TGHN Workshop Report COVID-19 Hub

Reaching a Global Consensus on What the Research Priorities are now for COVID-19 to Guide Funding

Date: 05/06/20
Location: Zoom

Introduction

Several major international research funding organisations are planning further calls to respond to the current COVID-19 pandemic. To ensure their funding decisions will address critical global knowledge gaps, we asked researchers across the globe help to make certain current research priorities are globally correct, appropriate and applicable.

The Global Health Network, the African Academy of Sciences and the UK Collaborative on Development Research have conducted a survey to seek the opinion of researchers globally as to the top priorities for COVID-19 research in their country and region.

In the survey we have combined research priorities set out by the WHO in the "WHO Coordinated Global Research Roadmap: COVID-19, March 2020" and a further list of additional priorities defined by the African Academy of Sciences with African based researchers. We had 1528 responses from 118 different countries in the survey.

To complement the survey, the 5th of June 2020 a workshop titles "**Reaching a Global Consensus on What the Research Priorities are now for COVID-19 to Guide Funding**" was conducted to complement the findings of the survey. In this virtual meeting the results of the survey were presented and discussed, with particular focus on the research needs and priorities of LMICs.

Methods:

The workshop was hosted using the teleconferencing software platform Zoom, specifically the Zoom Video Webinar function. The event was widely disseminated via The Global Health Network communication channels including social media with an invitation to register and join. The event registration page included the agenda of the workshop and a brief narrative on issues for discussion as detailed below:

"*Several major international research funding organisations are planning further calls to respond to the current COVID-19 pandemic. To ensure their funding decisions will address critical global knowledge gaps. TGHN, the African Academy of Sciences and the UKCDR have conducted a survey to seek the opinion of researchers globally as to the top priorities for COVID-19 research in their country and region (more information here). To complement the survey, join us for an open discussion and help us guide major research funders with your expertise on what COVID-19 research should be prioritised.*"

The format of the workshop followed short overview and situational summaries drawn from the results of the survey conducted in May, and then sought comments from the participants of the workshop.

The workshop was recorded, and comments and questions captured. We then undertook a basic and pragmatic thematic analysis in order to pull together a rapid consensus from this workshop and enable this to be shared and next steps considered.

Data included in this analysis comprised of the comments made using the software's 'Question and Answer' function, comments posted in the software's 'Chat' function, comments posted in Social Media (FB platform) and emails received after the delivery of the Workshop.

After data immersion, a coding framework was generated through an inductive and then deductive approach following the WHO research priorities Blueprint.

Results:

Over 500 people registered to attend. On the day of the workshop around 100 participants joined through zoom and more viewed the session through live streaming via the Facebook page of TGHN, spanning 38 countries (Fig. 1.).

Fig 1. Location of workshop participants (Countries shaded in dark blue.)
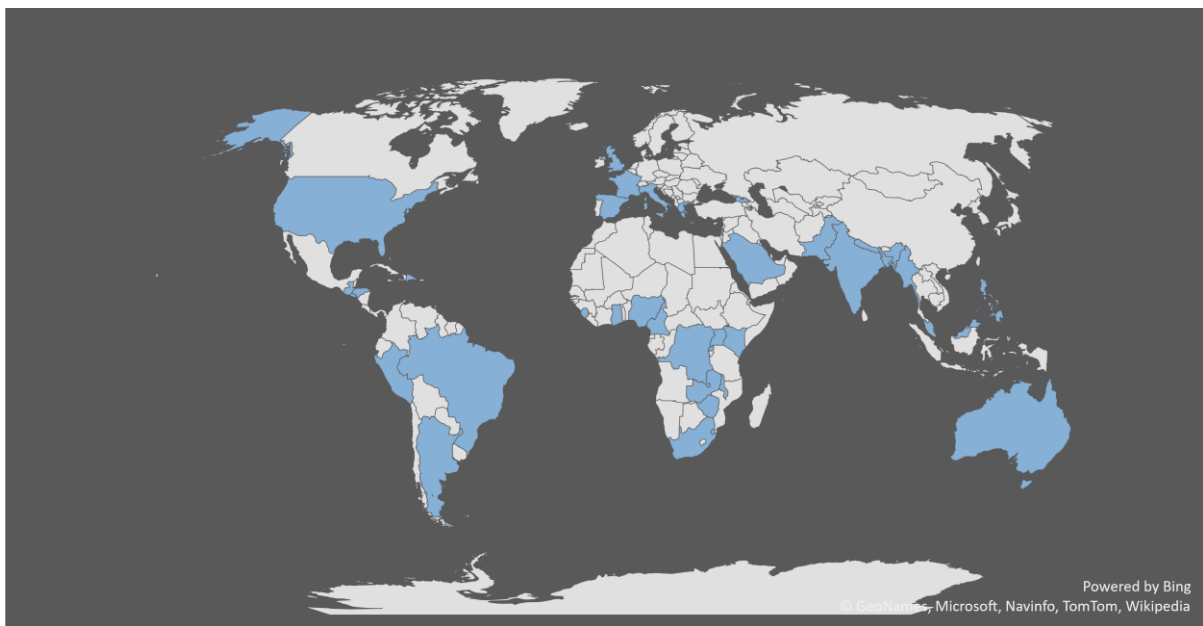

