Modeling and Measuring Community Engagement in Health Emergencies Convening: Summary Report

25 & 26 April 2017

Bill & Melinda Gates Foundation, 1300 I St. NW, Suite 200 East, Washington DC 20005

1. Goals and Objectives

The Modeling and Measuring Community Engagement in Health Emergencies Convening was hosted by the Multilateral Partnerships Team of the Bill & Melinda Gates Foundation in Washington DC, 25th and 26th April 2017.

The convening provided a platform for participants to consider how to better define, measure, model and operationalize community engagement and behavior change communication in future health emergency responses. The diverse group of participants included practitioners, academics, data modelers, representatives of implementing agencies and global coordinating and funding bodies. The convening goal was ambitious: to achieve consensus on high level indicators, tools and operational approaches for doing and measuring community engagement better, as a key element of preparedness for global health emergencies. Participants were challenged to move beyond reflection of lessons learned from recent health emergencies, and to focus on what concrete steps must be taken to avoid past pitfalls and problems. The convening posed three critical questions:

1) **What concrete actions and plans do we need in place when the next health emergency occurs**? How do we frame and define 'good' community engagement in ways that can be better integrated into future health emergency responses, considering how complex and context-specific social responses can be?
2) **How do we build the evidence base**? How do we more clearly define the outcome and operational indicators that must be tracked to measure social and behavioral factors influencing disease transmission? What social science research and data collection efforts are needed to integrate social factors into epidemiological models?
3) **How can the evidence inform policy**? What is needed to convince health policy-makers that quality community engagement has a priority role to play in decision-making, resource allocation and preparation for health emergencies?

Considering these broad questions, the convening set out to achieve the following objectives:

- To review current progress and lessons on incorporating behavior change into mathematical disease modeling, with a focus on the 2014 – 2016 Ebola Outbreak in West Africa.

- To determine gaps related to measuring and modeling community engagement and behavior change within the context of health emergencies/pandemic preparedness.

- To agree on principles in support of pandemic preparedness that guide the development of methodologies, frameworks and indicators for data collection on community engagement and behavior change.

- To create and foster links between institutions and individuals focused on improving the policy and practice of engagement and social and behavior change communication in health emergencies.

2. Background and Context

Behavioral and social factors play a critical role in determining both how a disease is spread and how people use health services during a health emergency. A growing body of social research points towards the significant role of social, political, cultural and historical factors on disease epidemiology, as well as the impact of good (and poor) community engagement and social interventions on local behaviors and response capacity.

Social factors are typically not well integrated into epidemiological models and are not fully incorporated into epidemiological parameters such as reproduction rates and transmission rates. It is often assumed that empirically measuring the impact of social interventions as a top priority for epidemic control is very difficult to do rapidly and at scale. These challenges contribute to an arguably weak evidence base for social interventions during health emergencies, which in turn makes it difficult to

develop policies and practices that improve the effectiveness of these interventions, determine the allocation of resources and support the role of community feedback in decision-making. At the same time, poor incorporation of social factors into disease models may lead to incorrect predictions about a disease's epidemiology, thereby impacting on resource allocation and response operations.

The Bill & Melinda Gates Foundation and Global Good's Institute for Disease Modelling (IDM) have brought together research scientists, development practitioners, health professionals, and policy makers to guide retrospective mathematical modelling of the 2014 – 2016 Ebola Outbreak in West Africa, integrating epidemiological data with available behavioral data from at-scale community engagement interventions. The *Data Modeling Behavior Change in Health Emergencies* project aims to quantify the impact of behaviors on disease transmission, and through this the potentiality for reducing future disease transmission through modelling that will inform resource allocation and implementation for community engagement at timescales short enough to prevent significant mortality and morbidity.

This project has highlighted the challenges and opportunities of systematic data collection, modeling and analysis of quantitative and qualitative social data during health emergency responses. As a result, the *Modeling and Measuring Community Engagement in Health Emergencies* convening was developed as a platform for interested stakeholders to explore these challenges and opportunities and suggest ways of addressing them.

