Health Cluster Study Findings:

Key Informant Interviews from Six Countries

Technical gaps, operational challenges and good practice delivering COVID-19 response and maintaining essential health services in humanitarian settings

November 2020

HEALTH CLUSTER

Acknowledgements

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Acronyms

AFRO	WHO Africa Regional Office
CHW	Community Health Worker
COVID-19	Novel coronavirus disease 2019
EMRO	WHO Eastern Mediterranean Region
GBV	Gender-Based Violence
GHC	Global Health Cluster
HHI	Harvard Humanitarian Initiative
HCW	Health care worker
INGOs	International Non-Governmental Organizations
KI	Key informant
MHPSS	Mental Health and Psychosocial Support
MoH	Ministry of Health
NGOs	Non-governmental organizations
PPE	Personal protective equipment
RCCE	Risk Communication and Community Engagement
SEARO	WHO South East Asia Regional Office
UN	United Nations
WHO	World Health Organization
WASH	Water, Sanitation and Hygiene

Executive Summary

To better understand technical and operational challenges being faced by Health Clusters and Health Cluster partners to implement COVID-19 response and maintain essential health services in humanitarian settings, the Global Health Cluster COVID-19 Task Team conducted two key studies. An online survey for all cluster settings and simultaneously key informant interviews in six cluster countries were conducted, the latter of which also aimed to capture good practice and localized solutions. The findings presented in this document are of the key informant interviews.

In August 2020, 64 key informant interviews were conducted with health cluster partners and coordination team members in six countries where the cluster is activated: Cox's Bazar (Bangladesh), Burkina Faso, Chad, Iraq, NE Nigeria and Yemen. Interviews were conducted in English, French and Arabic and findings were related to the nine pillars of COVID-19 response[1] as well as multisectoral coordination and programming.

Cross cutting challenges affecting all aspects of response to safely deliver both COVID-19 and essential health services were reported by health clusters and partners. Mistrust and lack of transparency in the health response including limited engagement with communities and partners in decision making and information sharing were cited. Furthermore, fear of being placed in quarantine or contracting COVID-19 when receiving health care, alongside stigma of having COVID-19 even if wearing a mask, were identified as challenges. Additionally, mistrust and fear were reported to relate to stigmatization of health care workers and an increased threat of violence against them. The central role of risk communication and community engagement in addressing these challenges was therefore underscored.

Further challenges being faced by health care workers were highlighted as a cross cutting issue. Insufficient personnel, technical capacities, or support to adopt evolving guidance were identified. In addition morale and motivation of health care workers emerged as a challenge for all areas of response as health care worker infections occurred, perceptions of insufficient availability of PPE, fear of falling sick, lack of health care provision if sick, and insufficient or irregular remuneration being stated.

Movement restrictions diminished partners abilities to access affected populations as well as populations to access health care services especially for those already living in hard to reach or insecure areas. Furthermore, application of public health and social measures (movement restrictions, quarantine etc.) to suppress transmission were reported to impact international and domestic movement of staff, transport of essential medicines and supplies. Disruptions in the global and local supply chain including cost inflation were reported to effect availability at facility level of critical supplies such as oxygen and PPE. Increased operational costs, decreased funding or funding diverted to COVID-19 response were described as contributing to operational challenges faced.

Multisector programming and services were also reported to face operational challenges due to limitations on gatherings, restrictions on movement and insufficient funding for activities. Disruptions in program activities for GBV, MHPSS, nutrition and food security protection and WASH were relayed. Nutrition programmes were reported to have challenges procuring and providing PPE for safe service delivery. Shelter was reported to have lack of guidance in managing overcrowded shelters or dwellings.

Despite the overwhelming challenges being faced many solutions captured across all pillars demonstrate the adaptive and innovative approaches of health cluster partners and other sectors, community leaders and members, to respond to the COVID-19 crisis.

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[1] As defined in WHO, *Covid 19- Strategic Preparedness and Response Plan, Operational Planning Guidelines to Support Country Preparedness and Response* May 2020

When asked to identify support needed from the global level, participants requested that existing guidance be adapted and operationalized relevant to the humanitarian setting where resource scarcity and significant operational challenges are encountered. In that effort, respondents stated that generating protocols, algorithms, job aids, messaging strategies and training materials relevant for different levels and cadres of health personnel would be most useful. Moreover, partners requested to learn from other countries experiences, share lessons learned and solutions to ensure that health cluster partners respond effectively as COVID-19 evolves over time. Key informants also requested coordination at the global level to merge and harmonize guidance within the health sector but also across sectors to ensure a multisectoral approach in responding to COVID-19.

These findings demonstrate the technical and operational challenges faced but also solutions, good practices and potential for strengthening localised response, many of which are reiterated in the companion Global Health Cluster study conducted by the READY Initiative, *Health Cluster Survey Findings*[2] where 112 organisations from 27 cluster settings participated. Shared findings include the reported technical gaps, the extent of operational constraints including cross cutting issues being faced, and requests for additional support through shared learning and context-appropriate guidance.

Given the long-term and evolving nature of the COVID-19 response, for example the introduction of new therapeutics, diagnostics and vaccines, regular discourse and evaluation should continue to help identify the key gaps and challenges over time.

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[2] *Health Cluster Survey Findings,* Global Health Cluster, November 2020 www.who.int/health-cluster

Background

The Global Health Cluster (GHC) aims to relieve suffering and save lives in humanitarian emergencies, while advancing the well-being and dignity of affected populations. COVID-19 has affected humanitarian contexts whose health systems and services are already under threat. To support COVID-19 response in humanitarian contexts the GHC COVID-19 Task Team was formed in May 2020. The Task Team is comprised of 30 partners including non-governmental organizations (NGOs), United Nations (UN) Agencies, donors, observers, Health Cluster Coordinators and academic partners.[3]

The GHC COVID-19 Task Team aims to capture key operational challenges partners are facing in the field; strengthen the coordination and effectiveness of Health Cluster preparedness and response through harmonized efforts to identify, promote, and support implementation of COVID-19 guidance for low capacity and humanitarian settings in response to the technical and operational challenges identified at country level to mitigate the health impact of COVID-19 amongst vulnerable and affected populations.

The primary objectives of the GHC COVID-19 Task Team are to:

- Output 1: Collate country-level technical, operational and coordination challenges
- Output 2: Promote and support adaptation and use of COVID-19 guidance for low capacity and humanitarian settings
- Output 3: Support multi-sectoral action
- Output 4: Capture and share lessons learned and good practices
- Output 5: Advocacy to address unmet needs and operational barriers

In order to achieve these objectives, the GHC COVID-19 Task Team decided to simultaneously conduct two key pieces of research: an online survey and a series of key informant interviews in six countries. The GHC COVID-19 Task Team Core Group 1, established to ensure emerging needs were captured, developed the research objectives and original tools for both pieces of research to ensure alignment. For the survey, the Save the Children-led READY Initiative conducted the research producing a companion report *Health Cluster Survey Findings[4]* where 112 health cluster partners in 27 cluster settings participated. For the key informant interviews, a team from the Harvard Humanitarian Initiative (HHI) conducted the research.

The six cluster country case studies were undertaken to address four objectives:

1. To determine urgent gaps in existing guidance or guidance that need contextualizing to low capacity or humanitarian settings
2. To determine operational challenges that health clusters, health cluster partners or implementing partners (in non-cluster countries) are facing
3. To capture good practices, innovations or adaptations that have addressed challenges
4. To identify opportunities to support evolving needs as the crisis unfolds in various stages

The complete results across all six cluster are presented in this report. Each country is also represented in a more detailed case study report and available with the Global Health Cluster.

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[3] See GHC COVID 19 Task Team
[4] *Health Cluster Survey Findings,* Global Health Cluster, November 2020 www.who.int/health-cluster

Methods

The case studies were conducted by the Harvard Humanitarian Initiative on behalf of the GHC COVID-19 Task Team in August 2020. Health Cluster Coordinators in all cluster countries were invited to participate from which 8 expressed interest but only six were able to participate within the time frame given. The final six clusters selected to be part of the study based were Cox's Bazar (Bangladesh), Burkina Faso, Chad, Iraq, North East Nigeria and Yemen. One-hour semi-structured key informant (KI) interviews were conducted remotely in either English, French or Arabic using video or teleconferencing. The semi-structured interviews prompted KIs to discuss the nine pillars of the response, the use and need for guidelines and what they perceive as the urgent needs at the national and international level.

The GHC COVID-19 Task Team developed the initial semi-structured interview tool from which the HHI study team then finalized into an interview guide. This was piloted and revised twice to ensure length and clarity of the questions (Appendix 1).

Key Informant Types
- Health Cluster Coordinator
- Country Focal Person or MoH representative
- National NGO
- International NGO
- WHO
- UN Agencies
- Donors
- Observers

Figure 1: Key informant types that participated in the assessment

Two project team members conducted each interview – one interviewing and one taking detailed notes capturing the KI's own words whenever possible. The interviews were not recorded for confidentiality purposes. The interviewers followed the guides as best as possible to cover all the subject in the guide probing areas at the subject went along. There was some interviewer liberty to allow the respondents to talk freely often covering several topic areas in one response. To ensure completeness the interviewers reviewed the topics at the end to make sure all areas had been asked about. Key informants represented the cluster constituency for COVID-19 response. (Figure 1)

A minimum of nine key informant interviews were aimed to be conducted per country (1 Health Cluster Coordinator, 1 WHO technical focal point, 2 INGOs, 2 NNGOs, 1 MoH partner, 1 UN agency, 1 donor). A total of 110 possible KIs were suggested by the health cluster coordinators in the six countries which were all invited to participate in the study. From those 110, 64 KI interviews were interested and available to be interviewed within the time frame given. Yemen completed the most interviews with Chad completing the least number of interviews. The composition of the types of key informants was also identified and it was noted that 54% of those interviewed were direct implementing organizations split equally between national and international non-governmental organizations (NGOs). The other key stake holder types were represented proportional to their representation to the clusters. (Figure 2) Participating agencies and organizations are noted in Appendix 2.

KEY COUNTRY BREAKDOWN

Bangladesh ■ Burkina Faso ■ Chad ■ Iraq ■ Nigeria ■ Yemen

14%
18%
8%
19%
17%
24%

KEY INFORMANT TYPES

HCC ■ UN ■ MOH ■ NNGO ■ INGO ■ Donor ■ Observers

8% 3% 10%
17%
8%
27%
27%
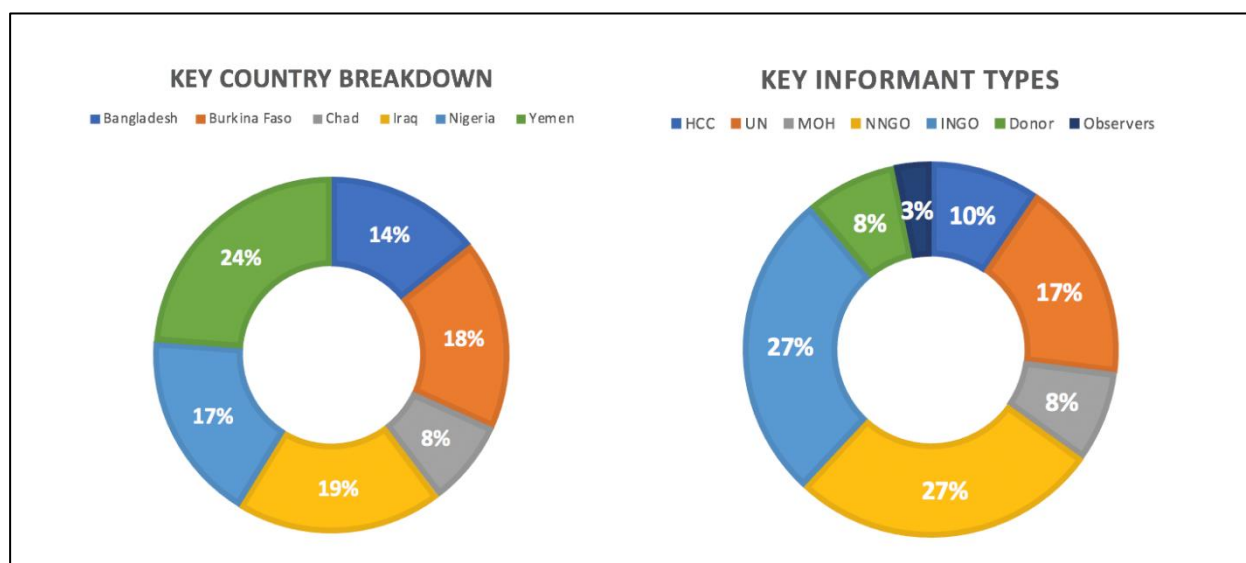
Figure 2: Cluster country participant representation (Left) Key informant types participating in the assessment (Right) **(total n=64)**

Prior to data analysis the project team completed subjectivity memos to acknowledge and mitigate their personal biases in conducting this assessment. The detailed notes from each interview were deidentified and then uploaded into open source qualitative analysis platform Dedoose version 8.3.41 (Dedoose.com). Grounded theory analysis was done by a subgroup of the project team to identify the codes and subcodes that reached saturation to comprise the code book (Appendix 1: Code Book). The five coders performed independent serial code application and revision of the code book for inter-rater reliability until reaching a Kappa coefficient > 0.61 for substantial agreement.[5] All interview notes were then double coded by the five coders to identify the themes for each code. For each country the codes represent saturated themes that emerged from the data analysis. For this summative report across all six clusters a saturated theme was considered a theme that occurred in at least four of the six clusters. Saturated themes are identified and reported here for challenges while solutions as they were often unique to the context(s) are reported without saturation. The frequency of code application was assessed as well as the relationship between codes applied by analyzing co-occurrence of themes. For co-occurring themes the excerpts were reviewed for examples and illustrative quotes that are highlighted in the report.

Limitations of this work include the purposive selection of cluster countries and of the KI within the clusters. This was done to ensure participation on a rapid timeline. There is no correlation of this qualitative data with the epidemiological curve of the cluster country and the severity of the COVID-19 outbreak in that context. This study was unable to directly triangulate the findings of a GHC COVID-19 Task Team rapid gap analysis conducted in June 2020, amongst task team partners. This was initially included in the KI interview however the length of the interview was too long and was unable to be completed in the allotted time burdening the KIs. The primary focus was hearing from the field their operational challenges and solutions, thus the validation questions from the interview tool were removed.

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[5] McHugh ML. Interrater reliability: the kappa statistic. *Biochem Med (Zagreb).* 2012;22(3):276-282.

