COVID-END global horizon-scanning panel
May briefing note for global panelists
(Last updated 24 May 2021)

Current pandemic context

Confirmed COVID-19 cases are now over 167 million worldwide and COVID-19-attributed deaths are approaching 3.5 million. The number of new cases is trending downward again. Approximately 1.7 billion vaccination doses have been administered thus far, and approximately 10% of the world's population is has received at least one dose.

Potential issues for consideration from the scan

To inform panelists' deliberations about emergent issues (or previously missed long-term and recurring issues) that may need to be prioritized, the COVID-END team has prepared the following bulleted summary of issues identified through available documents (e.g., academic journals and magazines), websites (e.g., international organizations and traditional media), and social media (e.g., Twitter), which are organized using the four parts of the COVID-END taxonomy of decisions related to COVID-19.

1) **Public-health measures**
   - Growing mistrust of, and inconsistent and delayed messaging from, government and scientific guidance bodies
   - Reimposing public-health measures as COVID-19 cases again increase and as the new India variant spreads in countries such as the United Kingdom
   - Increasing rejections of public-health measures in the United States as growing number of states pass bills that forbid schools and universities from enforcing a mask mandate

2) **Clinical management of COVID-19 and pandemic-related conditions**
   - Political views, use of traditional vs social media, and marketing efforts influence what information about vaccines and COVID-19 generally is seen
   - Physical attacks on health workers are increasing , especially where health systems are unable to keep up with COVID-19 demands

3) **Health-system arrangements**
   - Using private clinics to deliver government-funded procedures, re-opening unused operating rooms and other strategies are being used to address the procedures backlog
   - Managing COVID-19 vaccine supplies as expiration dates grow near

4) **Economic and social responses**
   - Acknowledging lessons learned about airborne infections and indoor air quality to advance a new paradigm in infrastructure design and regulation that recognizes the importance of respiratory infections as an important environmental-health concern
   - Increasing calls to build the capacity to manufacture vaccines and other critical products in low- and middle-income countries to enhance health security and reduce dependency
   - Optimizing active labour-market policies to connect people with jobs and accelerate recovery from the pandemic

The team has also prepared a more detailed appendix containing lists of hyperlinked descriptors of the issues addressed in identified documents, websites and social media (Appendix 1).

Potential top priorities for 'living' evidence syntheses where they are currently lacking

To inform panelists' deliberations about top priorities for 'living' evidence syntheses, we are sharing topics prioritized at the April 2021 panel meeting. The following list reflects the re-ordering of topics by panelists, changes to the wording of topics by panelists (highlighted in yellow), and the addition of new topics by panelists (with these new rows added to the bottom of each part of the list and with a blue row header). Topics for which at least some evidence syntheses are available have a light-green row header, and topics for which we are aware of existing or planned living evidence syntheses have a dark-green row header.

Rank	Prioritized topics from panel
Cross-cutting	
1	Understanding real-world comparative **vaccine effectiveness** (in addition to trials data about safety and efficacy), including in relation to variants of concern, and the implications for public-health measures (e.g., vaccine substitution and timing for second dose; changes to infection prevention and control measures; and when herd immunity will be reached) and health-system arrangements (e.g., PPE, cohorting, and HVAC) **** see health-system arrangements for vaccine roll-out ****
2	Engaging vulnerable groups in society to develop and customize packages of public-health measures, clinical-management approaches, health-system arrangements, and economic and social responses that are sensitive to **equity, diversity and inclusion** considerations and that address inequalities in COVID-19 burden
3	Optimizing **packages of responses** (public-health measures, health-system arrangements, and economic and social responses), including combinations of centralized and decentralized approaches, in terms of both their health benefits and their economic and social costs
4	Understanding the 'pipeline' of **SARS-CoV-2 variants**, the conditions under which they become 'variants of concern,' their transmission characteristics, and their implications for public-health measures (e.g., vaccine choice and sequencing, double masking, quarantine length, and border closures) and for health-system arrangements (e.g., capacity planning, PPE, cohorting, and HVAC systems)
5	Supporting **coordination** across government sectors and across non-governmental organizations, citizen groups, academia, and others, including 'non-typical' stakeholders (both in general and specifically to avoid future cycles of lockdowns and re-openings) and increasing capacity for policy learning across jurisdictions
6	Integrating **data systems** and monitoring and evaluation mechanisms to support pandemic response
7	Capturing **lessons learned** from this pandemic from the perspective of **individual citizens/households** in clear and concise ways in order to effectively apply them in future
New	Understanding the **impact of global inequities** in the pandemic response (e.g., effects of vaccine nationalism, distribution of supplies, and variable government support for response) and the long-term global consequences
New	Documenting and addressing the long-term **impacts** of the pandemic **on children** (e.g., nutrition, obesity, sport participation rates and social impacts)
Public-health measures	
1	Supporting **adherence to public-health measures**, including addressing barriers to adherence (e.g., ease of booking for testing and vaccinations, safe transportation to testing and vaccination sites, paid time off work, and publicly funded isolation facilities), recognizing pandemic fatigue, optimizing public messaging about individual- and household-level measures (and using creative formats to convey these messages), and using appropriate behavioural interventions
2	Building **rapid-response mechanisms** to support interdisciplinary outbreak studies (and addressing litigation and other concerns related to sharing information about outbreaks) and to support timely study