Workshop participants represented broad demographics, covering a wide range of job roles (Fig. 2.).

Fig 2. Job roles of workshop participants
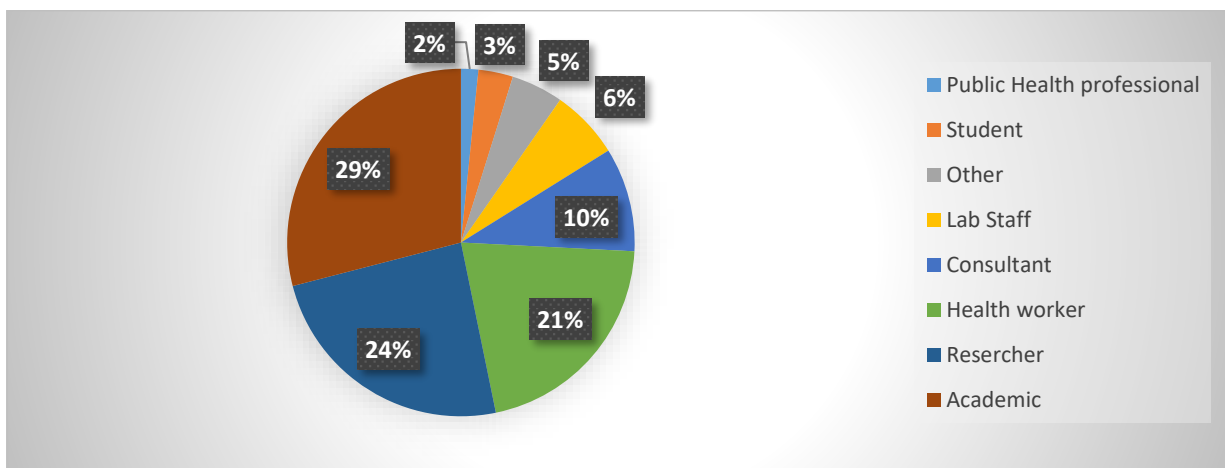
Participants were most commonly employed in academia, research organisations and hospitals. However, various types of establishments featured demonstrating that the views, skills and concerns of researchers from different sectors and industries were represented (Fig. 3.)..