3. Issues Emerging from Proceedings

WHO, UNICEF and other international agencies are making progress to address gaps in social science and community engagement capacity as part of global health emergency preparedness efforts.

▪ WHO is currently conducting the Social Science Interventions (SSI) for Managing Infectious Hazards consultation, which focuses on incorporating social science interventions into operational responses. The overall goal is to establish SSIs as a core public health response strategy that cross-cuts all infectious hazard management and the prevention and management of epidemics and pandemics. Along with the Global Consultation on SSIs, WHO plans to develop guidance on community engagement, which follows the recent development of guidance on emergency risk communication.

▪ UNICEF's Communication for Development team are in the process of developing the Social Science in Action Platform, which will strengthen a network of social scientists to disseminate research and build capacity for active response. The platform aims to address lessons learned during the West Africa Ebola outbreak, including delayed activation of community engagement as a key part of the emergency response, and the need for actionable tools, resources and internal capacity. UNICEF also plans to develop local, national and global indicators for measuring community engagement, and to use digital technology to improved data collection. Strengthening local capacities for quality community engagement is a priority item for UNICEF, not only in public health emergencies but across social service systems.

Stakeholders must aim for greater consensus and clarity on the definition and components of community engagement within a health emergency.

▪ The term 'community engagement' is contested and ill-defined. Several terms, including social mobilization, sensitization, behavior change communication, risk communication, psychosocial support, and others, are often used interchangeably to describe a range of different social interventions. The term 'community' itself can oversimplify complex power structures and dynamics within and among individuals. Participants attempted to define key elements of community engagement within a health emergency context, a discussion which highlighted the wide diversity of expert and institutional perspectives.

▪ Lack of clarity and consensus on the definition of community engagement makes it difficult to measure, to advocate for, or to position community engagement within an operational response. There was general agreement on the need to further clarify terms, and to define core community engagement components and activities within the context of existing global preparedness frameworks, e.g. the Global Health Security Agenda. Stakeholders seeking to advocate to medical response officials for a greater role for community engagement and need to 'get on the same page' to better make the

case through the use of more consistent language and framing on general terms, while recognizing a diversity of perspectives and approaches for any specific context.

- Community engagement should be considered as a critical component of the public health system in any given context, not only as an intervention of an international emergency response. Strengthening this element of public health systems is key to building and strengthening local capacities and systems, improving resource allocation and influencing policy at local level.

- Understanding context is essential for community engagement to be effective. This includes the cultural, socio-economic and political contexts within which communities and individuals respond to health emergencies and within which emergency response interventions are implemented. Participants discussed how best to access secondary sources of information about these contexts (e.g. 'crowd-sourcing' social science and area specialist knowledge) and rapidly acquire information that can help develop and inform operational responses.

- Community engagement is an essential element of both humanitarian responses and development interventions, especially those focusing on health. While critical reviews of the community engagement response during the West Africa Ebola outbreak have created an impetus for improving preparedness for future health emergencies, the same essential elements of community engagement should be applicable to development interventions. It is important to ensure that lessons from recent health emergencies are also incorporated into initiatives seeks to improve practice and measurement of development interventions.

Great scope exists to further the field of epidemiological modelling and to build the social evidence base through deeper collaboration between the modelling professionals and social science practitioners.

- The evidence base quantifying the impacts of community engagement within the context of health emergencies is slight, making it difficult for policy makers, funding agencies and humanitarian actors to determine how to allocate resources and integrate community engagement interventions into response operations. This being the case, there is a broader – though not comprehensive - evidence base from the development sector from which lessons can and should be drawn to inform future responses. Participants agreed that having more rigorous evidence on community engagement interventions will contribute to improving practice and resource allocation across the sector.