Results

There were 3,420 excerpts across all KI interviews to which 66 codes and subcodes were applied 10,432 times. Figure 3 represents the code application frequency where red, yellow, green and blue represent the highest to lowest frequency of code application, (respectively). It is noted that there was broad discussion across all codes as represented by the blue in figure 3 with some areas of frequent discussion, specifically in the area of public health control measures as represented by the red, green and yellow or more easily visualized in the packed code cloud (Figure 4). In the packed code cloud, the larger the word size the more frequently a theme was discussed. The results themes are presented in the following three sections by study objective after a brief note on results terminology.
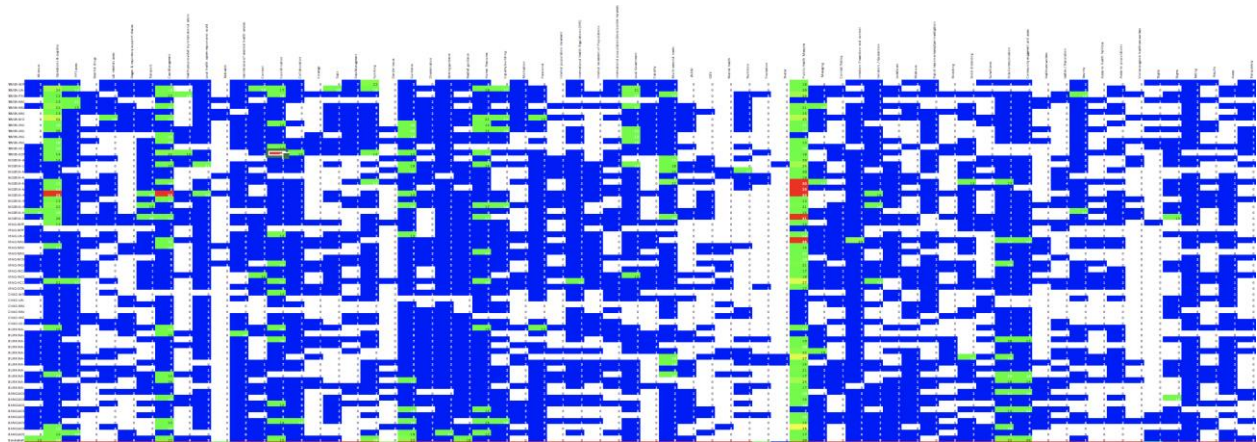
Figure 3: Frequency of the code (x-axis) application by KI (y-axis) where red, yellow, green and blue represent the highest to lowest (respectively) frequency of code application.

Results Terminology

The terminology used by KIs directly is presented in the results to preserve their messages as intended. The use of terminology was inconsistent in some areas or did not represent internationally accepted terminology in some cases. KIs universally used the term 'social distancing' instead of the normative term 'physical distancing,' which was established to separate the need for physical distance to prevent disease spread but maintain social connectedness for mental health and well-being. The terms isolation, quarantine and 'lockdown' were all used interchangeably by KIs to reference the need to isolate one's self or patients or to minimize movement and maintain physical distancing to avoid disease spread. As the term 'lockdown' is not a formal term, nor utilized by WHO or other bodies, the terms movement restrictions and the application of public health and social measures are used in this report to accurately reflect this. The interchangeable use of these terms required the collapsing of these codes and their identified themes into one category. Shielding was used interchangeably with quarantine and was not used as defined to protect vulnerable subgroups of the population from disease.

Figure 4: Weighted code cloud of the assessment's themes

Results for Objective 1: Determine urgent gaps in existing guidance

KIs identified which guidance was most useful to their organization and response efforts, with guidance defined as policies, protocols, training materials, etc. that were used for technical and programming references. Guidance specifically identified as helpful included:

- WHO training modules on infection prevention and control (IPC)
- WHO training modules on case management
- WHO videos
- Safe and dignified burial materials
- WHO guidance on school reopening
- WHO awareness posters
- WHO strategic plan
- WHO guidance on Gender Based Violence (GBV)
- WHO list of supplies/items with specifications for COVID-19 care
- International Organization for Migration materials on community engagement
- Health Sector-generated guidance on case management/home-based care
- National guidelines from their local government
- INGO specific generated guidance – varied from country to country

The KIs in addition to the above specific guidance broadly referred to the WHO's public health measure documents and technical guidance but did not further specify which specific guidance when probed.

Participants also provided information about what guidance they felt was necessary to advance their organization's response:

- Dissemination of good practices in low capacity and humanitarian settings – learning from each other
- Expanding and operationalizing the existing guidance so it is ready to be applied in the field. Examples of this include protocols, algorithms, job aids, messaging strategies, training materials, documentation forms or data collection templates
- Guidance on strategies to reopen or maintain essential health services
- Guidance on communication strategies: for the public with community focused approach, healthcare workers (HCWs) and governments that include the voice and opinions of service users
- Coordination at the global level to merge/harmonize guidance – within health and across other sectors

As guidance is only useful if it reaches the target audience, KIs were asked what the best modalities for the dissemination of guidance are. The modalities identified were:

- Regional forums to allow for sharing of ideas and solutions across similar contexts
- Mixed online and hands on training for guidance dissemination
- Website for a central place to aggregate all resource which should be organized and easily searchable
- Access to guidance on mobile devices (phone/tablet) through an easily searchable app to house information that can be used online and offline and is easily searchable
- Decentralize guidance - international guidance should be adapted for country contexts

Results for Objectives 2 & 3: To determine operational and technical challenges and to identify solutions & innovations from the field

KIs reported their operational and technical challenges as well as solutions with examples of each during the interviews. When analyzed, cross-cutting themes and sub-themes by response pillar emerged. Illustrative quotes are included where confidentiality of the KI can be maintained.

Cross-cutting Themes

The cross-cutting themes that emerged included mistrust, transparency, stigma, security, human resources, funding, data management and local government. A summary of the themes for mistrust, transparency and stigma is provided in Figure 5. These challenges occurred as primary topics of discussion and integrated across all nine pillars of response activities. Some KIs reported solutions that had been identified in their cluster country to address these cross-cutting challenges

Mistrust
The challenges identified related to mistrust included lack of engagement with the community to build trust and convey messages to combat the rumors that perpetuated through communities about COVID-19. Local perspectives were not always sought or addressed by whoever was perceived to be playing a leading role in the response (government, the cluster or the WHO). Community members reportedly did not believe that the disease was real as they didn't know anyone personally who had COVID-19. Underlying mistrust in the health system and its quality at baseline stoked fears of getting COVID-19 by attending health facilities. KIs reported where there was mistrust in national authorities prior to COVID-19

it affected the acceptance of response activities implemented. This was exacerbated by national authorities' efforts to enforce isolation and quarantine policies or utilize the police or military to support contact tracing and testing. However, national authorities are responsible for applying public health and social measures needed to protect the population and to mobilize available assets to support response. The differing mandates and motivations created conflict between the viewpoints of citizens, responders and national authorities on the complex issue of implementing measures that involve restrictions. Conflicting opinions from so-called 'experts' at the national or international level caused additional mistrust by HCWs and/or the community due to inconsistencies and frequent changes in information.

Solutions for mistrust that were identified included taking the time to communicate the complex messages needed for communities to fully understand COVID-19. The use of trusted community leaders such as religious, political, community or market leaders in Iraq, Burkina Faso and Cox's Bazar (Bangladesh) was successful in communicating messages and engaging in bidirectional conversation about COVID-19 to address rumors and misinformation. Individuals who contracted COVID-19 and recovered were also used to convey messages and establish the existence of the disease for those who did not believe it was real in Nigeria. In Cox's Bazar (Bangladesh) and Yemen where systems for community health workers (CHW) were part of the existing health system, CHW were trained to message on COVID-19 and promote control measures which as trusted members of the community before COVID-19 they were successful at doing.

> *"Acknowledging its [COVID-19] existence and being truthful to it. Whether I'm from a UN agency, the NGO, or the ministry, I need to be transparent. Once you deny it, that's when the stigma comes in."*

Transparency
Transparency was identified as a critical cross-cutting theme with real or perceived lack of transparency by the response structures or the national authorities affecting response efforts. This included concern over national authorities restricting which organizations could conduct testing where additional capacity existed thereby affecting the assessment of true disease prevalence. KIs expressed concern over inaccurate data sharing and the possible motivations for this. Poor risk communication and community engagement was perceived as lack of transparency when rapid decision-making processes for emergency rules or policies were implemented. KIs reported this may have led to decreased acceptance and compliance with those rules/policies.

Solutions to address the real or perceived lack of transparency included the use of feedback mechanisms. In Burkina Faso systems for feedback and questions between the government for cluster partners as well as for community members to provide their input into local government were established. Programs with strong community engagement and community feedback in Cox's Bazar (Bangladesh) allowed for questions on COVID-19 response to get answered, rumors to be addressed and suggestions for the response or improvements to be heard. Efforts to develop clear messages that convey the information about COVID-19 to both the community and HCWs and were clear and concise were reported to mitigate the lack of transparency and was consistent across all six participating country clusters. It was important that these messages were customized for the target audience – lay persons in the community versus the different levels and types of HCW (doctors, nurses, etc.). Using local languages and local examples/context in Chad and Burkina Faso reassured both HCWs and the community that information was being freely shared.

Stigma
Stigma was identified as a major challenge spanning all aspects of the response and all stakeholders. At the community level being identified as a contact, being placed in isolation/quarantine or even getting tested for COVID-19 was stigmatizing with negative impacts on social and economic standing with neighbors or within the community. Wearing a mask was identified as a sign of being sick rather than preventing disease resulting in stigma. HCWs were also stigmatized by their communities with people avoiding them as they may be at risk of having COVID-19 and spreading it in the community given they work in health facilities.

> *"COVID-19 is perceived as a stigma … [even] when a patient was referred for COVID-19 and he was negative, the patient and the program were stigmatized."*

Violence against HCWs due to their perceived threat of carrying COVID-19 into the community was also identified.

Limited specific solutions were identified to address stigmatization directly as addressing stigma was part of larger efforts across the coordination, risk communication, IPC and case management pillars.
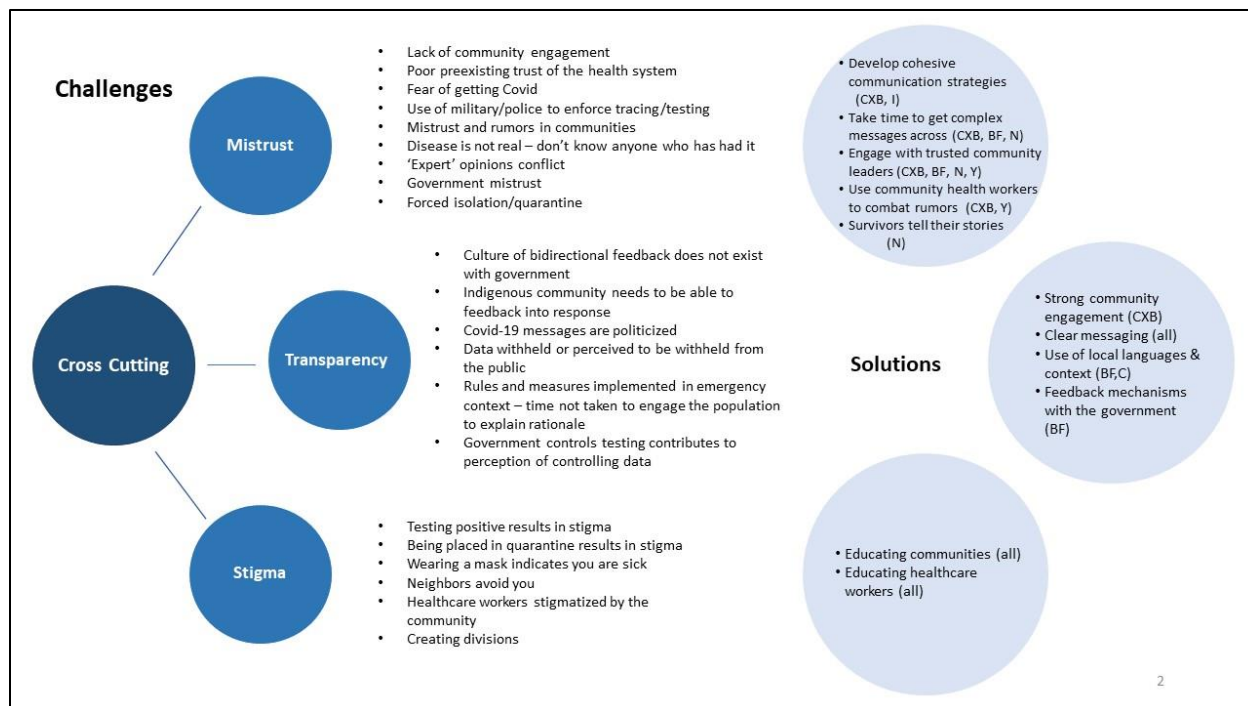
Figure 5: Summary of the challenges and solutions identified for the cross-cutting themes of Mistrust, Transparency and Stigma. CXB: Cox's Bazar (Bangladesh); BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Access and Security
Access and security were identified as a cross-cutting challenge to provide COVID-19 response with subthemes of access to populations, access to health facilities by both populations and HCWs and violence against HCWs (Figure 6). Health cluster partners responding to COVID-19 reported difficulty in accessing populations due to movement restrictions and their enforcement. They reported limited ability to get exemption passes or too few passes to be able to continue their response efforts and reach populations in need. If able to reach communities, there was fear and unwillingness to let response efforts into the community for fear of introducing COVID-19. Several of the participating cluster countries at baseline have difficult geography and limited road infrastructure which exacerbated access to populations due to rainy season, road conditions/infrastructure and long travel times. With the exception of Cox's Bazar, Bangladesh, the participating contexts face ongoing insurgency and variably escalating conflict which affects access to different regions at different times and results in population movements discussed further below.

Strategies to mitigate these challenges included increased focus on working with CHWs who were already located in communities to conduct messaging, case identification and contact tracing activities. As time passed, some cluster countries provided access passes for legitimate response agencies to move about despite the application of public health and social measures to

"[There are] security concerns for health care workers… recently, a health care worker was killed by non-state armed actors. Contact tracers [are] unable to access populations due to community refusal to allow entry"

reduce movement. NNGOs reported more difficulty in obtaining these passes.

In a reciprocal manner, while responders had difficulty accessing populations in need due to movement restrictions, the populations had limitations in attending health facilities as well. Baseline far distance from a health facility was further exacerbated by limited or unsafe (crowded) public transport availability due to the application of public health and social measures to suppress transmission and limitations on how far those in need can move from their home location. These movement restrictions also affected HCWs ability to go to work at health facilities due to limited or unsafe (crowded) public transport and lack of issuance of a pass to confirm their essential worker status. Some countries also reported incidences of violence against HCWs in communities due to the fear that they may spread COVID-19. The only solution identified to improve access to health facilities was the use of humanitarian air services with the UN Humanitarian Air Service (UNHAS) cited as particularly critical in maintaining activities in Nigeria.

Figure 6: Summary of the challenges and solutions identified for the cross-cutting theme of Access and Security and its sub-themes of access to populations, access to health facilities and violence against healthcare workers. CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Human resources

The availability, motivation and capacity of human resources to conduct the response was identified as cross-cutting challenges (Figure 7). It was identified that both WHO and NGOs needed additional personnel to scale up work to integrate COVID-19 response into existing programs. In the majority of contexts, countries lacked sufficient HCWs and laboratory staff at baseline to meet needs which was compounded by the COVID-19 response needs. Competition between NGOs and national health system for HCWs was identified as a problem with salary and working conditions driving HCW to choose one or divide time between both. Limitations on air travel and visas prevented supplementation by health cluster partners with international staff. Frequent COVID-19 infections among HCWs and response staff further reduced workforce through their need

> *"There are some field hospitals that don't have field workers and they are not in a position to take a patient. It's not that they aren't willing, but they just cannot provide services."*

for treatment and the isolation of staff who were close contacts.

Solutions to meet the needed availability and retention of personnel for the COVID-19 response included providing health insurance in Cox's Bazar (Bangladesh) to local healthcare staff to reassure them they would be taken care of if they became ill. Expedited onboarding and approvals processes by the government in Iraq and Yemen were a way to more rapidly bring in international staff. Some health cluster partners have offered incentive pay/stipends in addition to base salary to local responders to increase their numbers.

