TGHN Disease Characterisation Open Working Group 1st meeting

COVID Hub - Minutes

Date: 22/05/20
Location: Zoom

Introduction:

The ongoing establishment of 'COVID-19 working Groups' is addressing the discussion and consensus building around identified research gaps across low resource settings. All attendees of 'open workshops' have been invited to participate by completing a survey and expressing their interest in the 'COVID-19 working Groups'.

At 13:00 BST on the 22nd May, The Global Health Network supported the first virtual meeting for the 'Diseases Characterisation open Working Group'.

The meeting was organised in response to questions raised in COVID HUB workshop which highlighted the need for greater discussion of the impact that COVID-19 pandemic might have around COVID-19 disease characterisation, specifically the implications for co-infection, immunology, etc.

The purpose of this meeting is that teams can be formed from across the globe to share ideas, gather consensus, form collaborations and seek funding. These groups can share and engage widely to support rapid research implementation during this pandemic. We can fully support the operations of these groups and so your precious time can be spent on these key discussions.

- *What do we know so far about COVID-19 disease characteristics?*
- *Where are there gaps? What do we still need to know about COVID-19?*
- *Where do we start to answer these questions?*
- *What is needed to find this answer?*

Attendees:

Over 74 people registered to be members of this WG and 34 attended the first team meeting from 20 different countries as shown in the following map:

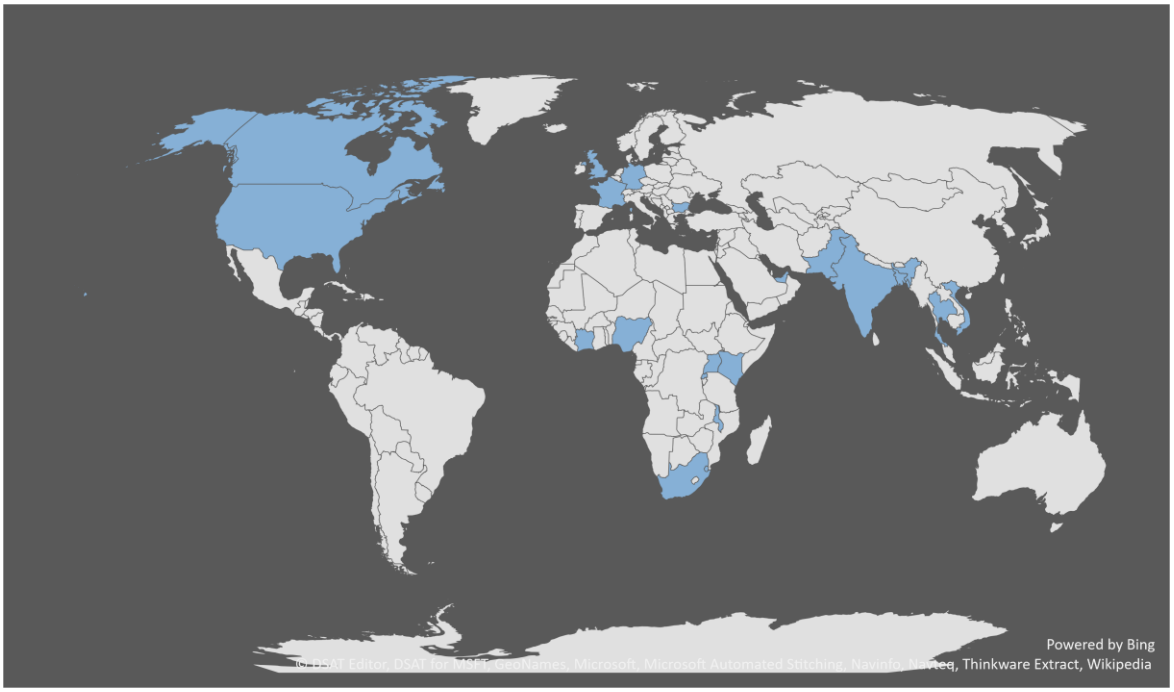

Fig 1. Location of the WG1st meeting attendees.