- There is great scope for the social science and epidemiology/modeling communities to intensify collaboration. Modelling experts noted that the assumptions about human behavior made in mathematical disease models typically do not draw on the deep knowledge about people and cultures that exists within the social sciences. Social science practitioners noted that more modelling of social data may offer considerable opportunity to test hypotheses and better analyze existing data. Participants agreed that work is needed to reach common ground and improve methodological approaches.

- Modeling of social interventions in an epidemic is limited by a lack of reliable, at-scale field data collection on social and behavioral indicators, along with indicators that measure the process of community engagement. Participants agreed on the need for homogeneous guidelines and standardized indicators and approaches for data collection. Such guidelines could include how to establish a social behavior baseline, including geospatial factors of transmission, in addition to setting requirements for establishing a stable record of data sets and how they were collected. Implementing agencies, including governments and NGO practitioners, often have deep knowledge and collect substantial amounts of data on local community responses. However, due to a lack of capacity, time, funding or mandate for undertaking further research and analysis, this data may remain on a shelf without being analyzed or published. Better linkages between practitioners and academics, and between qualitative and quantitative research communities, can help to bring this data to light for further analysis and publication.

- There is a significant evidence gap related to the relative efficacy of financing community engagement as compared to other interventions.

It should be possible to develop standard indicators for measuring behavioral outcomes and operational performance of community engagement interventions within health emergency responses.

- Community engagement can be measured, and has been measured, at-scale in the context of health emergencies. Large-scale interventions during the recent West African Ebola and Zika outbreaks have collected both process and behavioral intentions data and demonstrated the 'possible' for future responses. Key to data collection within the context of these interventions is in ensuring that the collection of data was fully integrated into interventions, and that tools for collection and analysis were placed in the hands of mobilizers and communities.

- Participants emphasized that is important to understand community engagement as a process that is focused on affecting changes in behavioral intentions and, ultimately, behavior change. When it comes to measurement, community engagement interventions should be considered alongside outcomes related to behavioral intentions. However, as the vehicle used to influence behavior, community engagement `is a distinct process can be controlled and adjusted within the context of an operational response and should be frequently measured and reported on.

- Where possible, community engagement should be consistently and rigorously measured during health emergencies of all sizes. This is not always the case for reasons that include a lack of prioritization of community engagement in health emergency response centers, limited funding for monitoring and measuring within the context of interventions, a lack of capacity within implementing organizations, or simply a belief that it 'cannot be done'.

- While some institutions have developed metrics for community engagement and behavior change communication for both development and humanitarian interventions, the lack of any standardization of indicators and methodological approaches across implementing agencies sets limitations on how data can be synthesized and compared both within and between emergency contexts.

- The identification of appropriate community engagement indicators in health emergencies may in some cases be contextual - they will depend on the modes of disease transmission and behaviors in question, types of interventions (including scale and location) and the methodologies employed. However, there was some agreement that would be possible to develop typologies of indicators for monitoring and measurement of community engagement that can be applied across responses. This might not only include for large-scale pandemics like Ebola and Zika, but also localized disease responses (such as cholera) that are happening every day.

- One suggestion was the potential of developing composite indicators for community engagement, developed by social scientists and community engagement experts, that might be included in future situation reports for guiding interventions. Indicators collected within the context of community engagement interventions might include: community engagement processes, knowledge attitudes and practices (to the disease and the response), behavioral intentions and socio-cultural factors.

- Some participants were strong advocates for the development of indicators – including the incorporation of qualitative information into models. However, other participants challenged researchers and practitioners to demonstrate definitive links between these indicators and reduction in disease transmission.

There is a need to develop minimum standards for community engagement in health emergencies and for these to be adopted internationally.

- The convening recognized that there are currently no agreed international standards for designing, implementing and measuring community engagement. As with indicators, many NGOs, multi-lateral institutions and government agencies have implementation guidelines, standards and protocols that guide community engagement. However, these are not standardized or in alignment across contexts, or even within specific emergency responses. This makes measurement difficult and can result in uneven practice, limited accountability and narrow impacts.

