

# Membership Profile Survey

A SURVEY OF COVID-END MEMBERS TO UNDERSTAND THE PROFILE OF  
THE MEMBERSHIP AS WELL AS THEIR KEY INTEREST AREAS

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## Response Profile

### Survey Response

All members registered with the JISC Listserv were sent a link to the member survey and approximately 2 weeks later, a link to the Top 5 Questions Survey. Members were reminded to complete, and new members were also included within this correspondence. A total of 277 members were sent the membership survey link and a total of 285 members were sent the Top 5 Questions survey link, as new members were added as the surveys progressed. The response rate for the membership survey was 33% (91/277), which is a reasonable response for this type of survey. The participation rate for the Top 5 Questions survey was 30% (86/285), but with a complete response rate of only 35% (30/86) of those who participated in the survey. Therefore, the Top 5 Questions survey had an incompleteness rate of 65%, which may be due to the fact that the survey was predominately open text fields, which often yields a lower response rate.

### Respondent Profile

The respondent profile was fairly similar across both surveys. Respondents within the Membership survey were predominately from the **Academic/Research** and **Government** sectors (82%), with most respondents being based in the **WHO PAHO region** (51%) and **Canada** being 29% of the overall response. There was a slightly higher response from the NGO sector than the Government sector in the Top 5 Questions survey, but the Academic sector remained the highest with a 44% response. Respondents in both surveys indicated they were experienced to very experienced (60%-65%) within Evidence Informed Policy Making (EIPM), while a further 20%-32% of respondents indicated some experience across the two surveys. Half of all respondents listed that they had found COVID-END through a professional contact or colleague.

## Assumptions

### *Member Profile/Representativeness*

Although the response was reasonable for this type of survey, the respondent profile is likely skewed to sector, region and experience level. The assumption is two-fold.

- 1) The first assumption being that in a listserv community there are likely to be a smaller proportion of information generators compared to consumers. Those who are information generators are likely to be the more experienced and engaged members. It is assumed that the more engaged members are likely to fall within the majority sectors and experience level indicated within the member survey.
- 2) The second assumption is that marketing and communication about the listserv has been more targeted at the engaged membership that falls within the majority sectors, region and experience level indicated within the member survey.

## Professional Role in EIPM

Within the Membership survey, respondents were given the option to respond to multiple categories. They were asked to indicate if their professional role for Covid-19 included: *Scoping; Summarizing; Engaging; Synthesizing; Recommending; Packaging; Sustaining; and/or Digitizing*. The majority indicated they were involved in **Recommending** and **Packaging**. The WHO AFRO Region had a slightly higher indication of a role in **Engaging** than Packaging. There were limited responses from the WHO Regions of SEARO, EMRO and WPRO.

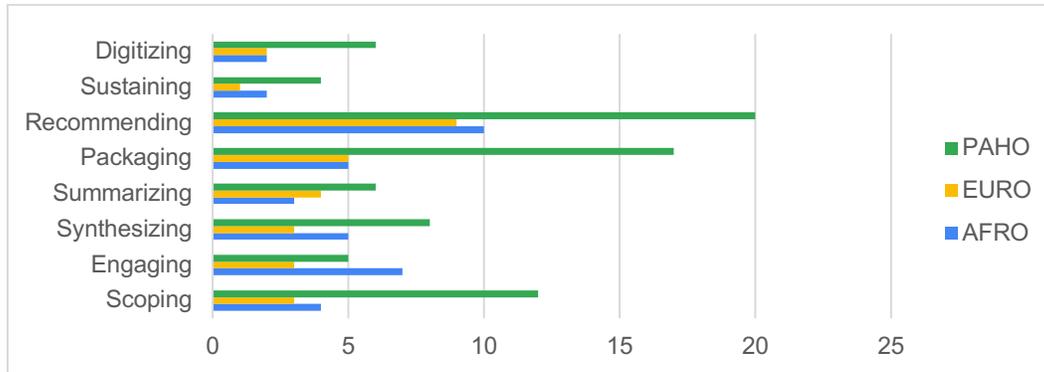


Figure 1: Role in EIPM by WHO Region (n)

## Areas of Interest

Within the Membership survey respondents were given the option to respond to their top five areas of interest within the following broad categories: *Public-health measures; Clinical management; Economic and social responses; Health-system arrangements; Evidence synthesis; Horizon scanning; Priority setting; Communication; and Equity*. The majority indicated areas of interest predominately within **Evidence Synthesis** and **Public-Health Measures**. **Economic and Social Responses** had a higher rate of response in AFRO. **Horizon Scanning** was of more interest in EURO comparatively. There were limited responses from the WHO Regions of SEARO, EMRO and WPRO.

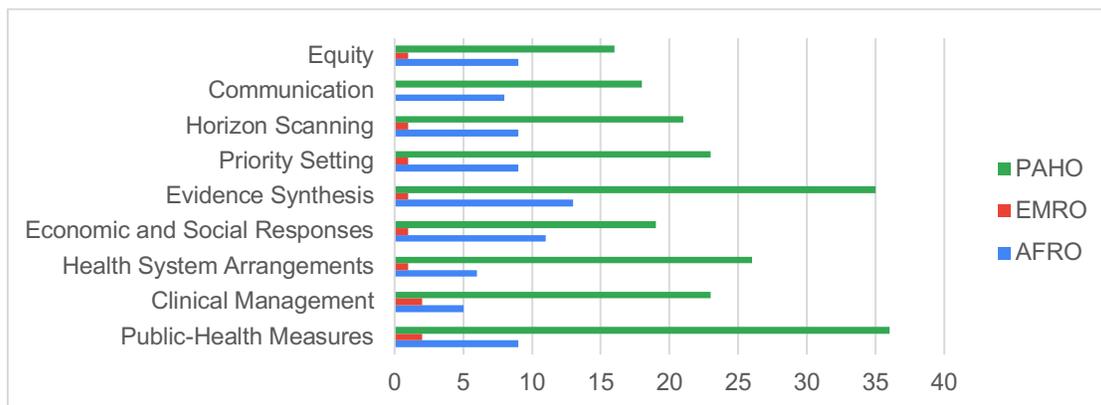


Figure 2: Area of Interest by WHO Region (n)

## Top 5 Questions

Respondents were asked to state the Top 5 Questions they had for both the next 12-month period, as well as the next 24-month period in regards to COVID-19. Data was collected from 30 respondents and coded initially using the broad areas of interest stated above in Figure 2. Sub-coding was applied based initially on the categories discussed within the COVID-END Horizon Scanning Working Group, and additional sub-codes were applied as required based on the emerging themes within the survey. Table 1 below indicates the areas of interest and sub-themes which emerged in the survey and were applied to the qualitative analysis using QDA Miner Lite.

