COVID-END: Achievements, Priorities and Opportunities to Draw on this Work to Achieve Greater Value for Money When Commissioning or Funding COVID-19 Research

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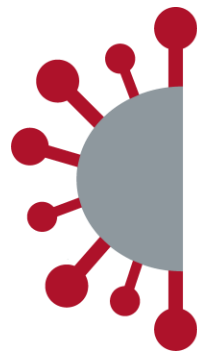   - Probably many or most research funders on the call

Background – We've Never More Needed…

- Scientific evidence across all dimensions of the pandemic and response
- Evidence syntheses given the explosion of scientific research
- Living evidence syntheses given the pace of scientific advances
- Quality appraisals of evidence syntheses given 'new entrants' to the field
- Evidence contextualization for specific contexts
- Effective communication of high-quality, locally contextualized findings
- Decision support with high-quality, locally contextualized findings

- To avoid unnecessary duplication and enhance coordination (i.e., to avoid waste in all of the above) and to strengthen existing institutions and processes while doing it, which is where funders can play a key role

Background – 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

Background – COVID-END's Principles

- Three of the seven principles that underpin COVID-END's work
  - Supporting (not competing with or replacing) well-positioned organizations that are working in close partnership with key target audiences and already responding to their evidence needs
  - Supporting – with a common brand/identity, small agile secretariat, and simple working group structure – a distributed network of organizations and individuals to play to their comparative advantages and leverage one another's work
  - Seeking out quick wins for those supporting decision-makers and among those involved in preparing evidence syntheses, technology assessments and guidelines, and taking measured steps to longer-term solutions that can better support decision-makers

Background - COVID-END's Working Groups

1) Scoping where support and coordination is most needed and what principles should underpin such support and coordination

2) Engaging those already supporting decision-makers to work in more coordinated and efficient ways

3) Digitizing as many aspects of the work as possible to facilitate coordination and capture efficiencies

4) Synthesizing the evidence that already exists in ways that are more coordinated and efficient and that balance quality and timeliness

5) Recommending evidence-based approaches in ways that are more coordinated and efficient and that balance quality and timeliness

6) Packaging evidence and guidelines in ways that meet the needs of citizens, providers, policymakers and researchers in different contexts and languages

7) Sustaining the efforts that strengthen institutions and processes so that we are even better prepared for future challenges

Seven 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

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

Seven 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 three 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)

Priorities: 1) COVID-END Community Listserv

- Reached out to 20+ networks to identify individuals with the following attributes to invite them to join the listserv (and community of practice)
  - 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
- Created a list of discussion topics and facilitators
- Developed an approach to summarizing and sharing the insights from both organized topic discussions and ad hoc interactions
- Join the COVID-END Community listserv

Priorities: 2) Inventory (and Sharing)

- 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 bi-weekly 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: 2) 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)

Rough Example of What the Inventory Will Look Like (Hiding and Not Hiding Columns)

Broad and specific decisions	Criteria for 'best evidence synthesis'			Key details to support relevance assessment
	Date of last search	Quality (AMSTAR) rating	Evidence profile	Title
Infection prevention				
Personal protection				
Washing hands				

Broad and specific decisions	Criteria for 'best evidence synthesis'			Key details to support relevance assessment
	Date of last search	Quality (AMSTAR) rating	Evidence profile	Title
Citizenship				
Community engagement				
Civil-rights violations				
Elections				
Climate action				
Climate-action focused economic stimulus				

Priorities: 3) 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)
  - Diversity 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: 4) 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

Implications for funding evidence synthesis and related activities to enhance value

Our assumptions (1)

- The world will be best served by:
  - A global stock of high quality, open-access living systematic reviews covering (80% of) key (healthcare, public health, health system, economic and social) issues faced by decision makers (to allow them to focus on contextualization of evidence within their setting
  - Evidence synthesis capacity (and funding) to undertake priority syntheses where high quality living systematic reviews are not available
  - Local evidence-support initiatives that can support decision makers to find and interpret best evidence
  - Global evidence synthesis infrastructure (building wherever possible on existing evidence synthesis organisations) to facilitate efficient conduct and sharing of evidence syntheses

Our assumptions (2)

- The global research funding community is key to achieving this vision (whilst ensuring value of commissioned evidence syntheses)

