

Rapid Review Report

Review Title:	What is the best evidence to guide the sequence or priority of re-opening each type of healthcare service and how have the closures impacted patients?
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Key Findings

- There are no published or grey literature that directly address the review questions
- A number of principle based guidelines/recommendations/criteria are available and reviewed. It appears that the WHO interim guidance "Considerations in adjusting public health and social measures in the context of COVID-19" is the best piece of evidence available right now. It is included in the reference list below.

Limitations

- At time of writing, official frameworks specific to health services had not been published, existing guidelines focus on the relaxing of public health and economic measures.

GRADE of Evidence: C - Low

A grade of "C" is assigned when further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate. The review may consist of one or more studies with severe limitations.

For more information about how this rating was determined, visit https://www.essentialevidenceplus.com/product/ebm_loe.cfm?show=grade

Background/Context

As the number of new cases of COVID-19 decreases in Saskatchewan consideration is being given to the manner in which the health care system should be re-opened. This review examines the principles and evidence to be considered in doing so as well as the recommendations and experience of other jurisdictions.

Purpose

To provide an evidence base for the re-opening of the Saskatchewan health care system.

Review Question(s)

- What is the best evidence to guide the sequence or priority of re-opening each type of healthcare service and how have the closures impacted patients?

Method

REQUESTED RESOURCES:

- CDC COVID-19 Database
- Google, Google Scholar
- PHAC Website
- WHO Global Research on Coronavirus Disease
- Provincial & Territorial Government sites
- Colleges of Physicians/Surgeons (all provinces)
- Allied health regulators/colleges (i.e. nursing, therapies,
- Ovid MEDLINE / PubMed

LIMITS/EXCLUSIONS/INCLUSIONS:

English

Summary of Evidence

No published literature was identified that directly addresses the review question. Rather, what are available are position papers from international organizations and the guidelines of professional bodies.

Guidelines from WHO, the European Union and the German Ifo Institute recommend criteria to guide the process of reactivating national health care systems following the COVID-19 outbreak. Restrictions should be lifted when circumstances permit:

- COVID-19 transmission is controlled, as demonstrated by a sustained reduction in the number of new infections, hospitalizations and patients in intensive care.
- Sufficient health system capacity exists to deal with a recrudescence of disease when it occurs: an adequate number of available hospital and ICU beds, PPE, pharmaceutical products, trained workforce, secure supply chain.
- Appropriate monitoring capacity exists: robust electronic information systems to monitor health care system needs and capacity, disease surveillance systems, laboratory testing capacity, adequate mechanisms and staff for contact tracing and monitoring.
- The risk in high-vulnerability settings (eg. long term care, personal care and group homes) must be minimized by appropriate staff training, screening of residents and staff, early identification

of outbreaks, rapid intervention and clear protocols for Infection prevention and control and case management.

- Measures to prevent nosocomial transmission are present in all health facilities.
- The public and health workforce are informed and engaged.

Key principles recommended to guide the process include:

- Gradual, phased resumption of health care activity at 2-4-week intervals be pursued while monitoring for any recrudescence of disease or adverse consequences.
- Protection of the most vulnerable groups of the population.
- The risks vs benefits of each aspect of re-opening the healthcare system must be considered. Several jurisdictions have listed services and procedures that they feel provide a favorable risk-benefit ratio (below).

Neither the Royal College of Physicians and Surgeons of Canada nor the Canadian Medical Association has provided guidance regarding the resumption of medical/surgical activity in Canada. The American College of Surgeons and the American College of Physicians have, however, released broad guidelines that may assist the province in its plan.

A summary of current position of given jurisdictions is given below:

- Alberta: COVID-positive cancer patients should have treatment deferred until COVID-19 symptoms have resolved and the virus is undetectable by RT-PCR, unless rapidly progressing disease and risk/benefit ratios favor treatment
- Australia: all category 2 (classified as those that should be seen within 90 days) or equivalent procedures in the private sector and selected category 3 procedures such as IVF can restart
 - Includes all screening programs
 - State specific decisions not yet available
- California: starting to allow procedures such as tumor removals, colonoscopies, heart valve replacements, angioplasties
- Ohio: Phase I allows for resuming the following procedures
 - Mammograms
 - Colonoscopies
 - Cataract surgeries
 - Skin lesion removal
 - Allergy testing
 - Pulmonary function testing
 - Cardiac stress testing
 - Prostate biopsies
 - Joint injections
 - Tonsillectomies
 - Diagnostic imaging
 - Surveillance for cancer recurrence
 - Pain management procedures
- New York: hospitals can resume elective outpatient treatment if hospital capacity remains >25% in the county, fewer than 10 cases are hospitalized in the previous 10 days and the patient has a negative COVID-19 test pre-op

- Arizona: As of May 1, hospitals can resume elective procedures if there is a sufficient PPE stock (14 days), sufficient bed space, the ability to test patients and staff and enhanced cleaning capability
- Utah: Governor stated that they can resume elective procedures in a measured and cautious way
- Arkansas: some elective surgeries allowed as of April 20 if patient has a negative COVID-19 test 48 hours pre-op and procedure does not require an overnight stay
- Texas: loosening restrictions on elective surgeries if they don't deplete hospital capacity or PPE supply



