID-19 symptoms or 'long COVID': qualitative study](#) (March 21, 2022)

"Around one in ten people who contract COVID-19 report persistent symptoms or 'long COVID'. Impaired mental health and well-being is commonly reported, including anxiety, depression and reduced quality of life. However, there is limited in-depth research exploring why mental health and well-being are affected in people experiencing long COVID. The aim is to explore factors affecting mental health and well-being from the perspective of people



with long COVID. People with long COVID experience a range of factors that negatively affect their mental health and well-being. Providing patient-centred health services that integrate rapidly evolving research in this area is important, as are peer support groups and supported approaches to self-management.” [LINK](#)

**British Journal of Psychiatry Open: [Fear of COVID-19 and its association with mental health-related factors: systematic review and meta-analysis](#)** (March 21, 2022)

“The severity of COVID-19 remains high worldwide. Therefore, millions of individuals are likely to suffer from fear of COVID-19 and related mental health factors. The present systematic review and meta-analysis aimed to synthesize empirical evidence to understand fear of COVID-19 and its associations with mental health-related problems during this pandemic period. Fear of COVID-19 has associations with various mental health-related factors. Therefore, programmes for reducing fear of COVID-19 and improving mental health are needed.” [LINK](#)

**The Lancet Public Health: [Acute COVID-19 severity and mental health morbidity trajectories in patient populations of six nations: an observational study](#)** (March 14, 2022)

“Long-term mental and physical health consequences of COVID-19 (long COVID) are a persistent public health concern. Little is still known about the long-term mental health of non-hospitalised patients with COVID-19 with varying illness severities. Our aim was to assess the prevalence of adverse mental health symptoms among individuals diagnosed with COVID-19 in the general population by acute infection severity up to 16 months after diagnosis. Severe acute COVID-19 illness—indicated by extended time bedridden—is associated with long-term mental morbidity among recovering individuals in the general population. These findings call for increased vigilance of adverse mental health development among patients with a severe acute disease phase of COVID-19.” [LINK](#)

**See also:**

- Center for Infectious Disease Research and Policy: [Severe COVID-19 tied to long-term depression, anxiety](#) (March 16, 2022)

**Neuroscience & Biobehavioral Reviews: [Hyper/neuroinflammation in COVID-19 and suicide etiopathogenesis: Hypothesis for a nefarious collision?](#)** (March 14, 2022)

“Accumulating scientific and clinical evidence highlighted pathological hyperinflammation as a cardinal feature of SARS-CoV-2 infection and acute COVID-19 disease. With the emergence of long COVID-19 syndrome, several chronic health consequences, including neuropsychiatric sequelae, have gained attention from the public and medical communities. Since inflammatory mediators have also been accredited as putative biomarkers of suicidal ideations and behaviors, hyper- and neuroinflammation might share some colliding points, overlapping and being interconnected in the context of COVID-19. This review aims to provide a summary of current knowledge on the molecular and cellular mechanisms of COVID-19-associated hyper/neuroinflammation with focus on their relevance to the inflammatory hypothesis of suicide development. Subsequently, strategies to alleviate COVID-19 hyper/neuroinflammation by immunomodulatory agents (many of which at experimental stages) as well as psychopharmacologic/psychotherapeutic approaches are also mentioned. While suicide risk in COVID-19 survivors - until now little known - needs further analysis through longitudinal studies, current observations and mechanistic postulates warrant additional attention to this possibly emerging mental health concern.” [LINK](#)

**Public Library of Science One: [Internalizing symptoms and family functioning predict adolescent depressive symptoms during COVID-19: A longitudinal study in a community sample](#)** (March 18, 2022)

“The COVID-19 pandemic and lockdown pose a threat for adolescents’ mental health, especially for those with an earlier vulnerability. Accordingly, these adolescents may need increased support from family and friends. This study investigated whether family functioning and peer connectedness protects adolescents with earlier internalizing or externalizing symptoms from increased depressive symptoms during the first Dutch COVID-19 lockdown in a low-risk community sample. In a low-risk community sample, one-in-four adolescents reported

clinically relevant depressive symptoms at the first COVID-19 lockdown. Higher earlier internalizing symptoms and lower quality of family functioning increased risks. These results indicate that even in low-risk samples, a substantial group of adolescents and their families are vulnerable during times of crisis.” [LINK](#)

**Journal of Child Health Care: [The indirect health impacts of the COVID-19 pandemic on children and adolescents: A review](#)** (March 10, 2022)

“Five main issues emerged: Increased mental health conditions, declines in presentations to paediatric emergency departments, declines in vaccination rates, changes in lifestyle behaviour (mainly decreased physical activity for specific groups of children), and changes in paediatric domestic violence and online child sexual abuse. There are early indications that the COVID-19 pandemic is impacting the health of young people, and this is amplified for those with existing health conditions and vulnerabilities. Despite this, there is limited insight into the protective factors for young people’s health and wellbeing, as well as how the impacts of the pandemic can be mitigated in both the short and long term.” [LINK](#)

**Child: Care, Health and Development: [Protective and risk activities for emotional and behavioural well-being of children and adolescents during the COVID-19 lockdown](#)** (March 16, 2022)