Motivation and morale of HCWs to participate in the response was negatively affected by seeing other HCWs become ill with COVID-19 and fear of becoming ill themselves. A lack of personal protective equipment (PPE), whether real or perceived, as well as lack of hazard pay/incentives or locally poor track record of providing regular salary payments on time, also reduced HCW motivation to join the COVID-19 response. PPE availability was reported to have improved during the response, however KIs remained skeptical about the system's ability to sustainably maintain the supply of quality products. Stigma from the public affected HCWs willingness to participate in COVID-19 patient care, education activities or contact tracing, fearing ostracization or violence in their communities.

Solutions that were implemented to motivate HCWs to participate in the needed healthcare provision and public health programming for the response included: training of HCWs to increase their competency and confidence in their skills to prevent themselves from getting COVID-19 and the provision of health insurance to ensure they will be cared for if they fall ill from COVID-19 in Cox's Bazar (Bangladesh). Performance based financing was not used to compensate HCWs or healthcare facilities by number of cases seen, as there was concern this may lead to inflation of cases being reported to increase renumeration.

The capacity of HCWs in cluster countries was also a challenge. The need for additional knowledge, skills and consistent practice of IPC measures as well as the need to keep updating these as the response evolved were identified. These training needs were exacerbated by limitations in the ability to gather for in person training, the use of online training which was a new learning modality to adopt in this time of crisis and access to internet due to cost, service coverage and/or bandwidth. Lack of technical staff with specialized knowledge in needed areas (IPC, lab) also slowed down the production of training materials and implementation of those trainings at a country level.

> *"Capacity building in IPC practices [is needed], but also recognizing COVID case and symptoms, and how to set up systems. A lot of technical people left over conflicts not even before the last conflict. This isn't to say that they aren't good but there's such a need for technical support and the ones [that are here] are exhausted because of COVID. Depending on the area that you're in it's even harder to get medical professionals and [to] staff them appropriately since they don't really want to go to remote areas".*

Solutions to increase the capacity of HCWs needed for the response included the launch of online training in the absence of the ability to gather and the training of specialists in the technical areas needed. These were reported to be limited in effectiveness with more time needed to develop long term durable capacity and technical experts locally. It was recognized that the need for expertise in IPC, WASH and infectious disease cannot be built in countries through short term trainings and there is a real need for advanced courses of study (masters programs, fellowships, etc.) to build true long-term local experts to manage this and other infectious threats.
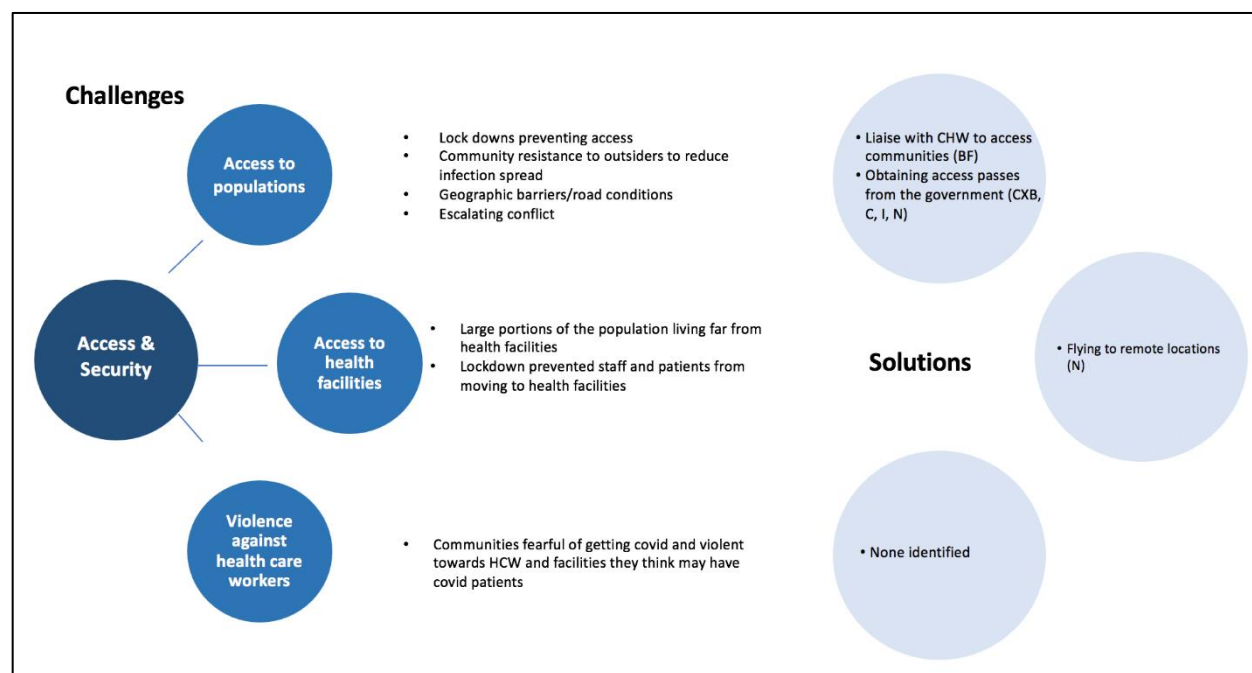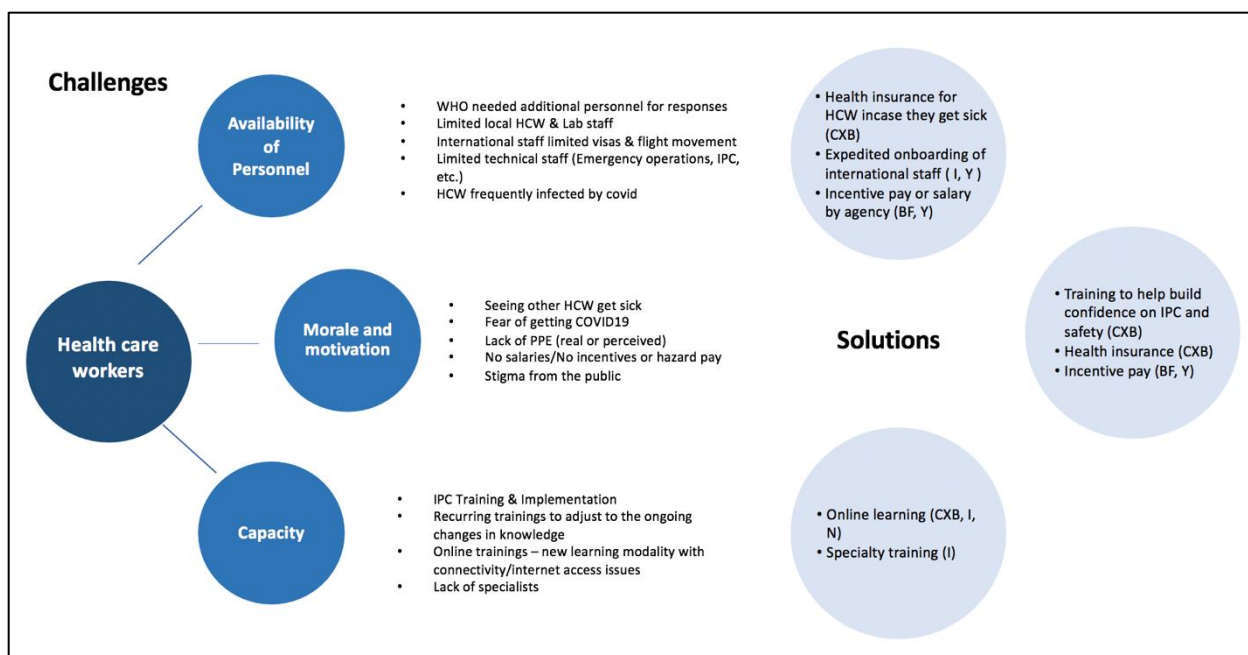
Figure 7: Summary of the challenges and solutions identified for the cross-cutting theme of Human Resources and its sub-themes of personnel, motivation and capacity. CXB: Cox's Bazar (Bangladesh); BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Funding
Funding was identified as a cross cutting challenge in the humanitarian context as many Humanitarian Response Plans (HRPs) were already underfunded at the start of COVID-19. Limitations placed by donors on purchasing of PPE hampered organizations to maintain staff safety in health and non-health programs by not having the needed materials (masks, sanitizers, cleaning supplies, etc.) available. The purchase of PPE was not allowed by some donors, was limited in what types of PPE could be purchased, limited by which programs could have access to PPE (i.e. only health services programs were allowed to purchase PPE, not community programs) or by which suppliers PPE could be purchased from. Lack of available funding for investment in the needed personnel and logistics to devote to COVID-19 response was a challenge and, in some contexts, funding was redirected from other health programming to COVID-19 response. KIs reported needed infrastructure projects were not being invested in to address challenges like space constraints or Water, Sanitation and Hygiene (WASH) in both health care facility and community settings. Where WASH projects were moving forward, planning for maintenance and long-term sustainability was reported as being overlooked. These were compounded by a lack of investment in the local health system by country governments and donors alike.

While all contexts are trying to increase funding as a solution to these challenges, and country based pooled funds mechanism exist in some clusters, in Bangladesh the flexible funding mechanism created with a shorter cycle to access it, was reported to be useful to address response needs in semi-real time and as the situation continues to evolve. In this mechanism the opportunity to apply for funding remained open and response agencies could apply whenever a need was identified and have a decision on funding in a matter of weeks.

Data and Information Management
Data management has been identified as a cross-cutting theme and has a close link with mistrust and transparency with frequent co-occurrence of these codes. Where data sharing was perceived to not be occurring freely there was also a complaint of lack of transparency. National NGOs in some contexts perceived incomplete sharing of information by the health cluster on opportunities to engage in the

response. KIs expressed concern over inaccurate data sharing on case volumes and the possible motivations for this by leaders. In areas where there is real or perceived politicization of the response there is mistrust in data, especially when data for vulnerable or at-risk groups is unavailable. Inaccuracy in data entry or reporting has created challenges in the reporting of accurate test results, impacting contact tracing data. As much work is done remotely monitoring and evaluation of response activities has been more difficult with reduced accuracy. Good practices in data management that have been identified include daily or weekly data sharing by the government to partners in Cox's Bazar, Bangladesh and using web applications that track tasks and status of implementation for various needs in Burkina Faso.

National Authorities
Another cross-cutting theme identified was national authority performance during the response with subthemes of capacity and leadership for the COVID-19 response (Figure 8). National authorities' capacity challenges for the response included limited communication capacity (language barriers, lack of phone credit, limited network service areas, not knowing points of contact etc.). Communication challenges with the public and partner organizations pre-COVID-19 were worsened by increased demand in a rapidly evolving COVID-19 response. KIs also prioritized the need to support building technical capacities within the MoH as well as throughout the system which were reported to be limited (e.g., expertise on IPC, supply chain, contact tracing). Existing processes and systems, already stressed pre-COVID, were further burdened with additional COVID-19 challenges, such as slow approvals processes. Reported solutions included partners investing more time to dialogue and work with national authorities at the national and local levels to jointly address and mitigate these challenges.

Frequently changing staff in MoH or in other ministries leading national COVID-19 response, was noted to interrupt the continuity of the response with the need to 'catch people up' after every change. National strategies have placed limitations on different aspects of response. For example, restricting where and which agencies may perform COVID-19 testing or operate quarantine facilities. This resulted in existing capacities going unused despite ongoing needs. KIs perceived this restriction may be due to the additional burden on national authorities to manage, coordinate, and implement the COVID-19 response. There is a real or perceived lack of information sharing that is interrelated to mistrust and transparency affecting the support of public and response agencies to national response measures (see also section on Data above). Noteworthy national strategies were noted in Burkina Faso, Nigeria and Iraq where authorities have seized the opportunity to align non-COVID-19 health system initiatives to COVID-19 response to advance both at the same time.

Figure 8: Summary of the challenges and solutions identified for the cross-cutting theme of National and Local Government including capacity and control by authorities. CXB: Cox's Bazar (Bangladesh); BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Response Pillar Themes and Multi-sectoral Issues

The challenges experienced by KIs and their organizations were discussed by COVID-19 response pillar which are detailed in the following sections with their subthemes. It is also highlighted here where cross cutting themes were involved and interaction between pillars occurred.

Pillar 1: Coordination and Planning
Challenges and solutions for response pillar 1 Coordination and Planning were identified by KIs divided into subthemes coordination and collaboration (Figure 9).

Coordination
Coordination challenges identified were closely linked to transparency. These included lack of a transparent decision-making processes in the response from both clusters and all levels of governments. Intersectoral collaboration was identified as a challenge that was worse where pre-COVID-19 multi-sector collaboration was limited. A lack of feedback mechanisms including critical/formative feedback for the response was identified as a barrier to learning from mistakes or experience. The coordination capacity of the national authorities was identified as a challenge referring to having sufficient dedicated people and infrastructure (network, equipment, etc) to ensure coordination with relevant partners occurred while also working remotely as many governments applied distancing measures to control disease spread. The real or perceived disproportionate focus on urban/capital areas as opposed to rural areas was highlighted as a shortcoming of the capacity to coordinate. Multi-sectoral coordination with other clusters was identified as a challenge as adding a layer of complexity given existing challenges and need for coordination within the health sector. In countries where there was strong multi-sectorial coordination prior to COVID-19, cross-sector coordination was reported to be more successful than in countries where it was limited before COVID-19. An effective practice in coordination was highlighted in Cox's Bazar, Bangladesh where the health cluster used daily reporting mechanisms to collect and disseminate information to partners to enhance coordination efforts. Those clusters that had frequent and meaningful engagement with their partners/stakeholders and had effective leadership were reported to be more successful in their coordination efforts.