Fig 3. Establishments where workshop participants work
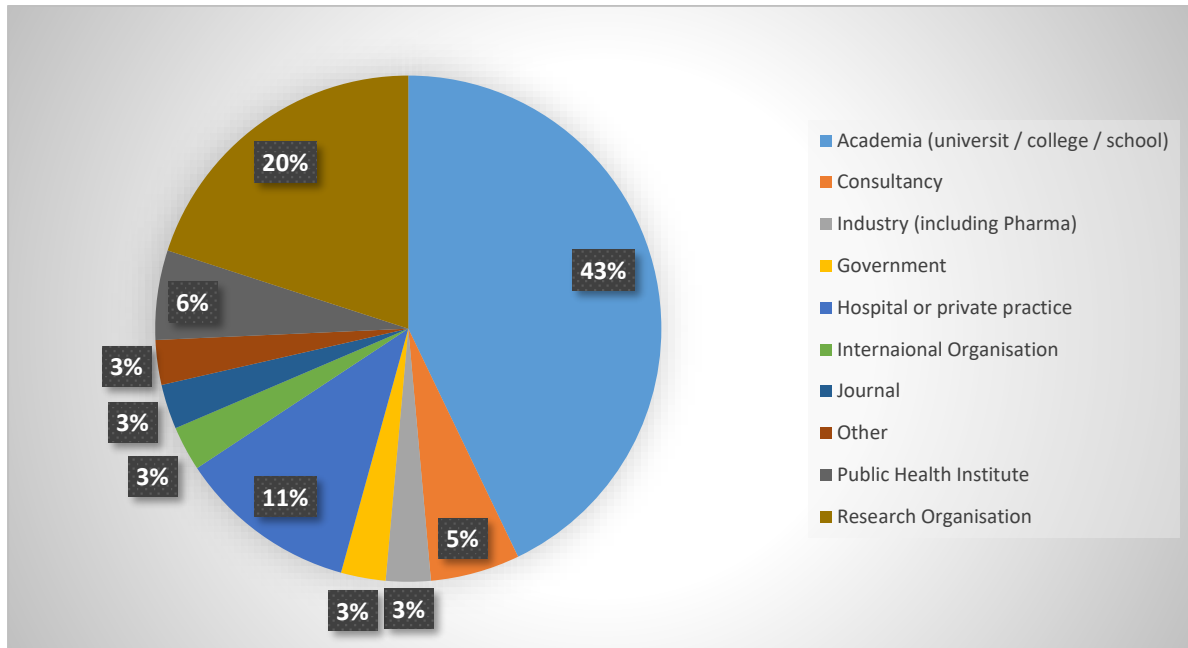
The following table shows the comments and discussion during the workshop:

Table 1. Comments and discussion from workshop participants

Social Media Comments
I would like to see research in the Vit D levels and comparisons of the very sick and less sick Covid cases.
I think we have varied epidemiology across globe. Seeing Africa and Asia we need to know what is the factor aside low testing for low number of cases and low death rate?
Uganda. Since Covid 19 has led to improvement in hand washing and hygiene practices. I would like to see the effect of behavior change in health. Especially on diseases like diarrhea, influenza among others.
What are factors affecting uptake of behaviour change intervention and factors affecting no uptake among those who are not taking up these interventions. Who are they and why are they not complying?
1. how to manage the infodemic (online health misinformation/disinformation. 2. Telehealth for chronic disease (not receiving care due to pandemic). I'm from the Philippines.
I think let's involve other institution in Africa or ICAP because African people have bad perception with their government, they look at it on political perspective
What are the pathogens(bacteria/protozoan) influence in man to man and animal to man transmission of covid19.Why was the virus in slow spread in west Africa ravaged by poverty, malnutrition and poor hygiene?
I think we have varied epidemiology across globe. Seeing Africa and Asia we need to know what is the factor aside low testing for low number of cases and low death rate?
TGHN email Inbox

1) In Zimbabwe there has been an increased number of people returning from neighboring countries. Unfortunately, some of the returnees especially from the neighboring countries do not have required documents to pass through normal border channels prompting them to bypass the borders. This poses a potentially hazardous risk to the communities as these groups of people do not go through quarantine and screening. Research to quantify the number of people using alternative routes is necessary to give a holistic approach to the COVID 19 response.

2) The other observation is that the current designated areas of quarantine are mainly hostels for ordinary students. These premises have common bathrooms, toilets and dining halls, which are high touch points. The effectiveness of infection prevention and control protocols at these facilities needs assessment.

3) Research is also needed on the experiences of those people who are in quarantine seeking ways into how the conditions in these centres could be improved to reduce the numbers of those who are running away.

4) The reason why most Zimbabweans are returning back to their country is because of loss of employment in the neighboring countries because of the lock-down restrictions. The decision to come back is also prompted by the fact that many are not eligible to access social grants in those neighboring countries. This situation poses a possible ongoing transmission across the borders at various stages. Research is needed to guide how best neighboring countries can collaborate to reduce this movement of people.

