FEATURED

- Evidence products produced with our partners
- Research evidence
- Jurisdictional experience
- Trusted resources

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

CONTACT RAEB

Anne Hayes, RAEB Director
Andrea Proctor, Evidence Synthesis
Emre Yurga, Economic Analysis and Evaluation
Erika Runions-MacNeil, Research Planning and Management

EVIDENCE PRODUCTS PRODUCED IN COLLABORATION WITH OUR PARTNERS

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision makers as the pandemic continues. Please contact *Evidence Synthesis Unit* for the full read of these evidence products.

- ### COVID-19 Testing – Evidence and Best Practices
  (Produced in collaboration with McMaster Health Forum, North American Observatory on Health Systems and Policies, and SPOR Evidence Alliance).

  Guidelines recommend COVID-19 testing for symptomatic people based on the likelihood of contracting the infection, or testing that targets specific groups (e.g., home care patients recovering from COVID-19 prior to being released from home isolation, admissions to long-term care facilities, mass or population-wide testing). Asymptomatic testing is not widely used due to risks of false negative results, and uncertainty regarding the true prevalence of asymptomatic cases. Best practices for COVID-19 testing include: 1) testing frequency: a minimum of two negative tests at least 24-hours apart prior to release after being in isolation; 2) location of testing: expand testing capacity and accessibility, and reduce hospital traffic such as through drive-in testing facilities; 3) rationale for testing: based on clinical and epidemiological factors, patterns of transmission, or the availability of tests; and 4) approaches that complement testing: contact tracing supported by leveraging data (e.g., from mobile phones), and self-isolation to complement testing. Ontario is prioritizing COVID-19 testing for: those who have been in contact with a positive COVID-19 case; new hospital admissions; patients being transferred from hospital to home or other health care facilities; and health care providers. Ontario has expanded testing to include asymptomatic persons who request a test or are referred by a physician.

RAEB Research, Analysis & Evaluation Branch
Evidence to Action

Ontario

COVID-19 PANDEMIC – RAEB'S EVIDENCE UPDATE
Highlights of health research evidence synthesized by the
Research, Analysis and Evaluation Branch (RAEB)

• June 15, 2020 •

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.

- **Temperature, humidity, and latitude analysis to estimate spread and seasonality of COVID-19**

  June 11, 2020. A study examining climate data from 50 cities worldwide with and without substantial community spread of COVID-19 suggested that weather modeling may be possible to estimate the regions most likely to be at a higher risk of community spread of COVID-19. *Read*.

- **Sex differences in immune responses to SARS-CoV-2 that underlie disease outcomes**

  June 9, 2020. Based on blood samples collected from 93 men and women admitted to the Yale-New Haven Hospital with mild to moderate SARS-CoV-2 infection, researchers identified sex differences in immune responses during the early phase of SARS-CoV-2 infection (i.e., SARS-CoV-2 specific antibody titers, plasma cytokines). *Read*.

- **Self-reported anosmia and dysgeusia as key symptoms of COVID-19**

  June 8, 2020. A Canadian study found that smell and taste loss may be key symptoms of COVID-19. This evidence can be helpful in the clinical diagnosis of COVID-19, particularly settings of limited testing capacity. *Read*.

- **Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe**

  June 8, 2020. A United Kingdom-based modelling study examining data from 11 European countries up to May 4, 2020 revealed that major non-pharmaceutical interventions and lockdown have had a large effect on reducing transmission (reproduction number [i.e., <1]) to achieve control. *Read*.

- **Changes in SARS-CoV-2 positivity rate in outpatients in Washington State**

  June 8, 2020. SARS-CoV-2 infections in patients seen in Washington outpatient clinics and Seattle emergency department settings peaked in late March and have been declining. These findings suggest that the early and aggressive physical distancing measures enacted in Washington State (i.e., statewide shutdown of bars and restaurants; social gathering limits; and the "Stay Home, Stay Healthy" order) have influenced the course of the COVID-19 pandemic. *Read*.

- **Estimating the effect of large-scale anti-contagion policies on the COVID-19 pandemic**

  June 8, 2020. A United States (US)-based study that compiled and analyzed data on 1,717 local, regional, and national non-pharmaceutical interventions deployed in China, South Korea, Italy, Iran, France, and the US was estimated to prevent or delay 62 million confirmed cases, averting roughly 530 million total infections. *Read*.