Collaboration
Collaboration, defined as joint activities or programs or work, was uniquely identified separately from coordination as a subtheme especially as partners capacities varied. The need to seek joint solutions to address both capacity and funding deficits was identified early in the response. A lack of personnel in health cluster partners to devote time and effort to ensuring good collaboration was a limitation, especially with the added burden of communication during remote work, as well as the need for transparent and honest efforts for collaboration (e.g., accurate information sharing) to occur between organizations. Multisectoral collaboration continued or was worsened in areas with limited multisectoral collaboration prior to COVID-19. Solutions used by organizations to facilitate the increased need for collaboration included identification of remote technical resource persons to get quick technical guidance making work on the ground more efficient, freeing up time to develop the joint delivery of services. Collaboration between organizations for shared logistics like importation and transport of goods was used in Nigeria to maximize the value of investments. Agreeing on and identifying a common online platform (e.g., using only Zoom or Microsoft Teams, etc.) for responders to use for created consistent collaboration forums. An improvement in collaboration was noted in countries where the personnel among the national authorities, UN agencies and NGOs remained relatively stable. Those with frequent turnover reported ongoing difficulties with collaboration.
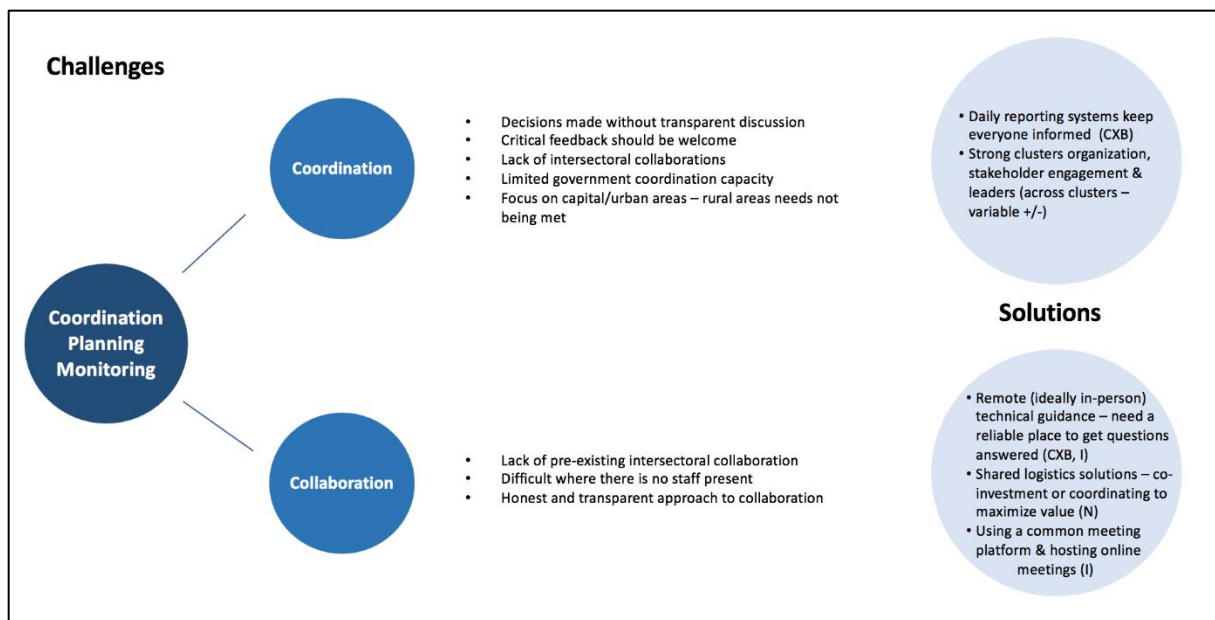
Figure 9: Summary of the challenges and solutions identified for response pillar 1 Coordination and Planning and subthemes coordination and collaboration. CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Pillar 2: Risk Communication and Community Engagement

Risk communication and community engagement (RCCE), response pillar 2, was frequently talked about with several subthemes including community engagement, engagement with HCWs and engagement with leaders (Figure 10). The RCCE subthemes had significant overlap with the cross-cutting themes of mistrust, transparency and stigma. Findings here overlap with subthemes of 'messaging' in Pillar 6 regarding Infection Prevention and Control.

Community engagement

Key informants noted that if communities were not engaged and effort was not made by national authorities, the cluster and NGOs to understand how communities would like messages disseminated, or how services should be delivered, then the result was often community mistrust in the information and in the response itself. Reaching rural 'disconnected' areas was also identified as a challenge due to limitations in movement due to application of public health and social measures reducing movement, locations being insecure and/or with lack of internet or phone connections for remote contact. These factors impacted the ability to engage with communities directly. Many KIs reported that communities are still in disbelief that the disease is real, especially if they did not personally know anyone who has had COVID-19. It was often cited there was a feeling in communities that god will protect them. KIs reported the high volume of rumors and misinformation that circulated both online and were transmitted verbally. Populations were noted to be very effective at transmitting messages, thus interventions to support populations spreading to the right messages was highlighted as a need. KIs also reported that appropriate and relevant messaging was lacking e.g. gender specific messages for women, messages in a variety of local languages or messages

"Feedback on COVID-19 response in real-time is key. Indigenous knowledge is key, and they may have a real point in the way they perceive things and adopt knowledge. We must listen and engage with it."

"We used a feedback mechanism where we would collect the different beliefs and rumors that were circulating in the community and we made sure to address each of them and to use them to guide future awareness messages and risk communication strategies. This made people feel heard and involved in the response, which improved compliance to recommendations.

that incorporated what communities considered more urgent e.g. socio-economic impact of COVID-19 or other health issues.

Significant efforts to find solutions to challenges with community engagement were described by KIs with some innovative solutions. Radio shows in Burkina Faso and Chad were used to reach rural communities. SMS or phone calls to IDP camp residents conveying messages were used in Iraq, In Yemen, to ensure relevance, COVID-19 messaging was combined with other health education messages that the community felt more urgent. In Nigeria recovered patients helped risk communication efforts to address community disbelief by telling their stories. In Cox's Bazar (Bangladesh) a real time feedback system on the response and messaging activities was used to adjust messages as needed. This was done both through community meetings and via a phone number that could be messaged (SMS or WhatsApp) with questions. Iraq also used hotlines to address questions.   Depending on the context, CHWs (Cox's Bazar, Bangladesh), religious leaders (Iraq), community leaders (Nigeria) and market leaders (Burkina Faso) were all engaged to help with messaging and risk communication to communities. Door to door strategies by CHWs, HCWs or response specific personnel were used to convey messages and answer questions in Nigeria, Iraq and Yemen. Activities All health clusters and their partners worked collaboratively to generate accurate, quality online content and media to combat misinformation circulating on various platforms. In Nigeria and Iraq multisectoral collaboration on messaging was done.

Health care workers

Given their central role in responding on the frontlines to COVID-19 and often also being part of the affected population, health care workers were another population in need of RCCE activities. Risk communication for healthcare workers was important and has overlap with capacity building. The often-slow bureaucratic process of guidance reaching health care workers contributed to their increased fear and mistrust of the response. HCWs have fears for their own safety as well as for that of their colleagues, their families and their communities. Fear of transmitting the

> *"By using these CHWs, they are able to raise awareness and help people understand and remind them to go to the nearest health facilities if they have symptoms or for routine care. They use promotion via brochures in case people do not want to hear but to read."*

disease themselves was identified as a barrier to motivation to provide medical services and COVID-19 specific care. Addressing the risks involved and the fears identified by healthcare workers was the first step to then be able to successfully start capacity building activities. HCWs' absorption of public health messaging (as a part of the community) was negatively affected by knowing or seeing other HCWs get infected with COVID-19. Solutions to address the needs for risk communication in the HCW population included continuing with some limited in person training to ensure HCW understood the disease and the facts and could demonstrate the competencies needed for their own safety as well as providing online and/or in person training on the WHO protocols to bolster feelings of safety.

Leaders

Leaders (including those within ministries leading national response, within agencies supporting the response, as well as community leaders) were identified as a group that required targeted risk communication and engagement on how to communicate clearly and engender trust from the public. Leaders that were perceived to have inconsistent or frequently changing messages or when there was turnover in leadership with subsequent changes in messaging it was reported to reduce the effectiveness and uptake of messaging. Frequently changing policies or plans without explanation, especially if they were inconsistent with previous messaging, undermined trust in leadership. Messages from government in particular were at times perceived to politicize the response, especially after changes in leadership.

The strategy of using longstanding trusted leaders from communities, religious groups or markets (i.e. able to retain presence) was used to maintain consistency and address this challenge. In Cox's Bazar (Bangladesh) leaders who needed to be engaged and learn about COVID-19 response were shown the effects of the outbreak or areas that required changes which helped increase their engagement to help delivery key messages.

> *A lot of useful videos have been shared on social media but 70% of the population here is illiterate and 40% are poor, so much how much access do they really have to those videos or to social media in general?*

Figure 10: Summary of the challenges and solutions identified for response pillar 2 Risk Communication and Community Engagement. CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Pillar 3: Surveillance, rapid response teams, case investigation

Response pillar 3 was frequently talked about with several related subthemes including contact tracing, surveillance and rapid response identified (Figure 11). The case investigation and contact tracing subthemes had significant overlap with the cross-cutting themes of security, local government and stigma.

Contact tracing
Challenges to contact tracing were related to other cross cutting themes including being able to access contacts due to security limitations in some response areas, coordination to conduct contact tracing activities due to limited information from the government on contact and reluctance of people to identify their contacts due to fears of stigma or forced quarantine. It was also difficult to locate populations that were mobile including new internally displaced persons (IDPs) or those IDPs or refugees who were moving between camps or settlements. Local governments had limited personnel to devote to contact tracing and often restricted NGOs (both local and international) from conducting contact tracing functions. Once identified, contacts often didn't believe the disease was real since they were feeling well and had no symptoms. They felt it was unnecessary to remain home and KIs reported that livelihood and maintaining household income/food took priority over instructions to isolate. No ongoing solutions to these problems were identified among the clusters participating in this study.

> *"Community health workers and traditional birth attendants supported the entire response, especially in terms of surveillance in hard to reach areas."*

Surveillance
Surveillance was frequently mentioned by KIs but had a variety of opinions of its meaning depending on the KI. Some KIs used it to describe identification of disease (case definition) and others used it to describe the testing required to confirm disease. No KI used it to refer to active case investigation or

finding. KIs described low rates of testing related to fear of having COVID-19 and the stigma that would result in as a challenge. Other KIs identified lack of available testing and/or slow turn around to confirm disease as a barrier to surveillance and contact tracing. Probable case definition and syndromic screening approaches were not being widely utilized.

Rapid response teams

Rapid response teams (RRT) have been utilized in several of the participating cluster countries to try to rapidly identify, confirm and isolate cases of disease. Depending on the country some teams were implemented by the MoH others by the WHO. There have been challenges in implementing these teams including having sufficient staff not pulling resources away from routine health care. Transportation access and costs have been prohibitive and the ability to reach remote geographic areas or insecure areas has limited their effectiveness with either delay or inability to reach the location needed. It was noted that in Cox's Bazar Bangladesh where testing was available with rapid turnaround for the results RRTs were able to be much more effective in reaching locations in a timely fashion to identify and trace contacts to contain the spread of disease. Technical training for RRTs in Cox's Bazar (Bangladesh) and Iraq (where this was a new intervention) cited specific benefit from being trained by the WHO on developing and operating an RRT, as well as training the staff who are part of the RRT. In Burkina Faso and Chad (where there were CHW capacity prior to COVID-19) they were successful in using CHWs as part of rapid response to identify cases, isolate those cases and conduct contact tracing.

> *"Rapid response team: safety is an issue. Weapons are widely available, people are hiding, adding to the stigma. People were reluctant to cooperate with rapid response team for contact tracing. Stigma is especially in religious areas; people are not cooperating with rapid response team and contact tracing."*
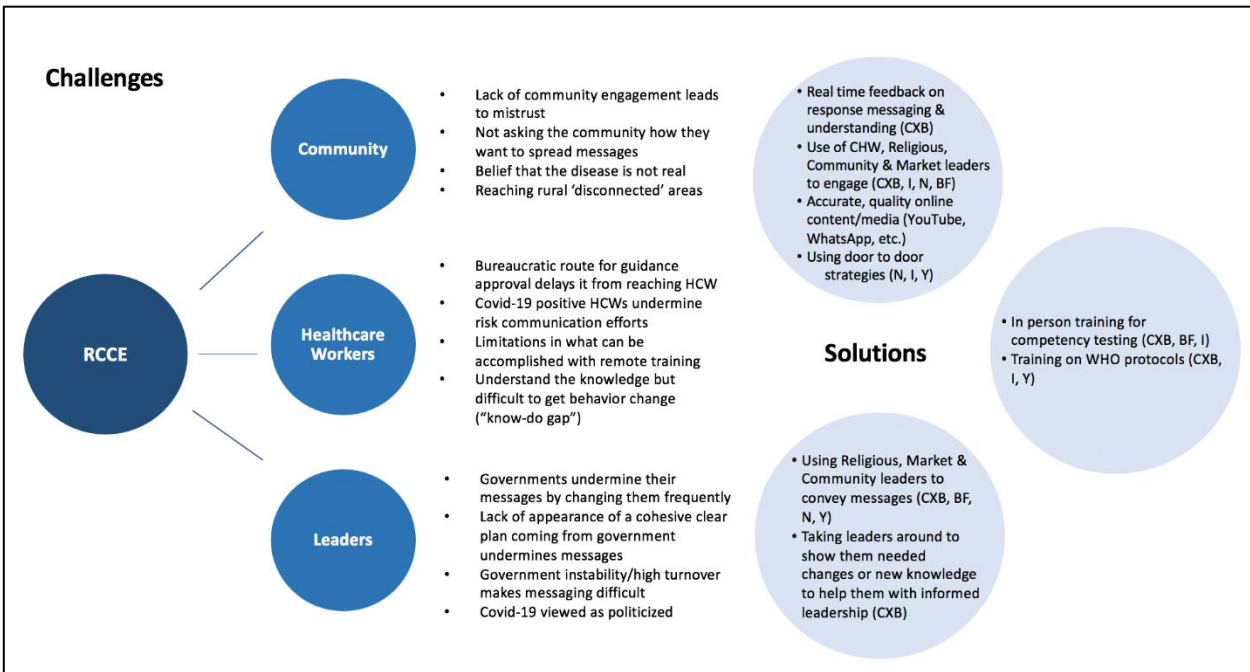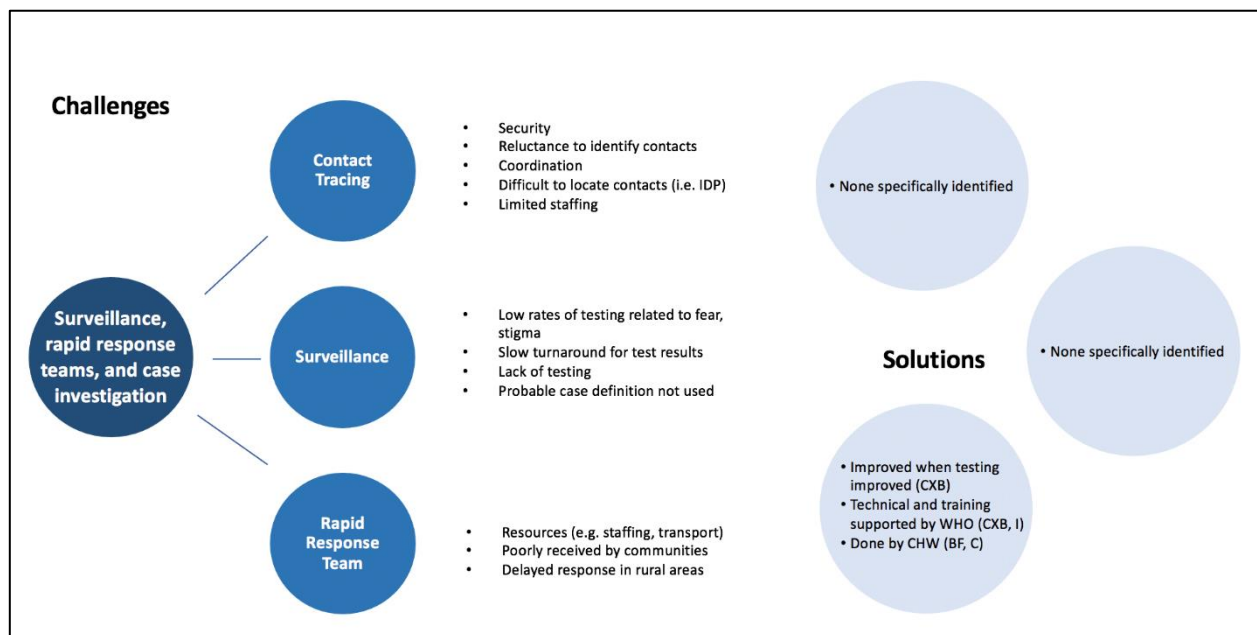

Figure 11: Summary of the challenges and solutions identified for response pillar 3 Case Investigation and Contact Tracing. CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Pillar 4: Points of entry, international travel and transport (movement of populations)

The movement of populations during the COVID-19 response (pillar 4) has posed challenges to the response whether the populations are IDPs moving within a country or refugees crossing international borders. Mobile populations have multisectoral needs that are not just health but include protection, shelter and WASH. IDPs often congregate informally and move frequently, with lack of a long-term shelter in a stable location. KIs reported this instability in location made it difficult to follow up test results and conduct contact tracing. Noting also that access to IPDs is challenging as they often congregate or reside in insecure areas. IDPs and refugees residing in camps are often crowded making physical distancing for prevention of the spread of disease difficult but also isolating or quarantining if they get COVID-19 or become a close contact with someone infected. In some contexts, KIs highlighted escalating conflict was increasing international border crossings and in particular informal crossings making it difficult to identify and trace cases. Border testing, at both air and land points of entry for IDPs and refugees where noted to be limited and where available it was difficult to follow up the results with populations once they enter the country. Guidance on how best to reopen borders and prevent the spread of disease was identified as a need. Only Burkina Faso cited a solution to reopening air border entry points that combined symptomatic screening, temperature checks, testing on arrival, isolation and tracing. This had facilitated the movement of international staff for the response.