Char comments during the Workshop
Engaging policy makers, traditional/religion leaders in research is critical as they play major role in sensitizing the general public in the control and prevention of infectious diseases like the current COVID-19. pandemic and this will help as a preparatory strategy towards the next pandemic. This is because, a number of community/societies have various believe towards infectious diseases. Some don't believe in the current pandemic.
Clinical drug trial, effective vaccine, quantification of effect of covid -19 pandemic om MNCH outcomes,
I am a Biologist from the Dominican Republic and work as researcher and educator at higher education institutions. I think I would fund research related to prevention as a holistic approach for this global problem. For this reason "Design and test suitable risk reduction strategies at the human-animal-environment interface" would be one of my first priorities to fun
Find drug and support communication against misinformation and WASH. OMEP: World Organisation For Early Childhood Education is more interested to have research focus on child prevention
There are different measures that had been practicing from long time ago in Eastern culture in order to improve the immunity. some of them are still in practice as alternative therapy in Nepal like Ayurveda, Naturopathy. many public health measures that are stated in AAROGYA SASTRA need to be reinvestigated. so for long term impact of protecting people from such pandemic and minimize it's severity , research priority is necessary in this area too.
I think Vaccine development should be considered
Each country is different and has different needs. I would suggest that the priority is to find the gaps in each country's health system and what prevents them from delivering quality care and implementing and effective epidemic control program. I think we need to make sure that the projects fit into a strategy and sequence of research to avoid piecemeal research that does not build on the other findings
Health systems research in the priority in Africa.

In Kenya the government is developing measures to Quarantine people at home and this might be marred by stigma and resistance from community and the key message will be crucial to implementing these Public health interventions as we explore modalities of Biomedical research.

Cape Town. They are currently investigating different alternatives to ventilators or intubation. Medical interventions for patients with severe COVID-19 e.g. do ventilators do more harm than good? What was missed? Possibly research into COVID-19 and heart-failure/cardiac conditions.

Country like Sierra Leone grapples with ravages of war, Lassa fever, communicable diseases, Malaria etc. Another research would be on capacity building and standardizing methods within the African region. Sierra Leone has among the highest population of bats in the world. Can it be an indicator for considering where to do mathematical modelling and disease surveillance. I think we need to strengthen data capture and surveillance in the hospitals because that's provides first line of information. i.e. Wuhan experience.
Impact of COVID-19? Are we expecting an upsurge of lifestyle diseases because of the sedentary lifestyle? Upsurge of hypertension, obesity, mental illnesses etc. Research priorities need to be preventive measures rather than addressing the gaps identified during the pandemic. Secondly one vital challenge has been the disconnect between knowledge and implementation. There were challenges during contact tracing, diagnosis and skill gap in PCR, innovations etc...Our education curriculum, needs to be strengthened to provide implementation science rather than just acquiring certificates and failing in implementation(control , monitor and using evidence based practices to detect and contain outbreaks and pandemic).
There is a big knowledge gap!
Retrospective study on the hospital records to detect, predict disease hotspots.
We need simple solutions

I am a Brazilian doctor studying Medical Anthropology now. I would like to see studies on native communities' knowledge and how they are dealing with the disease in LMICs.
What are the measures they are doing that work to them, is it possible for them to do social distancing?
Is it effective the use of mask and at what extend hand wash is possible?

my priority would be in the epidemiology, the effect clinical management protocol and the social science in Ghana

Response from Asia seemed v low - 6%? any chance of adding further input? And, did you have a minimum cut off for 'new priorities' or is that based on n=1 in some cases?

Our priority should focus to community baseline research as this will narrow down our genesis approach towards COVID-19. We need also to think on how to cooperate the Use of Digital Health technologies to get the quick response on our baseline data responses

How much does the redirection of funds and focus of ministries of health to COVID 19 affected other public health programs? How much is surveillance of other notifiable diseases affected by the redirection of efforts of ministries to COVID-19 surveillance. With the advent of COVID-19 as a pandemic, some ministries had redirected their focus and resources. this left some program such as EPI, MCH, HIV/AIDS/ Tuberculosis, Nutrition unattended.

I would love to see studies investigating transmission that have direct impact on easing lockdown or infection prevention and control for example: transmission in schools/water systems/in neonatal units or women with symptoms caring for children

I agree. This is an interesting thing to document as well - the impact of the COVID19 pandemic on the care being given to other diseases that depend on the public health infrastructure. The speaker mentioned infectious diseases but it would also be interesting to also investigate this for vaccine-preventable diseases and non-communicable diseases. It would be interesting to formally investigate the different policies countries implemented to quell the spread of the pandemic, and how this has affected, if at all, the outcomes of patients in their country. There have been many comparisons published but most of them were anecdotal and informal. Would be interesting to see some sort of framework that could guide future policy.