Table 1: Emerging Themes and Sub-Themes

|                                     |  |
|-------------------------------------|--|
| <b>Public Health Measures</b>       | Balance of Public Health with Economic and Social            |
|                                     | Communication and Behavioural Strategy                       |
|                                     | Testing and Tracing  |
|                                     | Adoption and Adherence                                       |
|                                     | Future Preparedness  |
|                                     | Social Determinants of Health                                |
|                                     | Prevention and Wellness                                      |
| <b>Clinical Management</b>          | Collaboration and Research                                   |
|                                     | Transmission   |
|                                     | Treatment  |
|                                     | Comorbidity  |
|                                     | Mental Health  |
|                                     | Medium to Long Term Effects                                  |
|                                     | Concurrent Management of COVID and other seasonal infections |
| <b>Health System Arrangement</b>    | Vaccination  |
|                                     | Equity   |
|                                     | Pre-existing system challenges                               |
|                                     | Healthcare Workers   |
|                                     | Private Sector Involvement                                   |
|                                     | LMIC specific  |
|                                     | Virtual Care   |
|                                     | Supplies and Equipment                                       |
|                                     | Restoration of Non-COVID services                            |
|                                     | Infection Prevention and Control                             |
| <b>Economic and Social Response</b> | Employment and Labour Market                                 |
|                                     | Childcare and Schools  |
|                                     | Vulnerable Populations                                       |
|                                     | Democracy and Governance                                     |

There was a lot of repetitive responses in both the 12- and 24-month top question responses. Therefore, the findings have been grouped together and were relevant have been indicated.

## Emerging Themes Overview

| Emerging Themes                                   | Key Findings   |
|---|--|
| <b>Public Health Measures</b>                     |  |
| Balance of Public Health with Economic and Social | <p>Respondents were very interested predominately in the <b>effectiveness of public health interventions</b>, both prevention and reduction of transmission. There was mention of looking for comparative evidence of different types of interventions, duration and social and economic impacts of these,</p> <p>There were a few key questions around the <b>'new normal'</b> and what this would look like for both the individual and the collective. This raised the social and economic impacts on issues like education and employment.</p> <p>One question raised which was when to stop interventions, when to return to certain activities – likely looking for guidance on what the <b>end of a pandemic</b> may look like.</p> |
| Communication and Behavioural Strategy            | <p>The way in which information is communicated through <b>media and managing misinformation</b> were stated.</p> <p>The underpinning result being <b>communicating to influence behavioural change</b> being a key question – with <b>influencing vaccine uptake</b> being a consistent query that carried over into the adoption and adherence sub-theme.</p>  |
| Testing and Tracing                               | <p>The main questions around testing and tracing were <b>accuracy</b> of tests, <b>early detection</b> and routine testing, <b>cost</b> and effectiveness of testing and tracing.</p>  |
| Adoption and Adherence                            | <p>This theme is a combination of the effectiveness of public health interventions and the communication strategies to influence behaviour. Questions raised here are similar to in previous emergent themes around <b>effectiveness of interventions</b>.</p>   |
| Future Preparedness                               | <p>This is a broad collection of questions, but highlight the phrasing of the questions raised. There was emphasis on the <b>learning aspect of what worked</b>. Most questions focused on the <b>strategic level</b> of compressing what worked from both disease control, but also social and economic interventions.</p> <p>There were also several questions focused on governance, collaboration and finance – indicating a more <b>global deconstruction of what worked</b>.</p>   |
| Social Determinants of Health                     | <p>There were few questions, but they focused on the more <b>vulnerable or key populations</b> – and <b>if the health system was able to respond</b> to the needs of these populations</p>   |
| Prevention and Wellness                           | <p>The questions raised were predominately understanding the <b>effectiveness of prevention interventions</b>.</p> <p>There was also mention of better understanding the needs of <b>vulnerable and key populations</b>.</p>   |

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| Collaboration and Research                                   | <p>There were a few key areas of research that were indicated, but they were along the lines of <b>effectiveness and knowing what works</b>.</p> <p>There was mention of <b>global collaboration</b> and how best to engage – which leans to the aforementioned global deconstruction of what worked.</p>   |
| <b>Clinical Management</b>                                   |   |
| Transmission   | <p>Most of the issues raised were around <b>effectiveness of interventions for prevention of transmission</b>. However, there were questions raised around <b>child vs. adult transmission</b> as well as understanding <b>transmission in vulnerable populations</b>.</p> <p>A question was raised around <b>reinfection</b> and evidence that exists to better understand this.</p>   |
| Treatment  | <p>Most queries are around <b>therapeutic efficacy</b> of treatments available, both pre- and post-exposure. The <b>cost-effectiveness and affordability</b> of these therapeutics was also raised. The role of complimentary and alternative therapies was also mentioned. Beyond 12 months, questions were focused on the drug approval process.</p> <p>The need for <b>hospitalization</b> as well as treatment of <b>severe Covid-19</b> was indicated as a key area to better understand. <b>Vulnerable populations</b> again are raised as a key area within treatment.</p> |
| Comorbidity  | <p>There is a need for more information on <b>chronic disease, co- and multi-morbidity with Covid-19</b>. Questions raised were not only around the <b>effectiveness of treatment</b>, but also within the <b>health system mechanisms for care delivery</b>.</p>   |
| Mental Health  | <p>There are questions which include mental health as a sub-theme within the impact of public health interventions, more from a <b>psychological impact of the pandemic on mental health</b>. However, there is a clinical question raised around <b>mental health having a confounding relationship</b> to the high Covid-19 mortality rate at the beginning of the pandemic.</p>  |
| Medium to Long Term Effects                                  | <p>There are several general questions around the <b>epidemiology and treatment of long-term clinical impacts</b> of Covid-19.</p>  |
| Concurrent Management of COVID and other seasonal infections | <p>Limited questions, but important considerations around current capacity as well as the effectiveness for <b>care delivery of chronic diseases and multi-morbidity for Covid-19 vulnerable populations</b>. These issues were raised more predominately under health system arrangements.</p>   |
| <b>Health System Arrangement</b>                             |   |
| Vaccination  | <p>Vaccination does not sit purely in health system arrangement, but across public health measures as well. There is interest in Covid-19 vaccination, but across many interest areas. From <b>effectiveness and immunity</b> to the <b>availability and cost-effectiveness</b>. There are also practical considerations around <b>distribution and prioritization</b> as well as the <b>barriers and facilitation of uptake</b>. Beyond 12-months there are queries around the <b>vaccine approval process</b>.</p>  |
| Equity   | <p>The broad question around equity is as expected around considerations for <b>vulnerable populations</b>.</p>   |
| Pre-existing system challenges                               | <p>The pandemic has raised expected questions around access, effectiveness, financing and human resources for health related to Covid-19. The issues</p>  |