> *"Physical distancing is hard because of the density of people. The refugee crisis as well [has] made things not easy"*
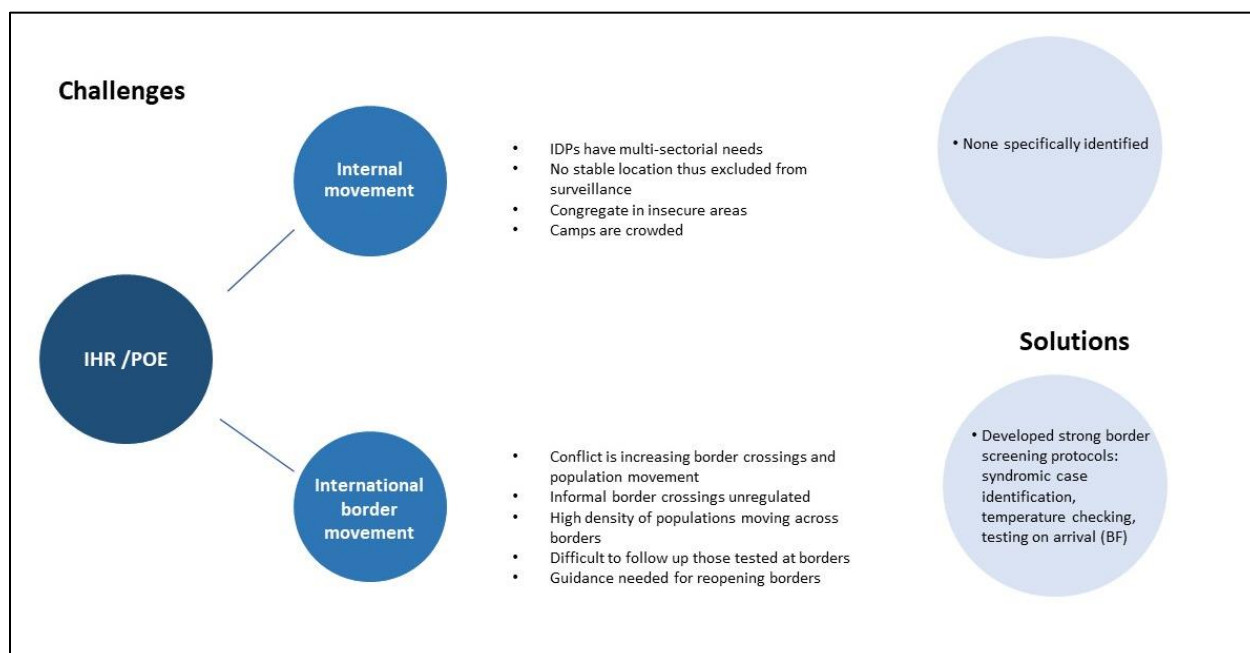
Figure 12: Summary of the challenges and solutions identified for response pillar 4 International Health Regulations/Points of Entry. CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Pillar 5: National Laboratories and Testing

Response pillar 5 had subthemes of access to testing and managing the results of testing identified (Figure 13). The laboratory testing subthemes had significant overlap with the cross-cutting themes of data management and stigma.

Access to testing

There were several different challenges in providing access to testing. In some locations, fees for testing charged to the population to offset cost or the full cost of ensuring the availability of testing materials by the government were prohibitive for individuals to be tested. The stigma associated with testing and fear of being placed in quarantine were also barriers to convincing populations to get tested. A lack of supplies, equipment and personnel or any combination of those limited the ability of countries to scale up testing volumes. Long sample transport times due to logistic challenges undermined testing efforts. In contexts where testing was limited it was perceived that guidance on the priorities for who is tested should be established. The only specifically identified solution to increase access to testing was used in Cox's Bazar (Bangladesh), Burkina Faso and Chad, where testing was decentralized across the countries.

> *"It takes a minimum of 48 hours before getting results, and sometimes more. So, there is a period where we don't know, and we can't quarantine them at this time. This would be good if there were tests and isolation centers in their community, so they don't have to travel so much."*

Results

KIs identified the activities around managing and utilizing test results as having many challenges. Slow turnaround times reduced the effectiveness and ability to identify cases and perform contact tracing. Unclear reporting of results or inaccurate results (i.e. incorrect names, addresses, phone numbers, etc.) were also limiting response efforts. The real or perceived obscuring of results contributed to feelings of mistrust and lack of transparency. Lack of information on vulnerable or at-risk groups (like IDPs, children) or in specific communities negatively affected the targeting of risk communication efforts. No solutions to testing challenges were identified by KIs.

> *"For the few tests we had, it was very difficult to ensure transportation to the lab…road access in the Northeast is difficult, it can only be accessed by air…air transport was locked down or very expensive"*
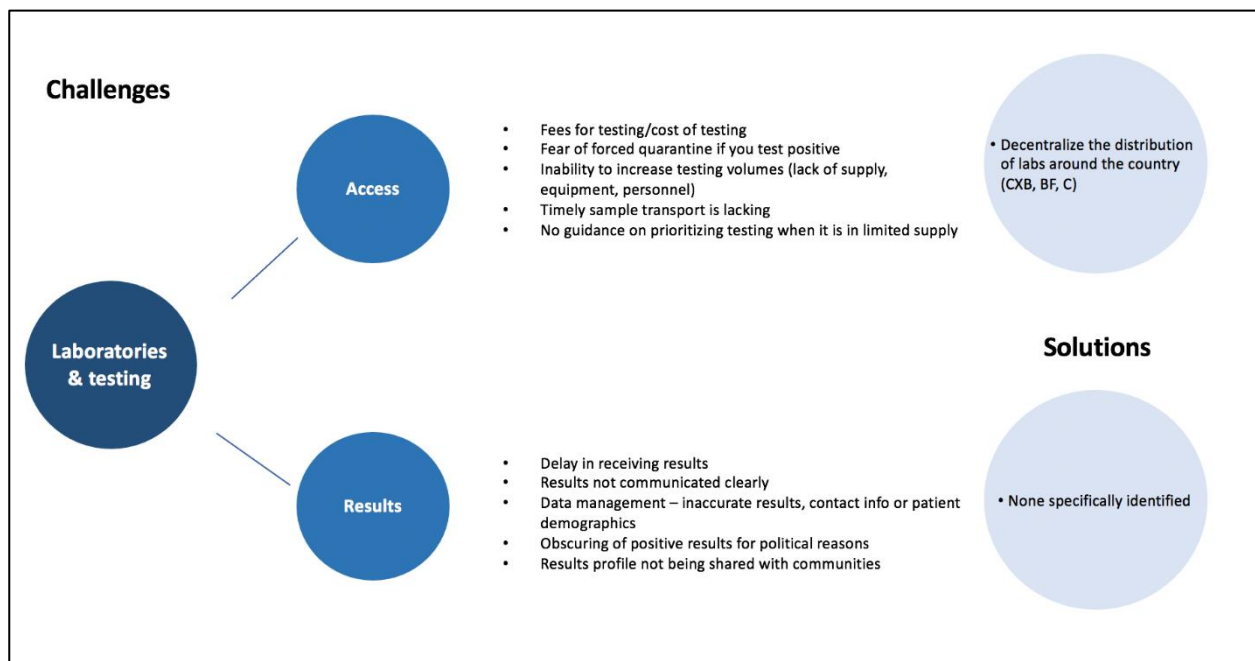

Figure 13: Summary of the challenges and solutions identified for response pillar 5 laboratory testing. CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Pillar 6: Infection, Prevention and Control

Infection, prevention and control (IPC) (response pillar 6) was the most frequently talked about pillar with subthemes of messaging, mask use and physical distance identified (Figure 14). The IPC subthemes had frequent co-occurrence with operations and logistics, as well as capacity building for human resources.

Messaging

Messaging was identified as an IPC-specific theme to communicate the behaviors needed to stop the spread of infection. This theme had overlap with RCCE in engaging with communities (the public and healthcare workers) to identify how they want messages communicated and on the high volume of circulating rumors and misbeliefs like 'god will protect' from infection. Community IPC messaging activities, similar to general messaging activities, were difficult to implement effectively with proper public health measures in place (i.e. distancing, masking and reduced number of participants). The content of IPC messages also posed a challenge as there is no single 'simple message'. The length of time, or space in messages to cover content needed to address preventing the spread of disease poses a challenge to the simple and quick methods used in previous types of health messaging campaigns (e.g., loudspeaker announcements from driving vehicles). The complexity of messaging was reported to be further complicated by multisectoral messaging and variations in messages between sectors that may result in confusion.

Much effort has been put into identifying solutions for messaging and IPC messaging specifically given the importance of this topic in controlling the spread of COVID-19. Similar to other RCCE activities, solutions included using community, religious and market leaders to convey IPC messages, developing quality and accurate social media content to combat misinformation and using door to door campaigns to reduce large gatherings and communicate complex messages. The use of recovered patients in Nigeria and the use of community inputs/feedback systems in Cox's Bazar (Bangladesh) have supported community IPC measures. COVID-19 infection control messages were combined with other health messages during the provision of essential health services in Yemen to promote the uptake of IPC practices among the public.

Mask use

Challenges in mask use, or 'masking', were at the policy and ideological level as well as the technical level. The changes in policies and guidance about the need for the public to wear masks was reported to undermine compliance and contribute to the public not agreeing that they are necessary. Where they are being worn there is high demand, limited supply or lack of understanding that fabric masks can be made from home. Populations in need who are experiencing financial hardship have been noted to use their limited income to purchase necessities which they

> *"No one is wearing masks, people are up close to each other, there is non-compliance with masking laws or mandates"*

do not consider masks a part of. The general public is also, at times, wearing and using masks incorrectly (e.g. not covering the nose, frequently removing masks, contaminating their hands or other surfaces). Misinformation on masks is also circulating that wearing a mask is a sign of being sick and not for the prevention of disease. Solutions that have been used to address challenges with mask use include programs on making cloth masks, with a specific targeting of women, in Nigeria and Yemen, and the modeling to the public of proper use of masks by healthcare workers and CHWs in Nigeria.

Physical distancing

Many challenges in physical distancing have been reported including having insufficient physical space to distance in camps, urban settings and healthcare facilities. Crowded camps and large families were reported to pose a challenge in physical distancing to prevent disease but also isolating or quarantining in the event of a positive household member or contact. Cultural barriers have affected uptake of distancing behaviors with events like weddings, holidays and religious observances continuing without adequate measures being followed. Limitations on gatherings have also affected COVID-19 and non-COVID-19 humanitarian program delivery in that target populations cannot gather to receive services and organizations, or governments cannot gather staff for training or capacity building to meet service delivery needs.

"Initially, it was challenging to have a standard package that didn't contradict MoH or WHO guidelines. There was an early push from Baghdad to wear masks at a community level. It was not recommended but in June they changed. If they followed that MoH guidance, then their community health volunteers would not wear masks, but the volunteers would not feel safe going door-to-door, especially as PPEs were a luxury material. It was quite difficult, at some point WHO revised guidelines and it was a big challenge at the time to coordinate different areas of response from different organizations."

Where possible new structures (e.g. isolation facilities, field hospitals) and old structures undergoing renovation and are being planned with enough physical space for distancing. Messaging campaigns through radio, religious leaders or dramas in Cox's Bazar (Bangladesh), Burkina Faso, Nigeria, Yemen and Iraq are educating on maintaining distancing especially in places that are traditionally crowded, like markets. Health cluster partners are readapting their programs to safely deliver services, by maintaining IPC measures. NGOs and UN agencies have been trialing approaches like reducing the number of service users attending programs but increasing the frequency of those program activities to cover the same volume of service users. This has been done successfully in Iraq, Nigeria and Yemen. Also using 'scheduled' health services in Burkina Faso and Iraq such as providing certain services only on certain days, having a female doctor on certain days or vaccinations on certain days.

Figure 14: Summary of the challenges and solutions identified for response pillar 6 Infection, Prevention and Control. CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Pillar 7: Case Management

Challenges with case management (response pillar 7) included subthemes of response from government and MoH, internationally provided response and telehealth (Figure 15). Case management themes had the most frequent co-occurrence with infection control and operations and logistics.

National health response
Response by national authorities was a subtheme identified for case management which referred to the ability of the MoH in the cluster country to provide case management for COVID-19. Identified challenges included the approach of separating out COVID-19 care from existing health facilities, which resulted in an increase or doubling of resources needed. This was further compounded by the need to frequently manage co-morbidities, common in severe and critical COVID-19 cases. One example of this would be the need for diabetes care and management in the COVID-19 facility, which would have otherwise been provided within existing healthcare facilities. Furthermore, separate facilities were competing for resources and supplies (e.g., oxygen, essential medications) and investment into strengthening health systems, specifically rehabilitating facilities, workforce and equipment was reported to be diverted or lacking.

> *"People appreciate being treated at home instead of the facility, since they don't want to be separated from their family."*

Pre-COVID-19, the PPE supply chain was limited and was stretched further by the need to supply existing health services and new isolation and treatment facilities. KIs reported technical and training needs to scale up IPC programs to prevent COVID transmission both in existing health facilities and in COVID-19 isolation and treatment centers. Existing clinical lab infrastructure (blood gas, renal function, etc.) was limited in most countries and the ability to rapidly scale up to support management of COVID-19 patients was hampered by cost and access to materials (reagents and/or equipment). KIs identified the need to further develop efforts to treat mild/moderate cases and provide home based care.

To support scaling up COVID-19 case management in MoH run facilities, assessments were done in Cox's Bazar (Bangladesh), Iraq and Yemen to identify needed resources. Triage and syndromic screening were introduced into healthcare facilities in Cox's Bazar (Bangladesh), Burkina Faso, Iraq and Nigeria to identify suspect COVID-19 cases. These triage programs supported movement of patients to the most appropriate locations for treatment in accordance with WHO guidance. For mild and moderate cases home-based care was implemented in Cox's Bazar (Bangladesh), Iraq, Nigeria and Yemen to avoid overwhelming health facilities or to support patient preference. In Burkina Faso, Iraq and Nigeria existing hospitals (MoH run and university teaching hospitals) are also being used to care for severe cases.

International support to response
The set-up of COVID-19 treatment facilities was often done by international response agencies. While initially felt to be the best approach to prevent the spread of COVID-19, these facilities were noted to be parallel to existing health service delivery platforms / facilities resulting in duplication. Initially, limited availability and increased cost of quality PPE on the international market was a challenge to agencies to develop and maintain COVID-19 case management programs. Improvement in access to PPE was noted over time, however, KIs verbalized concern for its long-term sustainability. Reduced international flights, border restrictions and slow processing of visa documents due to government shutdowns limited the movement and availability of staff of international agencies to operate these facilities.