From India authority obedience and stigmatization of nurses making nurses behind in research. Effect of corona on nurses and exact nurses' number who got affected? health worker disparities affecting research? improve nursing research. There is a need for common research poral.

Let me share with you my thoughts considering the situation in our country, Epidemiology is what we need to focus on as well as well as its the impact on the use of PPE such as use of Mask, disposing off the PPE etc. Also, we need to focus on the social behaviour aspect and cultural are because our area is a diverse, regional country with various religious beliefs

Disposal of PPEs and masks and sanitisers

In low- and middle-income country, the priority will be to improve IPC/WASH for effective management of cases. LMIC have multiple problems, including Ebola, covid-19 antibiotic resistance, health care associated infections etc, with one cause, poor IPC/WASH. Therefore there is only one solution, which is improving IPC/WASH. Therefore, research priority should be how to improve IPC/WASH in LMICs.

For us in Nigeria, we will like to carry out studies on which interventions would be more effective in slowing down the pandemic. Use of cloth masks has been advocated, but its effectiveness is not known. In Nigeria too, we need to study the impact on health workers & what interventions have worked.

Mutation studies are key for development of effective vaccines

curative and preventive research on covid -19 though it's short term. Then a vaccine for covid- 19.

is herd immunity can help fight against Covid 19?

I am from India and go through the various data which shows that so many health workers are infected and even died due to covid - 19 while caring the patients of covid-19. So I think we need to give priorities in the studies of prevention of infection among health care worker or frontline work simultaneously along with vaccine development and test kit development.

Kenya: my research top priority will be surveillance since we have low screening coverage across the country to identify the gaps and anticipated covid19 spread existence in the community. Research priorities differ across globe in terms of resources and health care infrastructure. vaccine development should be the top priority in research funding for long term priority

Comments from attendees who spoke during the workshop

It is important to remind ourselves that the context is key – the global pandemic context but also coming from Pakistan, an LMIC, I will focus more on this LMIC context; Good biomedical research depends on infrastructure and many LMIC's have fractured healthcare infrastructure this poses a particular challenge. In many countries in Africa, Southeast Asia etc illiteracy is a challenge; leads to mistrust and conspiracy theories which are a core problem across the globe, especially for LMIC's. Within this context I agree while it is important to focus on therapeutics/vaccines we also must focus on social science research, otherwise we may not be able to convince people to agree to any new drugs/vaccines. Public education, trust and CE are vital to explore. 'Public' as to include HCW's – need to find robust mechanisms of communication to everyone. Also burn out of HCW's is becoming more of a problem. I think that the bottom line is that funders should prioritise large scale collaborative studies which incorporate social science research. Generating research leadership is also key.

priorities need a focus on the context, eg in Malawi there was an issue of people returning from South Africa – how to manage them etc is an example of contextual importance. Focus on choices at individual level: when lockdown is implemented many people in LMIC's must make a choice:-> lockdown and risk starvation or work to earn a living but risk getting the virus? Presidential elections, trust in gov or underlying agenda – trust is important? There are a number of issues which are very context focussed: How to enhance compliance with lockdown, wear masks etc. Support mechanisms for social intervention.

LMIC's have multiple problems, hence we need to look at a holistic approach instead of focussing on 1 problem: in years to come we might have more pandemics. Poor IPC and sanitation are the problems in LMIC's – COVID or any other disease: should be able to look for ways to improve IPC and sanitation.

