

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

The Atlantic: [Sorry, a Coronavirus Infection Might Not Be Enough to Protect You](#) (September 15, 2021)

“Anyone who’d rather have COVID-19 than get vaccinated is taking two gambles: that immunity will stick around, and that symptoms won’t.” [LINK](#)

Eurosurveillance: [Characterization of vaccine breakthrough infections of SARS-CoV-2 Delta and Alpha variants and within-host viral load dynamics in the community, France, June to July 2021](#)

(September 16, 2021)

“Epidemic control may require similar measures for symptomatic PCR-positive vaccinated individuals as for non-vaccinated infected individuals. This remains true even if there is indeed a late faster viral load decline in vaccinated individuals, as most transmission would already have taken place.” [LINK](#)

Science Table COVID-19 Advisory for Ontario: [Understanding the Post COVID-19 Condition \(Long COVID\) and the Expected Burden for Ontario](#) (September 14, 2021)

“The post COVID-19 condition is associated with a wide range of ongoing symptoms and morbidity, increased use of health care resources, and adverse impact on work and activities of daily living. The post COVID-19 condition has substantial potential harms for patients, caregivers, health systems and society.” [LINK](#)

- See also: [CDC: Post-COVID Conditions](#)

Brain, Behavior, & Immunity- Health: [Post-acute sequelae of COVID-19: Evidence of mood & cognitive impairment](#) (September 14, 2021)

“Efforts toward elucidating psychiatric sequelae of COVID-19 are becoming increasingly urgent, given the potential for profound public health ramifications. The current study adds to mounting evidence of mood and [cognitive impairments](#) following COVID-19 infection, particularly within four months of diagnosis. This study is among the

first to shed light on post-acute deficits in reward processing and executive function in COVID-19 survivors, necessitating further investigation into neurobiological underpinnings of PASC. To this end, researchers should continue to focus on COVID-19-specific mechanisms, such as protracted inflammation, that might contribute to prolonged psychiatric consequences. Accordingly, this research will help guide the development of targeted therapies to treat post-acute mental health impairments after recovery from COVID-19.” [LINK](#)

MedRxiv: [Right Ventricular Dysfunction in Ventilated Patients with COVID-19 \(COVID-RV\)](#) (July 31, 2021)

“COVID-RV demonstrates a prevalence of RVD in ventilated patients with COVID-19 of 6.2% and is associated with a mortality of 85.7%. Association is observed between RVD and each of the aetiological domains of; ARDS, ventilation, micro/macro thrombi and myocardial injury.” [LINK](#)

HEALTH EQUITY AND ETHICS (VULNERABLE GROUPS)

CBC: [COVID-19 during pregnancy means 10 times higher risk of ICU admission, Canadian data suggests](#) (September 16, 2021)

“A [new briefing document from Ontario's COVID-19 Science Advisory Table](#) notes that the risks of getting COVID-19 while pregnant include having a higher chance of needing a C-section or having a preterm birth, according to preliminary evidence. The latest available Canadian data compiled by the Canadian Surveillance of COVID-19 in Pregnancy team (CANCOVID) also suggests people who are pregnant are nearly five times more likely to be admitted to hospital for COVID-19 than their non-pregnant peers — and 10 times more likely to be admitted to an ICU.” [LINK](#)

Canadian Medical Association Journal: [Characteristics of children admitted to hospital with acute SARS-CoV-2 infection in Canada in 2020](#) (September 27, 2021)

“Among children who were admitted to hospital with SARS-CoV-2 infection in Canada during the early COVID-19 pandemic period, incidental SARS-CoV-2 infection was common. In children admitted with acute COVID-19, obesity and neurologic and respiratory comorbidities were associated with more severe disease.” [LINK](#)

- Commentary: [Protecting Canada’s children from the consequences of the fourth wave of the COVID-19 pandemic](#)

Immunity, Inflammation and Disease: [Long-term effects of obesity on COVID-19 patients discharged from hospital](#) (September 9, 2021)