- To avoid duplication, there needs to be a comprehensive literature review and analysis of what already has been developed in terms of standards for community engagement. These should be based on a broad understanding of the core elements of community engagement that reflect wide range of interventions and operational approaches.

- To support international adoption of standards of community engagement, a Sphere standards or handbook for community engagement in humanitarian response might be developed and vetted at Inter-Agency Standing Committee/CORE Group level. Were standards to be developed, these should not only include the core principles or concepts of communication, participation and empowerment, but also operational process, measurement and resourcing/budgeting.

There is an opportunity to support current policy initiatives aimed at preparedness for future health emergency responses.

- Community engagement is an integral component of current initiatives by WHO and UNICEF to incorporate social science interventions into operational responses for future health emergencies. Community engagement is one of the core vehicles for operationalizing the findings of social science interventions. Engagement with, and support to, policy makers on how community engagement is integrated into preparedness planning is essential to having an impact on its role in future health emergencies.

- Influencing the policy and funding agendas is highly dependent on making available robust evidence that supports the efficacy of community engagement interventions. It is also essential to demonstrate the capacity of those implementing community engagement interventions to measure their work.

- There is considerable scope for collaboration and consultation between all experts and institutions that are working to support community engagement in both the humanitarian and development sectors. Sharing evidence, ideas, practice and experience will result in a more collaborative and united approach to the promotion and advocacy of community engagement in support to current WHO, UNICEF, and other collaborative processes, including the *Communication and Community Engagement Initiative* currently underway under the auspices of the CDAC Network. Two-way communication extends beyond communities, and stakeholders need to be prepared to better communicate with policy makers to clearly articulate both the importance and complexities of community engagement.

4.   Actions for consideration.

It was understood that WHO and UNICEF are working at a global level to more formally incorporate social science interventions, community engagement and risk communication into preparedness for operational responses. Participants welcomed the opportunity to fully participate and engage with these efforts, and offered some specific potential actions:

- **Enhance practical collaboration and advocacy**: Foster a community of practice that includes convening participants and their organizations, supported by a **Call to Action** for the broader health and humanitarian sectors on the need to improve evidence, policy and practice for community engagement in health emergencies. Practitioners and academics can connect on practical projects, including modelling and further analysis of existing data sets. Create an **'Influence Plan'** to help coordinate messages for key policy makers and decision-makers leading medical response and preparedness efforts.

- **Create a blueprint for improving measurement and standards of practice**: Outline a process or 'blueprint' for the development of **indicators and standards of practice** for community engagement in health emergencies. The first steps include:

  o Developing a terms of reference for a **literature review** of existing initiatives, tools, indicators and guidelines for community engagement that can inform the collaborative development of **standardized indicators** (or a menu or tool for developing relevant indicators) for social and behavioral outcome measures; **standardized key performance indicators** for community engagement within response operations; and **standards of practice** for effectively engaging in social science interventions and community engagement efforts.

  o Collaboratively define the scope, priorities and timeline for the **synthesis and refinement of tools** that can support better social science and community engagement in health emergencies. This could include

standardized survey question banks; guidance for conducting rapid formative research; guidance for data collection and storage, and others.

- o Mapping a process for collaborative work to further clarify and gain consensus around the **definition of core community engagement components and activities** within the context of existing global preparedness frameworks, e.g. the Global Health Security Agenda.

- o Mapping **stakeholders and related activities** across agencies at global and national scales to avoid duplication and align similar efforts.

- ▪ **Establish a mechanism for supporting increased publication of research on community engagement:** The potential of partnerships for increasing the publication of community engagement research was highlighted during the convening. In support of this, develop a terms of reference or proposal for an institution or community of practice to support in identifying and synthesizing community engagement data for analysis and publication, facilitate practitioner-academic linkages, connect anthropologists and modelers and provide support to institutions for enhancing data collection, storage and sharing that all contribute to building a larger body of community engagement evidence.