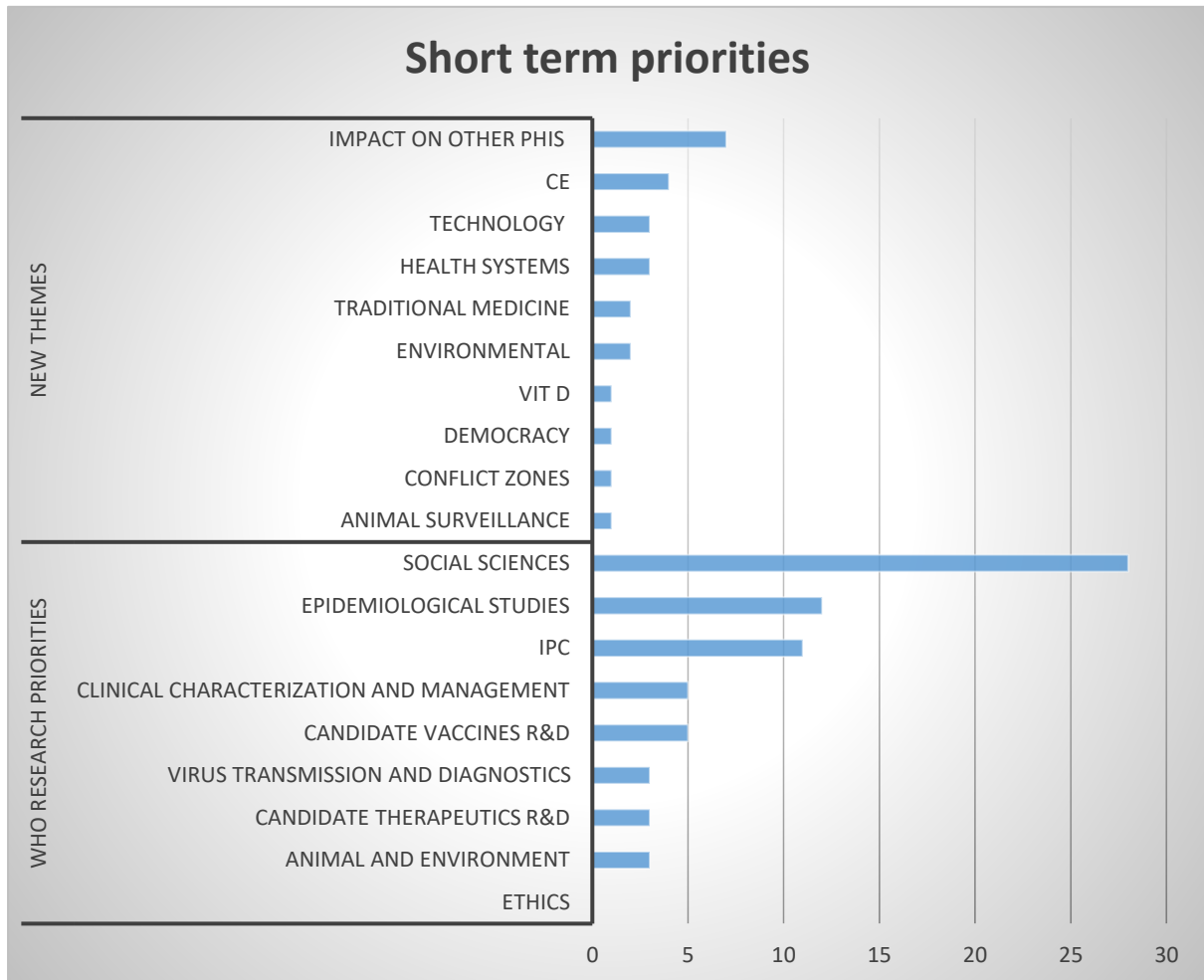| |
|---|
| we have to go back to the drawing board to look at the impact of not just the pandemic but also the public health measures impact on reaching SDG? – end poverty, hunger, ensure education and quality education. We are running the risk of moving backwards - Education, supply chains etc have been majorly disrupted. SDG's should be at the core of the response to the pandemic. |
| Highly impactful decisions are being made without a lot of evidence. Research into Public Health Interventions (PHI's) is vital |
| We need more data and look into the social aspects of the response, e.g. use of masks etc. disposal of PPE/masks |
| on the context of LMIC's: we don't have anywhere near as much of a capacity to research. Look into PHI's, distrust, PPE efficacy. CE, public trust, field antigen testing are all absolutely vital |
| While this is global, it is worse in LMIC's – may even be underestimated. Need to record health outcomes during the lockdown period. Children health effects: many have missed vaccines – will polio make a return? Will we go back 50 years in terms of health after COVID19? The use of isolation centres is important. Communication of COVID testing results needs work. As vaccine development may take a while, therapeutic research is also important – research the ones which people are taking at home to see if any have antiviral properties. Priorities should be split into immediate, mid- and long-term priorities |
| I think community baseline studies should be very important: can't overlook the community. Need to enlighten the community about sanitation, healthcare, facemask use; if we can focus on the community, who may not be aware of COVID19. The use of digital health technologies |

Discussion

The following themes emerged from the thematic analysis highlighting research priorities within the WHO blueprint and new themes identified, both divided into Long- and short-term priorities.

