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Province of Ontario's COVID-19 Response

Science Table – Terms of Reference

Location: Remote – within the Province of Ontario
Duration: 6 months, or until necessary
Number of Members: ##
Reports to: Province of Ontario's COVID-19 Command Table

Background and Context

Our understanding of COVID-19 is evolving rapidly with a substantial volume of new work every day from our universities, research institutes, and agencies. The global volume of scholarship is staggering, making it difficult to parse out what is important and relevant for Ontario, versus what is not. Each individual scientific Table - Modelling Consensus, Evidence Synthesis, and Rapid Response - surfaces some critical developments to the Command Table. Other pieces of relevant evidence are identified at various committees such as the Testing Expert Panel. However, there are significant limits on our ability to synthesize and understand how emerging scientific evidence in Ontario, and globally, could shape our pandemic response.

One of the key challenges that we face is coordination across the Tables. Currently, no Table provides a holistic and comprehensive overview of scientific progress across different critical subject areas (e.g. epidemiology, health policy, infectious disease). For example, there is significant debate over the role of case and contact tracing apps. To estimate the potential value of apps in pandemic control, one needs to draw upon scientific evidence from systematic reviews, epidemiological models, usability studies, as well as ethics and comparative policy studies. No single Table has the capacity to bring together these different types of evidence in order to provide scientific advice for the government, allowing them to make a case for such apps, or to switch their attention. Without actionable scientific information synthesized across different sources, there is little ability to act on emerging evidence. Coordination should support action.

Due to the rapidly evolving nature of COVID-19, new gaps in our understanding and new hypotheses appear almost daily. Likewise, there are new aspects and bodies of evidence constantly emerging from the global literature that are not necessarily garnering attention, but should, given their potential importance. For example, a recent review on social distancing suggests that the value of the 2-metre distancing standard may not be worthwhile outside of healthcare settings.[1] Finally, with an unclear pathway for scientific advice, it is easy for pseudoscience to garner public attention, and little ability to fully mobilize the scientific talent across Ontario to provide advice.

[1] Chu DK et al. Physical distancing, face masks and eye protection to prevent person-to-person transmission of SARS-2 and COVID-19: A systematic review and meta-analysis. The Lancet, 2020; available at https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(20)31142-9.pdf

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All of these challenges lead to two problems. First, it is not clear to leaders in the field (e.g. hospital CEOs and MOHs) whether emerging evidence has been considered and applies to them. This can result in implementation setbacks and the unnecessary reworking of the same questions. Second, transparency can help provide clarity and bring credibility to the decision-making process, making it easier for the public to understand, adjust, and cooperate as new evidence and guidance emerge.

Purpose

- To synthesize and report on emerging evidence to inform Ontario's response to the COVID-19 pandemic.
- To provide a weekly written synoptic summary of this synthesis to the Command Table, after which the report will be published.

Objectives

The Science Table will work with the current scientific Tables and leading scientific experts in key COVID-19 fields to:

i. Collect and summarize, on a weekly basis, the key insights developed at the current scientific Tables (i.e. Evidence Synthesis, Modelling Consensus, and Rapid Response) and from work conducted at, or commissioned by, Public Health Ontario, Public Health Units, and research institutes (e.g. IC/ES). This synthesis will extend to scientific studies produced by Ontario's universities and the Health Data Platform initiative.

ii. Provide a weekly synoptic summary of important scientific evidence for the Command Table, integrating inputs from existing Tables, Ontario's universities and agencies, and the best global evidence in the following four key domains:
    - COVID-19 epidemiology and public health interventions (e.g. modelling estimates, evidence on public health interventions)
    - Infectious disease and clinical care of COVID-19 (e.g. advances in treatment and IPAC across different clinical settings)
    - Health policy and economics (e.g. economic impact of public health measures)
    - Health equity and social care/education (e.g. safe school opening, impact of COVID-19 on racialized populations)

iii. Identify key gaps in evidence and work with existing Tables, universities, and agencies to fill these gaps on a rapid basis;

iv. Share information, where relevant, with expert panels currently considering different policies (e.g. Public Health Measures Table and Testing Expert Panel); and

v. Provide an on-demand service to the Command Table, reviewing and critiquing the underlying evidence – however defined – for policies under their consideration. This service will utilize our existing Tables and a network of Ontario and global experts.

Process

The Science Table follows a nine-day cycle with three meetings each week:

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- The first meeting will be a working session on Thursday, where all Table members review materials that have been collected by the Table's Secretariat and review questions from the Command Table. At this meeting, the Science Table will identify key pieces of evidence for the upcoming report in each category and will also provide advice on the contextualization of the evidence for Ontario. Members will also identify a list of priority research questions and the Table(s) that can answer these questions quickly.
- The second meeting, on the Tuesday of the following week, will finalize the draft report for the Command Table. Only members with direct input into the report are required to attend. This report will then be shared with Command Table members on Wednesday.
- The third meeting, on the following Friday, will be a discussion by the co-Chairs with the Command Table of all relevant findings. At this point, the Science Table will have had the chance to identify newly emerging topics for the following cycle, before providing this cycle's briefing to the Command Table.

Additionally, the Science Table will meet on an ad hoc basis to deal with rapid requests from the Command Table.

On Mondays, the Science Table will post the Scientific Reports online for broad consumption, and will maintain an email address to receive comments and feedback. This will also provide an opportunity for the Table to engage an even wider community of researchers and data producers.

Membership and Support

The Science Table will be chaired by two independent public health experts, Dr. Adalsteinn Brown and Dr. Brian Schwartz.

Representatives from Ontario Health, Public Health Ontario and key leaders in the health system have been identified by the Ministry and will attend the Science Table. Internationally-recognized experts from across Ontario, in each domain, have been identified through soliciting nominations from the Vice-Presidents of Research at each Ontario University. There is no compensation for serving on the Science Table.

The Table's Secretariat will be headed by the Scientific Director, Dr. Peter Jüni, an internationally recognized scientific leader with depth across two of the key domains, and supported by five experienced staff and students from leading academic units. Funding for this attachment will be provided by these units. The Table will be hosted by the Dalla Lana School of Public Health to allow nimble posting of updates and access to evidence.

Term

The Science Table will work for six months, producing weekly reports, or until it is no longer needed by the Command Table. After six months, the process of providing scientific evidence will be reviewed, and if the Table is still deemed useful by the Command Table, it will continue for another six months.