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Infectious Disease Outbreak Response Coordination:

An Introductory Guide for
Non-Governmental Organizations

September 2022



This guidance was made possible by the generous support of the American people through the United States Agency for International Development (USAID). Led by Save the Children, the READY initiative is implemented in partnership with the Johns Hopkins Center for Humanitarian Health, the Johns Hopkins Center for Communication Programs, UK-Med, and the Humanitarian Leadership Academy. READY is augmenting global capacity for non-governmental organizations to respond to large-scale infectious disease outbreaks. For more information, visit our website at <http://www.ready-initiative.org>.

Purpose

National outbreak response coordination can be highly complex, and exact coordination mechanisms are typically specific to both the country and the disease. The purpose of this guide is to help national and international nongovernmental organizations (NGOs) to understand the basic elements of a major disease outbreak response coordination. It gives an overview of outbreak response coordination, the factors that influence how coordination

structures are operationalized at the national level, and tips on how your organization can effectively engage with and support outbreak responses. This guide does not attempt to outline a universally applicable methodology, but rather it describes common outbreak coordination mechanisms and some of the factors that shape and influence the coordination of an outbreak response.

Outbreak Response Coordination

Unlike the humanitarian cluster approach, where the coordination mechanism remains broadly similar for each humanitarian response,ⁱ there is no consistent coordination mechanism for outbreak responses despite recognized approaches. Though national governments and their health authorities (e.g., ministries of health) are responsible for coordination, the type and size of response, activities within the response, and the degree to which other agencies such as the World Health Organization (WHO), United Nations (UN) agencies, and NGOs support the government can vary greatly. The type of disease, the size and scale of the outbreak, and its geographical location inform decisions made by such organizations.

Coordinating a response to smaller outbreaks, such as localized seasonal outbreaks of cholera or measles, often does not require additional coordination mechanisms to support the national health system response. Specialized UN agencies and NGOs may support local responses, but outbreaks of this scale happen frequently, and typically they can be managed within existing coordination mechanisms.

The potential for major disease outbreaks, including epidemics and pandemics,ⁱⁱ to cause significant primary and secondary impacts on affected populationsⁱⁱⁱ and to spread across communities and international borders increases the urgency to slow and stop transmission and therefore requires specific coordinated efforts by national government ministries or agencies, UN agencies, and national and international NGOs.

Outbreak Response Strategy and the Pillar Approach

An outbreak response strategy is the principal guidance for coordinating actors and resources and ensuring cohesive action in response to a major disease outbreak. The national government, typically the ministry of health, develops the response strategy with support from the WHO and other response actors. The response strategy defines the nature of the outbreak, the objectives of the response, key elements and structure of priority activities, timelines, and needed resources. It also outlines mitigation and containment activities and allocates them into key priority thematic areas known as response pillars.

Response pillars define response activities and team structures and aim to reduce redundancy and siloed working. Response pillars can and will change with each response.

Some pillars (and activities within them) will always be essential in response coordination such as case management, logistics, contact tracing, and risk communication and community engagement (RCCE), while others, such as response research and safe and dignified burials, may be less of a priority for some diseases. Factors that affect the inclusion of specific pillars in a response strategy include the mode of transmission of the disease pathogen, the corresponding mitigation and containment strategies, and the availability of an effective vaccine, among others. Common pillars are outlined in Table 1. Mental health and psychosocial support (MHPSS) is included, acknowledging the growing evidence of the association between disease outbreaks and poor mental health outcomes^{iv v} and the increased frequency of its appearance as a stand-alone response pillar in recent outbreaks and guidance.^{vi vii viii}

Documents used to inform the development of Table 1, are included in the [Resources for Additional Information](#) section at the end of the guidance.

National Response Task Forces

In public health emergencies, such as major infectious disease outbreaks or epidemics, national governments and their health authorities (e.g., ministries of health) typically manage a response task force or similar response management group to coordinate the response. The role of the task force is to ensure clear command and control, rapid decision making, and cohesive information flow, all of which are vital elements in supporting the control and suppression of an outbreak. The task force is likely to meet quite frequently, especially at the start of an outbreak.