Short-term priorities

Within the ***WHO research blueprint priorities*** there was a great emphasis on social sciences, epidemiological studies and infection prevention and control strategies. Regarding the subthemes within the WHO research priorities, new ones where identified that were not found amongst the responses in the Survey. First, participants indicated that research studies should also evaluate the impact of improved WASH practices on other related infections diseases: '*in hand washing and hygiene practices. I would like to see the effect of behaviour change in health. Especially on diseases like diarrhea, influenza among others'.* Secondly, workshop and working groups participants also honed on the need for examining the effects of the pandemic on the participation of the public in democratic processes.

Short term priorities

NEW THEMES
- IMPACT ON OTHER PHIS
- CE
- TECHNOLOGY
- HEALTH SYSTEMS
- TRADITIONAL MEDICINE
- ENVIRONMENTAL
- VIT D
- DEMOCRACY
- CONFLICT ZONES
- ANIMAL SURVEILLANCE

WHO RESEARCH PRIORITIES
- SOCIAL SCIENCES
- EPIDEMIOLOGICAL STUDIES
- IPC
- CLINICAL CHARACTERIZATION AND MANAGEMENT
- CANDIDATE VACCINES R&D
- VIRUS TRANSMISSION AND DIAGNOSTICS
- CANDIDATE THERAPEUTICS R&D
- ANIMAL AND ENVIRONMENT
- ETHICS

0 5 10 15 20 25 30

Furthermore, new research priorities outside WHO research blueprint (e.g. environmental impact), and existing priorities requiring greater research emphasis also emerged (e.g. vit D, use of technology). These are similar to the ones found in the results from the survey conducted in May except for two, namely Community Engagement and Health systems

Regarding health systems, there was a strong engagement from respondents in wanting to know the impact of redirecting resources and PHI to COVID-19 on public health programmes. These were associated with decreased surveillance on other notifiable diseases, reduced funding, lack of access to healthcare and poor infrastructure: *"How much does the redirection of funds and focus of ministries of health to COVID 19 affected other public health programs?"* Furthermore, there was mentioned of the impact not only on other ID but also related to non-communicable diseases and reproductive, maternal and child health and even education. *"With the advent of COVID-19 as a pandemic, some ministries had redirected their focus and resources. this left some program such as EPI, MCH, HIV/AIDS/ Tuberculosis, Nutrition unattended"*

As for Community engagement, this one is mentioned within the blueprint in section 9a,9c and 8d. However, during the workshop participants emphasised the need to further engage with different set of stakeholders, including for example religious leaders, to make public health interventions more available, acceptable and culturally appropriate.
"Engaging policy makers, traditional/religion leaders in research is critical as they play major role in sensitizing the general public in the control and prevention of infectious diseases like the current COVID-19 pandemic and this will help as a preparatory strategy towards the next pandemic. This is because, a number of community/societies have various believe towards infectious diseases. Some don't believe in the current pandemic."

Long-term priorities

Within the ***WHO research blueprint priorities*** there was again a need for social sciences research, understanding the impact of COVID-19 in the long run and the development of vaccines: *"vaccine development should be the top priority in research funding for long term priority"*

Regarding the subthemes within the eight WHO research priorities, two new ones where identified that were not found amongst the responses in the Survey: the impact of improved WASH practices on other WASH-relate infections and the effects of the pandemic on the participation of the public in democratic processes.