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Appendix: Evidence Search Details

Search Strategies

SUMMARIES, GUIDELINES & OTHER RESOURCES

Royal Colleges/Societies (Canada)

- **Royal College of Physicians & Surgeons**
<http://www.royalcollege.ca/rcsite/documents/about/update-coronavirus-e>
No recommendations.
- **CPSBC**
<https://www.cpsbc.ca/news/COVID-19-updates>
No recommendations.
- **CPSA**
<http://www.cpsa.ca/resources-for-physicians-during-covid-19>
No recommendations.
- **CPSM**
<http://www.cpsm.mb.ca/news/physicians-please-read-latest-update-from-manitoba-health-about-coronavirus>
No recommendations.
- **CPSO**
<https://www.cpso.on.ca/News/COVID-19-Updates/Information-for-Physicians>
No recommendations.
- **CMQ**
<http://www.cmq.org/page/fr/covid-19-suivez-le-fil-de-l-actualite-du-college.aspx>
No recommendations.
- **CPSNB**
No recommendations.
- **CPSNL**
https://www.cpsnl.ca/WEB/CPSNL/COVID-19_Updates.aspx
No recommendations.
- **CPSPEI**
No recommendations.
- **CPSNS**
<https://cpsns.ns.ca/news/covid-19-college-updates/>
No recommendations.
- **Territorial agencies** (Yukon Medical Council, Nunavut Department of Health, Health & Social Services – Gov't of NWT)
No recommendations found.

We also searched the following pages and found no relevant information:

- [Doctors of BC](#)
- [Alberta Medical Association](#)
- [Saskatchewan Medical Association](#)
- [Doctors Manitoba](#)
- [Ontario Medical Association](#)
- [New Brunswick Medical Society](#)

- [Doctors Nova Scotia](#)
- [Medical Society of Prince Edward Island](#)
- [Newfoundland and Labrador Medical Association](#)
- [Yukon Medical Association](#)
- [Society of Rural Physicians of Canada](#)

Other Sources

- Considerations in adjusting public health and social measures in the context of COVID-19: Interim guidance. WHO. 16 April 2020. https://apps.who.int/iris/bitstream/handle/10665/331773/WHO-2019-nCoV-Adjusting_PH_measures-2020.1-eng.pdf
- Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response https://www.who.int/docs/default-source/coronaviruse/covid19-rcce-guidance-final-brand.pdf?sfvrsn=6602b069_1&download=true
- Abele-Brehm A, Dreier H, Fuest C, et al. Making the Fight against the Coronavirus Pandemic Sustainable. Ifo Institut. April 2020. https://www.ifo.de/DocDL/Coronavirus-Pandemic_Strategy.pdf
- Gottlieb S, Rivers C, McClellan MB, et al. National Coronavirus Response: A Roadmap to Reopening. American Enterprise Institute. March 28, 2020. <https://www.aei.org/wp-content/uploads/2020/03/National-Coronavirus-Response-a-Road-Map-to-Recovering-2.pdf>
- Rivers C, Martin E, Watson C. Public Health Principles for a Phased Reopening During COVID-19: Guidance for Governors. Johns Hopkins University. 2020. https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2020/200417-reopening-guidance-governors.pdf
- Local Resumption of Elective Surgery Guidance. American College of Surgeons. April 17, 2020. https://www.facs.org/-/media/files/covid19/local_resumption_of_elective_surgery_guidance.ashx
- Joint Statement: Roadmap for Resuming Elective Surgery after COVID-19 Pandemic. American College of Surgeons. April 17, 2020. https://www.facs.org/-/media/files/covid19/joint_statement_resuming_elective_surgery_after_covid19.ashx
- OPENING UP AMERICA AGAIN: Centers for Medicare & Medicaid Services (CMS) Recommendations Re-opening Facilities to Provide Non-emergent Non-COVID-19 Healthcare: Phase I. U.S. Centers for Medicare & Medicaid Services. April 19, 2020. <https://www.cms.gov/files/document/covid-flexibility-reopen-essential-non-covid-services.pdf>
- Policy and Public Health Recommendations for Easing COVID-19 Distancing Restrictions. Infectious Diseases Society of America. April 16, 2020. https://www.idsociety.org/contentassets/9ba35522e0964d51a47ae3b22e59fb47/idsa-recommendations-for-reducing-covid-19-distancing_16apr2020_final-.pdf
- Rapid Response Report: What is the optimal strategy for assessing patients who were infected with COVID-19 for suitability for starting or resuming cancer treatment?. Alberta Health Services COVID-19 Scientific Advisory Group. April 16, 2020. <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-starting-or-resuming-cancer-treatment-rapid-review.pdf>

- Joint European Roadmap towards lifting COVID-19 containment measures. European Union. https://ec.europa.eu/info/sites/info/files/communication_-_a_european_roadmap_to_lifting_coronavirus_containment_measures_0.pdf

ARTICLES FROM LIBRARY DATABASES

Note: References are sorted by year (newest to oldest)

Research findings were very limited!