|                                     |  |
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|                                     | <p>to be considered more specific to Covid-19 may be around <b>building resiliency</b> to respiratory outbreaks, <b>emergency services for respiratory outbreaks</b> and <b>essential service delivery by non-physician health workers</b>.</p> <p>An issue raised which may be addressed under the global deconstruction of what worked may be the <b>impact specific weak health systems had on the pandemic</b>.</p>            |
| Healthcare Workers                  | <p>The issue around the availability of human resources for health is expected. The specifics were <b>skill acquisition, training and use of non-physician and community health workers</b>.</p> <p>The issue of <b>safety and infection prevention and control adherence</b> of health workers was raised. Also, the capability of health workers to address the <b>social and behavioural aspects of health and illness</b>.</p> |
| Private Sector Involvement          | <p>There was only one query in the 24-month top questions around the engagement of <b>public private partnerships</b> in Covid-19 – again probably a good theme in the global deconstruction of what worked.</p>   |
| LMIC specific                       | <p>The specific issues to LMICs mentioned were around equity and cost-effectiveness. There were concerns of the <b>safety for health workers</b>, the ability to access <b>virtual care</b> and desire to better understand <b>how to support health systems in LMICs</b>.</p> <p>In regards to testing and treatment, there were queries around the <b>effectiveness of testing and treatment</b> in LMICs.</p>                   |
| Virtual Care                        | <p>Given the massive increase in virtual service delivery, there were only a few queries regarding <b>strategies for remote care for chronic conditions</b>. Of those queries, there was interest in regard to <b>equity and accessibility</b> of virtual care.</p>  |
| Supplies and Equipment              | <p>There was only one query around the <b>redistribution of Covid-19 related infrastructure and resources</b> into the broader health system – presumably post-Covid. Also, beyond 12-months there was a query around the <b>equitable use of resources</b> meant for Covid-19.</p>  |
| Restoration of Non-COVID services   | <p>There were few queries with the focus being on <b>strategies for maintaining non-Covid services</b>. Within the 24-month top questions there was a key question around dealing with the <b>backlog and urgency of non-Covid health service</b> post-Covid.</p>  |
| Infection Prevention and Control    | <p>The questions were focused on <b>effectiveness of and adherence to IPC guidelines</b>.</p>  |
| <b>Economic and Social Response</b> |  |
| Employment and Labour Market        | <p>Queries were broad around the social and economic impacts of Covid-19 and what this means for the <b>'new normal'</b>. <b>Safe return to work</b> was also mentioned.</p>   |
| Childcare and Schools               | <p>One question raised around the <b>effectiveness of long-term closure of schools</b> on Covid-19, also the effectiveness of virtual classrooms vs. in-person classrooms.</p>   |
| Vulnerable Populations              | <p>Vulnerable populations were a sub-theme throughout, predominately around <b>equity and access</b>, as well as <b>effectiveness of interventions and care</b> targeted for vulnerable populations.</p>   |

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| Democracy and Governance | There were no issues raised here within the 12-month top questions. Within the 24-month top questions there were queries around <b>political drivers</b> of the Covid-19 response, <b>corruption and equitable use of Covid-19 intended resources</b> . There was also a query around the impact of Covid-19 on the <b>general election process</b> , specifically in LMICs. |
|--------------------------|--|

## Recommendations

### Membership Management

*Map linkages between sectors, ensuring connections between evidence producers and evidence users.*

There is interest to further understand if the membership is containing both producers and users of evidence, and the sectors that would lead to EIPM for Covid-19. COVID-END aims to foster these linkages, so it would be worth exploring if there are active relationships within the membership.

*Focus on the regional reach of COVID-END to improve representativeness as a global membership, as well as responding to unique regional needs.*

Further strategies should be considered to extend the COVID-END reach to include a more regional approach, as there appears to be some potential differences in priority areas of interest. A communication and marketing strategy should include improving global representativeness.

*Target the offering of COVID-END by experience level – or alternately focus efforts on experienced members and refer less experienced members to other groups.*

The member survey did not capture significant input from the limited- to no-experience member group. It is assumed that this group may be consumers of COVID-END information due to their inexperience, therefore the low response from this group. COVID-END would need to develop a different strategy for the lesser experienced membership compared to the more experienced membership – as their needs are likely to be different. It is likely that COVID-END may not have the resources to expend on both groups, therefore the recommendation to focus on the more experienced membership and refer less experienced members to other groups that can provide the introduction to evidence informed policy making.

### Areas of Interest

*Generally, the membership wants evidence for what works – effectiveness and how to present what works*

The majority of questions focused around better understanding what worked. There was a keen interest in evidence of what impact interventions had on Covid-19 both from a disease control and clinical management perspective, but also from a social and economic perspective. The questions tended to be phrased around also understanding key risk areas, both of individuals as well as systems to be able to cope and/or respond to Covid-19.