“Obesity has been reported as a risk factor for COVID-19 prognosis. However, the long-term effects of obesity on patients discharged from the hospital are unclear, and the present study aims to address this issue. In the long term, obesity affects clinical manifestations, immune function and endocrine metabolism in patients discharged after recovering from COVID-19.” [LINK](#)

The Medical Journal of Australia: [Policy considerations for mandatory COVID-19 vaccination from the Collaboration on Social Science in Immunization](#) (September 12, 2021)

“Mandates should only be implemented once a set of conditions relevant to the setting are satisfied. Below we set out those considerations: i. the mandate should be legal; ii. Burden of disease should be high enough to justify a mandate; iii. The mandated vaccines should be safe; iv. The vaccines should reduce transmission; v. Vaccine supply should be sufficient and access should be easy; vi. Less restrictive and trust-promoting measures should come first. Thresholds are value judgments that require stakeholders to consider what matters. Questions include: How high

is "high enough" for the burden of disease? What levels of effectiveness are sufficient to justify the negative consequences of a mandate? How should we prepare for the inevitable backlash that will come from a policy of mandatory vaccination in any setting? The answers to these questions will be differ over time and place and the goal of the mandate." [LINK](#)

EurekAlert: [The evidence is in: COVID vaccines do protect patients with cancer](#) (September 20, 2021)

"First concrete results presented at the ESMO Congress 2021 confirm need to promote vaccination in patients with cancer. The long-awaited confirmation of the efficacy of COVID-19 vaccination in patients with cancer has arrived, on time to be disseminated to a global audience at the annual congress of the European Society for Medical Oncology (ESMO Congress 2021), the leading professional society for medical oncology. With a multitude of studies supporting similar conclusions still to be presented (tomorrow), new research revealed today that individuals with cancer have an appropriate, protective immune response to vaccination without experiencing any more side-effects than the general population. Indirect evidence suggests that a third "booster" shot could further increase the level of protection among this patient population." [LINK](#)

BioMed Central Public Health: [Assessment of health equity consideration in masking/PPE policies to contain COVID-19 using PROGRESS-plus framework: a systematic review](#) (September 16, 2021)

"There is increasing evidence that COVID-19 has unmasked the true magnitude of health inequity worldwide. Policies and guidance for containing the infection and reducing the COVID-19-related deaths have proven to be effective, however the extent to which health inequity factors were considered in these policies is rather unknown. The aim of this study is to measure the extent to which COVID-19-related policies reflect equity considerations by focusing on the global policy landscape around wearing masks and personal protection equipment (PPE). Our review highlights even if policies considered health inequity during the design/implementation, this consideration was often one dimensional in nature. In addition, population-wide policies should be carefully designed and implemented after identifying relevant equity-related barriers in order to produce better outcomes for the whole society." [LINK](#)

HEALTH SYSTEM ADMINISTRATION

CBC: [These charts show how much more often unvaccinated Albertans are being hospitalized and dying from COVID-19](#) (September 16, 2021)

"Recent rates of hospitalization, intensive care unit (ICU) admission and death among unvaccinated Albertans have been at least eight times higher — and as much as 60 times higher — compared to the fully vaccinated population, depending on which age range you look at." [LINK](#)

Public Health Ontario: [Mitigating Risk of Breakthrough Transmission from Delta Variant](#) (September 10, 2021)

"Although evidence on vaccine effectiveness and epidemiological data of case counts show a high degree of protection following mass vaccination campaigns against SARS-CoV-2 infection, the emergence of variants of concern - VOCs (particularly those capable of vaccine escape) has prompted further consideration for the appropriate management of fully vaccinated individuals with high risk exposures. Furthermore, the emerging evidence demonstrating similar levels of infectiousness from fully-vaccinated Delta cases as in unvaccinated cases suggest a need for a strengthened approach to case and contact management for fully-vaccinated high risk contacts, to prevent the risk of transmission from breakthrough cases." [LINK](#)

The British Medical Journal: [COVID-19: Government lays out its “plan B” to protect NHS this winter](#) (September 15, 2021)