TGHN team	Trudie Lang, Davide Balardi, Ryan Walker, Jamie Parker, Nicole Feune de Colombi, Welile Sikhondze
Those who spoke	Dobrin Vassilev, AbdulAzeez A. Anjorin, Amoo Olufemi Samuel, Roman Tandlich, Azuka Ike
	SadiaZia, MallikarjunaK, Santosh KumarB, Lawrence Ogbannaya, AbbasAbel Anzaku, Shahanaz Chowdhury
Rest of Attendees	James peter, Gakuru Isaac, Sagida Ismail, Duncan Oyugi, Michelle Gitau, Thhu Anh Nguyen, Tamara Stojkovic Bulatovic, Amartya Pradhan, Festus Rao, Shaanaz Chowdhuy, Sospeter Mwatha, Eric Fouelifack Nzeko, Jane Achan, Nébié OUEDRAOGO, Bhekisisa Mavimbela, Khadija Bashir, Niranjan Kumar Matham, Caitlin Murphy, Alma Abou-samra, James Amenge, Oksana Zinchenko, Krupa Desai, Steve Wandiga, Wamalwa David, Oscar Tapera, Stanley Chinedu, Ibra Lujumba, Evans Otia, Tegene Dadi, Minyanga Nkhoma, Ricardo Strauss, I Gede Juanamasta, Vito Baraka, Richard Maude, Liberty Makacha, Noel Patson, Prudence Hamade, Isaac Godwin Bulndi, Vijaykumar Mishra, Richard Yapi, Jorge Maguina, Abuyot Adane, Sawaira Ahmad, Dr Premjeeth Moodbidri, Sewa Singal, Roger Paluku Hamuli, Abbas Abel Anzaku, Mark Tefero kivumbi, Mutabazi Placide, Eman Eltahlawy, Liã Bárbara Arruda, kathrun Washington, Breatrice Ojuederie, Maria Nunez, Olabinri Folashade, Adeniyi Aderoba, Stacy Bey, Cassius Maapea, Abubakar Sadiq Bashir, Nensi Lalic, Abebe Sorsa, Doaa elmamdouh, jean Bosco Mbonimpa, kedar Baral, Omara Denis, Frank Kato, Samuel Mbugua, Said Abasse Kassim, Ewurama Owusu, Ivan Kamurasi, Malvika Salve, Derrick Bary Abila

Summary of comments

Three main themes emerged from the thematic analysis highlighting research priorities within the COVID-19 Disease Characterisation Open Working Group 1st meeting (Fig. 2.).

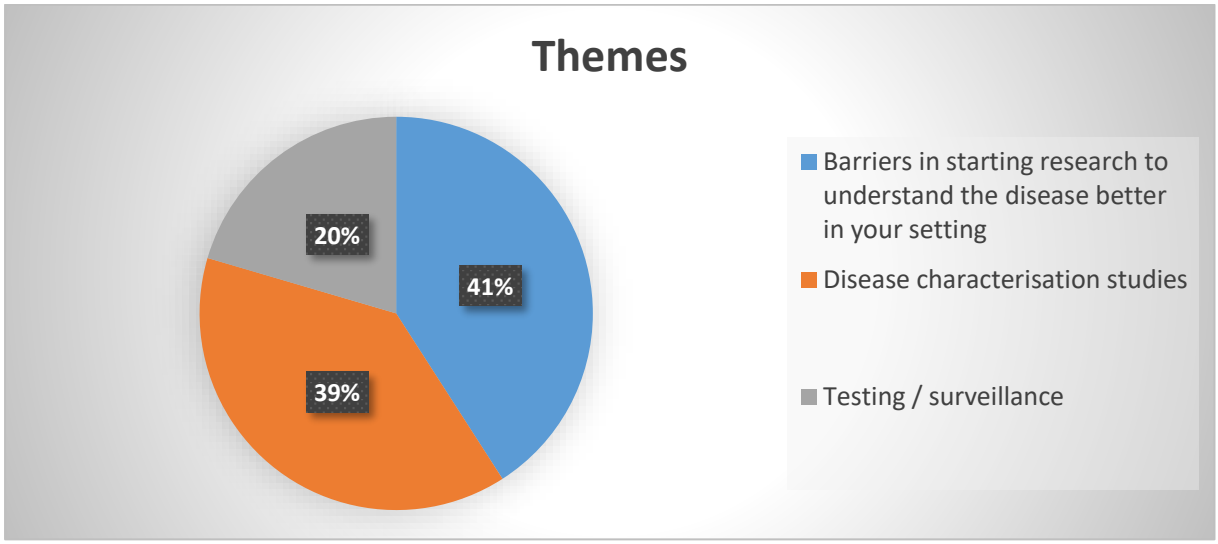

Fig 2. Three main themes for research priority within COVID-19 identified from Disease Characterisation Open Working Group 1st meeting feedback review.

Within these three topics it was then possible to categorise the questions, comments, and discussions to further specific areas (Fig. 3.).

