

# COVID-19 PANDEMIC

## RAEB'S Evidence Update

Highlights of health research synthesized by the Research, Analysis and Evaluation Branch

August 17, 2020

### Featured

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### Research Evidence and Jurisdictional Experience

The research evidence profiled below was selected from highly esteemed academic journals and grey literature sources, based on date of publication, and potential applicability or interest to the Ontario health sector.

#### Understanding the Disease

##### ***medRxiv: Cardiovascular manifestations and outcomes of COVID-19***

**August 12, 2020.** A review (preprint) examined the current literature to provide a foundation for understanding the cardiovascular manifestations and outcomes of COVID-19, including potential avenues for prevention and treatment. [Article](#).

#### Disease Management

##### ***World Health Organization (WHO): Home care for patients with suspected or confirmed COVID-19 and management of their contacts***

**August 12, 2020.** WHO released an updated interim guidance for public health and infection prevention and control (IPC) professionals, health facility managers, health workers, and other trained community-based providers when addressing issues related to home care for patients with suspected or confirmed COVID-19. Topics include: considerations for clinicians when identifying and supporting patients who can receive care at home; considerations regarding the IPC requirements for the household to be suitable for caring for patients in the home; clinical

monitoring and treatment of patients at home; and waste management in the home setting in the context of COVID-19. [Article](#).

### ***Critical Care: International variation in the management of severe COVID-19 patients***

**August 5, 2020.** A survey of intensive care unit (ICU) specialists from 85 countries found differences in care management practices (e.g., timing of ICU admission, firstline oxygenation, use of antibacterial, antiviral, and anti-inflammatory therapies) for severe COVID-19 patients at regional and individual levels. [Article](#).

### ***Organisation for Economic Co-operation and Development (OECD): Greater harmonization of clinical trial regulations for COVID-19***

**August 4, 2020.** An OECD report discusses the existing obstacles in developing international clinical trials that are critical to fight the COVID-19 pandemic. The report provides information on relevant adaptations of regulatory requirements for clinical trials, intended to accelerate the processes, and highlights the need to further harmonize these regulations between national regulatory authorities. [Article](#).

## Transmission

### ***National Collaborating Centre for Methods and Tools: The role of daycares and schools in COVID-19 transmission***

**August 11, 2020.** This rapid review suggests that: 1) young children are not a major source of transmission of COVID-19 in school and daycare settings; 2) for children who were infected, transmission was traced back to community and home settings or adults, rather than among children within daycares or schools; 3) implementation of infection control measures appear to be important to limiting the spread as evidenced by several outbreaks where limited or no measures were in place, however it is not yet possible to evaluate the impact of specific infection prevention and control measures or make best practice recommendations for daycare or school settings due to variability in measures implemented. [Article](#).

### ***medRxiv: SARS-CoV-2 and the role of orofecal transmission***

**August 10, 2020.** A review (preprint) concluded that various observational and mechanistic evidence support the hypothesis that SARS-CoV-2 can infect and be shed from the human gastrointestinal tract. The review noted that policy should emphasize the importance of strict personal hygiene measures, and chlorine-based disinfection of surfaces in locations where there is presumed or known SARS-CoV-2 activity. [Article](#).

***European Centre for Disease, Prevention, and Control: COVID-19 in children and the role of school settings in COVID-19 transmission***

**August 6, 2020.** This report presents approaches to school closures in most European Union (EU)/European Economic Area (EEA) states and the UK that have been varied and are within the realm of ‘partial closure’ (i.e., restricted class sizes, limitation to specific age/year groups, staggered timetables, and alternation of student cohorts between remote and in-person teaching). [Article](#).

## Health Equity and Vulnerable Populations

***Toronto Science Policy Network (TSPN): The early impact of COVID-19 on graduate students across Canada***

**August 11, 2020.** A TSPN survey identified the negative impact COVID-19 has had on graduate students across Canada (e.g., financial concerns, ability to conduct research). The TSPN made several recommendations to ensure graduate students receive support during the recovery phase of the pandemic (e.g., reduce financial burden, introduce flexibility into degree completion times). [Article](#).