Rank	Prioritized topics from panel
	appraisals and interpretation (and finding other ways to avoid preprints inappropriately driving action before their quality has been determined)
3	Adapting strategies for **testing** that optimize the use of existing capacity and incorporating neighbourhood-based approaches like sewage testing to identify outbreaks
4	Understanding patterns in and consequences of the greater **geographic dispersion** of infections, including the role of internal and international migration and of tourism in transmission, and of case fatality rates
New	Evaluating the use of **self-testing kits** as they become more publicly available and monitoring for **fraudulent testing sites**
Clinical management of COVID-19 and pandemic-related conditions	
1	Optimizing **packages** of COVID-19 treatments including drug treatments, respiratory support (including pulse oximetry), and physical interventions such as proning
2	Documenting and addressing **long-haul symptoms of COVID** (also known as 'long COVID') among people without severe COVID (as well as the long-term effects of COVID-19 on the body) and/or long-term sequelae of severe COVID
3	Understanding COVID-19 as a '**syndemic**' that co-occurs with a range of other communicable and non-communicable diseases that differentially affect population groups, and adjusting supports accordingly
4	Understanding the protective effects of antibodies (e.g., duration of protection) and the role of **auto-antibodies** in more severe illness
5	Screening for and managing emergent **mental health and substance use** issues and understanding the links with between substance use and pandemic-related increases in domestic violence and suicide
Health-system arrangements	
1	Optimizing **vaccine roll-out**, including securing and distributing a reliable supply of vaccines and ancillary supplies, allocating vaccines and ancillary supplies equitably, communicating vaccine-allocation plans and the safety and effectiveness of vaccines (and addressing the factors that contribute to vaccine hesitancy in particular population groups), administering vaccines in ways that optimize timely uptake (including tailoring vaccine messaging appropriately to racialized and vulnerable groups), and surveillance, monitoring and evaluation, and reporting (including the documentation of vaccination status and adverse events)
2	Restoring **non-COVID services** after surges (including prioritizing and sequencing service restoration based on risk) and addressing the effects of **interrupted care** on people with chronic conditions, including those with rare diseases
3	Leveraging **primary care** as the foundation for the health-system response to COVID-19
4	Addressing in an agile way **health worker** shortages, motivation and wellbeing, including strategies to build resilience, manage burnout, and recruit and retrain staff
5	Consolidating and optimizing the value achieved through shifts in **virtual care** (including developing or updating of legal frameworks and policies)
6	Strengthening health-system **governance** (including by addressing corruption and avoiding the politicization of decision-making processes)
7	**Strategic purchasing** of supplies and equipment (e.g., personal protective equipment and liquid nitrogen for vaccine storage)
Economic and social responses	
1	Financial protection – Enhancing **economic security** by addressing pandemic-related job losses and adjusting 'safety nets' (and keeping in mind differential impacts on women and other vulnerable populations) and enhancing workforce development (in healthcare as well as private businesses)
2	Economic development and growth – Embracing new approaches to **public financing** that support fairness and equity (especially for women and other vulnerable populations) while avoiding fiscal cliffs (expiring tax cuts and government spending cuts) and debt traps
3	Food safety and security – Addressing food supply-chain challenges and **food insecurity**, including both community-based and nationally led actions