For more information, contact:

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ANNEX 1: SESSIONS OUTLINES AND GUIDE QUESTIONS

DAY 1

Panel Discussion 1: Conceptualizing community engagement What do we know about behavioral, social and cultural dynamics during a health emergency? How do we define 'community engagement'?
Moderator: • Danielle Pedi, Bill & Melinda Gates Foundation
Panelists: • Sharon Abramowitz, Anthropologist, Rutgers University/IBTCI • Debora Diniz, Co-Founder and Vice Chair of Anis: Institute of Bioethics, Human Rights and Gender, University of Braslia. • Jim Lavery, Professor, Hubert Department of Global Health, Emory University
Guide Questions: • Epidemic response initiatives have to grapple with two sets of qualitative information that are often relegated to secondary research. The first set of qualitative information addresses the impact of behavioral, social, and cultural factors on disease epidemiology. The second set of information pertains to response capacity at the local level - specifically, community engagement. What do you see as specific epidemiological indicators that should be adopted when trying to understand and measure the impact of behavioral, social and cultural factors on disease epidemiology? How do we tackle the complicated job of integrating these principles and indicators into modeling efforts for reproduction rates, transmission rates, time to treatment etc.? • It is often assumed that empirically measuring the impact of community engagement as a top-priority for epidemic control is very difficult to do rapidly, at a large scale. There may be some disciplinary bias – medical experts often fail to recognize the power of community engagement as a determinative control measure. However, many sets of tools and indicators have been developed for measuring community-based intervention and behavior change, but have not been integrated actively. Are you aware of, or do you know, of emerging tools to address these challenges? What aspects of existing or emerging tools and approaches need to be modified to be workable and rapidly integrated in an epidemic outbreak context? • In the recent West Africa Ebola epidemic, a single indicator – 'Number of 'community resistance events' – was used to measure progress for the community engagement pillar of the response. If we imagine the SitReps of the future, what indicators do we need to track? What qualitative CE indicators do we need to track" with the same intensity and frequency as other epidemiological measures? • What do you see as some of the key gaps and opportunities for the future when considering the methodologies and methods used in empirical research and action on community engagement? What advice would you give in developing approaches and tools for qualitative and quantitative study that are applicable in health emergencies? • What are some of the ethical considerations when working with communities in health emergencies? How do you balance ethical principles with the political and social sensitivities of qualitative data collection and usage? What specific and general principles and techniques can be implemented to address these issues?

Session 2: Spotlight on UN initiatives
What new platforms and initiatives are emerging to improve community engagement in Pandemic Preparedness?

Moderator: Steve Landry, Director Multilateral Partnerships, Bill & Melinda Gates Foundation.
Presenters:
- Gaya M. Gamhewage, Manager, Interventions and Guidance, Expert Networks and Interventions Unit, WHO
- Ketan Chitris, Communication for Development Specialist, UNICEF

Guide Questions:
- What are the primary prevention and preparedness initiatives within WHO and UNICEF that incorporates community engagement and social mobilization?

- What are the top 2 – 3 lessons from recent emergencies that have informed these initiatives?

- How do you plan to measure community engagement and behavior change interventions? What do you see as the role of communities in this measurement? How will new initiatives measure that CE interventions are having an impact on disease dynamics?

- What is the role of partners in developing these initiatives? How can those partners working towards better and more accountable community engagement to support these initiatives?

Panel Discussion 3: Community engagement as global and national policy

Moderator:
- João Rangel de Almeida, Wellcome Trust

Panelists:
- Ketan Chitris, Communication for Development Specialist, UNICEF

- Katherine Lyon Daniel, Associate Director of Communication, CDC

- Gaya M. Gamhewage, Manager, Interventions and Guidance, Expert Networks and Interventions Unit, WHO

- Kama Garrison, Senior SBC Advisor, USAID

- Amara Jambai, Deputy Chief Medical Officer, Government of Sierra Leone.

