

COVID-END: Moving from Sprint to Marathon in the Evidence Response to COVID-19

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COVID-19 pandemic

- The COVID-19 pandemic is one of the greatest health and societal challenges that the world has collectively faced in many decades
- Policy, public health, clinical and individual decision makers are actively seeking evidence on prevention, management and mitigation of the health, social and economic impacts of COVID-19
- There has been a dramatic global increase in basic and applied health (and to a lesser extent social and economic) research
- However individual studies rarely sufficient by themselves to inform policy, public health, clinical or individual decisions

Evidence to inform decisions

- Evidence syntheses that ‘use formal explicit rigorous methods to bring together the findings of studies already completed and to provide an account of the totality of what is known from that pre-existing research, should be used to inform decisions.’

Gough (2020). *Systematic Reviews*

Evidence syntheses

- Evidence synthesis methods exist for a wide range of types of questions:
 - Reviews of basic science studies
 - Reviews of epidemiological data
 - Reviews of diagnostic test performance
 - Reviews of effectiveness of therapeutic and preventive interventions

Benefits of using evidence syntheses to inform decision-making (1)

- 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)

Benefits of using evidence syntheses to inform decision-making (2)

- Allow decision makers to focus on appraising the local applicability of systematic reviews (instead of also having to find and synthesize studies on their own)
- 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 & transparent way

Evidence synthesis during the sprint phase (1)

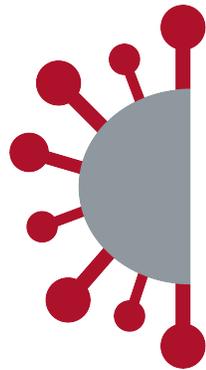
- Substantial increase in evidence synthesis (and supporting) activities
- Lots of new entrants to the field
- Focus on rapid reviews (largely) on clinical and public health topics
- Variable quality and transparency of reviews
- Duplication of effort
- Discoverability and longevity of (rapid) reviews uncertain
- Relatively few living systematic reviews/guidelines
- Evidence synthesis capacity and conduct issues in LMICs

Evidence synthesis during the sprint phase (2)

Noise-to-signal problem

COVID-END's Focus

- COVID-END is a **time-limited network** that has come together in response to an 'exogenous shock' (COVID-19) to collaboratively advance the evidence (synthesis) ecosystem in a way that
 - Makes the most of an explosion of interest in and demand for evidence synthesis (in part by reducing the noise-to-signal ratio)
 - Makes the evidence (synthesis) ecosystem even more robust and resilient in future
 - Strengthens existing institutions and processes
- COVID-END's work can also help to make the most of investments in primary research as well as in methodological research and infrastructure



COVID-END

COVID-19 Evidence Network
to support Decision-making



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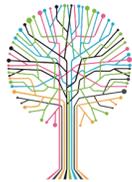
- Centre for
- Evidence
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- Health
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- Evidence
- Synthesis
- International



EVIDENCE SYNTHESIS
IRELAND



The Global Evidence
Synthesis Initiative



Scottish Charity No: SC 03404



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



SPOR
Evidence Alliance



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

- 1) Regularly updated **guide** to key COVID-19 evidences sources, which can be used to quickly review high-yield, high-quality sources of evidence to respond to decision-makers' urgent questions
- 2) **Living hub of COVID-19 knowledge hubs**, which can be used to identify organizations that are already supporting decision-making with a specific topic or sectoral focus, with a specific type of resource (e.g., recommendations, evidence syntheses or data), and/or with a specific geographic or linguistic scope [**searchable version coming soon**]
- 3) **Taxonomy of decisions** where evidence will be needed, which spans public-health measures, clinical management of COVID-19 and pandemic-related health issues, health-system arrangements, and economic & social responses

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

- 4) Principles and resources to support **evidence packaging** for decision-makers
- 5) Description of an **evidence-support model** that can provide responses to decision-makers questions – both what's known and who's doing what – in timelines as short as 3-4 hours
- 6) **Tips and tools** for those supporting decision-makers
- 7) **Resources to support researchers** considering or conducting an evidence synthesis (with an interactive flow diagram)
- 8) WHO requested COVID-END to join its secretariat function for the **WHO Evidence Collaborative for COVID-19**

Evidence synthesis during the marathon phase (1)

The world will be best served by:

- A global stock of high quality, accessible and actionable, living systematic reviews addressing the most important healthcare, public health, **health system, economic and social** issues faced by decision makers.
- Evidence synthesis capacity to undertake high priority syntheses efficiently where needed (where high quality living systematic reviews are not available)

Evidence synthesis during the marathon phase (2)

The world will be best served by:

- Local evidence support initiatives to enable decision makers to find, interpret and contextualise the best evidence to meet their needs
- A global evidence infrastructure that builds on existing organisations to deliver coordination and prioritisation, and ensure efficient conduct and sharing of high-quality evidence syntheses
- Secure funding to support the entire evidence eco-system