The national government will determine the specifics of how the task force is structured and how it wants to operationalize the national outbreak response strategy. The task force will decide whom to include within the formal coordination structure, which type of implementing partners are needed, and how the task force will engage with other health or non-health actors and other established coordination bodies, such as humanitarian clusters (if activated). These decisions will largely be dictated by the nature of the outbreak, existing response capacity, and external context.

Table 1. Common Pillars of an Outbreak Response^{ix}

Pillar	Illustrative Activities
Case Management	<ul style="list-style-type: none"> > Establish treatment centers and units designed in line with WHO standardized guidance in locations determined by risk and population ratios. > Create and train a case-management team. > Start safe screening, triage, and isolation capacities within the facility or center. > Establish a patient referral system and transit structures.
Coordination	<ul style="list-style-type: none"> > Review national policy and legislative frameworks. > Coordinate visas, importation of goods, and vaccination. > Establish or maintain emergency operations centers. > Map a list of donors and partners.
Epidemiological and Outbreak Analysis	<ul style="list-style-type: none"> > Ensure a clear flow of data to and from each activity. > Perform real-time analysis and timely dissemination of updated information.
Infection Prevention and Control	<ul style="list-style-type: none"> > Activate an infection prevention and control (IPC) taskforce. > Disseminate standardized and evidence-based IPC guidelines, standard operation procedures, and tools. > Ensure appropriate supply and usage of personal protective equipment (PPE). > Conduct water, sanitation, and hygiene (WASH) assessments in communities, schools, and health facilities.
Logistics	<ul style="list-style-type: none"> > Consolidate supply–need forecasts and ensure a pharmacy and supply management system is in place. > Transport cargo, people, patients, and samples. > Evaluate storage and warehouse capacity. > Assess communication network capacity.
Surveillance, Case Investigation, and Contact Tracing	<ul style="list-style-type: none"> > Start contact tracing. > Establish community-based surveillance systems and rapid response teams. > Train on case definitions, detection, and reporting. > Reinforce integrated disease surveillance and response systems.
Laboratory and Diagnostics	<ul style="list-style-type: none"> > Assess national systems for sample collection, transport, testing, and tracking. > Establish/strengthen testing networks to decentralize testing and diagnostic capacity. > Begin a data-management system for prompt dissemination of results.
Mental Health and Psychosocial Support	<ul style="list-style-type: none"> > Integrate MHPSS in assessments, preparedness, response, and recovery plans. > Train frontline workers in each facility and activity. > Map existing services.
Risk Communication and Community Engagement	<ul style="list-style-type: none"> > Develop evidence-based key messages and rapidly disseminate public information on the outbreak and prevention strategies. > Conduct and collect social science and social listening data, including rumor tracking, and analyze and disseminate for decision making. > Establish RCCE coordination mechanism and map RCCE activities. > Provide guidance on participatory community engagement and community-led approaches, and conduct trainings with implementers, journalists, and other key stakeholders.
Vaccinations	<ul style="list-style-type: none"> > Registration of vaccines, quality assurance, and safety monitoring. > Ensure preparedness for deployment and vaccination, including target population definition. > Provide technical support for monitoring and evaluation of the vaccine deployment and the impact of vaccination. > Ensure the rapid deployment of vaccine and associated supplies/equipment in the right condition, the right quantities, and the right place. > Surveillance and monitoring of adverse events. > Work closely with RCCE for vaccine confidence and campaigns. > Work closely with IPC pillar for safe vaccine disposal and waste management.

Typically, a task force is responsible for:

- > Establishing a clear and effective response strategy and response pillars;
- > Coordinating response efforts by directing and tasking response partners and monitoring the delivery of activities and services;
- > Ensuring clear communication between responding agencies, the affected population, regional actors, media, etc.; and
- > Coordinating resources (e.g., staff, supplies, equipment, funds).

