

Using Synthesized Research Evidence to Inform the COVID-19 Response

2020 National Health Research Conference, 18 November 2020

John N. Lavis, MD PhD

Co-Lead, COVID-END

Director, McMaster Health Forum

Director, WHO Collaborating Centre for Evidence-Informed Policy

Professor, McMaster University



HEALTH FORUM



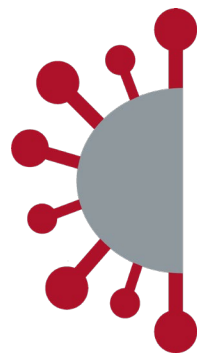
The Ottawa
Hospital
Centre for Implementation
Research

Acknowledgements

- Funding for COVID-END
 - Government of Ontario (through a grant to Rapid-Improvement Support and Exchange, or RISE), which supports the locally focused parts of our work
 - National Institute of Health Research (Evidence Synthesis Program), UK
 - Individual donors through the Centre for Effective Altruism and Fidelity Charitable, USA, and private individual donors

COVID-END

- **Time-limited network** that has come together in response to the COVID-19 pandemic to help
 - Those supporting decision-making about COVID-19 to find and use the best available scientific evidence (i.e. evidence-demand side)
 - Researchers to avoid waste by reducing duplication in and better coordinating the COVID-19 evidence syntheses, technology assessments & guidelines being produced (i.e., evidence-supply side)
- Partners include **50+** of the world's leading evidence-synthesis, technology-assessment, and guideline **groups**
- Covers the **full spectrum** of pandemic responses
 - Public-health measures, clinical management, health-system arrangements, and economic & social responses
 - High-income and low-and-middle-income country contexts



COVID-END

COVID-19 Evidence Network
to support Decision-making



AGENCY FOR
**CLINICAL
INNOVATION**



- Centre for
- Evidence
- Based
- Health
- Care



Cochrane
France



Cochrane
Ireland



- Evidence
- Synthesis
- International



EVIDENCE SYNTHESIS
IRELAND



The Global Evidence
Synthesis Initiative



HTAI HEALTH TECHNOLOGY
ASSESSMENT INTERNATIONAL



International
Initiative for
Impact Evaluation



M Evidence
Ecosystem
Foundation



**McMaster
PLUS**



Ministério da Saúde
FIOCRUZ
Fundação Oswaldo Cruz
Brasília



National Collaborating Centre
for Methods and Tools
Centre de collaboration nationale
des méthodes et outils



Norwegian Institute of Public Health



SPOR
Strategy for Patient-Oriented Research
**EVIDENCE
ALLIANCE**



COVID-END Resources for Those Supporting Decision-making (<https://www.covid-end.org>)

- **Inventory of ‘best’ evidence syntheses for COVID-19 decisions**
- **Horizon scans for emerging issues**
- Community of those supporting decision-making
- Living hub of COVID-19 knowledge hubs
- Additional supports
 - Guide to COVID-19 evidences sources
 - Evidence-packaging resources
 - Evidence-support models
 - Tips and tools

COVID-END Resources for Researchers

(<https://www.covid-end.org>)

- Priorities for new evidence syntheses and guidelines (coming soon)
- **Supports for evidence synthesizers**
- Supports for guideline developers (coming soon)

Case for Doing Things Differently As We Transition from a Sprint to a Marathon

- Remarkable number of single studies being published everyday has created a very **high noise-to-signal ratio**;
- One-off reviews on long-term and recurring issues are quickly **out of date**
- Many rapid (and full) reviews are of **low quality**
- Few reviews about interventions provide a GRADE evidence profile that speaks to the **level of certainty** of the available evidence
- Too many evidence syntheses address the **same topic** (e.g., >200 prognostic reviews and only 5 such reviews address ≥ 5 factors)
- Too many key decisions have **no available evidence synthesis** (let alone a living evidence synthesis that is updated as new studies are published)
- The small number of existing **living evidence syntheses** often address same topic (e.g., 3 living network meta-analyses of COVID-19 treatments)

Case for Doing Things Differently As We Transition from a Sprint to a Marathon (2)

- More on the high noise-to-signal ratio →
Start with recently updated, high-quality **evidence syntheses, which**
 - Reduce the likelihood that decision-makers will be **misled** by research (by being more systematic and transparent in the identification, selection, appraisal, and synthesis of studies)
 - Increase **confidence** among decision makers about what can be expected from an intervention (by increasing the number of units for study)
 - Allow decision makers to focus on **how findings do or don't vary by context and population (ideally using an explicit equity lens) and hence what the evidence means for a specific jurisdiction at a specific moment in time**
 - Allow stakeholders, including public interest or civil society groups, to **constructively contest** research evidence because it is laid out for them in a more systematic and transparent way
- These evidence syntheses are distinct from **jurisdictional scans**

What Does the Marathon Look Like?