“The lockdown imposed to contain the COVID-19 pandemic brought deep changes in the daily life of Italian children and adolescents, increasing the time spent at home. This study aims to explore how activities that children and adolescents carried out at home during the lockdown were related to their emotional and behavioural well-being. The current study may help to identify activities that could be promoted and those that should be limited to effectively manage home time, in order to ultimately safeguard the emotional and behavioural well-being of children and adolescents.” [LINK](#)

**See also:**

- American Journal of Pharmaceutical Education: [Effects of Resilience and Wellness Behaviors on Burnout and Academic Performance Among First-Year Students During the COVID-19 Pandemic](#) (March 18, 2022)
- Journal of Child Psychology and Psychiatry: [Maternal mental health mediates the effects of pandemic-related stressors on adolescent psychopathology during COVID-19](#) (March 22, 2022)

**Industrial Health: [Walking the tightrope between work and home: The role of job/home resources in the relation between job/home demands and employee health and well-being](#)** (March 15, 2022)

“The present study investigated the role of job/home resources in the relation between job/home demands and exhaustion, job satisfaction, work-home interference, and home-work interference during the COVID-19 pandemic. We explored the prevalence of job/home demands and resources during the COVID-19 pandemic, and examined whether working at different locations (i.e., working from home or at the office) affects how both job/home demands and resources are associated with employees’ health and well-being.” [LINK](#)

**BioMed Central Public Health: [Exploring the impact of COVID-19 on substance use patterns and service access of street involved individuals in Kingston, Ontario: a qualitative study](#)** (March 23, 2022)

“Increased substance use to combat feelings of isolation and hopelessness related to loss of income and housing was commonly described. Increased fentanyl usage was considered the major contributor to the rise in overdoses over the pandemic. Restrictions on public access to businesses and services disproportionately impacted individuals with limited means. Harm reduction services and mental health support were considered extremely important throughout the pandemic. The coinciding COVID-19 pandemic and opioid epidemic place street-involved individuals who use substances in a uniquely dangerous position. As such, it is imperative that public policy decision-makers consider the differential needs of street-involved community members to provide safe, relevant, and compassionate solutions in future public health emergencies.” [LINK](#)

**Public Library of Science One: [Small business managers and COVID-19—The role of a sense of coherence and general resistance resources in coping with stressors](#) (March 18, 2022)**

“The response of small business managers to an external event such as the pandemic can have a profound effect on the work environment, health and well-being for themselves and their employees. Previous research on small business managers during the pandemic has mainly focused on traditional pathogenic effects, and there is a lack of studies looking at the issue from a salutogenic health promotion perspective. The aim of this study is to explore whether a sense of coherence and general resistance resources were experienced by small business managers in Sweden and Norway during the COVID-19 pandemic. The small business managers handled the pandemic in a way that worked well in their contexts, and the pandemic generally did not have a negative effect on their businesses or themselves. A salutogenic approach, through which the managers focused on identifying and using resources, was an important factor for managing stressors and adversity during the pandemic. Hence, the concept of salutogenesis may be used as an intervention to foster better health in small businesses, both at a personal and organisational level in order to handle future challenges effectively.” [LINK](#)

**National Collaborating Centre for Environmental Health: [Canadian green spaces during COVID-19: Public health benefits and planning for resilience](#) (March 16, 2022)**

“Canadian green spaces saw marked changes in visitation during the first months of the COVID-19 pandemic. These included city parks and provincial and national parks, as well as informal green spaces. Park use appeared to have partially compensated for both lost physical activity and negative mental health impacts due to the pandemic, although rigorous, large-scale studies are lacking. Park use did not increase uniformly across communities. Regional differences in park access and public health communications may have affected park use, even in places without local restrictions. In addition, marginalized or racialized communities may have experienced barriers to park access, whether due to lack of local parks or concerns regarding safety or discriminatory enforcement of public health orders. Parks, and green spaces more broadly, should be viewed as public health assets, increasing resilience during the current pandemic and during future climate-related disruptions. Accordingly, environmental public health should take opportunities to participate in park planning and design to ensure best health outcomes.” [LINK](#)

**See also:**

- MedRxiv: [Outdoor long-range transmission of COVID-19 and patient zero](#) (March 18, 2022)

**National Collaborating Centre for Environmental Health: [Webinar Recording - The COVID-19 pandemic and climate change: Two different, but equally important, crises having major psychosocial impacts](#) (February 22, 2022)**

“Almost two years since the start of the pandemic, significant psychosocial impacts are still observed in the Canadian population. The results of various surveys, as part of a study carried out by Université of Sherbrooke with the collaboration of international universities, have depicted the association between various risk/protective factors and mental health in times of pandemic. The most recent survey was conducted in October 2021 (in Canada, New Zealand and Switzerland) among a large and representative sample of adults. Special attention will be paid to the evolution in anxiety and depression and its associated risk/protective factors, as well as to a newly explored concept called “pandemic fatigue”. In addition to these results, some interesting comparisons between the attitudes, perceptions and responses towards the COVID-19 pandemic and climate change will be made. Lessons in disaster risk management learned over the past two years can indeed be utilized to enhance risk management of other global crises, including climate change. This study allows to increase the understanding of the psychosocial impacts of these two different, but equally important, crises (i.e., the pandemic and climate change).” [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, 2022.

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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