> *"Prior to COVID, the health system was very weak due to the conflict and heavy focus on secondary health care. The primary health care component does not exist, and this would make it much harder to respond to any outbreak."*

The provision of remote technical support to meet response needs was used by agencies in Cox's Bazar (Bangladesh), Iraq and Yemen as a solution to the travel challenges for international staff. Similarly, to address this challenge, national staff in Yemen were used to fill staffing needs by international agencies wherever possible, with international staff used only where critically needed. It was highlighted that international agencies in Iraq and Yemen were able to reliably provide PPE to program staff which specifically motivated HCW to work with them.

Telehealth
Telehealth was identified as a mechanism to continue essential healthcare but was challenging to implement due to lack of internet connectivity and the willingness of patients to accept this method as a

mode of care which they were not familiar with. Remote solutions to provide needed services were tried including a hotline in Cox's Bazar (Bangladesh), phone mental health services in Iraq, and doctors maintaining contact with their patients in Iraq and Yemen over WhatsApp.
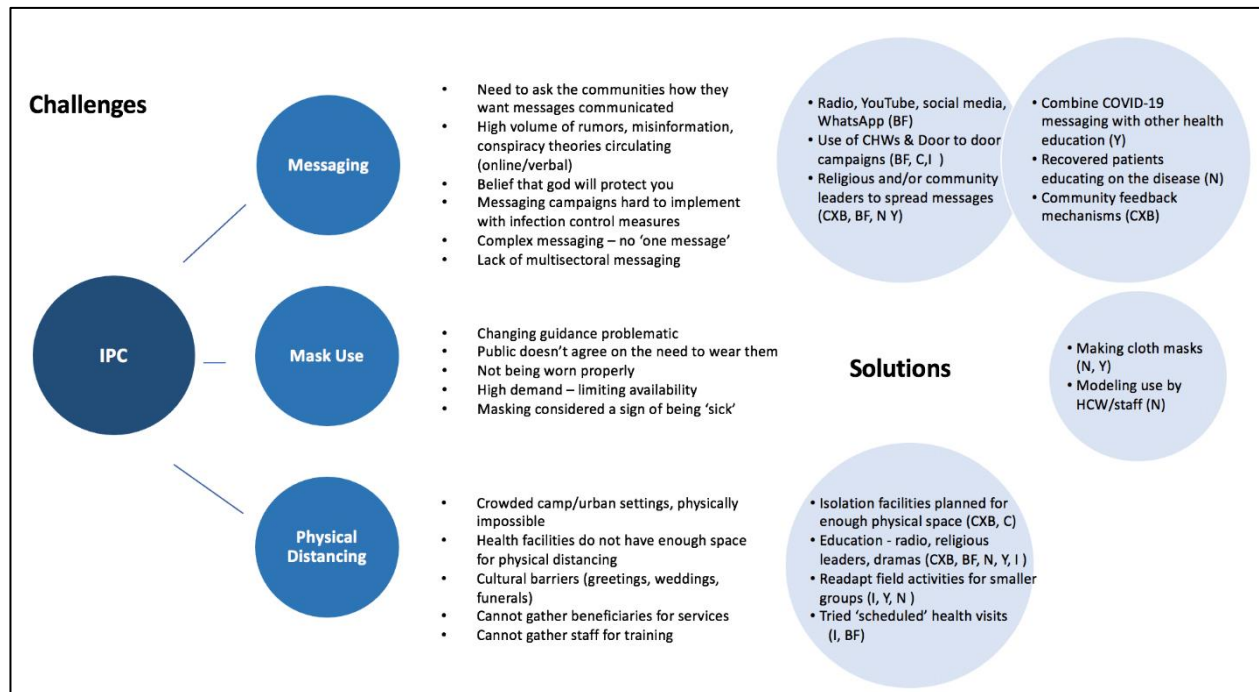

Figure 15: Summary of the challenges and solutions identified for response pillar 7 Case Management.
CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Pillar 8: Operations and Logistics

Operations and logistics challenges (response pillar 8) in supply chain, oxygen provision, transport and essential drugs were identified. Operations and logistics challenges have affected all pillars of the response and have been noted in each section while here they are discussed by specific subtheme.

Supply chain
Major challenges throughout the supply chain especially for PPE and laboratory supplies were reported. Limited supply and thus availability from manufactures or suppliers were noted, and when available inflated costs due to increased demand and limited supply were reported. Furthermore, variable quality of products procured were reported. Global supply chain constraints were reported to ease overtime but with persistent fears for sustainability. Once in country, the necessary permissions to move PPE and other supplies were more challenging to obtain due to government closures and movement restrictions, stalling distribution of supplies within country. Sustainable access to PPE was reported to be a long-term concern to maintaining essential health services. Solutions to address supply chain limitations around PPE included training for HCW on proper PPE usage to minimize waste in Iraq, local soap making in Burkina Faso and cloth mask making in Nigeria and Yemen.

> *Most of the health facilities are in remote and conflict areas. Especially with corona[virus], there is a delay of supplies of medication and PPE to these areas.*

Oxygen
KIs reported that the baseline availability of oxygen or respiratory support devices was low in pre-existing health facilities and had not improved during COVID-19. The use of CPAP, BiPAP and ventilators (as well

insufficient HCW capacity to utilize such devices) was discussed but not the specific use of oxygen concentrators. KIs highlighted that international partners were frequently relied upon to provide care of critical cases, but they were also facing funding restrictions on activities for oxygen provision and delivery systems. The only identified solution to this challenge was in Cox's Bazar (Bangladesh) where some health facilities were given funding and support to invest in installing an oxygen tanking system.

Transport

Transport was highlighted as a key challenge that crosscut most themes with limitations in road access due to poor conditions or insecurity. Movement restrictions in place by governments to control the spread of disease also limited the movement of goods and staff, with slow government approvals processes, border closures and increased costs due to fuel shortages and other constraints. Health cluster partners in Burkina Faso, Chad and Yemen allocated increased funding and resources to meet the demands of more transport at higher costs, while in Nigeria the use of UNHAS air service was key to personnel accessing remote locations.

Essential drugs

The supply of essential drugs was identified as a challenge during COVID-19 specifically the last mile distributions to clinics and hospitals from central MoH stores. This was exacerbated where pre-COVID-19 supply chains were already weak. Movement restriction measures at borders and within countries further hampered the importation and local distribution of drugs. To ensure access to needed medication in

> *"Mobile clinics, which are very effective for those who are too far from a hospital…The mobile clinics were effective to reach a region unfamiliar with social media or TV or different broadcasting memes and are otherwise unreachable."*

Nigeria, partners anticipated and managed pharmaceutical supply chains to ensure sufficient stock availability of medicines to provide to patients for an extended period of time. For example, patients with non-communicable diseases were given an extended supply of medications to avoid running out as movement restrictions were implemented. To align to the change in prescribing patterns, facilities had to maintain sufficient stock and change forecasts appropriately.
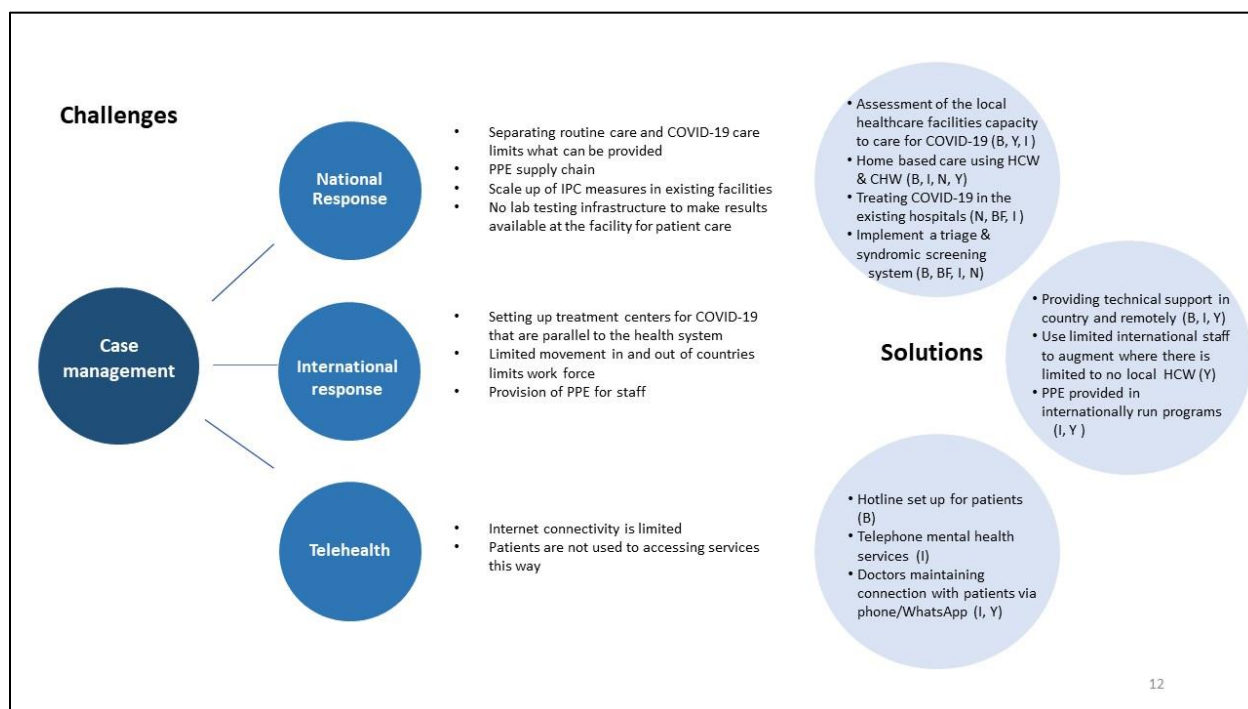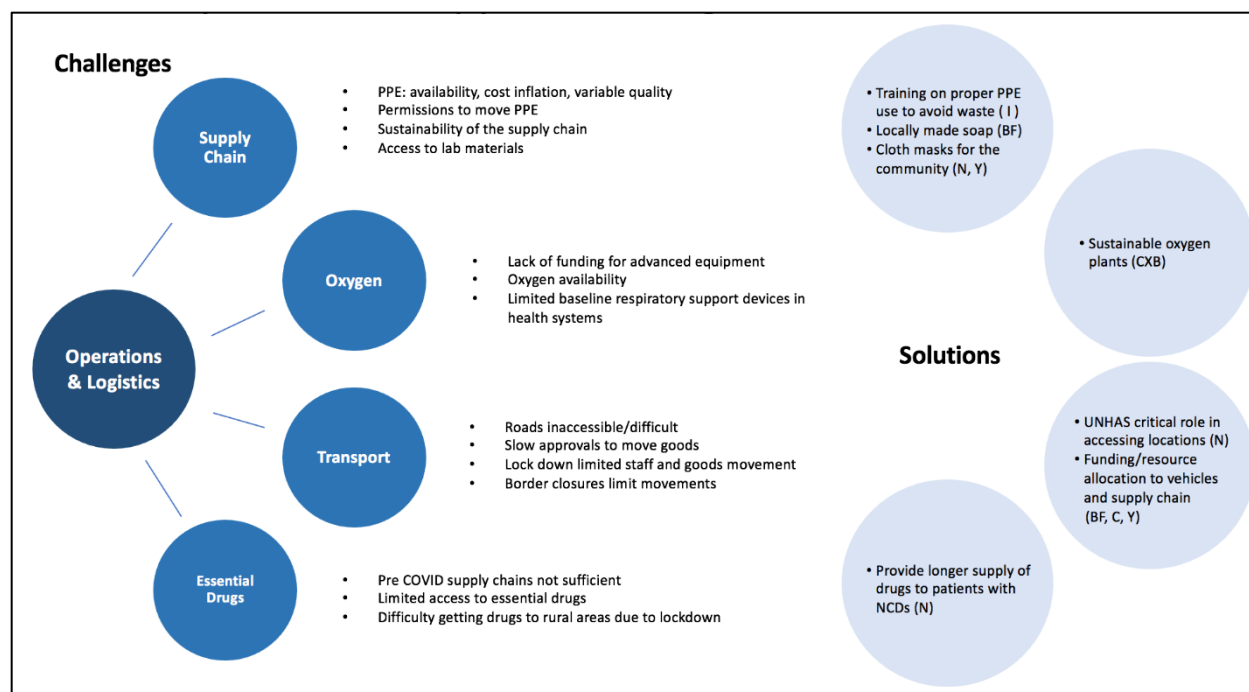

Figure 16: Summary of the challenges and solutions identified for response pillar 8 operations and logistics. CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Pillar 9 Essential Health Services

Challenges with essential health services were reported in all countries (Figure 17). Essential health services that were usually provided in these settings were affected by movement restrictions and the reductions in provision. Lack of PPE and poor infection prevention and control practices were reported to contribute to HCWs getting infected and persistent fears of HCWs being infected were reported to at times affect their willingness to continue working and staff retention. The community and patients were also reported to be fearful of being infected by going to healthcare facilities, reducing attendance at routine health services. The separation of isolation and COVID-19 care facilities from facilities providing essential health services was also problematic for patients with COVID-19 who needed more advanced care for comorbidities.

> *"All of our PHCC patients reduced drastically, and our mental health patients reduced drastically. [There was] huge mistrust with health care centers that they will get COVID-19, or that they might get sent to COVID-19 healthcare centers against their will."*

Solutions were trialed to ensure essential health services were maintained. All cluster countries reported that they optimized IPC to maximize safety in facilities providing essential health services. In Nigeria and Iraq partners reconfigured what space was available in their existing health facilities to optimize physical distancing. Mobile clinics and scheduled healthcare visits were trialed to both maintain health care provision and reduce crowding. Non-communicable disease care was maintained by providing it at home and extending the duration of medications provided to patients to support compliance and ongoing medical care.

Figure 17: Summary of the challenges and solutions identified for response pillar 9 essential health services. CXB: Cox's Bazar, Bangladesh; BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Multisectoral programming

Multisectoral needs were discussed by KIs spontaneously during discussions and were also directly queried. No specific list of sectors was reviewed with KIs, instead they identified the sectors that they felt contributed challenges and solutions to the response from the perspective of their agency and their programs. The sectors that were identified by KIs included; WASH, GBV, nutrition, protection, mental health and shelter (Figure 18).

WASH

WASH challenges were commonly identified given the infrastructure across all six countries and water access limitations in several countries. Public spaces (e.g. markets, public transport) were reported to lack handwashing stations or sustainable access to alcohol-based hand sanitizer for personal hygiene and IPC. Healthcare facilities were reported to have limited knowledge of systems for medical waste management. This was particularly challenging with increased PPE consumption and therefore increased waste generation. This waste poses a threat to those in the facility and in the community if stored or disposed of improperly. WASH activities, particularly infrastructure, were identified as under or unfunded limiting the ability to solve these

> *"We went into the community and taught them how to make tippy taps, which provided access to water and hand washing to more than 30,000 families."*

problems. One locally identified solution was to make hand washing taps from buckets and spigots in the community to increase hand washing capabilities.