"The government's plan, published on 14 September, sets out what it calls a “plan B for England” that it will initiate if data suggest the NHS is likely to come under unsustainable pressure during the coming months. Measures would include introducing mandatory vaccine certification in specific settings, bringing back the legal requirement to wear face coverings in some settings, and advising people to work from home if they are able to. The government said it was committed to taking “whatever action is necessary” to protect the NHS from being overwhelmed but said stricter economic and social restrictions such as lockdowns would only be considered as “a last resort.” [LINK](#)

MedRxiv: [Hospital-level work organization drives the spread of SARS-CoV-2 within hospitals: insights from a multi-ward model](#) (September 17, 2021)

"Using a stochastic compartmental model, we simulate the spread of SARS-CoV-2 in a multi-ward hospital, assessing the effect of different scenarios and infection control strategies [...] Our results highlight the poor efficiency of implementing a screening area before hospital admission, while the setting up of an isolation ward dedicated to COVID-19 patients and the restriction of healthcare workers movements between wards significantly reduce epidemic spread.” [LINK](#)

Science: [Israel's struggles to contain COVID-19 may be a warning for other nations](#) (September 21, 2021)

"Public health experts differ about exactly why a country of 9.3 million that is vaccinating so aggressively still has one of the highest rates of reported infections per capita in the world, more than twice that of the United States. Extensive testing and social factors may play a role. But David Dowdy, an infectious disease epidemiologist at the Johns Hopkins Bloomberg School of Public Health, says it's a sign that “providing booster shots alone does not dramatically change the course or trajectory of transmission at a country level. Because the majority of transmission is still occurring from people who are unvaccinated.” [LINK](#)

The British Medical Journal: [Risk prediction of COVID-19-related death and hospital admission in adults after COVID-19 vaccination: national prospective cohort study](#) (September 17, 2021)

"This study presents a robust risk prediction model (QCOVID3) that can be used to stratify risk populations to identify those who are at highest risk of severe COVID-19 outcomes despite COVID-19 vaccination, and who might therefore benefit from further interventions to reduce risk or boost immunity once these become available [...] Risk stratification tools also provide a robust pragmatic mechanism for avoiding unnecessary lifestyle precautions, investigations, and therapeutic interventions for those individuals whose risk is relatively low, but who might perceive it to be much higher.” [LINK](#)

World Health Organization: [WHO competency framework: Building a response workforce to manage infodemics](#) (September 20, 2021)

"During epidemics, more so than in normal times, people need accurate information so that they can adapt their behaviour and protect themselves, their families and their communities against infection. Infodemics affect citizens in every country and addressing them is a new and centrally important challenge in responding to disease outbreaks.” [LINK](#)

Social Science & Medicine: [The impact of providing end-of-life care during a pandemic on the mental health and wellbeing of health and social care staff: Systematic review and meta-synthesis](#) (September 13, 2021)

“When health systems are put under pressure, health and social care staff are at the forefront in responding to the challenge. In pandemic disease outbreaks or disasters, end-of-life care processes are disrupted for staff, patients and their families. When staff are supported, resourced and trained for these events, they feel prepared,

motivated and enabled to continue to deliver quality, compassionate care. Individual, team and system-level supports are required in order to ensure staff feel supported and are prepared to enable compassion and dignity for patients, when end-of-life processes are disrupted.” [LINK](#)

Occupational & Environmental Science: [Perceived sources of occupational burn-out and embitterment among front-line health workers for COVID-19 control in Gyeonggi province, South Korea: a qualitative study](#) (September 20, 2021)

“The current pandemic response system imposes great moral and emotional burdens on the workforce, prompting the need for initiatives to safeguard the values and needs of those who represent the backbone of the system. This study suggests that multilevel strategies, including providing organizational support and establishing contingency plans for workforce management and resource distribution, may improve FHWs' mental health outcomes as well as the health system for emergency preparedness.” [LINK](#)

INFECTION PREVENTION AND CONTROL

STAT: [Winter is coming, again: What to expect from COVID-19 as the season looms](#)

(September 20, 2021)