A task force will typically meet in a convenient venue offering appropriate facilities that allow effective meetings, good communications, and proximity to the response. This could be a formal emergency operations center, many of which have now been established in different countries, a hospital meeting room, an office of the national government, or anywhere that allows for effective coordination. Remote meetings may also take place as necessary to comply with national mitigation and containment efforts related to the outbreak.

Task force membership and implementing partners

A task force may be multi-sectorial and involve multiple government agencies, but it will generally consist of the ministry of health, the WHO, the national disaster management authority (if this exists), and other stakeholders relevant to and able to contribute to the response, including NGOs as formal or informal implementing partners. Key partners commonly include:

- > **The Ministry of Health:** As the national government agency in charge of health care, a ministry of health (or other lead national health agency) is typically the responsible and accountable party to manage the overall response. The ministry may delegate elements of management, coordination, or response delivery to other government agencies, UN agencies, or NGO actors, but it remains the overall director of any response.

- > **The World Health Organization:** If requested by the national government, the WHO will support and advise the national health authorities to coordinate other partners and international organizations, develop the national response plan, provide international expertise, and mobilize necessary resources. If there is a concurrent humanitarian response in the same location and the humanitarian cluster system is activated, the WHO will play a leading role in coordinating between the task force and the health cluster. The extent of the WHO's engagement and influence within the task force will vary from outbreak to outbreak and largely depends on national capacity and capabilities and the nature and scale of the outbreak.
- > **National Disaster Management Authority (NDMA):** An established government agency in some countries, the NDMA may play a supportive role in ensuring rapid access to relief items, funding, and human resources. The precise remit of a NDMA and its relationship to the national health authorities will change from country to country and from response to response.
- > **Other actors and implementing partners:** A response task force may engage a number of other actors, including additional national government agencies (e.g., military, police, or agencies responsible for water provision, environmental health and waste management, or public transport), UN agencies, national and international NGOs and NGO fora, national and international Emergency Medical Teams^x, community-based organizations and civil society, or the Red Cross/Red Crescent Movement depending on their relevance, capacity, the primary and secondary impacts of the outbreak, and response needs.

Implementing partners can directly lead a pillar or assist with specific activities within a pillar in one or more geographic location(s). See Box 1 for additional information on the role of implementing partners in outbreak response.

In addition, national response mechanisms can be supported by wider coordination initiatives to strengthen overall approaches and response efforts. For example, the RCCE Collective Service,^{xi} supports collaboration between a wide range of organizations on global, regional and national levels to increase the scale and quality of the risk communication and community engagement pillar.

Box 1. Implementing Partners

Government agencies, other organizations, and NGOs that contribute to an outbreak response through delivery of activities are often referred to as implementing partners. Implementing partners coordinate with the task force to carry out specific elements within the response (e.g., WASH, case management, vaccination campaigns). They can be a combination of national and international NGOs, UN agencies, and any other organizations that can add expertise and resources to support the response.

Certain larger organizations and agencies are frequently on the task force as implementing partners due to their size, expertise, and established presence in country. There may be multiple partners working on one element of the response, but there is likely to be one organization, typically a UN agency, selected by the national health authorities to lead on the coordination of each response pillar. For example, it is common to see UNICEF leading on RCCE and the WHO leading on case management, but this will depend on who is in country, their expertise, and their pre-existing relationship with the national health authorities.

Factors that Influence Outbreak Response Coordination

The Nature of the Outbreak and the Extent of the Risk

The factors below are inherent to the nature of the disease and may inform the extent, scale, and complexity of the required response and therefore the need for local or national and complex or simple coordination structures. They also inform the development of the response strategy, pillar prioritization, task force membership, and outreach and engagement with potential implementing partners. The factors include:

- > The number of people affected, the case fatality ratio,^{xii} disease-specific mitigation and prevention measures, the complexity of diagnosis, treatment of the disease, and vaccine availability
- > The rate at which the disease transmits (transmissibility or RO^{xiii}), transmission pathway(s), and level of risk of the outbreak spreading across international borders; and
- > Whether the disease is notifiable under international health regulations (IHRs; WHO, 2005), thereby bringing an international dimension to the response (Box 2).