Gender Based Violence
Partners who were also involved in GBV programming (as protection cluster partners) reported disruptions in GBV activities due to limitations on gathering sizes and restrictions on movements. Health cluster partners also reported to be unable to provide clinical management of rape (CMR) services. KIs identified a possible solution to address GBV activity gaps when GBV programs were not allowed to continue. This solution would involve training CHWs to provide parts of GBV programs if and where appropriate and feasible. However, the opportunity for joint collaboration with the protection cluster and partners was limited due to COVID-19 health response demands. No specific solutions were identified to address the challenges affecting the ability to provide CMR programs.

Nutrition, and food security
Gathering and movement restrictions were reported to have been particularly detrimental to nutrition programs as service users could not travel for care and to receive food supplementation. Screening programs were also reported to have become challenging due to physical distancing and the insufficient availability of PPE for program staff. The inability to increase screening for nutrition needs was reported to be particularly unfortunate as the application of public health and social measures to reduce movement were reported to have exacerbated food insecurity. Restrictions on the movement of goods making food less available in markets, reduction in public transport making it harder to populations to get food and the reduction in livelihoods making it harder to afford food were all reported as contributing to food insecurity. To address challenges of food insecurity for those in isolation or quarantine, Chad reported food packets were delivered every 1-2 days as part of programs implemented by health cluster partners.

Protection
The increased protection needs of vulnerable and at-risk groups especially women, children and GBV survivors due to COVID-19 were reported where movement restrictions confined them to their home without access outside support. In some countries quarantine centers were viewed by the public as a detention center without clear, transparent criteria to be placed there. Whether real or perceived these quarantine centers were felt to be a politicized, arbitrary form of government imprisonment in some cluster countries. KIs reported solutions found for continuation of protection programs included reducing number of service users per event or session reduced to maintain physical distancing measures and IPC precautions.

Mental health and psychosocial support
Similar to GBV and nutrition programs, mental health (MH) programs were reported to be affected by restrictions in travel for service users and staff as well as limitations on the size of gatherings. In Chad and Iraq, to mitigate these challenges HCWs providing COVID-19 or non-COVID-19 services were taught how to provide basic psycho-social support (PSS) to meet anticipated increased need. Respondents did not elaborate on exactly what PSS was taught (e.g., psychological first aid or other skills). MH and PSS programming were also reported to have been integrated into other sectors (e.g., WASH) to increase the ability to reach those in need in Iraq.

Shelter
Shelter was frequently identified as a challenge due to the crowding often present in camps and urban settings. Guidance on the practical management of distancing, isolation and quarantine in these crowded environments was highlighted as needed. No solutions have been identified beyond guidance in Iraq for careful design to maintain distancing in any newly developed camp or structures. This guidance was developed jointly by the health, shelter and camp coordination and camp management clusters.

> *"All of the IDP camps are already overcrowded currently we have a gap of 50% in terms of shelters"*

Figure 18: Summary of the challenges and solutions identified for multisectoral challenges.
CXB: Cox's Bazar, BF: Burkina Faso; C: Chad; I: Iraq; N: Nigeria; Y: Yemen

Results for Objective 4: Opportunities to support evolving needs

Key Informants were queried directly about their response needs both at their national cluster level and globally to identify tangible areas of support that could be provided to the COVID-19 response

Partners identified and are requesting the following supports from the national authorities and country clusters:

1. Funding for locally identified response needs
2. Increase government collaboration overall and specifically on permissions for programming, access, movement and the entry of staff
3. Develop and implement communication strategies that align to local context and build trust with communities
4. Capacity to increase COVID-19 testing
5. Increased transparency in the response particularly on data, funding, guidelines, programs
6. Investment in and programs to support national health system development specifically capacity building, quality of health services, supply chain, etc.

When asked about the response needs from a global level, meaning outside of the country context from headquarters, central offices, donor agencies or other countries bilaterally, key informants identified these six areas of support from the global level that were needed:

1. Support to adapt guidance to the country context so it is tangible and practical for that location and available resources
2. Support supply chain and access to PPE & laboratory testing materials that is sustainable and cost effective
3. Guidance and support for the integration of COVID-19 response and care into existing health service delivery platforms
4. Increased funding for COVID-19 response through investment in national health systems (improving WASH and IPC, supporting existing hospitals, capacity building of existing healthcare work force, etc.)
5. Meeting the demand for technical resources by engaging more international support while investing in the development of true local expert capacity
6. Communication strategies driven by communities for messaging and risk communication to maintain their engagement in the response.

Discussion

The illustrative study from key informants across six health cluster countries highlights both the challenges health clusters and partners are facing to deliver COVID-19 response and maintain essential health services in humanitarian settings as well as many solutions. These findings, moreover, emphasize the need for further examination into issues raised as well as how to address them.

The significant operational challenges around maintaining both essential health services and delivering COVID-19 response in resource scarce settings were highlighted in this study as well as the companion survey implemented by the READY Initiative on behalf of the Global Health Cluster COVID-19 Task Team[6] where 112 health cluster partners from 27 cluster settings participated, and was conducted simultaneously. Both studies cited that movement restrictions presented challenges in terms of transporting staff, essential medicines, and critical supplies such as PPE and oxygen. As captured throughout this report, stigma, lack of transparency and mistrust of health care provided may be contributing to a reduction in service utilization (See Figure 5). These findings resonated with reported decreases in service availability and utilization data in the GHC survey as well as other surveys

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[6] *Health Cluster Survey Findings,* Global Health Cluster, November 2020, www.who.int/health-cluster

conducted during the COVID-19 response.[7] This raises concerns of the indirect impacts of COVID-19 on essential health services and the potential implications for excess morbidity and mortality.

Interestingly, a cross-cutting finding affecting all pillars of the COVID-19 response was the reported challenges health care workers are facing. Not only do findings in this report reveal that HCWs often lacked the specialized training, skills and technical guidance in areas such as IPC to support adequate response (See Figure 7), but respondents also cited morale and motivation as a challenge. There were also reports of stigma, discrimination and threats of violence towards HCWs from communities fearing COVID-19 infection. Reports of insufficient PPE for HCWs, and inadequate remuneration were also described (Figure 7). There is, therefore, a need for supportive mechanisms and safeguards to be afforded to health care workers to ensure they can perform their roles safely and effectively.

The key informant interviews also conveyed perceived disruptions to multisectoral programs including GBV, MHPSS, nutrition and food security and WASH citing limitations on gatherings and restrictions of movement as reasons (Figure 18). The GHC survey also examined intersectoral activities reporting a reduction in service availability and utilization for clinical management of rape (CMR) services, MHPSS services and inpatient management of severe acute malnutrition programs that respondents usually provided. Given that cases of gender-based violence are reported to have increased in humanitarian settings,[8] a reduction in GBV services including CMR is concerning. In the GHC survey, though 25% of partners reported they were able to maintain or increase MHPSS services, many reported disruptions. Thus, understanding the contextual factors as to why MHPSS services were able to be increased or decreased will be important to examine in order to facilitate shared learning.

Notably, multisectoral coordination of the COVID-19 response was seen as a challenge by both survey and key informant respondents. Findings from the key informant study revealed that where coordination was well executed prior to COVID-19, countries were well positioned to coordinate multisectoral response across pillars. Respondents identified gaps in transparent decision-making processes, a lack of feedback mechanisms as well as limitations in the available capacity of local government as challenges to deliver effective coordination (Figure 9). Generating a better understanding of the multisectoral coordination gaps on the sub-national and national levels would be helpful in supporting an ongoing COVID-19 response.

Conclusion

The key informant interviews conducted across six health cluster countries have provided an exploration into the challenges Health Clusters and Health Cluster partners face to respond to COVID-19 in humanitarian and low resource settings. The tangible needs and priorities identified in this report provide guidance to inform the evolving and ongoing COVID-19 response in humanitarian contexts.

In terms of identifying gaps in guidance, there was a reported need to adapt existing guidance, to expand and contextualize it to the operational environment of humanitarian settings where significant resource scarcity is being faced. In that effort, respondents stated that generating protocols, algorithms, job aids, messaging strategies and training materials would be most useful. Key informants also requested more coordination at the global level to merge and harmonize guidance within the health sector but also across sectors to ensure a multisectoral approach in responding to COVID-19. In addition, participants clearly identified a need for technical support and capacity building at the local level through hands on, country level training as well as learning from each other's experience responding to COVID-19 and local level solutions.

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[7] WHO Pulse Survey on Continuity of Essential Health Services during the COVID-19 pandemic: interim report 2020 ; UNICEF 2020 Tracking Socioeconomic Impact of COVID Dashboard
[8] 24 of 26 of Protection Clusters report an increase in Gender-Based Violence since COVID-19 crisis began; Nearly 90% report this as having severe impact on affected populations. See SitRep August 7 COVID 19 Protection Risks & Response Situation Report 7, August 2020

In terms of operational challenges, this research has highlighted the significant shortages and scarcity of resources, including funding, supplies and ability to staff health facilities, that hinder the safe delivery of both COVID-19 response and essential health services in humanitarian settings. Stigma, fear, lack of transparency and mistrust were report to affect community members' willingness to access services. Thus, the reported decline in service availability and utilization has worrying implications for excess morbidity and mortality.

The many solutions reported demonstrate the innovation and adaptive approaches of health cluster partners and other sector actors to respond to COVID-19.

Findings identified in this study are reiterated in the Global Health Cluster companion study implemented by the READY Initiative *Health Cluster Survey Findings*[9] and should also be reviewed.

Given the long-term and evolving nature of the COVID-19 response, for example the introduction of new therapeutics, diagnostics and vaccines, regular discourse and evaluation should continue to help identify the key gaps and challenges over time.

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[9] *Health Cluster Survey Findings,* Global Health Cluster, November 2020 www.who.int/health-cluster

Appendix 1: Key Informant Interview Guide Template

This is the key informant interview template that was used for INGOs, NNGOs and UN Agencies. Slight modifications of this template were used with the Health Cluster Coordinators, Donors and Government Focal Persons.

<u>Key Informant Interview Guide</u>
INGO/NNGO/UN Agency

I. Introduction
Thank you for agreeing to participate in the Global Health Cluster/World Health Organization Study, Identifying Technical and Operational Gaps and Good Practice in Low Capacity and Humanitarian Settings.

The purpose of this study is to better understand key technical and operational challenges faced at country level, as well as capture any good practices that are occurring. These findings will be used by the Global Health Cluster and WHO to help identify and fill urgent response gaps. This project team is from Harvard Humanitarian Initiative, conducting this work on behalf of the GHC COVID-19 task team.

We'd like to start by introducing ourselves and providing some information about the interview.

> **Interviewer**
> My name is _____ and I am a [Doctor or Nurse or Student] researcher with Harvard Humanitarian Initiative (HHI). I have worked in the humanitarian and development context in [AFRO, EMRO or SEARO] and [specify country(ies)]. I will be the interviewer today.

> **Notetaker**
> My name is _____ and I am a [Doctor or Nurse or Student] researcher with Harvard Humanitarian Initiative (HHI). I have worked in the humanitarian and development context in [AFRO, EMRO or SEARO] and [specify country(ies)]. I will be the note taker today.

> ·Ask interviewee to briefly introduce themselves.
> - *Probe:* how long have they been working for the organization in this specific country?

II. I will now provide you information about the interview
  · Length: The interview is expected to last no more than 1 hour.
  · Notes: We will be taking notes during the interview, but we will not be recording our discussion.
  · Anonymity: The data collected will be de-identified prior to analysis. Nothing will be directly attributed to you or your organization without seeking your permission directly beforehand.
  · Clarity: Please feel free to interrupt at any time if terms used or questions asked are unclear
  · Consent: Do we have your consent to participate in this interview?
  · Are there any questions prior to beginning?

III. We will now start the interview:

1. **Details and background information:** *The interviewer should fill in any gaps here that were not part of the subject's self-introduction.*

1.1	Interviewee name

1.2	What is your current position?
1.3	What organization do you work for?
1.4.	Please specify the location (Country, head office / sub national)

2.Can you briefly summarize the programs that your organization is conducting that support or provide health services to populations in need during this COVID-19 pandemic? (For example: vaccination, primary health care)

3.We will now ask you questions about your health services as they pertain to the WHO 9 Pillars of response for COVID-19 -19. We will ask about challenges your organizations has faced. These can be operational or technical, or challenges that are worsened because there is no clear or useful guidance available. In some cases, these challenges may overlap; for example, there may not be enough testing capacity, and no guidance on how to prioritize testing.

3.1	What challenges has your health programming experienced with risk communication and community engagement? *Probe:* what solutions has your organization identified?
3.2	What are the main challenges your organization is facing related to prevention of COVID-19 in beneficiary/service user populations? Examples may include physical distancing, masks when physical distancing is not possible, or handwashing) Is your organization promoting shielding practices? If so, what are the challenges your organization is facing promoting these practices? (example: increased gender-based violence) Has your beneficiary/service user community or region implemented movement restriction or 'lockdown' measures? *Probe:* Why do you think these challenges exist? What have you done to address the challenges?
3.2	What challenges has your health programming experienced with case investigation and rapid response? This includes contract tracing, monitoring and quarantine. *Probe: W*hat solutions has your organization identified for these challenges?
3.3	Have there been any challenges related to populations moving (Internally displaced persons/IDP or across an international border? Have there been any challenges accessing these populations? *Probe:* What solutions has your organization identified for these challenges?

3.4	What challenge has your health programming had in availability and access to laboratory testing?
	Probe: What solutions has your organization identified for these challenges?
3.5	What challenges has your health programming had implementing Infection, Prevention and Control activities?
	Probe: What solutions has your organization identified for these challenges?
3.6	What challenges has your health program had in identifying and treating COVID-19 19 (Case Management)?
	Probe: What solutions has your organization identified for these challenges?
3.7	What challenges has your organization experienced delivering non-COVID-19 health care i.e. essential health care services?
	Probe: What solutions has your organization identified for these challenges?
3.8	What challenges has your health program had in logistics and operations for delivering services?
	Probe: What solutions has your organization identified for these challenges?
3.9	What challenges is your organization experiencing in accessing the needed consumables for your prevention, disease management and response activities?
	Probe: Can you give me specific examples? Are there solutions to these challenges your organization has identified?
3.10	What challenges have you had in delivering multi sector COVID-19 response? (e.g. WASH, Nutrition, GBV, and mental health)
	Probe: What solutions has your organization identified for these challenges?
3.11	What challenges has your organization experienced in country-level coordination, planning, and monitoring of COVID-19 response?
3.12	Have organizations implementing health programs experienced operational challenges? (ex: staff movement, supply chain, etc.)
	If so, please describe these challenges.

4.0 This section will focus on existing technical guidance.

4.1	Are there technical guidance documents that your organization has found useful? If yes, which ones?
4.2	Are there gaps in technical guidance documents from the WHO or IASC that your organization needs? If yes, what areas do you feel you need additional technical guidance?
4.3	How would you like new technical guidance delivered to you/your staff? (examples: website, smartphone app, supported with webinars for country clusters)

5.0 Last, we'd like to ask you about what requests you would have to improve the COVID-19 response.

5.1	What support do you think is most urgently needed from the **global level** for COVID-19 response in humanitarian context? *Interviewer Note:* If interviewee asks for clarification, suggest technical or operational support to address gaps in prevention, disease response, and/or adapting essential health services.
5.2	What support do you think is most urgently needed from the **national level** for COVID-19 response in humanitarian context?
5.3	Can you describe things your organization has done particularly well in your COVID-19 response work that reaches populations in need? *Probe:* Would you share examples of gaps addressed through local solutions? (Specifically related to prevention, providing clinical care for patients with COVID-19, and continuing routine health services?)