Long term Priorities
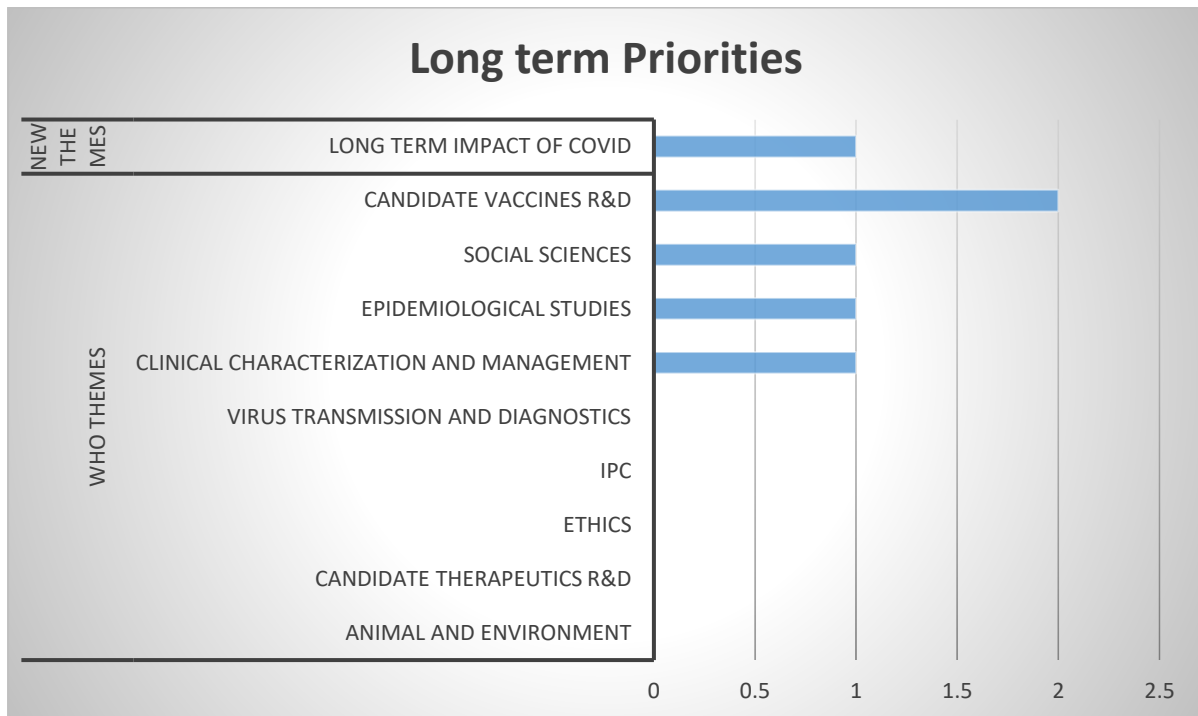
Summary or priorities identified:

WHO priorities

a) Short-term priorities

- Candidate therapeutics R&D
    - *Investigate the potential role of natural/alternative/herbal/traditional remedies and practices in treatment of COVID19*
- Social Sciences in the outbreak response
    - *Understanding COVID-19 in the contexts of conflict, civil war, and refugee situations*

b) Long-term priorities

- Clinical Management
    - *The effects of the global response to COVID-19 on management and prevalence of other infectious diseases, such as TB/HIV/Chikungunya*
- Epidemiological studies:

- *The impact of improved WASH practices on WASH-related infections diseases.*
- Social Sciences
  - *Examine the effects of the pandemic on the participation of the public in democratic processes.*

Existing priorities requiring greater research emphasis also emerged – these are covered under the WHO priorities but were mentioned by several respondents:

- *WHO priority 9a, c&d:*
  - *engaging relevant stakeholders (including religious leaders) in research to enhance community sensitization and adherence to IPC measures.*
- WHO priority 4a
  - The importance of Vitamin D levels in COVID-19 severity
- *WHO priority 9b*
  - *Health Systems research & strengthening*
  - *The impact of redirecting resources and PHI to COVID-19 on public health programmes (RMNCH, other IDs – especially vaccine preventable diseases-, NCDs)*
- Cross-cutting
  - The use of technology in various aspects of pandemic response.

New broad themes & sub themes

- The environmental impact of the response to COVID-19.
  - **Environmental impacts of large-scale PPE production and disposal.**
- Preparing for the next pandemic.
  - **Ensure effective measures including community surveillance are in place to rapidly identify emerging zoonotic diseases by developing animal screening techniques (e.g. of bats/migrating birds)**

Call to action and next steps

Over the next few days please send in your comments and feedback and share your views on the COVID-19 workshop '**Reaching a Global Consensus on What the Research Priorities are now for COVID-19 to Guide Funding'**.

Further virtual workshops are planned, which will be topic-specific and based on demand. If you would like us to conduct an open workshop related to a specific area of COVID-19 research, please let us know what aspects would be most helpful. We will also be running Working Groups on several different topics related to the COVID-19 pandemic for those with experience in research in the relevant areas.

You can get in touch here: info@theglobalhealthnetwork.org