COVID-19 PANDEMIC

RAEB'S Evidence Update

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

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RAEB's Rapid Responses for Ontario's Health Sector

Please contact the [Evidence Synthesis Unit](#) for the full read of these rapid responses.

Success and risk factors in the prevention of COVID-19 outbreaks in long-term care homes

The literature that described success and risk factors associated with preventing COVID-19 outbreaks in long-term care (LTC) homes was identified in five jurisdictions (i.e., the United Kingdom [UK], the United States [US], New Zealand, Taiwan, and Hong Kong). Key findings were identified in relation to:

Infection Prevention and Control: This includes access to hand hygiene facilities in the workplace, regular disinfection of high-traffic surfaces, allocating staff to one facility and providing psychosocial support to them, restricting visitors, and conducting diagnostic testing of residents and staff.

Regional Coordination/Organizational Networks: This includes, for example, the development of protocols for the rapid formation of a regional LTC Incident Management Team (IMT) with members from the LTC sector, public health, and relevant specialist units.

Pandemic Management Guidance/Workbook for the LTC Sector: This guidance can include the establishment of: 1) an early LTC facility IMT; 2) essential responsibilities for the executive management team; and 3) a communication strategy (e.g., internal communication, newsletters).

Research Evidence

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

Creating a lottery overseen by state health departments to allocate scarce COVID-19 medications

June 24, 2020. States could create a central registry into which hospitals report the demographics and clinical outcomes of all patients entered into the lottery, including those who are not allocated the drug. This approach could simultaneously accomplish fair allocation and rapid learning (i.e., the lottery creates a natural experiment for researchers that achieves random allocation in which some patients receive the drug while others do not). *Article*.

Nursing home crowding associated with COVID-19 infection and mortality in Ontario

June 23, 2020. A preprint study retrospectively analyzed a cohort of 78,000 residents in 618 Ontario nursing homes, finding that 4,496 (86%) of infections occurred in 63 (10%) nursing homes. Results suggest that converting all four-bed rooms to two-bed rooms would have averted 988 (18.9%) infections of COVID-19 and 271 (18.7%) deaths. *Article*.

Creating a thriving human-centred health system in the post-COVID-19 era

June 23, 2020. Health care leaders can draw on organizational development research to address the expected clinical burnout among health care workers that commonly follow pandemics by recommending strategies, including implementing leadership practices (e.g., flattening hierarchies, investing in front-line workers) and addressing emotional impact (e.g., providing accessible support resources, psychological first aid, ongoing professional counseling). *Article*.

Prescription fill patterns for commonly used drugs during the COVID-19 pandemic in the US

June 23, 2020. An analysis of US pharmacy data in 50 states identified a surge in hydroxychloroquine/ chloroquine prescription fills, likely due to off-label prescriptions for COVID-19. There was a subsequent reduction in longer-term prescription fills, which could indicate decreased availability for patients with systemic lupus erythematosus and rheumatoid arthritis. The sharpest declines were noted for amoxicillin, azithromycin, and hydrocodone-acetaminophen; however, cardiometabolic therapies (amlodipine, atorvastatin, lisinopril, and losartan) remained stable or declined slightly compared with 2019 estimates. *Article*.

Pool testing to identify patients with COVID-19 under conditions of limited test availability

June 23, 2020. A modelling study on pool testing efficiency (i.e., if the results from the pool test are negative, all patients in the pooled sample are declared not to have COVID-19; if the results of the pool are positive, each patient sample is tested individually) reported varied testing results according to prevalence, test sensitivity, and patient pool size. The study recommended that pool testing may be considered as an alternative, especially in circumstances of limited SARS-CoV-2 test availability and a COVID-19 prevalence less than 30%. *Article*.

Assessment of COVID-19 community containment strategies in China

June 22, 2020. A case series study among community-dwelling individuals exposed to or at risk of COVID-19 in China suggested that cooperation among authorities from multiple sectors (i.e., physicians, community managers, and public safety bureau officials) led to the implementation of preventive measures (i.e., community containment strategies for tracking, quarantine, and management) which were associated with limited community transmission of COVID-19. *Article*.

Variation in ventilator allocation guidelines by US state during COVID-19: A systematic review

June 19, 2020. A systematic review found significant variation among 26 publicly available US state guidelines for ventilator allocation, which could cause inequity in allocation of mechanical ventilatory support. *Article*.

COVID-19 and "return to work" policies

June 18, 2020. This article summarized the challenges that commercial establishments face in returning to work and discussed the merits and limitations of various re-opening strategies, ranging from simple measures (e.g., social distancing, telework, symptom screening) to more expensive and elaborate measures (e.g., testing, contact tracing). *Article*.

Approximately one in five individuals worldwide may be at increased risk of severe COVID-19

June 15, 2020. A modelling study estimated that 1.7 billion people (22% of the global population) may have an increased risk of severe COVID-19 due to underlying conditions (e.g., chronic kidney disease, diabetes, cardiovascular disease, chronic respiratory disease), but this risk varies considerably by age. *Article*.

Socioeconomic disparities in travel behaviour during the COVID-19 pandemic

June 15, 2020. A study based in Washington State used administrative and survey data to examine socioeconomic differences in travel behaviour during the COVID-19 pandemic. Travel intensity declined considerably less among less-educated and lower-income individuals who were less able to work from home and cease commuting. *Article*.

Global registry of patients with COVID-19-related diabetes

June 12, 2020. An international group of leading diabetes researchers have established a global registry of patients with COVID-19-related diabetes to establish the extent and characteristics of new-onset diabetes in confirmed COVID-19 patients. *Article*.

Jurisdictional Experience

No evidence of net COVID-19 case growth after Black Lives Matter protests in the US

June 23, 2020. Based on data collected on Black Lives Matter protests in 315 US cities, the US National Bureau of Economic Research reported that net stay-at-home behaviour increased following protests in June 2020 and there is no evidence that protests reignited COVID-19 case growth. *Article*.

Monitoring and evaluation framework to monitor COVID-19 interventions

June 17, 2020. The European Centre for Disease Prevention and Control issued interim guidance to support European Union, European Economic Area countries, and the United Kingdom in their efforts to monitor the implementation and effects of COVID-19 response activities (e.g., how to collect and analyze data for suggested indicators). The framework will assist decision makers and support preparedness and response planning. *Article*.

TRUSTED RESOURCES

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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