***Toronto Public Health: Socio-demographic characteristics of COVID-19 in Toronto***

**July 30, 2020.** Toronto Public Health collected individual-level COVID-19 case data to understand who is being impacted by the outbreak and reported that: 83% of people with reported COVID-19 infection identified with a racialized group; 51% of reported cases in Toronto were living in households that could be considered lower-income; and 27% of COVID-19 cases were among individuals who live in households with five or more people. [Article](#).

## Public Health Measures

***medRxiv: Behavioural changes during the COVID-19 pandemic in Singapore***

**August 7, 2020.** An online survey study in Singapore reported gender and demographic differences in preventive (e.g., handwashing) and avoidant behaviours (e.g., avoiding crowds), where females and those who were younger adopted more preventive behaviours, and females and those who were married adopted more avoidant behaviours. Local health authorities can focus their efforts to encourage segments of the population who do not readily adopt infection control measures against COVID-19. [Article](#).

***medRxiv: Public perceptions and preventive behaviours during COVID-19 pandemic in Hong Kong and the UK***

**August 7, 2020.** A comparison study in Hong Kong and the UK noted population differences in perceived severity, level of anxiety, and ease of transmission, which were associated with variable adoption of social distancing measures. The adoption of preventive measures was higher in Hong Kong and lower in the UK, and it was suggested that the lower adoption of preventative measures in the UK could have been improved through public health campaigns. [Article](#).

***Nature Medicine: Digital technologies in the public health response to COVID-19***

**August 7, 2020.** A review of digital innovations for the public health response to COVID-19 worldwide identified approaches that use a combination of digital technologies (e.g., smartphone applications, visualization tools, digital diagnostics, genomics), which rely on telecommunications infrastructure and internet availability. The data generated from these technologies feeds into data dashboards that collate real-time public health data (e.g., confirmed cases, deaths, and testing figures) to keep the public informed and support policymakers in refining interventions. [Article](#).

## Frontline Workers

***medRxiv: Associations between personal protective equipment (PPE) and nursing staff stress during the COVID-19 pandemic in Austria***

**August 7, 2020.** A study of Austrian nursing staff from different settings (e.g., hospital, long-term care) investigated the association between the use of PPE and stress during the COVID-19 pandemic and reported that increased mask-wearing time led to increased stress levels. The study recommended that PPE use should include a maximum duration of time for wearing each type of mask. [Article](#).

## Data Analytics, Modelling and Measurement

***The Lancet: The optimal strategy for schools re-opening in the UK***

**August 3, 2020.** A modelling study in the UK suggested that active symptomatic testing, contact tracing, and isolation strategies may prevent a second wave and avert a large number of COVID-19 cases and deaths when re-opening schools and society together. [Article](#).

***medRxiv: Is it safe to lift COVID-19 travel bans? The Newfoundland story***

**August 2, 2020.** A modelling study (preprint) noted that a new COVID-19 case would enter Newfoundland and Labrador every other day with the province fully reopening and that

banning air travel from outside Canada is more efficient in managing the pandemic than fully reopening and quarantining 95% of the incoming population. [Article](#).

## Trusted Resources

The Evidence Synthesis Network (ESN) is a collaborative COVID-19 response initiative by Ontario's research and knowledge production community. The [ESN website](#) is a portal where research evidence requests can be made and includes previously completed ESN briefing notes.

An up-to-date and comprehensive list of sources, organized by type of research evidence, is available on McMaster Health Forum's COVID-19 Evidence Network to support Decision-making (COVID-END) [website](#).

## About RAEB

Through research funding, brokering, translating, and sharing, we promote an enhanced evidence use capacity that supports all aspects of health policy, programming, and investment decision-making. Services include:

- Literature reviews
- Jurisdictional scans
- Economic analysis
- Evaluation planning
- Research fund management
- Knowledge translation services

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