*Public Health Measures is again around effectiveness, but also about improving the understanding of communication and behavioural strategies.*

There was interest in public health interventions and not only what had the better outcomes on disease control, but also interest in understanding the social and economic impacts of the interventions on education, employment and vulnerable populations. Communication strategies was also another key theme around uptake and adherence, which brings the behavioural aspects of public health forward as a key theme.

*Clinically there is interest in the long-term impacts of Covid-19, co-morbidity and mental health.*

Clinically, there was interest also in therapeutic efficacy, including comorbidity. Also looking to the clinical management of Covid-19 impacts in the longer-term, as well as clinical management of chronic conditions within the pandemic. Mental health also featured as an area of interest, both clinical management but also the broader psychological impacts of the pandemic on mental health.

*Health system arrangements were focused on the capacity and resilience of the health system to respond to a respiratory outbreak, as well as the potential of a new vaccine.*

Within health system arrangements, there were the standard areas of concern, access, effectiveness, financing and human resources for health. Within each of these, there were Covid-19 considerations, but more questions spoke to the resiliency of the health system to adapt and the effectiveness of the response. There was considerable interest in a vaccine that spans across public health measures, but specific to health system arrangements is the ability to distribute and prioritize the vaccine once available.

*Economic and social responses appeared focused on vulnerable populations, as well as schools and the workplace.*

Within economic and social responses there was a focus on equity for vulnerable populations, but also interest in the impact and effectiveness of interventions in schools and the workplace. Democracy and governance were raised only beyond 12-months where political influence, corruption and the impact of Covid-19 on the political election process was indicated.

## Annexure A – Complete List of Top 5 Questions

*\*Questions are alphabetized in no particular order.*

| Category  | Code   | Question (spelling is not corrected)  |
|---|--|---|
| Health System Arrangement, Public Health Measures | LMIC specific, Testing and Tracing   | Acceptability of testing in LMICs   |
| Public Health Measures                            | Testing and Tracing  | accuracy (PCR, antibody) + effectiveness of different test strategies   |
| Clinical Management                               | Medium to Long Term Effects, Mental Health   | Adjusting systems to address long-term health effects of COVID-19 (including mental health)   |
| Public Health Measures                            | Balance of Public Health with Economic and Social, Future Preparedness                         | ANALYTIC STUDY: What are the relative effects and cost/disruptions of measures to reduce community transmission (beyond FTTIS) - such as various distancing rules, ventilation, masks, etc. This is needed to weigh up the minimal set that can be introduced when community transmission levels are not controlled by FTTIS.                     |
| Health System Arrangement, Public Health Measures | Healthcare Workers, Social Determinants of Health  | Are health care workers adequately trained on social and behavioural aspects of health and illness?   |
| Economic and Social Response                      | Childcare and Schools  | Are in-person schools a good idea?  |
| Public Health Measures, Health System Arrangement | Future Preparedness, Infection Prevention and Control  | Are there components of the enhanced use of PPEs or other practices that should continue past the resolution of the pandemic to ensure appropriate infection control practices? In other words, similar to the changes that followed AIDS and SARS what are the lessons learned from this pandemic that change health care on a go forward basis? |
| Public Health Measures                            | Adoption and Adherence, Communication and Behavioural Strategy                                 | BEHAVIOURAL QUESTIONS: What messaging is most effective to improve adherence to the set of behaviours prioritized in Q2?  |
| Clinical Management                               | Comorbidity, Treatment   | Comparative effectiveness of treatment interventions for COVID-19 patients with different medical and social comorbidities  |
| Public Health Measures                            | Adoption and Adherence, Balance of Public Health with Economic and Social, Future Preparedness | comparison of different lengths and models of quarantine  |

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| Public Health Measures,                           | Balance of Public Health with Economic and Social, Future Preparedness, Prevention and Wellness | comparison of different lock-down protocols (naturalistic studies across countries)  |
| Public Health Measures                            | Communication and Behavioural Strategy  | Correct and clear health communication   |
| Health System Arrangement, Public Health Measures | LMIC specific, Testing and Tracing  | Cost and cost effectiveness of COVID-19 testings in LMICs  |
| Clinical Management                               | Comorbidity, Mental Health  | Could the mental health factors associated with COVID 19 explain the high mortality rate at the beginning of the pandemic?   |
| Clinical Management                               | Transmission  | COVID transmission among kids (nurse, pre-school age) and kids - adults  |
| Health System Arrangement                         | Vaccination   | COVID vaccine  |
| Public Health Measures                            | Communication and Behavioural Strategy, Testing and Tracing                                     | data interpretation and comparison (within country/ across country)  |
| Public Health Measures, Clinical Management       | Testing and Tracing, Treatment  | DESCRIPTIVE Q: What are the relative size of the failure points in the Find, Test, Trace, Isolate, Support (FTTIS) system? Reducing these failures is vital for an effective FTTIS system, so research and improvement is needed on the largest failure points. (eg See the i-sense Dashboard on this - <a href="https://covid.i-sense.org.uk/">https://covid.i-sense.org.uk/</a> ). |
| Public Health Measures                            | Testing and Tracing   | Diagnostic test accuracy of COVID -19 tests  |
| Health System Arrangement                         | Healthcare Workers, Infection Prevention and Control  | Dissemination interventions to improve healthcare workers' adherence with infection prevention and control (IPC) guidelines for respiratory infectious diseases in the workplace   |
| Public Health Measures                            | Collaboration and Research, Future Preparedness   | Do we need to invest in more research?   |
| Health System Arrangement                         | Pre-existing system challenges  | Do weak institutions prolong crises?   |
| Clinical Management                               | Treatment   | drug approval  |
| Public Health Measures                            | Testing and Tracing   | Early detection of infection   |
| Clinical Management                               | Treatment   | effective therapeutics in critical care  |
| Health System Arrangement                         | Virtual Care  | Effectiveness of alternative care delivery methods (e.g. telemedicine)   |