“Duchin worries we’re not ready for what’s coming when influenza-like illnesses and COVID collide. “It’s going to put a lot of stress on the health care system to help people figure out whether they have COVID-19 or not and what they need to do next,” he said. Cheap and easy-to-access COVID rapid tests could fill this gap, but tests are still too expensive and haven’t yet been adopted widely enough, he and others argue. “It’s a huge gap, I think, in our national preparedness still,” Duchin said.” [LINK](#)

Journal of the American Medical Association: [Confronting the Delta Variant of SARS-CoV-2 Summer 2021](#) (August 18, 2021)

“The Delta variant presents a serious challenge to controlling the COVID-19 pandemic in the US and worldwide. Effectively responding to this formidable variant will require an evidence-based response that, unfortunately, has not been the case for many US states. Vaccines are the only way forward that will preserve the health care infrastructure and the economy, and eventually contain the pandemic. Increasing uptake among vaccine-hesitant populations will require full participation and complete commitment by everyone, including government officials, clinicians, public health practitioners, and members of the community.” [LINK](#)

Science: [Can ‘zero COVID’ countries continue to keep the virus at bay once they reopen?](#)

(September 14, 2021)

“Countries with this “zero COVID” strategy, as it has been dubbed—scientists prefer the term “elimination”—“have generally fared better than countries that opt for mitigation [...] But the spread of the highly infectious Delta variant, the economic burden of closed borders, lockdown fatigue, and increasing vaccine availability are changing the equation. “In the long term [zero COVID] is not really economically sustainable,” says Ben Cowling, an epidemiologist at the University of Hong Kong (HKU). “Countries are going to need to test out different approaches to find the right balance between infection prevention and control and normalizing societal activities” [LINK](#)

Current Opinion in Infectious Diseases: [COVID-19 transmission and the safety of air travel during the pandemic: a scoping review](#) (the October 2021 issue)

“Of these, it may be argued the most effective mitigation measure to date has been mandatory masking in flight, as the majority of documented secondary cases occurred on flights in or earlier than March 2020, prior to the enforcement of in-flight mask wearing policies. The WHO is currently synthesizing the available evidence on

effectiveness, safety and potential harms of mitigation measures being implemented by the aviation sector to decrease transmission risk during air travel." [LINK](#)

Journal of Biosafety & Biosecurity: [A solution scan of societal options to reduce transmission and spread of respiratory viruses: SARS-CoV-2 as a case study](#) (September 15, 2021)

"Here, we present a list of 517 possible measures to reduce SARS-CoV-2 transmission and spread [...]. Our solution scan can inform the selection of appropriate societal biosecurity measures against the transmission and spread of SARS-CoV-2 (Figure 1). The measures can be incorporated into biosecurity guidance and plans for immediate crisis management (e.g., surges of infected cases), long-term management of ongoing epidemics, and the design of a future pandemic-resilient society. Although we used SARS-CoV-2 as a case study, we expect that many of the measures are transferable to future epidemics or pandemics, caused by pathogens transmitted or spread through similar pathways." [LINK](#)

The New York Times: [We Did the Research: Masks Work, and You Should Choose a High Quality Mask if Possible](#) (September 26, 2021)

"The bottom line is masks work, and higher quality masks most likely work better at preventing COVID-19. If you have the ability to choose between a cloth and a surgical mask, go with surgical. But the best mask is one that a person will actually wear and wear correctly." [LINK](#)

- Original research: [The Impact of Community Masking on COVID-19: A Cluster-Randomized Trial in Bangladesh](#)

Proceedings of the National Academy of Sciences: [Asymptomatic infection is the pandemic's dark matter](#) (September 21, 2021)

"Simply put, it is hard to fight an enemy you can't see. Proof of concept on the impact of widespread use of testing has been seen at the level of nations, such as the remarkable impact of a testing blitz in Slovakia in late 2020, and within organizations. Deep-pocketed professional sports teams have used frequent testing to keep players and coaching staff safe, and to maintain their playing schedules. Given the economic damage inflicted by the pandemic to date, better epidemic control through widespread use of testing isn't simply good public health practice, it likely makes economic sense as well." [LINK](#)

TREATMENT

CBC: [Goodbye Pfizer, hello Comirnaty: Top COVID-19 vaccines given brand names in Canada](#) (September 16, 2021)