Rank	Prioritized topics from panel
4	Education - Benefits and risks to students, educators and families arising from **school** closures, re-openings, **changes to operations** (e.g., school-year adjustments) and pedagogical innovations (e.g., e-learning) that can support ongoing education
5	Community and social services - Promoting children's resilience and recovery via social policy
6	Citizenship - Linking **citizen and community participation** in pandemic planning, policymaking and response with outcomes and capturing innovations in government approaches
7	Culture and gender – Understanding the additional risks of **gender-based and domestic violence** arising from restrictions and identifying appropriate ways to address such violence
8	Transportation - Safely re-opening the **tourism and travel** industry and managing the related risks (e.g., through testing protocols) and spill-over effects on other countries (e.g., testing requirements before travel)
9	Culture and gender – Confronting pandemic-induced or pandemic-exacerbated racism
10	Climate action – Maximizing the opportunity for synergies between the COVID-19 response and **climate action**, including exploring a 'green recovery'
11	Economic development and growth – Understanding and addressing the impacts of the abrupt shift toward **nationalism** as a governing strategy for the economy and of the 'new economy' imposed on many countries by COVOID-19
New	Transportation - Identifying best practices in restrictions on and supports for **domestic and international travel**, particularly in light of differences in adherence (to public-health measures), infection, and vaccination

Citation: Bullock HL, Sharma K, MacLean A, Al-Khateeb, Lavis JN. Potential issues for consideration and top priorities for living evidence syntheses where they are currently lacking. Hamilton, Canada: COVID-19 Evidence Network to support Decision-making about COVID-19 (COVID-END); 24 May 2021.

Appendix 1: Emergent issues (or previously missed long-term and recurring issues) for consideration, as identified from the monthly scan

1) Public-health measures

Theme	**Ineffective communication to the public** • New issue
Taxonomy component	Infection prevention – Public-focused behaviour-change supports
Source(s)	• Distrust and inconsistencies in local and provincial government messaging is a major obstacle to effective risk communication and raises the urgent need for an uniformed informed plan. Link (Website – The Conversation) • Public health experts are expressing concern over delays in updated communication and guidelines from the United States' Centers for Disease Control and Prevention, further exacerbating confusion among the general public. Link (Website – STAT News)

Theme	**India variant and resurgence of cases and public health measures** • New issue
Taxonomy component	Infection prevention – Vaccination, personal protection, service limitations
Source(s)	• The new India B.1.617.2 variant could undermine United Kingdom's recent achievements and lead to a third wave as the country's government deliberates on easing of public-health restrictions and diverting vaccines from low-case regions where the variant is becoming widespread. Link (Newspaper – The Guardian) • Public-health restrictions are being reimposed and postponed as COVID-19 resurgence begins to sweep across countries in Asia, such as Malaysia, Singapore and Taiwan. Link (Newspaper – The Globe and Mail)

Theme	**Growing rejection of face mask mandates** • New issue
Taxonomy component	Infection prevention – Public-focused behaviour-change supports, personal protection
Source(s)	• Increasing number of U.S. states are passing bills that forbid public schools and universities from requiring people to wear face masks, as the Centers for Disease Control and Prevention has released guidance that vaccinated people no longer need to wear a face mask but are still advised to do so in schools, medical settings, and public transit. Link (Website – Reuters)

2) Clinical management of COVID-19 and pandemic-related conditions

Theme	**Health promotion more generally** • Elaboration on an existing issue
Taxonomy component	Finding trustworthy information
Source(s)	• American public interest in finding trustworthy information seems to align also with their political views, baseline suspicion of government information sources Link (News – Scientific American) • Many Americans have little trust in national health institutions when it comes to COVID-19, and are much more likely to trust their nurses or doctors on health information Link (Report – Robert Wood Johnson Foundation) • Strong links between vaccine hesitancy and use of social media in the EU; users of traditional media much more likely to be pro-vaccine Link (News – Reuters) • Reddit page with 2.5million users uses citizen activists to keep its page from being overrun with misinformation; has established a large following due to ongoing information provision, dealing with anti-vaxxers Link (News – Science) • Several for-profit anti-vaccine websites and networks are making large sums of money and reaching citizens through multi-level marketing techniques Link (News – Associated Press)