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| Health System Arrangement  | Vaccination  | Effectiveness of mandatory vs. voluntary receipt of SARS-CoV-2 vaccines                           |
| Clinical Management  | Transmission   | Effectiveness of masks in controlling COVID -19 spread  |
| Health System Arrangement, Public Health Measures                      | Healthcare Workers, Infection Prevention and Control, Prevention and Wellness  | effectiveness of postprophylaxis for health personnel   |
| Public Health Measures   | Adoption and Adherence, Balance of Public Health with Economic and Social, Communication and Behavioural Strategy, Prevention and Wellness | effectiveness of public health interventions (masks, protection of elderly, lockdown..)           |
| Clinical Management  | Treatment  | effectiveness of therapeutics in hospitalized patients  |
| Public Health Measures, Economic and Social Response                   | Balance of Public Health with Economic and Social, Childcare and Schools   | Effects of Lock down on Education Sector  |
| Public Health Measures, Clinical Management                            | Future Preparedness, Treatment   | Efficacious and affordable drug treatment for Covid vs other diseases                             |
| Public Health Measures, Health System Arrangement, Clinical Management | Collaboration and Research, LMIC specific, Treatment   | Efficacy and types of treatments used in non clinical trials settings in LMICs                    |
| Health System Arrangement, Public Health Measures                      | Equity, Pre-existing system challenges, Prevention and Wellness, Social Determinants of Health   | Ensuring health and social needs of older adults are met  |
| Health System Arrangement  | Equity, Supplies and Equipment   | Equitable use of resources meant for COVID-19   |
| Economic and Social Response   | Democracy and Governance   | Equitable use of resources meant for COVID-19<br>Question of corruption and embezzlement in LMICs |
| Public Health Measures   | Adoption and Adherence, Communication and Behavioural Strategy   | Factors that influence compliance with SARS-CoV-2 prevention strategies                           |
| Health System Arrangement  | Pre-existing system challenges   | Financing NHS !!!!  |
| Economic and Social Response, Health System Arrangement                | Democracy and Governance, LMIC specific  | General elections and COVID-19 Effects on democracy in LMICs                                      |

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| Health System Arrangement                            | Healthcare Workers, LMIC specific   | Health work safety and decent work in LMICs  |
| Public Health Measures                               | Adoption and Adherence, Communication and Behavioural Strategy  | How best can trust in reliable health promotional messages be built to combat rumors?  |
| Clinical Management                                  | Medium to Long Term Effects, Mental Health  | How best to manage the COVID-19-induced mental health issues, post-COVID-19  |
| Health System Arrangement                            | Pre-existing system challenges, Restoration of Non-COVID services   | How best to setup healthcare to deal with the post-COVID-19 health issues for those who didn't have COVID-19 but other health conditions     |
| Clinical Management, Health System Arrangement       | Medium to Long Term Effects, Pre-existing system challenges   | How best to setup healthcare to deal with the post-COVID-19 health issues for those who had COVID-19   |
| Public Health Measures                               | Future Preparedness   | how can countries adapt their systems to be more receptive to pandemics and major emergencies  |
| Public Health Measures                               | Future Preparedness   | How can countries better prepare to face another pandemic in the next decades?   |
| Public Health Measures, Clinical Management          | Testing and Tracing, Treatment  | How can COVID-19 testing and management become more affordable? Cost-effectiveness strategies...   |
| Public Health Measures                               | Collaboration and Research, Future Preparedness   | How can the countries better prepare to another pandemic in the next decades?  |
| Health System Arrangement                            | LMIC specific   | how can we support low income and developing countries in upgrading health systems to be more responsive and equitable when facing pandemics |
| Public Health Measures                               | Collaboration and Research, Future Preparedness   | How critical is research to COVID 19?  |
| Public Health Measures                               | Social Determinants of Health   | How do communities play a critical role in the after care of COVID-19 patients?  |
| Health System Arrangement, Public Health Measures    | Pre-existing system challenges, Future Preparedness, Pre-existing system challenges   | How do we best support health systems so they can fight this significant crisis  |
| Public Health Measures, Economic and Social Response | Balance of Public Health with Economic and Social, Childcare and Schools, Employment and Labour Market, Future Preparedness | How do we live as an individuals and collectively in the new normal?   |
| Public Health Measures, Economic and Social Response | Balance of Public Health with Economic and Social, Childcare and Schools, Employment and Labour Market, Future Preparedness | How do we live as an individuals and collectively?   |

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| Public Health Measures, Economic and Social Response                         | Collaboration and Research, Vulnerable Populations  | How do we target key populations for all pandemics including COVID-19 within a multisector-, integrated, and MIT (multi-, inter- and transdisciplinary) approach?          |
| Public Health Measures, Economic and Social Response                         | Collaboration and Research, Vulnerable Populations  | How does health care contribute to stigma related to COVID-19? How should social sciences collaborate on this?   |
| Economic and Social Response, Public Health Measures                         | Childcare and Schools, Prevention and Wellness  | How effective and safe (long term) is to close schools during the pandemic?  |
| Health System Arrangement  | Vaccination   | How effective are the candidate vaccines   |
| Clinical Management, Health System Arrangement, Economic and Social Response | Comorbidity, Concurrent Management of COVID and other seasonal infections, Pre-existing system challenges, Vulnerable Populations | How effective are the current mechanisms of care delivery for populations with chronic diseases or multimorbidity at high risk of severe COVID-19 for preventing COVID-19? |
| Clinical Management, Health System Arrangement, Economic and Social Response | Pre-existing system challenges, Treatment, Vulnerable Populations   | How effective are the current mechanisms of care delivery for the older populations at high risk of severe COVID-19 for preventing COVID-19?                               |
| Health System Arrangement, Economic and Social Response                      | Vaccination, Vulnerable Populations   | How effective are the vaccines for COVID-19 in preventing COVID-19 in the general population and vulnerable population?  |
| Health System Arrangement  | Equity, LMIC specific, Pre-existing system challenges   | How equitable is access to quality health care across Africa?  |
| Health System Arrangement  | Vaccination   | How long does vaccine-produced immunity last?  |
| Clinical Management  | Transmission  | How much do children actually transmit COVID-19 to other children and adults   |
| Health System Arrangement  | Vaccination   | How safe are candidate vaccines  |
| Health System Arrangement  | Pre-existing system challenges  | How should health care be strengthened for continuous care post-COVID-19?  |
| Health System Arrangement  | Healthcare Workers, Supplies and Equipment  | How to best (cost-effectiveness) transition COVID related health infrastructure/human and material resources throughout the health systems?                                |
| Public Health Measures   | Collaboration and Research  | How to build impactful global collaborations.  |