We will set up search alerts and surveillance to capture new publications entered into online databases over time.

1. Guest JL, Del Rio C, Sanchez T. The 3 Steps Needed to End the COVID-19 Pandemic: Bold Public Health Leadership, Rapid Innovations, and Courageous Political Will. JMIR Public Health Surveill. 2020;2020/04/03. DOI: 10.2196/19043.; ID: 8419

10.2196/19043

ABSTRACT: The world is experiencing the expansive spread of the virus SARS-CoV-2 in a global pandemic that is placing strains on healthcare, economic and social systems. Commitment to implementing proven public health strategies will require bold public health leadership and courageous acts by politicians. Developing new innovative communication, mitigation and healthcare approaches, particularly in the era of social media is also clearly warranted. We believe that the best public health evidence must inform activities in three priority areas to stop this pandemic: 1) coordinated and consistent stay-at-home orders across multiple jurisdictions, including potential nation-wide mandates; 2) rapid scale-up of SARS-CoV-2 testing; and 3) improving healthcare capacity to respond. The editorial outlines those areas, the rationale behind them, and the call for innovation and the engagement of bold public health leadership to empower courageous political action to reduce the number of people who will die during this pandemic.

DOI: <https://dx.doi.org/10.2196/19043> ; ID: 841910.2196/19043

2. Scarabel F, Pellis L, Bragazzi NL, et al. Canada Needs to Rapidly Escalate Public Health Interventions for Its COVID-19 Mitigation Strategies. SSRN- Lancet prepublication. 2020.

ABSTRACT: Background. After the declaration of COVID-19 pandemic on March 11th 2020, local transmission chains starting in different countries including Canada are forcing governments to take decisions on public health interventions to mitigate the spread of the epidemic. Methods. We conduct data-driven and model-free estimations for the growth rates of the COVID-19 epidemics in Italy and Canada, by fitting an exponential curve to the daily reported cases. We use these estimates to predict epidemic trends in Canada under different scenarios of public health interventions. Results. In Italy, the initial growth rate (0.22) has reduced to 0.1 two weeks after the lockdown of the country on March 8th 2020. This corresponds to a reduction of the doubling time from about 3.15 to almost 7 days. In comparison, the growth rate in Canada has increased from 0.13 between March 1st and 13th, to 0.25 between March 13th to 22nd. This current growth rate corresponds to a doubling time of 2.7 days, and therefore, unless further public health interventions are escalated in Canada, we project 15,000 cases by March 31st. However, the case number can be reduced to 4,000 if escalated public health interventions can be implemented instantly to reduce the growth rate to 0.1, the same level achieved in Italy.

Interpretation. Intervention measures implemented so far in different countries worldwide have been effective in reducing the growth rate and increasing the doubling time, but their effects come with a substantial delay as long as 2 weeks. Prompt and farsighted interventions are critical to counteract the very rapid initial growth of the COVID-19 epidemic in Canada. Mitigation plans must take into account the delayed effect of interventions by up to 2-weeks and the short doubling time of 3-4 days.

Keywords: COVID-19; pandemics; growth rate; public health; intervention measures; Italy; Canada
URL: (March 23, 2020). Available at SSRN: <https://ssrn.com/abstract=3559929>

3. Tang B, Wang X, Li Q, et al. Estimation of the Transmission Risk of the 2019-nCoV and Its Implication for Public Health Interventions. *Journal of clinical medicine*. 2020;9(2):E462. DOI: 10.3390/jcm9020462

ABSTRACT: Since the emergence of the first cases in Wuhan, China, the novel coronavirus (2019-nCoV) infection has been quickly spreading out to other provinces and neighboring countries. Estimation of the basic reproduction number by means of mathematical modeling can be helpful for determining the potential and severity of an outbreak and providing critical information for identifying the type of disease interventions and intensity. A deterministic compartmental model was devised based on the clinical progression of the disease, epidemiological status of the individuals, and intervention measures. The estimations based on likelihood and model analysis show that the control reproduction number may be as high as 6.47 (95% CI 5.71-7.23). Sensitivity analyses show that interventions, such as intensive contact tracing followed by quarantine and isolation, can effectively reduce the control reproduction number and transmission risk, with the effect of travel restriction adopted by Wuhan on 2019-nCoV infection in Beijing being almost equivalent to increasing quarantine by a 100 thousand baseline value. It is essential to assess how the expensive, resource-intensive measures implemented by the Chinese authorities can contribute to the prevention and control of the 2019-nCoV infection, and how long they should be maintained. Under the most restrictive measures, the outbreak is expected to peak within two weeks (since 23 January 2020) with a significant low peak value. With travel restriction (no imported exposed individuals to Beijing), the number of infected individuals in seven days will decrease by 91.14% in Beijing, compared with the scenario of no travel restriction.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32046137>

DOI: 10.3390/jcm9020462

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5. American College of Physicians. Statement on Identifying “Essential Elements” to Ease Social Distancing Protocols, Address White House Guidance to “Re-open” the U.S. <https://www.acponline.org/clinical-information/guidelines>

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<https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-starting-or-resuming-cancer-treatment-rapid-review.pdf>