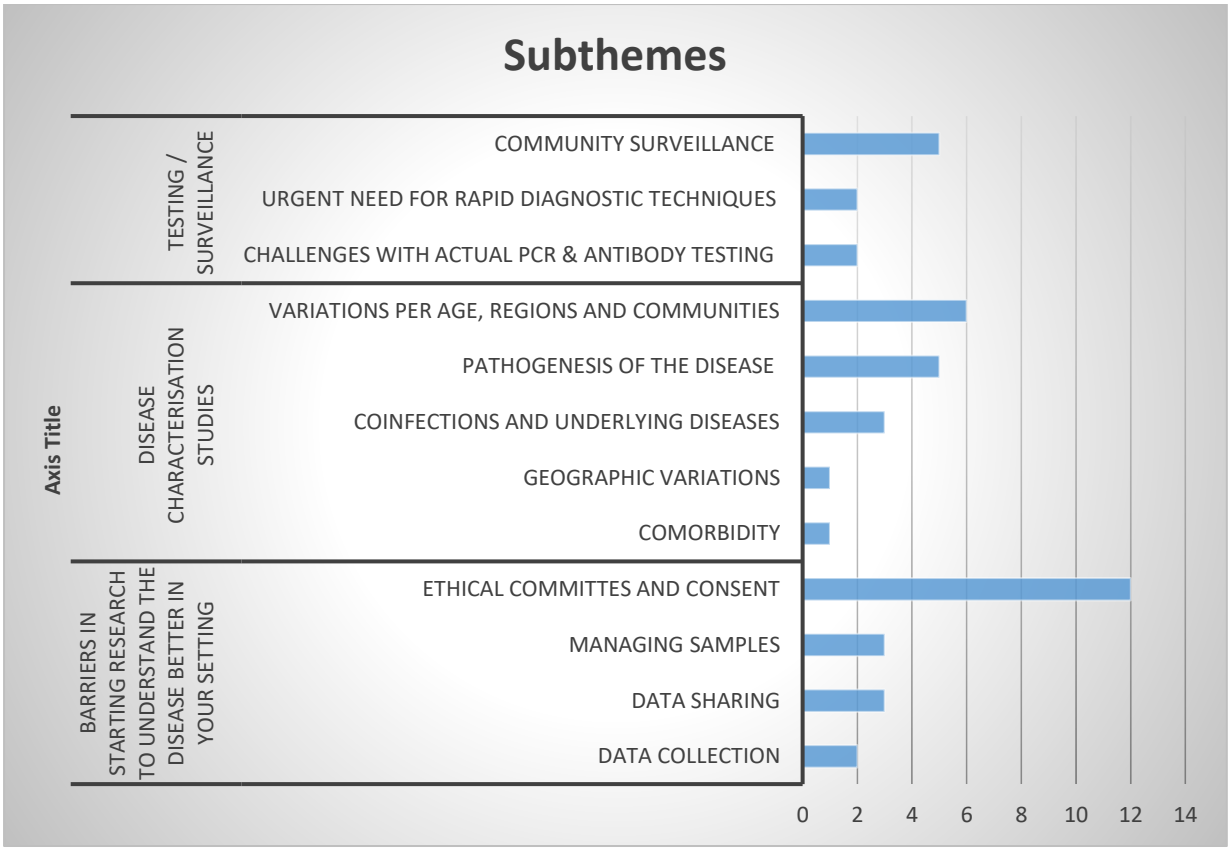

Fig. 3. Categorisation of questions, comments and discussions to specific areas.

Reviewing the discussion, comments and question we consider the following questions emerged as the priority research questions, concerns and knowledge gaps.

What are the barriers in conducting research to better understand COVID-19 in your setting?

Three main challenges were identified:

a) data management and sharing
b) managing samples
c) lack of efficient ethical committees and challenges regarding consent

Regarding the data management, one member of the group from Bangladesh stated challenges regarding data collection during COVID-19 time given the lack of ERC in many of the sites where studies are run. In his own words "*The hospital which I am collecting data there is not ERC. Usually no problem during normal time but now pandemic situation*." It was also mentioned that sometimes, even with ethical approval, hospitals are reluctant in sharing data. **Another member suggested to use this WG as an opportunity to work/study data together and escape the situation of several poorly resourced, similar, weak studies being done.**

For characterisation of disease there is a need to retrieve and store samples. Archiving samples is therefore critical. One member suggested the importance of setting Biobanks. "*Could we consider the impact of biobanks studying disease characterization? How those samples can be archived for long time storage and subsequently be retrieved for studies? Going into clinical trial, we will need to consider biobanks for storage of samples and those vaccines as well."*

Another challenged related to sampling was regarding the consent process and the precautions needed (handwashing, sanitising, wearing masks and PPEs where applicable). **This needs a guideline on which this Working group could engage with.**

There was a special mentioned to the importance of ethical systems of review. Many members commented on the challenges related to engaging with ethical committees and specially in settings/facilities where ethical committee or board have not been established. Two members suggested that even if hospitals don't have ethics committee it is not mandatory that the researcher organisation alone can give such approval. Researchers can apply to an external ethical committee within a 30km of the hospital or apply to ICMR for research approval. ICMR guidelines of research during pandemic where shared which is accessible to everyone (short & readable).