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| Public Health Measures                               | Collaboration and Research  | How to collaborate internationally in pandemics?  |
| Public Health Measures                               | Communication and Behavioural Strategy  | How to deal with misinformation for lay people?   |
| Public Health Measures                               | Collaboration and Research, Future Preparedness                                 | How to develop and to disseminate rapid guidelines on pandemics?  |
| Health System Arrangement                            | Vaccination   | How to distribute vaccination in the population?  |
| Health System Arrangement                            | Private Sector Involvement  | How to find the best balance between public and private initiatives?  |
| Health System Arrangement                            | Vaccination   | How to guarantee vaccination coverage (both in terms of awareness and engagement, security and availability)?           |
| Public Health Measures                               | Collaboration and Research  | How to integrate Indigenous Knowledge Systems within the existing COVID-19 response at national and continental levels? |
| Health System Arrangement                            | Restoration of Non-COVID services   | How to keep healthcare running for non COVID-19 patients?   |
| Clinical Management                                  | Medium to Long Term Effects   | How to manage long COVID-19?  |
| Public Health Measures                               | Future Preparedness   | How to predict and prepare for virus mutations and new pandemic waves?  |
| Health System Arrangement                            | Pre-existing system challenges, Vaccination                                     | How to prepare primary care services for the administration of the vaccine for covid-19?                                |
| Health System Arrangement, Public Health Measures    | Healthcare Workers, Prevention and Wellness                                     | How to prevent COVID-19 in healthcare workers?  |
| Clinical Management                                  | Treatment   | How to prevent hospital admissions in patients with COVID-19?   |
| Public Health Measures                               | Communication and Behavioural Strategy  | How to reduce fake news?  |
| Health System Arrangement                            | Equity  | How to reduce inequity in pandemics?  |
| Public Health Measures, Economic and Social Response | Balance of Public Health with Economic and Social, Employment and Labour Market | How to return to work safely  |
| Health System Arrangement                            | Healthcare Workers  | How to train community health workers?  |
| Public Health Measures                               | Communication and Behavioural Strategy  | How to train the media about Covid-19?  |
| Public Health Measures                               | Future Preparedness   | Identify the most effective strategies to develop health policies   |
| Clinical Management                                  | Mental Health   | Individuals and collectively in the new normal?   |

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| Public Health Measures, Clinical Management                                     | Prevention and Wellness, Treatment  | Interventions for the prevention of COVID-19  |
| Health System Arrangement, Public Health Measures, Economic and Social Response | Equity, Testing and Tracing, Vulnerable Populations                         | Interventions supporting testing, case identification and referral systems to include lower income populations in medically underserved areas   |
| Public Health Measures, Health System Arrangement                               | Communication and Behavioural Strategy, Vaccination                         | Interventions to engage people in getting the COVID-19 vaccine  |
| Public Health Measures, Health System Arrangement                               | Adoption and Adherence, Communication and Behavioural Strategy, Vaccination | Interventions to improve uptake of vaccines (especially with multi-dose vaccines)   |
| Health System Arrangement, Economic and Social Response                         | Equity, Virtual Care, Vulnerable Populations                                | Interventions to reduce disparities in access to telehealth and other digital health resources including but not limited to limited access to appropriate devices (computers, tablets, smart phones) and connectivity (broad band access in the home) |
| Public Health Measures, Clinical Management                                     | Adoption and Adherence, Future Preparedness, Transmission                   | Interventions/policies to minimize risk of transmission in the school setting (by level of education: primary to university)  |
| Clinical Management   | Medium to Long Term Effects, Mental Health                                  | -long haul covid and mental health issues   |
| Clinical Management   | Medium to Long Term Effects   | long term clinical consequences   |
| Clinical Management   | Mental Health   | -mental health issues   |
| Public Health Measures  | Social Determinants of Health   | Monitoring of social determinants of health and its changes and impacts on communities.   |
| Health System Arrangement   | Pre-existing system challenges  | Permanent changes in logistics of NHSs  |
| Public Health Measures  | Balance of Public Health with Economic and Social                           | policies to balance the benefits of COVID transmission with the psycho-social harms of lockdown procedures  |
| Public Health Measures, Clinical Management                                     | Prevention and Wellness, Treatment  | pre-/postexposure therapies   |
| Public Health Measures  | Balance of Public Health with Economic and Social, Prevention and Wellness  | Preventive medicine/public health priorities  |

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| Health System Arrangement                            | Vaccination   | Prioritization of vaccine implementation given expected high demand and low shortage of effective vaccines                               |
| Clinical Management                                  | Mental Health   | psychological impact of the pandemic   |
| Public Health Measures                               | Adoption and Adherence, Balance of Public Health with Economic and Social, Communication and Behavioural Strategy, Future Preparedness, Testing and Tracing | public health interventions to contain spread (school closure, events, etc.)   |
| Public Health Measures                               | Balance of Public Health with Economic and Social   | -public health measures  |
| Public Health Measures                               | Adoption and Adherence, Communication and Behavioural Strategy, Testing and Tracing   | -public health related strategies efficacy/effectiveness   |
| Health System Arrangement                            | LMIC specific   | Question of corruption and embezzlement in LMICs   |
| Public Health Measures                               | Collaboration and Research  | Reducing these failures is vital for an effective FTTIS system, so research and improvement is needed on the largest failure points.     |
| Clinical Management                                  | Transmission  | reinfection - genomic evidence   |
| Public Health Measures                               | Collaboration and Research  | research in Covid  |
| Clinical Management                                  | Treatment   | Role of Complementary and Alternative Medicines in Post COVID Health management.   |
| Public Health Measures                               | Testing and Tracing   | Routine laboratory testing to determine if a patient has COVID-19 pneumonia or SARS-CoV-2 infection                                      |
| Clinical Management, Health System Arrangement       | Medium to Long Term Effects, Treatment, Vaccination   | Same as previous 5, but would add vaccine uptake and management of long covid  |
| Public Health Measures                               | Collaboration and Research  | Should global collaborations be the way to go or should nations retain their sovereignty when it comes to managing Global health issues? |
| Health System Arrangement, Public Health Measures    | Pre-existing system challenges, Prevention and Wellness   | Should health care be the entry point for COVID-19 prevention?   |
| Public Health Measures, Economic and Social Response | Balance of Public Health with Economic and Social, Employment and Labour Market   | -social issues such as schooling, work/employment, income  |