Theme	**Clinical management of pandemic-related impacts on health more generally** • New issue
Taxonomy component	Burnout and trauma in health workers – Physical health
Source(s)	• Health care workers in India attacked by relatives of a patient who died of COVID-19 after they could not provide an ICU bed Link (News - the Hindu) • Maharashtra state government does not follow High Court order to provide details on 436 recent attacks on Indian healthcare workers Link (News – the New Indian Express) • Attacks on healthcare workers, already on the rise, have accelerated in the context of COVID-19 in Colombia, U.S., internationally Link (News – JAMA)

3) Health-system arrangements

Theme	**[Short description of theme]** • Elaboration on an existing issue – Restoring non-COVID services after surges and addressing the effects of interrupted care
Taxonomy component	Delivery arrangements – Service planning for 'return to normal'
Source(s)	• COVID-19 pandemic has forced cancellation of many medical procedures and operations causing a backlog and wait times to soar; plans are underway by some Canadian provinces to make up for lost time such as the use of private clinics to deliver government-funded procedures. Link (Newspaper – National Post)

Theme	**Vaccine supply management** • New issue – Vaccine expiration
Taxonomy component	Approach to COVID-19 vaccine roll-out – Securing and distributing a reliable supply of vaccines
Source(s)	• Some African countries resort to returning or destroying COVID-19 vaccines that are expiring Link (News – CNN) • Direction needed as some of Canada's vaccine supply is set to expire Link (News – CTV News) • Vaccine manufacturers re-assessing expiration dates for COVID-19 vaccines Link (Organization – GAVI – the Vaccine Alliance)

4) Economic and social responses

Theme	**Engineering and infrastructural changes to combat indoor respiratory infection** • New issue
Taxonomy component	Infrastructure
Source(s)	• The COVID-19 pandemic has advanced our understanding of airborne pathogens and respiratory infections and highlighted the deficiencies in current standards and guidelines for indoor air quality; this awareness should lead to a new paradigm wherein all of society demands higher standards for respiratory infection control and indoor air quality in new and existing buildings. Link (Journal – Science) • The increasingly widespread acknowledgment of the role of airborne transmission in spreading COVID-19 has spurred the need to consider how to improve indoor ventilation systems and air quality standards to fight the current pandemic and reduce the negative toll of other respiratory infections. Link (News – Bloomberg)

Theme	**Building manufacturing capacity for vaccines and other critical supplies in low- and middle-income countries** • Elaboration on an existing issue – Understanding and addressing the impacts of the abrupt shift toward nationalism as a governing strategy for the economy and of the 'new economy' imposed on many countries by COVID-19
Taxonomy component	Economic development and growth
Source(s)	• The Director-General of the World Health Organization has stressed the need for Africa to build capacity for manufacturing COVID-19 vaccines and other medical products. Link (Twitter) • The African Union and Africa Centres for Disease Control and Prevention launched the Partnerships for African Vaccine Manufacturing which will enhance public health security in Africa by scaling-up vaccine manufacturing in Africa and aims to ensure that the continent is able to provide for 60% of its routine vaccination needs by 2040. Link (Communiqué – Africa Centres for Disease Control and Prevention) • Developing African vaccine manufacturing capacity will require financing, political commitment, improved regulatory regimes, and the ability to learn lessons from nations that have developed domestic vaccine manufacturing capacity. Link (News explainer – Nature)

Theme	**Active labour market policies and job recovery** • Elaboration on an existing issue – Enhancing economic security by addressing pandemic-related job losses and adjusting 'safety nets' (and keeping in mind differential impacts on women and other vulnerable populations) and enhancing workforce development (in healthcare as well as private businesses)
Taxonomy component	Employment
Source(s)	• There is need to adapt the content of active labour-market programmes, and address their structural capacity constraints, to deal with the pandemic-induced jobs crisis; some examples of effective active labour market policies exist around the world. Link (OECD Policy Responses)