- **Inventory of best evidence syntheses** for COVID-19 decisions
 - 'Best' defined by recency of search, quality of review, and GRADE evidence profile availability
 - Declarative title to facilitate relevance assessments (e.g., PICO and certainty level)
 - Additional information about 'living' status, synthesis type, and synthesis question
- **Horizon scans** for emerging issues and topic prioritization
 - Monthly briefing note drawing on horizon scans from around the globe
 - Monthly meeting of a panel of 36+ diverse strategic and 'out-of-the-box' thinkers and doers (with diversity defined in relation to our taxonomy, target audiences, WHO regions, and primary languages spoken)
- **List of priority topics** for living evidence syntheses (and efforts to encourage, nudge and cajole teams to take them on)
- **Robust local efforts to contextualize** the evidence for decision-making
 - E.g., rapid-evidence profiles in 4 hours, 1 day, 2 days or 3 days (which provide both 'best evidence' and jurisdictional scans)

Where Are We in the Transition to Marathon?

- Inventory of best evidence syntheses for COVID-19 decisions (as of 13/11)
 - **3,300+ harvested** (with PROSPERO protocols our only key source outstanding)
 - 2,400+ non-duplicates
 - 1,100+ decision-relevant syntheses included in database
 - **150+ included** in inventory based on three criteria for 'best' evidence syntheses
- Horizon scans for emerging issues and topic prioritization
 - Four monthly panel meetings to date (with all **reports available on our website**)
 - Starting to use up and down voting for priority topics for evidence syntheses
- List of priority topics for living evidence syntheses (and efforts to encourage, nudge and cajole interdisciplinary teams to take them on, plus tips for teams)
 - **First draft of the list will be posted any day** and team building to begin soon

What's on our List of Priority Topics for Living Evidence Syntheses?

- Public-health measures
 - Supporting **adherence** to measures, including better communicating the rationale including trade-offs (including in politicized contexts and for politicized issues)
 - **Strategies** for testing and for test-track-trace approaches that optimize the use of existing capacity
 - Outbreak **contributors** (from interdisciplinary outbreak studies)
 - Surveillance, analytic and synthesis **capacity** in public-health units **and linkages** to other parts of the health system
- Clinical management of COVID-19 and pandemic-related conditions
 - **Long COVID** (among people without severe COVID) and/or long-term sequelae of severe COVID
 - Screening for and managing emergent **mental health** and substance use issues
 - **Concurrent management** of COVID-19 and other (seasonal) infections
 - Emergence of **endemic diseases** in urban environments

What's on our List of Priority Topics for Living Evidence Syntheses? (2)

■ Health-system arrangements

- Managing **vaccine** purchasing, allocation, ordering, distribution and inventories under shortage conditions, leveraging vaccine trust and addressing vaccine hesitancy, and capturing lessons learned from roll-outs
- Approaches to **strategic purchasing** of supplies and equipment (e.g., personal protective equipment and liquid nitrogen for vaccine storage) that balance accountabilities up & out
- Responsive and agile
 - Restoration of **non-COVID services** when possible (by developing or capitalizing on 'slack' within health systems)
 - Efforts to address **health human resource** shortages (and motivation & wellbeing)
- Consolidating and optimizing the value achieved through shifts in **virtual care**
- **Packages of responses** (public-health / health-system) and **combinations of centralized & decentralized approaches** (from studies of variations in response to local and regional outbreaks and/or changes in incidence rates)

What's on our List of Priority Topics for Living Evidence Syntheses? (3)

- Economic and social responses
 - **Culture and gender** - Additional risks of **gender-based and domestic violence** arising from restrictions and appropriate ways to address such violence
 - **Education** - Benefits and harms to students, educators and families arising from **school** closures, re-openings and **operations** as well as for pedagogical innovations that can support ongoing education
 - **Financial protection** - Enhancing **financial security** by adjusting 'safety nets' and supporting workforce (re)training
 - **Food safety and security** – Approaches to addressing food supply-chain challenges and **food poverty**
 - **Climate action** – Additional risks of **environmental crisis** and maximizing the opportunity for synergies between the COVID-19 response and climate action
 - **Transportation** - Managing the risks related to **tourism** and **travel**
 - **Citizenship** - Linking **community participation** in the pandemic response with outcomes and capturing innovations in participatory approaches

Tips for Teams Taking Up Priority Topics for Living Evidence Syntheses

- Consider committing to explicitly
 - Foreground **equity** considerations
 - Examine **benefits and harms** (health outcomes but also economic and social outcomes), citizen experiences, and costs
 - Acknowledge variation in **government capacity**
- Consider **interdisciplinary teams** (e.g., laboratory, IPAC, engineering, data modeling, outbreak studies, behavioural & social sciences, equity, science communication and citizens) alongside methodological experts
- Consider committing to **explicit cycles or triggers for updating** living evidence syntheses (and/or at least to finding a home for an evidence synthesis when an emergent issue becomes long-term or recurring and needs to become a living evidence synthesis)



COVID-END

COVID-19 Evidence Network
to support Decision-making

COVID-END

<https://www.covid-end.org>