- **COVID-19 symptom surveillance tools**

  June 5, 2020. A commentary discussed the importance of mobile symptom surveillance tools that capture COVID-19 symptom data to model population incidence of the disease in the absence of widespread population testing. For example: 1) the COVID Symptom Study app has collected symptom reports from 3.5 million people in the US, UK, and Sweden; and 2) CovidNearYou is a web and text-message-based surveillance tool that has collected over one million reports of COVID-19 symptoms in the US and Canada. *Read*.

RAEB Research, Analysis & Evaluation Branch
Evidence to Action

Ontario

COVID-19 PANDEMIC – RAEB'S EVIDENCE UPDATE
Highlights of health research evidence synthesized by the
Research, Analysis and Evaluation Branch (RAEB)

• June 15, 2020 •

RESEARCH EVIDENCE cont'd

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.

- **COVID-19 active case finding with case management in China**
  June 4, 2020. This research article indicates that case finding and management (i.e., identification and quarantine of close contacts) are important containment measures and are essential in China's pathway forward. *Read*.

- **Understanding heterogeneity to inform the public health response to COVID-19 in Canada**
  June 3, 2020. A Canadian commentary indicated that early modelling for COVID-19 assumed relative homogeneity in risks of infection and outcomes across all individuals. The COVID-19 epidemic in Canada is marked by heterogeneity in risks of infection, spread, and severity across people, places, and time. Leveraging data on heterogeneity to guide nuanced, population, and setting-specific strategies is not new and will require greater effort than universal strategies; it will not be cheap, but it represents a path forward that affirms human rights and aligns with aspirations for equity in Canada's health systems. *Read*.

- **SARS-CoV-2 in environmental samples of quarantined households**
  June 2, 2020. This German (preprint) study that analyzed environmental samples (i.e., air, objects, wastewater) from 21 randomly selected households under quarantine conditions with at least one SARS-CoV-2 positive family member suggested that indirect environmental transmission may play a minor role but needs further study. *Read*.

JURISDICTIONAL EXPERIENCE

- **The role of diagnostic testing in combating COVID-19: Accuracy matters**
  June 5, 2020. Emergency Care Research Institute's (ECRI) position statement on the role of diagnostic testing in combating COVID-19 includes the following take-home messages: 1) testing is critical to help mitigate spread of SARS-CoV-2; 2) without more rigorous clinical validation, available tests may produce incorrect results; 3) misleading test results may cause more infections and deaths than if testing is not conducted at all; 4) manufacturers typically submit only basic performance measures for their assays, such as analytic sensitivity and specificity; and 5) a COVID-19 testing task force of qualified experts in diagnostic testing should be created to provide independent oversight of testing efforts. *Read*.

RAEB Research, Analysis & Evaluation Branch
Evidence to Action

Ontario

COVID-19 PANDEMIC – RAEB'S EVIDENCE UPDATE
Highlights of health research evidence synthesized by the
Research, Analysis and Evaluation Branch (RAEB)

• June 15, 2020 •

JURISDICTIONAL EXPERIENCE cont'd

- **Health department guidance on developing a COVID-19 case investigation and contact tracing plan**
  June 4, 2020. The US Centers for Disease Control and Prevention provides interim guidance to assist state, territorial, local, and tribal health departments develop COVID-19 case investigation and contact tracing plans (e.g., how to scale up staffing roles), recommends procedures for investigating a COVID-19 case, and evaluates success. A case investigation and contact tracing checklist is also available. *Read*.

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.

* Figures in the header: Transmission electron microscope image shows SARS-CoV-2, the virus that causes COVID-19, isolated from a patient in the United States. Virus particles are emerging from the surface of cells cultured in the lab. The spikes on the outer edge of the virus particles give coronaviruses their name, crown-like. *National Institutes of Health's National Institute of Allergy and Infectious Diseases – Rocky Mountain Laboratories*

RAEB Research, Analysis &
Evaluation Branch
Evidence to Action ▥▶

Ontario 🏵