Last but not least, informed consent practice seems more challenging than ever. Some members explained that during the pandemic research doesn't necessarily need informed written consent. There are 4/5 categories of patients for which informed consent is not needed.

What disease characterisation studies do members of this team want to peruse?

Pathogenesis of disease:

- Mutations is likely to arise due to the environmental pressures, climatic and geographical differences. There is need for characterisation studies relating virus mutation and its association with the severity of the disease.
- Identifying metabolites involved in the pathogenesis of the disease is vital and allows observation of the relationship between the virus and its hosts. Detailed knowledge of metabolites would also assist in vaccine production and point of care diagnosis.
- Severity of COVID-19: Poor outcomes have been registered among COVID19 patients on ventilation in that a good number of them don't survive. There might be unrevealed impact of the disease on the Red Blood Cells in such a way that they are unable to pick up the oxygen being supplied. Studies are required in this area in order to gain understanding on the impact of the Virus on the RBCs.
- Characterising mode of transmission.
- Characterisation studies evaluating immunity including length of post-infection immunity, recurrence of infection and herd immunity as well as research into whether these change in different coinfection/comorbidity patients.

Studies looking at Co-infections and underlying diseases for example HCV and HBV along with COVID 19.

Reasons for and consequences of different variations

- *Age variation and the impact of COVID-19 on Young ones: There has been an* emergence of severely affected teenagers/young adults (maybe due to smoking and alcohol use?). Another member also would like to study on the disease characterization among infants who present symptoms that are quite different from the symptoms experienced in adults.
- *Regional variation at national and subnational elves:* disease characterisation studies evaluating this could help guide lockdown/other strategies.
- *Disease characterisation studies on specific communities:* human vulnerabilities in disasters such as those living in refugee camps, health workers, maternal and pregnancy groups.

What is the most efficient testing strategy to guide COVID response in resource poor settings? How could this WG help?

Laboratory diagnosis are a cornerstone in order to respond to the pandemic. However, there are different current problems with surveillance. Diagnostic test (PCR & Antibody testing) are still being developed, some of which still have high rates of FP/FN of tests. There are also challenges with handling the samples (including for example techniques to take nasopharyngeal swabs). Therefore, the development of various strategies for supporting surveillance would be extremely useful.

Furthermore, compared to countries in the Northern Hemisphere, in the Southern one, COVID-19 is more abundant in the community than in hospitals. Household transmission will continue and tackling it will only become more important as lockdown and other measures are lifted while vaccine/treatments are still under production. One of the possible solutions mentioned to strengthen community surveillance strategies were mobile testing labs. There seems to be many questions that remain about understanding COVID-19 in the community. **How might disease characterisation studies be designed for this setting?**

Call to action and next steps

Following this first meeting, there was an agreement in the need for a platform (for which TGHN will be providing – details to come) where members of the team will be able to post information on funding calls, specific resource and tool a well as a forum chat for members to form new collaborations and plan future work.

Disease Characterisation studies are very important! Suggested starting points from this first call are as follows:

1) **use this WG as an opportunity to work/study data together and escape the situation of several poorly resourced, similar, weak studies being done with little amount of data. Areas of interest for possible research disease characterisation studies are:**
    - Characterising studies evaluating mutations and metabolites involved in the pathogenesis of the disease
    - Characterising studies evaluating severity of COVID-19.
    - Characterising studies evaluating mode of transmission.
    - Characterisation studies evaluating immunity.
    - Characterisation studies at looking at co-infections and underlying diseases.
    - Characterisation studies at looking at reasons for and consequences of different variations (age variation, regional variation, specific population.

2) **Creation and possible publication of guidelines on:**
    - How might disease characterisation studies be designed for community settings?
    - Orienting the consent process and sampling during studies considering COVID-19 situation and the precautions needed.

If you are involved in Disease Characterisation research and you have not joined this group yet, please get in touch and share any relevant protocols, associated tools and your experience. You can get in touch here info@theglobalhealthnetwork.org or complete the survey here: https://oxford.onlinesurveys.ac.uk/covid-19-research-working-groups-members-selection-sur