6. Conclusion
- This concludes our study interview. Do you have any questions for us?
  - Possible questions you might be asked as an interview team
    - What other clusters/countries are being included in this study?
      - *Cox's Bazar (Bangladesh), Burkina Faso, Chad, Colombia, Iraq, Nigeria and Yemen.*
    - When will this study be completed?
      - *Anticipated findings will be provided to the global health cluster in mid-August.*
    - Can I get a copy of the report when it is finished?
      - *The Global Health Cluster will disseminate the report.*
    - What is the WHO going to tangibly do with this information?
      - *This information will guide prioritization for areas of immediate support. They will also use examples of innovative programming to help solve cross cutting challenges.*

Thank you for your time and knowledge contributions to this work. If you have any questions or think of additional useful information, please contact _____ anytime.

Best wishes for your ongoing work

Appendix 2: Key Informant's Organization*

National Authorities
- Cox's Bazar, Bangladesh focal person
- Burkina Faso focal person
- Iraq focal person
- Nigeria focal person
- Yemen focal person

NNGOs
- Action pour le Développement Social et Humanitaire (ADESOH) - Chad
- Albarka Health – Nigeria
- Bangladesh Rehabilitation Assistance Committee (BRAC) - Bangladesh
- Pengdwendé pour l'Epanouissement de la Jeunesse (APEPJ/CN) – Burkina Faso
- Building Foundation for Development (BFD) - Yemen
- Dary Human - Iraq
- Doctor's Aid for Medical Activities (DAMA) - Iraq
- Field Medical Foundation (FMF) - Yemen
- Goal Prime Organization Nigeria (GPON) – Nigeria
- Gonoshasthay Kendra (GK)
- Iraq Health Access Organization – Iraq
- Grassroots Life Saving Outreach (LESGO) - Nigeria
- Organisation Catholique pour le Développement et la Solidarité (OCADES) – Burkina Faso
- Yemen Family Care Association (YFCA) – Yemen

INGOs
- Family Health International 360 (FHI-360)
- International Medical Corps (IMC)
- International Rescue Committee (IRC)
- INTERSOS
- Lay Volunteers International (LVIA)
- PLAN International
- Relief International
- Save The Children International (SCI)

Health Cluster Coordinators
- Cox's Bazar, Bangladesh
- Burkina Faso
- Chad
- Iraq
- Nigeria
- Yemen

United Nations
- International Organization for Migration (IOM)
- United Nations Children's International Emergency Fund (UNICEF)
- United Nations High Commission for Refugees (UNHCR)
- World Health Organization (WHO)

Observers
- Croix Rouge Burkina Faso (CRBF)
- International Committee of the Red Cross (ICRC)
- Medecins sans Frontieres (MSF)

Additional organizations to reach the sample size of 64 organizations participated but wished to remain anonymous.

Appendix 3: Code Book

Code/Sub-Code	Definition	Indication for Use
1. Public Health Measures	When the respondent refers to any public health measure to control COVID-19	Apply this node alone or with the associated relevant subnode(s) when the respondent refers to public health measures to control COVID-19
a. Messaging	Applies to any public health message to the public to provide education or instruction on COVID-19	Apply this code to any statement that describes public health education on COVID-19, or examples of public health education programs targeted at the general public
b. Social distancing	Applies to any public health intervention or policy on social distancing	Apply this code to any statement that describes social distancing interventions, policies, examples or evidence.
c. Mask use	Applies to any public health intervention or policy on mask use in health facilities, the workplace or in the community	Apply this code to any statement that describes mask use, interventions, programs, evidence, policies or examples.
d. Isolation / Quarantine	Applies to any public health intervention that utilizes isolation or quarantining measures (often terms are interchangeably used) as an intervention, program or policy	Apply this code to any statement on the use of quarantine/isolation in programing, control measures, policies or examples of how COVID-19 19 is controlled.
e. Lockdown	Applies to any public health intervention utilizing lock down, curfews, restricted movements	Apply this code to any statement on the use of, policy of or examples of restricted movement measures used to control the spread of COVID-19
f. Infection Prevention and control	Actions or guidance relating to infection, prevention and control	Apply this node alone or with the associated subnode when the respondent describes policies, programs, interventions or examples of infection, prevention or control activities
g. Contact Tracing	When the respondent refers to any component of contact tracing such as rapid response teams, case identification, case finding, contact tracing	Apply this node alone or with the associated subnode when the respondent discusses contact tracing for COVID-19

h. Surveillance	When the respondent refers to surveillance systems in place by governments (Such as EWARN) or by partners or the need for surveillance systems	Apply this code to any statement on surveillance systems in place by governments (Such as EWARN) or by partners or the need for surveillance systems
i. Shielding	The practice of protecting vulnerable populations (elderly, very young, immunocompromised) through stay and home measures and precautions by those around the vulnerable individual(s).	Apply this code whenever the respondent talks about shielding.
j. Rapid response teams/case investigation	This code refers to the approaches or systems to investigate new cases to initiate contract tracing or case management and can be triggered by either symptomatic diagnosis or by confirmed laboratory diagnosis.	Apply this code when the respondent discusses investigating new cases to initiate contract tracing or case management and can be triggered by either symptomatic diagnosis or by confirmed laboratory diagnosis.
2. Testing	When the respondent refers to anything related to testing for COVID-19 19	Apply this node alone or with the associated subnode when the respondent discusses testing for COVID-19
a. Access	When the respondent discusses access to or the provision of diagnostic or surveillance testing	Apply this code to any policy, program, intervention or example of access to testing or surveillance testing programs.
b. Results	When the respondent refers to the use, dissemination or publication of results	Apply this code to when use of results, reporting of results, dissemination of results data or examples of the use of results.
3. Risk Communication	Refers to the exchange of information, advice and opinions between experts and people facing threats to their health or well-being. This parent code/node includes that this is a core function of public health.	Apply this node alone or with the associated subnode when the respondent discusses the exchange of information, advice and opinions between experts and people facing threats to their health or well-being. As a core tenant of public health, you do not need to include public health specifically as a parent node.
a. Community engagement and access	When the respondent discusses access to populations who they are trying to deliver a message to	Apply this code when the respondent discusses access to populations who they are trying to deliver risk communication messaging
b. Healthcare workers	Refers to healthcare personnel who are providing care to service users	Apply this code when the respondent refers to healthcare personnel who are providing risk communication to service users

c. Leaders / Reputation	Refers to risk communication messages delivered by government, religions, or community leaders and ramifications of messages to their standing	Apply this code when the respondent refers to risk communication messages delivered by government, religions, or community leaders and ramifications of messages to their standing
4. Human Resources	refers to the labor workforce employed by an organization or a sector	Apply this node alone or with the associated subnode when the respondent refers to individuals or the human resources providing or supporting health care
a. Personnel	People who make up the workforce of an organization and the knowledge which the individuals embody	Apply this code when the respondent describes people who make up the workforce of an organization and the knowledge and skills which the individuals possess
b. Capacity building	The process by which individuals and organizations obtain, improve, and retain the skills, knowledge, tools, equipment and other resources needed to do their jobs competently or to a greater capacity (larger scale, larger audience, larger impact, etc.).	Apply this code when the respondent describes the process by which individuals and organizations obtain, improve, and retain the skills, knowledge, tools, equipment and other resources needed to do their jobs competently or to a greater capacity (larger scale, larger audience, larger impact, etc.).
c. Motivation	The reason or reasons one has for acting or behaving in a particular way.	Apply this code when the respondent describes motivational factors (policy, program, intervention or example of) contributing to COVID-19 response or healthcare delivery
5. Security	Freedom from, or resilience against, danger or potential harm (or other unwanted coercive change) caused by others	Apply this node alone or with the associated subnode when the respondent describes freedom from, or resilience against, danger or potential harm (or other unwanted coercive change) caused by others
a. Access to populations	Refers to ability or inability to contact populations	Apply this code when the respondent refers to ability or inability to contact populations
b. Access to health facilities	Refers to ability or inability to receive health care	Apply this code when the respondent refers to ability or inability to receive health care due to the real or perceived lack of safety

c. Violence against healthcare workers	Refers to physical or psychological harm or perceived risk felt by healthcare workers	Apply this code when the respondent refers to physical or psychological harm or perceived risk felt by healthcare workers
6. Operations & Logistics	Planning, organizing and supervising of the provision of services, logistics or supply chain	Apply this node alone or with the associated subnode when the respondent refers to planning, organizing and supervising of the provision of services, logistics or supply chain in healthcare settings or in healthcare service delivery
a. PPE access	Refers to access to quality PPE	Apply this code when the respondent refers to access to appropriate, quality PPE
b. Lab materials access	Refers to access for materials necessary to obtain and perform laboratory testing	Apply this code when the respondent refers to access for materials necessary to obtain and perform laboratory testing
c. Essential drugs	Refers to medications essential to providing essential services (either non-COVID-19 or COVID-19)	Apply this code when the respondent refers to medications essential to providing essential services (non-COVID-19 or COVID-19 healthcare)
d. Oxygen & respiratory support devices	Refers to the use or need for oxygen or respiratory support devices like cpap, ventilators.	Apply this code when the respondent discusses need for oxygen, producing oxygen, need for or use of ventilators or cpap or other respiratory support devices.
e. Transport	Refers to the ability to transport personnel, goods, laboratory tests, services or patients	Apply this code when the respondent refers to the ability to transport personnel, goods, laboratory tests, services or patients
7. Local Government	Form of public administration/central government of a nation or a state	Apply this node alone or with the associated subnode when the respondent discusses administration, coordination or oversight of healthcare activities by local government
a. Capacity	Refers to the country's ability (the country where the emergency is occurring) to manage the country as a whole during the outbreak response and all sectors. Capacity of the health system is addressed under case management for COVID-19 and maintaining routine health services	Apply this code when the respondent describes the country's ability to maintain a functioning government, ensure function of the private and public sectors and manage across sectors (food, imports, security, etc.). Any reference to health system capacity or facility capacity for COVID-19

		or essential health services should use the code under case management.
b. Control	The power to influence or direct people's behavior or the course of events	Apply this code when the respondent describes local government control over health care programming
8. Case Management	Process of assessment, planning, facilitation, care coordination, evaluation and advocacy of healthcare services	Apply this node alone or with the associated subnode when the respondent discusses case management or care activities
a. Local health system response to COVID-19	Actions that provide direct support of local health system healthcare service delivery in response to COVID-19	Apply this code when the respondent describes policies, programs, interventions or examples of healthcare provision by local providers or organizations
b. Healthcare provided by international actors	Care support or service delivery provided by international staff or collaborators	Apply this code when the respondent describes policies, programs, interventions or examples of healthcare provision by international providers or organizations
c. Telehealth	The provision of healthcare remotely by means of telecommunications technology.	Apply this code when the respondent describes policies, programs, interventions or examples of telehealth activities
d. maintenance of essential health services	The ability to continue the provision of basic health care services, such as vaccination, primary healthcare, maternity care	Apply this code when the respondent describes policies, programs, interventions or examples of maintenance of essential health services (such as maternity care, vaccination, etc.)
9. Coordination	The organization and cohesiveness of the different elements of a complex body, cluster or activity so as to enable them to work together effectively.	Apply this node alone or with the associated subnode when the respondent describes examples of coordination (positive, negative, or neutral)
a. Gaps	Deficiencies or lapses in effective coordination	Apply this code when the respondent describes policies, programs, interventions or examples of gaps in coordination

b. Coverage	Ensuring comprehensive care provision across a region or group of service users	Apply this code when the respondent describes policies, programs, interventions or examples of care coverage across a region or group of service users
c. Collaboration	Shared vision and goal, communication channels and operations across sectors, organizations or regions to provide seamless, organized care delivery	Apply this code when the respondent describes collaboration, or lack of collaboration among governments, sectors, organizations, regions or actors
10. Multi-sectorial needs	Services or support provided discrete technical areas of humanitarian action	Apply this node alone or with the associated subnode when the respondent describes policies, programs, interventions or examples of multi-sectoral activities or programs
a. WASH	Water, sanitation and hygiene activities	Apply this code when the respondent describes policies, programs, interventions or examples of water, sanitation or hygiene activities or needs
b. Protection	Sector that focuses on safety, well-being and dignity for crisis-affected populations	Apply this code when the respondent describes policies, programs, interventions or examples of protection or protection needs
c. Nutrition	Responding to the nutrition needs of crisis-affected populations	Apply this code when the respondent describes policies, programs, interventions or examples of nutrition activities, programming or needs
d. Shelter	Responding to the shelter/housing needs of crisis affected populations	Apply this code when the respondent describes policies, programs, interventions or examples of shelter activities or needs
e. Mental Health	Responding to the mental health needs of the country at baseline or in particular for COVID-19	Apply this code when the respondent describes mental health needs or responses
f. GBV	Harmful act that is perpetrated against a person's will and that is based on socially ascribed (i.e., gender) differences between females and males	Apply this code when the respondent describes policies, programs, interventions or examples of gender-based violence, concerns or unmet needs
11. Guidance	Advice or information aimed at resolving a problem or difficulty; providing advice, knowledge or skill	Apply this node alone or with the associated subnode when the respondent describes technical or operational support

		Apply this code when the respondent describes existing technical or operational support documents
a. Existing guidance	Technical or operational support documents that are currently being used	
b. Needed guidance	Technical or operational support documents that are desired	Apply this code when the respondent describes guidance gaps that are desired
c. Dissemination	Act of spreading information	Apply this code when the respondent describes examples or methods of dissemination of guidance
12. IHR	International Health Regulations: international regulations with the objective of maximum prevention of the spread of infectious diseases with minimal disruption of travel and trade in response to public health events of international concern	Apply this node alone or with the associated subnode when the respondent describes actions or regulations related to international health regulation guidance
a. internal population movement	Involuntary movement of populations within national borders	Apply this code when the respondent describes policies, programs, interventions or examples of internal population movement
b. international population/cross border movement	Involuntary movement of populations crossing international borders	Apply this code when the respondent describes policies, programs, interventions or examples of cross border population movement
13. Data Management	Refers to the acquisition, management, analysis or reporting of COVID-19 data or indicators	Use this parent code when the KI refers to challenges or successes in managing data acquisition, analysis or reporting
14. Funding	This refers to the need for funding of unmet needs or innovative funding approaches,	Apply this code when a respondent refers to funding for needed activities or innovative funding approaches
15. Stigma	Applies to feelings or perceptions of disgrace or shame related to COVID-19 diagnosis or potential diagnosis at the individual, health facility or national level	Apply this code to feelings or perceptions of disgrace or shame related to COVID-19 diagnosis at the individual, health facility or national level
16. Mistrust	Lack of confidence in truthfulness or veracity of messages, response activities, response organizations or local governments	Apply this code when the respondent describes lack of confidence in truthfulness or veracity of messages, response activities, response organizations or local governments

17. Transparency	Refers to the intentional or unintentional and actual or perceived lack of open sharing of information about COVID-19 or COVID-19 response	Apply this code when the intentional or unintentional and/or actual or perceived lack of open sharing of information about COVID-19 or COVID-19 response is referred to by a respondent. This can often be referred to by the word transparency used directly by the respondent or describing situations that meet this definition.
18. Gender issues	Concerns related to women's and men's lives and situation in society, to the way they interrelate, their differences in access to and use of resources, their activities	Apply this node alone or with the associated subnode when the respondent describes policies, programs, interventions, examples or concerns related to gender issues, gendered perspectives and issues society. This does not necessarily have to be GBV it may be the difference between effect of movement restrictions on Men vs. Woman or other policies.