"Health Canada has approved brand names for Pfizer, Moderna and Oxford-AstraZeneca vaccines and announced the change on social media today. The Pfizer-BioNTech vaccine has now been dubbed Comirnaty, which the company says represents a combination of the terms COVID-19, mRNA, community, and immunity. The Moderna vaccine will go by SpikeVax and the AstraZeneca vaccine will be named Vaxzevria." [LINK](#)

The New York Times: [Moderna vs. Pfizer: Both Knockouts, but One Seems to Have the Edge](#) (September 22, 2021)

"A series of studies found that the Moderna vaccine seemed to be more protective as the months passed than the Pfizer-BioNTech vaccine." [LINK](#)

New England Journal of Medicine: [Safety and Efficacy of the BNT162b2 mRNA COVID-19 Vaccine through 6 Months](#) (September 15, 2021)

“Through 6 months of follow-up and despite a gradual decline in vaccine efficacy, BNT162b2 had a favorable safety profile and was highly efficacious in preventing COVID-19.” [LINK](#)

- See also: [Protection of BNT162b2 Vaccine Booster against COVID-19 in Israel](#)

Scientific Reports: [The impact of prioritization and dosing intervals on the effects of COVID-19 vaccination in Europe: an agent-based cohort model](#) (September 22, 2021).

“The study suggests that prioritizing vaccinating vulnerable people and care-home residents will reduce hospitalizations, mortality, and public health restrictions. We have demonstrated that the choice of dose interval should be informed by vaccine efficacy data and availability. Future studies on single-dose or delayed-dosing strategies are needed to design better-informed vaccination campaign.” [LINK](#)

Nature Medicine: [Safety and immunogenicity of SARS-CoV-2 variant mRNA vaccine boosters in healthy adults: an interim analysis](#) (September 15, 2021)

“Both the mRNA-1273 booster and variant-modified boosters were safe and well-tolerated. All boosters, including mRNA-1273, numerically increased neutralization titers against the wild-type D614G virus compared to peak titers against wild-type D614G measured 1 month after the primary series; significant increases were observed for mRNA-1273 and mRNA-1273.211 ($P < 0.0001$). This trial is ongoing.” [LINK](#)

Al Jazeera: [COVID-19 vaccine boosters not widely needed, say scientists](#) (September 13, 2021)

“Additional COVID-19 vaccine booster shots are not needed for the general population, a group of international scientists has said in a new report in a medical journal. [The report](#), published in The Lancet on Monday, concluded that even with the threat of the more contagious Delta variant, “booster doses for the general population are not appropriate at this stage in the pandemic.”” [LINK](#)

BBC: COVID: [Immune therapy from llamas shows promise](#) (September 22, 2021)

“A COVID therapy derived from a llama named Fifi has shown “significant potential” in early trials. It is a treatment made of “nanobodies,” small, simpler versions of antibodies, which llamas and camels produce naturally in response to infection. Once the therapy has been tested in humans, scientists say, it could be given as a simple nasal spray - to treat and even prevent early infection.” [LINK](#)

Original research: [A potent SARS-CoV-2 neutralizing nanobody shows therapeutic efficacy in the Syrian golden hamster model of COVID-19](#)

MENTAL HEALTH & WELLNESS

Journal of Medical Internet Research: [Determinants of Shielding Behavior During the COVID-19 Pandemic and Associations With Well-being Among National Health Service Patients: Longitudinal Observational Study](#) (September 20, 2021)

“Future health policy must balance the potential protection from COVID-19 against our findings that shielding negatively impacted well-being and was adopted in many in whom it was not indicated and variably in whom it was indicated. This therefore also requires clearer public health messaging and support for well-being if shielding is to be advised in future pandemic scenarios.” [LINK](#)

British Journal of Psychiatry Open: [The COVID-19 pandemic: an opportunity to make mental health a higher public health priority](#) (September 20, 2021)

“The COVID-19 pandemic has raised the importance of mental health to a much wider audience, including the public, governments and policy makers. This pandemic provides an opportunity to make mental health a higher public health priority and gives an added urgency to this need. Support is required for those at higher risk of developing mental health problems, including healthcare workers, people with prior mental health problems and ethnic minority groups. The pandemic has been associated with reports of increased rates of intimate partner violence, child abuse and substance misuse, and professionals need to be vigilant for these problems occurring. Improved training in the diagnosis and treatment of common mental disorders for a wide range of healthcare professionals, especially those working in primary care, is especially important in low- and middle-income countries. We hope the pandemic will give a new impetus to making mental health a higher public health priority.”