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| Public Health Measures, Health System Arrangement | Balance of Public Health with Economic and Social, LMIC specific  | Socio-Economic Ramifications of lock down in LMICs  |
| Health System Arrangement                         | Infection Prevention and Control  | Spread of COVID-19 in hospitals - what are the optimal infection control practices to keep health care workers safe and prevent nosocomial spread of COVID-19   |
| Public Health Measures, Clinical Management       | Adoption and Adherence, Balance of Public Health with Economic and Social, Future Preparedness, Transmission            | Strategies to enforce government recommendations based on non-pharmacological protective measures directed at the general population in order to prevent or reduce community transmission of pandemic respiratory viruses |
| Public Health Measures, Health System Arrangement | Future Preparedness, Pre-existing system challenges   | Strategies to expand emergency services and their sustainability for patient care during respiratory pandemics  |
| Health System Arrangement                         | Healthcare Workers, LMIC specific   | Strategies to improve the salary of health workers facing the pandemic and post-pandemic in low- and middle-income countries  |
| Public Health Measures, Health System Arrangement | Future Preparedness, Healthcare Workers, Pre-existing system challenges   | Strategies to increase specialists (doctors and others) for the management of patients related to respiratory pandemics   |
| Public Health Measures                            | Adoption and Adherence  | SUPPORT: What are the most crucial components of social support, eg funding for sick leave or quarantine, needed for maintaining appropriate behaviours?  |
| Public Health Measures                            | Adoption and Adherence, Balance of Public Health with Economic and Social, Future Preparedness, Prevention and Wellness | The Effectiveness of Quarantine alone or in Combination with Other Public Health Measures to Control Coronavirus Disease 2019   |
| Clinical Management                               | Transmission  | The rate of re-infection with COVID-19  |
| Clinical Management                               | Treatment   | -treatment efficacy/effectiveness   |
| Clinical Management                               | Medium to Long Term Effects, Treatment  | Treatment of chronic Covid  |
| Clinical Management                               | Treatment   | -treatments efficacy/effectiveness  |
| Public Health Measures                            | Adoption and Adherence, Communication and Behavioural Strategy  | Understanding if certain messaging for SARS-CoV-2 prevention is more effective for different contexts   |
| Health System Arrangement                         | Vaccination   | Understanding reasons people choose to receive and not receive SARS-CoV-2 vaccination   |

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| Health System Arrangement  | Vaccination   | vaccination   |
| Health System Arrangement  | Vaccination   | vaccine approval  |
| Health System Arrangement  | Vaccination   | vaccine effectiveness in different population   |
| Health System Arrangement  | Vaccination   | -vaccine efficacy/effectiveness   |
| Public Health Measures, Health System Arrangement                            | Future Preparedness, Pre-existing system challenges, Restoration of Non-COVID services  | What additional health care services should be made available within a comprehensive and integrated service delivery?   |
| Clinical Management  | Medium to Long Term Effects   | What are (and how to deal with) the long-term side-effects of COVID-19 exposure?  |
| Clinical Management  | Medium to Long Term Effects   | What are and how to deal with long-term COVID related side-effects/diseases?  |
| Health System Arrangement, Economic and Social Response                      | Vaccination, Vulnerable Populations   | What are interventions to improve COVID-19 vaccine delivery to the vulnerable population and how effective are they?  |
| Clinical Management  | Medium to Long Term Effects   | What are predictors for long COVID-19?  |
| Health System Arrangement  | LMIC specific, Virtual Care   | What are the barriers and enablers to accessing telemedicine for those living in LMIC?  |
| Health System Arrangement  | Vaccination   | What are the barriers and facilitators for populations regarding COVID-19 vaccination programmes?   |
| Public Health Measures, Health System Arrangement, Clinical Management       | Balance of Public Health with Economic and Social, Infection Prevention and Control, Prevention and Wellness, Transmission        | What are the best interventions to control the spread of the virus, without using lockdown?   |
| Clinical Management  | Treatment   | What are the best interventions to reduce mortality in severe Covid?  |
| Health System Arrangement  | Equity, Vaccination   | What are the best options for an effective roll-out of a vaccination program that includes equity and equality across all populations and communities in Canada   |
| Public Health Measures   | Balance of Public Health with Economic and Social   | What are the conditions to safely resume international travel?  |
| Clinical Management, Health System Arrangement, Economic and Social Response | Comorbidity, Concurrent Management of COVID and other seasonal infections, Pre-existing system challenges, Vulnerable Populations | What are the current mechanisms of care delivery for populations with chronic diseases or multimorbidity at high risk of severe COVID-19 for preventing COVID-19? |