Commissioning evidence syntheses (1)

- Important to recognize the need for syntheses relevant to healthcare, public health, health system and, economic and social issues

- Commissioning calls for evidence syntheses could recommend applicants review the COVID-END resources for researchers

- If directed call, frame around evidence gaps that are locally/regionally important. Funders can use the COVID-END inventory of trustworthy resources, horizon scanning reports and living systematic review priority list

- If open call, require applicants to provide evidence that high quality up-to-date resources are unavailable for their topic of interest (for example by searching the COVID-END inventory of trustworthy resources, PROSPERO)

- (Note: some replication of reviews should be encouraged)

Commissioning evidence syntheses (2)

- Consider commissioning for medium to long term
    - current priorities are likely to remain relevant for the next 2-3 years
    - given the explosion of research, evidence syntheses will rapidly become outdated
    - consider building in funding for updates (preferably as living evidence syntheses) over a 2-3 year time scale

- (Resources required to 'maintain' a living systematic review likely substantially less than resources required to do initial review (and repeated 'one-off' updates))

Commissioning evidence syntheses (3)

- Encourage applicants to follow best methodological practices and available software platforms

- Encourage applicants to work with established institutions (eg Cochrane, Campbell) that will provide additional methodological and editorial support and increase likelihood of high-quality reviews and their longevity

- Require full and transparent reporting (PROSPERO registration, public availability of protocols, full data sharing)

- Encourage diverse packaging/products to meet the needs of different stakeholders (if possible think about multi-lingual presentation)

- Resources for applicants could include COVID-END Resources for researchers and Evidence packaging resources

Commissioning evidence-support initiatives (1)

- Important to recognize the need for evidence-support initiatives relevant to healthcare, public health, health system and economic and social issues

- Funders may wish to consider whether to support existing evidence-support initiatives rather than undertake an open call (eg by searching the living hub of COVID-19 knowledge hubs)

- In commissioning call, encourage applicants to review the:
  - COVID-END Tips and tools for those supporting decision-makers
  - Principles and resources to support evidence packaging for decision-makers
  - COVID-END inventory of 'best evidence syntheses' to ensure they're supporting the use of best evidence

Commissioning evidence-support initiatives (2)

- Promote variety of push, pull and linkage and exchange activities targeting specific stakeholders (informed by COVID-END resources to support decision makers)

- Promote (or require) making available primary and derivative products for searching and re-use (a sort of open-access licencing) and the sharing of meta-data across platforms (through the 'improve my RIS file' service)

Commissioning evidence synthesis infrastructure and methods

- Consider opportunities to support core evidence synthesis infrastructure including
    - Evidence synthesis organisations
    - Development/maintenance/integration of software platforms
    - Core global resources eg PROSPERO

- Consider funding methodological research and resources

Commissioning primary research

- Point everyone to
  - Inventory of 'best evidence syntheses' to ensure they're filling a gap in the primary studies included in these syntheses
  - COVID-END partner evidence maps (e.g., EPPI-Centre, Norwegian Institute of Public Health) and databases (e.g., L*VE, McMaster PLUS, TRIP, UNCOVER, VA) listed in the guide to COVID-19 evidences sources
  - Horizon-scanning reports to ensure they're addressing a need
  - Other resources beyond COVID-END
    - COVID-19-COS for core outcomes

Implications for peer review

- Ensure adequate evidence synthesis expertise in peer review panels
- Encourage peer reviewers to use COVID-END resources when judging the merit and quality of the application (eg point peer reviewers to the COVID-END Inventory of best evidence syntheses and Resources for researchers)

- Consider the overall coverage of commissioning decisions (eg to avoid commissioning multiple syntheses in the healthcare area but none in the economic and social sectors)

Summary

- The explosion of primary COVID related research needs to 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)

- Research funders key to driving this change and enhancing value

- COVID-END lessons may be relevant to producing more effective and efficient global evidence synthesis community beyond the current pandemic

Keep Up To Date and/or Share Your Insights

1) Website – https://www.covid-end.org
2) Email – c/o covid-end@mcmaster.ca
3) Twitter – @covid_e_n_d
4) COVID-END Community listserv – https://www.jiscmail.ac.uk/cgi-bin/webadmin?SUBED1=COVIDEND&A=1