Guide Questions:
- Looking back on community engagement in recent pandemic responses, what is the one thing you would have had your organization do differently?

- Looking forward, what does the future global (and national) pandemic response look like and how do we get there? At a global and national policy level, what steps must be taken to ensure better community engagement?

- What are the two or three biggest gaps in the evidence base for community engagement in health emergencies? What data and information from communities are needed to inform and improve policy, decision-making and service provision?

- From your perspective, how are 'good' community engagement and behavior change interventions designed? Who needs to be involved? What resources are required? How do these efforts link to and inform policy and decision-making?

Panel discussion 4: Community engagement and behavior change in disease modelling
How is empirical evidence of behavioral and social factors being incorporated into epidemiological modelling? Where do we go from here?
Moderator: ▪ Cordelia Coltart, University College London

Panelists:
   ▪ Ben Althouse, Research Scientist, Institute for Disease Modeling
 	
   ▪ Sebastian Funk, Associate Professor and Director of the Centre for the Mathematical Modelling of Infectious Diseases, LSHTM (via Skype)
 	
   ▪ Sam Scarpino, Assistant Professor, Department of Mathematics and Statistics, University of Vermont.
 	
   ▪ Laurent Hébert-Dufresne, Postdoctoral Researcher, Institute for Disease Modeling

Guide Questions:
 	
   ▪ What have traditionally been some of the limitations in incorporating parameters for human and social behavior in mathematical disease modeling? How is it typically done?
 	
   ▪ What has been your experience incorporating behavior change and community engagement parameters in disease modeling of the West Africa Ebola outbreak? What has been most challenging? What are some of your preliminary findings and/or top-line insights?
 	
   ▪ What do you see as the top two or three opportunities for quantifying behavioral dynamics in future disease modelling? What are the biggest gaps and unknowns? As you further the modelling field, do you see the potential for anything 'fundamental' about mechanizing behavior that could be useful across a broad range of diseases?
 	
   ▪ What data or information about community and social dynamics is needed to build better disease models? At the start? In real time? What would be your main data requests to future community engagement practitioners, implementers and social researchers working directly within a national or local response?
 	
   ▪ What do you see as the main contributions of disease modelling on decision-making, policy and practice?

Panel Discussion 5: Community Engagement in Practice – experiences from Ebola and Zika responses
Moderator: ▪ Cynthia Cassell, Senior Epidemiologist, CDC

Panelists:
   ▪ Penelope Anderson, Country Director Liberia, Mercy Corps
 	
   ▪ Saiku Bah, RM&E Manager, Christian Aid
 	
   ▪ Dr. Megan Coffee, Snr. Tech. Advisor for Health Programs/Health Coordinator IRC
 	
   ▪ Dr. Alfonso Rosales, Maternal and Child Health Senior Advisor, World Vision
 	
   ▪ Cristina Mana, Risk Communications Specialist, PAHO

Guide Questions:
   ▪ Can you provide a brief overview of the community engagement initiatives you worked on? Can you give us a sense of the scale, scope and timing? What were the main objectives and activities? Who were the main actors? What assumptions did you make?
 	
   ▪ What do you see as top one or two successes and top one or two failures of these initiatives in terms of the quality of community engagement? What indicators did you use to measure success? Looking back, what is the one thing you would have changed about the design or implementation?
 	
   ▪ What did you learn about community structures and power dynamics, and how they affect disease spread in positive or negative ways? What methods did you use to learn about and support existing or emerging health-enhancing behaviors and practices? Were there any missed opportunities?

- How were the CE initiatives integrated and coordinated with other aspects of the bio-medical response? What kinds of functional linkages were there between community-level action and the 'formal' response structure? How were community engagement activities linked to, for example, surveillance, medical treatment, risk communication?

- If you were briefing a future team at the outset of another pandemic, what advice would you give them? What key pitfalls and challenges should they avoid? What are the 'non-negotiable' things they must do? What key CE metrics should they measure?