[LINK](#)

Journal of the Royal Society of Medicine: [Suicide reduction in Canada during the COVID-19 pandemic: lessons informing national prevention strategies for suicide reduction](#) (September 22, 2021)

“Our results indicate that for the first post-pandemic interval evaluated (i.e., March 2020 - February 2021), suicide rates in Canada decreased against a background of extraordinary public health measures intended to mitigate community spread of COVID-19. An externality of public health measures was a significant rise in national unemployment rates in population measures of distress. Our results suggest that government interventions that broadly aim to reduce measures of insecurity (i.e., economic, housing, health), and timely psychiatric services, should be prioritized as part of a national suicide reduction strategy, not only during but after termination of the COVID-19 pandemic.” [LINK](#)

Public Library of Science One: [Clinical, financial and social impacts of COVID-19 and their associations with mental health for mothers and children experiencing adversity in Australia](#) (September 13, 2021)

“The financial and social impacts of Australia’s public health restrictions have substantially affected families experiencing adversity, and their mental health. This cohort of mothers and children were already at disproportionate risk of poor mental health prior to the pandemic, with now potentially worsening inequities as we have seen globally; even without the impact of the virus itself. Unless the financial and social consequences of lockdown are addressed, the inequities arising from adversity are likely to be exacerbated by this crisis. To recover from COVID-19, the economic and healthcare needs of women and children living in adversity must be prioritized. Policy investment in income support and universal and equitable access to family health services are critical.”

[LINK](#)

British Journal of Clinical Psychology: [Loneliness and mental health in children and adolescents with pre-existing mental health problems: A rapid systematic review](#) (September 16, 2021)

“Loneliness is associated with depression and anxiety in children and young people with pre-existing mental health conditions, and this relationship may be bidirectional. Existing interventions to address loneliness and/or mental health difficulties in other contexts may be applied to this population, although they may need adaptation and testing in younger children and adolescents. There was some evidence that specific psychological interventions might help to reduce the effects of loneliness on mental health for children and young people. However, interventions that target loneliness in this vulnerable group that are accessible during periods of social isolation are much needed, and it may be helpful to integrate these into evidence-based interventions for mental health problems.” [LINK](#)

Journal of Adolescent Health: [COVID-19 Employment Status, Dyadic Family Relationships, and Child Psychological Well-Being](#) (September 14, 2021)

“COVID-19 has led to soaring unemployment rates and the widespread adoption of working-from-home (WFH) arrangements that have disrupted family relationships and adolescent psychological well-being. Adolescents from families facing economic hardship and employment shifts during COVID-19 experienced changes in parent-child relational dynamics that influenced their emotional well-being. Recognizing these shifts in family ecology is critical to health providers' ability to screen for mental health, assess existing family supports, and provide timely, targeted information about stress management and contending with family conflict.” [LINK](#)

Autism Research: [The association between COVID-19, personal wellbeing, depression, and suicide risk factors in Australian autistic adults](#) (September 21, 2021)

“The COVID-19 pandemic has had a significant impact on the mental health and wellbeing of the world's population, with particularly negative effects on vulnerable populations, including autistic people. It is important to consider potential impacts on the most vulnerable and those known to have an existing heightened risk for suicide. Therefore, our study aim was to examine whether COVID-19 impact was associated with suicide risk factors among Australian autistic adults. Our findings suggest that the impact of the COVID-19 pandemic may be associated with poorer wellbeing and higher depression, but is not associated with suicide risk. Overall, autistic people reported both positive and negative impacts of the pandemic on their lives.” [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 September 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.

QUESTIONS/ SUGGESTIONS? CONTACT:

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