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| Health System Arrangement, Public Health Measures, Clinical Management, Economic and Social Response | Pre-existing system challenges, Prevention and Wellness, Treatment, Vulnerable Populations           | What are the current mechanisms of care delivery for the older populations at high risk of severe COVID-10 for preventing COVID-19?                       |
| Public Health Measures, Clinical Management, Health System Arrangement                               | Future Preparedness, Treatment, Virtual Care   | What are the digital technologies used to improve outcomes of COVID-19 care delivery?   |
| Health System Arrangement  | Pre-existing system challenges   | What are the effects of different arrangements for financing COVID-19 health care services in the long term?  |
| Clinical Management, Health System Arrangement   | Treatment, Virtual Care  | What are the effects of different strategies of remote care provided by non-medical staff for chronic diseases in primary care?                           |
| Health System Arrangement  | Healthcare Workers, Pre-existing system challenges, Restoration of Non-COVID services                | What are the experiences with delivery of COVID and non COVID related essential services by non physician health workers.                                 |
| Public Health Measures, Clinical Management, Economic and Social Response                            | Prevention and Wellness, Treatment, Vulnerable Population  | What are the interventions to improve outcomes in preventing COVID-19 in the vulnerable populations?  |
| Public Health Measures, Economic and Social Response   | Balance of Public Health with Economic and Social, Democracy and Governance, Prevention and Wellness | What are the key socio-economic and - political drivers of the prevention of COVID-19?  |
| Clinical Management  | Medium to Long Term Effects  | What are the long-term sequelae of COVID-19?  |
| Health System Arrangement  | Equity   | what are the major human rights and equity considerations during pandemics  |
| Health System Arrangement, Economic and Social Response  | Vaccination, Vulnerable Populations  | What are the mechanisms for COVID-19 vaccine delivery to the vulnerable population and how effective are they?  |
| Public Health Measures, Clinical Management  | Adoption and Adherence, Communication and Behavioural Strategy, Transmission                         | What are the most effective communication strategies to improve compliance with measures to reduce the transmission of the pandemic virus in populations? |
| Clinical Management  | Medium to Long Term Effects  | What are the patient reported (important) outcomes related to SARS-CoV-2 infection and  |

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|  |  | COVID-19, including long-term effects of COVID-19  |
| Public Health Measures, Health System Arrangement                      | Communication and Behavioural Strategy, Prevention and Wellness, Vaccination                   | What are the programs, models or interventions to improve health literacy on COVID-19 and the associated vaccination programs and how effective are they?  |
| Health System Arrangement  | Virtual Care   | What are the specialized services that can best be provided with telehealth in times of pandemic and post-pandemic   |
| Public Health Measures, Health System Arrangement                      | Adoption and Adherence, Communication and Behavioural Strategy, Pre-existing system challenges | What behaviours within the healthcare system and within the community at large are barriers to a resolution of the pandemic?   |
| Public Health Measures, Health System Arrangement, Clinical Management | Prevention and Wellness, Restoration of Non-COVID services, Transmission                       | What characteristics of the SARS-COV2 virus make the transmission of the virus efficient and effective and what practical activities can effectively counteract transmission particularly in non-hospital or collective living settings to enable non-essential health care to continue within the pandemic. |
| Public Health Measures   | Future Preparedness  | What early indicators are there that a country is going into another wave  |
| Public Health Measures   | Future Preparedness  | what have we learned from COVID to better prepare us for future (and most likely inevitable) pandemics   |
| Clinical Management  | Transmission   | What is the contribution of asymptomatic people with SARS-CoV-2 to spread in hospitals and in the community  |
| Public Health Measures, Economic and Social Response                   | Balance of Public Health with Economic and Social, Childcare and Schools                       | What is the effectiveness of closing schools from a societal perspective? (long term)  |
| Health System Arrangement  | Healthcare Workers   | What is the extent of skill acquisition and knowledge retention by community health workers, trained using virtual training methods?   |
| Health System Arrangement, Clinical Management                         | Healthcare Workers, Mental Health  | What is the impact of social distancing in mental health? How to properly grieve from the experience (population in general and health workers)?   |
| Public Health Measures, Health System Arrangement                      | Prevention and Wellness, Vaccination   | What is the most effective and cost-effective vaccine to prevent COVID 19 in high-risk populations in specific contexts  |
| Health System Arrangement  | Vaccination  | What is the most effective and cost-effective vaccine?   |

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| Public Health Measures, Health System Arrangement, Clinical Management | Balance of Public Health with Economic and Social, Future Preparedness, Infection Prevention and Control, Transmission | What is the most effective intervention to control the spread of the virus, without using stricts lockdowns?  |
| Clinical Management  | Treatment  | What is the most effective treatment for severe COVID19?  |
| Clinical Management  | Transmission   | What is the outer limit of shedding of contagious virus for patients with asymptomatic SARS-CoV-2, for those with mild symptoms and those with severe symptoms.         |
| Public Health Measures   | Future Preparedness  | What is the risk and how to prepare for new pandemic waves?   |
| Public Health Measures, Clinical Management                            | Prevention and Wellness, Transmission  | What is the true effect of wearing masks outside of direct clinical care in preventing COVID-19   |
| Public Health Measures   | Balance of Public Health with Economic and Social, Future Preparedness   | What measures should be implemented and when to reduce the impact at the start of a new wave of infections in a country   |
| Clinical Management  | Treatment  | What mitigating factors show efficacy in reducing the viral load?   |
| Health System Arrangement, Clinical Management                         | Healthcare Workers, Infection Prevention and Control, Transmission   | what practices and procedures at point of care are reducing the risk of transmission  |
| Health System Arrangement  | Equity, Vaccination  | What strategies are the best for equitable vaccine implementation? How to help governments to exercise priorities in this regard?                                       |
| Clinical Management  | Mental Health  | What strategies from the health services exist to mitigate mental health problems in patients and their families during hospitalization and after discharge or death?   |
| Public Health Measures   | Prevention and Wellness  | what will it take for oral health to be a pillar of the health care system so that poor oral health is recognized as a contributor to overall ill health and morbidity. |
| Public Health Measures   | Balance of Public Health with Economic and Social, Future Preparedness   | What will the next normal look like?  |
| Public Health Measures   | Balance of Public Health with Economic and Social  | when to stop public health interventions: end of pandemia   |
| Health System Arrangement  | Vaccination  | When vaccines become available, how long will immunity last?  |

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| Public Health Measures                            | Adoption and Adherence, Prevention and Wellness      | Which interventions will be most effective at containing the overall community and regional spread of the virus?   |
| Public Health Measures, Clinical Management       | Collaboration and Research, Transmission             | Which reservoir did SARS-CoV-2 originate from?   |
| Public Health Measures, Health System Arrangement | Prevention and Wellness, Equity, Future Preparedness | Who are the most vulnerable populations that future pandemics should seek to protect   |
| Public Health Measures                            | Future Preparedness, Testing and Tracing             | Who should be tested when in order to provide early detection or prevention of case spread (eg screening travellers across borders; checks of health care workers, etc). |