Priorities: 1) Inventory

- Inventory of ‘best evidence syntheses’ for all types of decisions being faced by those who are part of the COVID-19 pandemic response, which will save time and avoid duplication for those providing ‘front-line’ decision support in government (who can then focus on what the evidence means for their context)
 - Evidence syntheses harvested from sources in COVID-END guide
 - Filters applied for all parts of the COVID-END taxonomy of decisions (COVID-focused for all parts and often COVID-relevant too for health-system arrangements and economic & social responses)
 - ‘Best evidence syntheses’ rank-ordered within any given ‘row’ in taxonomy, based on
 - Date of search (e.g., 2020-07-01)
 - Quality (AMSTAR) rating (e.g., 8/11)
 - Evidence profile available (e.g., yes, with hyperlink)
 - Re-worded title with details to support relevance assessment (e.g., participants, exposure / intervention / phenomenon, and outcomes)

Priorities: 1) Inventory (and Sharing)

- Inventory (continued)
 - Additional decision-relevant information profiled
 - **Living** evidence document (e.g., yes)
 - Type of synthesis (e.g., full review, rapid review, protocol)
 - Type of question (e.g., benefits & harms, costs, views and experiences, how & why it works)
- COVID-END's '**improve my RIS file service**' will enable value-added data sharing across different group's workflows (e.g., Cochrane, Norwegian Institute of Public Health, UNCOVER)

Priorities: 1) Inventory [Under Construction]

Broad and specific decisions		Criteria for 'best evidence synthesis'			Details to support relevance assessment
		Date of last search	Quality (AMSTAR) rating	Evidence profile	Key findings
	Wearing masks	2020-06-02	7/10	No	Limited evidence from observational studies shows that face mask use may be effective at reducing respiratory virus infections, with stronger evidence from healthcare settings compared to community settings (Last update 13 Aug 2020)
		2020-05-03	9/11	Yes	Large reductions in risk of viral infections may be possible with the use of masks, with N95 or similar respirators more likely to lead to greater reductions compared to disposable surgical masks or other reusable masks (Last update 13 Aug 2020)

Broad and specific decisions		Criteria for 'best evidence synthesis'			Details to support relevance assessment	Additional decision-relevant details			Citation
		Date of last search	Quality (AMSTAR) rating	Evidence profile	Key findings	Living evidence synthesis	Type of synthesis	Type of question	

Priorities: 2) Horizon Scanning

- Global horizon-scanning panel, comprised of diverse strategic and ‘out-of-the-box’ thinkers and doers, to proactively identify both **long-term and emergent issues** that need to be prioritized in efforts to synthesize the best available research evidence to support decision-making about COVID-19
 - Diverse in their coverage across the parts of the taxonomy and the four key target audiences (citizens, providers, policymakers and researchers)
 - Diverse in terms of WHO region and primary language
- Main focus is to identify priorities for **living reviews** on recurring priorities (and full or rapid reviews on one-off priorities) as we **transition from a sprint to a marathon**

Priorities: 3) Living Systematic Reviews

- In the short-term
 - Create a list of **priority topics** where living systematic reviews are needed (based upon our inventory and horizon-scanning activities)
- In the medium-term
 - Cajole, encourage and nudge groups to collectively take **responsibility** for a full set of living reviews addressing all priority issues related to the pandemic and pandemic response

Priorities: 4) COVID-END Community Listserv

- **Targets individuals with the following attributes**
 - Creating and/or using evidence syntheses, technology assessments, and/or guidelines as the focus of their support to decision-making about COVID-19
 - Engaging with decision-making about COVID-19 by citizens/service users, providers, and/or health- and social-system policymakers
 - Keen to learn from others about how to support decision-making about COVID-19 and willing to explore challenges and/or share experiences through online discussions
 - Share the values of the COVID-END partnership
- **250+ members** from around the globe, and counting
- Vibrant list **discussion topics and facilitators**
- Complemented by a soon-to-launch **webinar series**
- Plan to summarize and share the **insights** from both organized topic discussions and ad hoc interactions

Summary

- The explosion of primary COVID related research needs to be appraised and summarized in evidence syntheses
- Opportunity to move **FROM** initial high ‘**NOISE**-to-signal’ evidence phase (rapid reviews, variable quality, quickly out-of-date, huge duplication of effort, pick-your-own) **TO** high ‘**SIGNAL**-to-noise’ evidence phase (curated, high-quality, living evidence syntheses and evidence-support initiatives)
- Requires evidence synthesis and evidence support organizations to co-ordinate activities with key decision-making bodies (eg WHO) and funders globally

Keep Up To Date and/or Share Your Insights

- Website – <https://www.covid-end.org>
 - Resources to support researchers
 - Guide → Inventory [under construction]
 - Horizon-scanning panel’s monthly briefing notes and panels summaries → List of gaps in living systematic reviews
 - COVID-END Community listserv – <https://www.jiscmail.ac.uk/cgi-bin/webadmin?SUBED1=COVIDEND&A=1>
- Email – c/o covid-end@mcmaster.ca
- Twitter – @covid_e_n_d