DAY 2

Panel Discussion 6: Measuring community engagement and behavior change in health emergencies: what do we need to measure?

Moderator:
- Sharon Abramowitz, Anthropologist, Rutgers University/IBTCI

Panelists:
- Mohamed Jalloh, Epidemiologist, CDC (via Skype)

- Elizabeth Serlemitsos, Head of R + E team at CPP, JHU

- Paul Sengeh, Director Research and Evaluation, FOCUS 1000

- Sophie Mathewson, Portfolio Manager, Communities and Knowledge, Wellcome Trust

- Annie Wilkinson, Health and Nutrition; Digital and Technology, IDS

Guide Questions:
- What do you see as the one or two core principles that response initiatives should adopt when trying to understand and measure the impact of behavioral, social and cultural factors on disease epidemiology? What are some core principles for measuring the impact of community engagement initiatives on these behaviors?

- It is often assumed that empirically measuring the impact of community engagement as a top-priority for epidemic control is very difficult to do rapidly, at a large scale. There may be some disciplinary bias – medical experts often fail to recognize the power of community engagement as a determinative control measure. What tools and approaches are emerging that can address these challenges?

- In the recent West Africa Ebola epidemic, a single indicator – 'Number of 'community resistance events' – was used to measure progress for the community engagement pillar of the response. If we imagine the SitReps of the future, what indicators do we need to track?

- Community engagement encompasses a range of social sciences, from anthropology to social statistics, psychology, political science, etc., each with their own disciplinary lens and methods. What do you see as some of the key gaps and opportunities when considering the methodologies and methods used in empirical research and action on community engagement? What advice would you give in developing 'fit for purpose' approaches and tools for qualitative and quantitative study?

- What are some of the ethical considerations when working with communities in health emergencies? Specifically, what do we need to consider in terms of measuring and monitoring these efforts?

Session 7: Measuring and monitoring community engagement and behavior change in health emergencies: operational approaches and integrating responses.
Moderator: ▪ Elizabeth Smout, Research Fellow & Communications Coordinator, EBOVAC-Salone, London School of Hygiene and Tropical Medicine

Panelists:
    ▪ Saiku Bah, Monitoring, Evaluation and Learning Manager, Christian Aid Sierra Leone
    ▪ Dr. Amara Jambai, Deputy Chief Medical Officer, Government of Sierra Leone.
    ▪ Daniela Giardina, Oxfam.
    ▪ Dr. Alfonso Rosales, Maternal and Child Health Senior Advisor, World Vision

Guide Questions:
    ▪ Different community engagement and behavior change initiatives pose different challenges in assessing impact. From an operational perspective, what are some of the challenges for mobilizing large scale behavior change intervention in an emergency that makes monitoring and measurement challenging?
 	
    ▪ What do you see as the one or two core principles that response initiatives should adopt when trying to operationalize community engagement within an epidemic response?
 	
    ▪ There is often a wide gap between community engagement and behavior change strategies and health messages on the one hand, and the actual work of two-way communication that needs to happen on the ground, especially in an emergency. What do you see as the key challenges to addressing the 'missing middle' of implementation? How does community engagement and feedback loops fit into responses that are often vertical and driven by the need for urgent and rapid control?
 	
    ▪ In your experience, what training, operational structures and resources are needed to support an at-scale and targeted community engagement initiative during a health emergency?
 	
    ▪ What do we need to measure that approaches are being implemented with quality?
 	
    ▪ On an operational level, what do you think are the main opportunities and challenges to better integration of community engagement with other aspects of a bio-medical response?
 	
    ▪ What is the role of technology, and how can technological limitations be overcome? How do you address the issue of duplication?
 	
    ▪ If you were briefing a future team at the outset of another pandemic, what advice would you give them? What key pitfalls and challenges should they avoid? What are the 'non-negotiable' things they must do? What key CE metrics should they measure?

ANNEX 2: CONVENING PARTICIPANTS

(Alphabetical by surname)

Name	Title	Organization	Email
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