Box 2. International Health Regulations

In 2005, the international community agreed to improve the detection and reporting of potential public health emergencies worldwide.

The revised IHRs (WHO, 2005) are coordinated by the WHO and aim to keep the world informed about public health risks and events. As an international treaty, the IHRs is legally binding; all countries must report events of international public health importance. Countries reference the IHRs to determine how to prevent and control global health threats while keeping international travel and trade as open as possible. The IHRs requires that all countries have the ability *Detect, Assess, Report, and Respond* to public health emergencies.

National Government/Ministry of Health Capacity to Respond

The capacity and capability of the national government, including preexisting structures, to respond to outbreaks, access to resources, and prior experience responding to an outbreak all influence its ability and/or willingness to establish and sustain needed coordination structures and roles and membership within those structures. These factors will

influence the overall quality of the coordination, who is invited to engage, and the extent to which WHO or other external actors support the government's coordination efforts. These factors include the following:

- > The existence or absence of a dedicated emergency operations center;^{xiv}
- > The existence or absence of a national disaster management authority;
- > The existence or absence of a functioning national incident management system;
- > The existing level of collaboration between the national government/health authorities, WHO, the broader NGO, and humanitarian community (if applicable) and whether international support is requested by the national authorities;
- > Whether the area affected by the outbreak is under national government control;
- > Previous experience responding to outbreaks; and
- > The strength and resilience of the health system; primary health care systems already underfunded, understaffed, or experiencing humanitarian crisis may not be able to rapidly detect and respond to outbreaks and will require additional coordination and external support to respond effectively.

External Dimensions and Context

External considerations or pressures that may determine the necessity for a large or more complex coordinated response may include the following:

- > The level of international threat of the outbreak spreading to neighboring countries; and whether or not the WHO has declared the outbreak as a Public Health Emergency of International Concern;^{xv}
- > The level of media and foreign government interest in responding to and containing the outbreak; and
- > The presence of international actors and presence or absence of an existing humanitarian response and corresponding humanitarian coordination architecture and whether the epidemic itself rises to the level of a humanitarian crisis.

Outbreak Response and the Humanitarian Cluster System

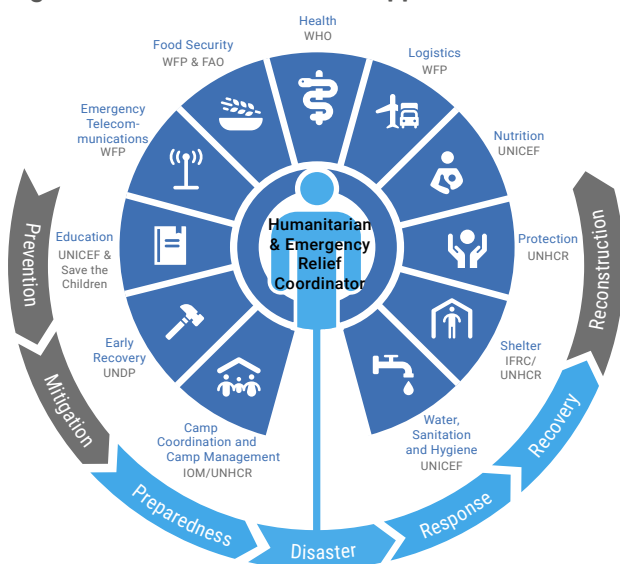
Increasing evidence suggests that complex humanitarian crises not only have a general negative effect on health outcomes of affected populations (in part due to the disruption of essential health services), but also exacerbate the risk of communicable diseases.^{xvi} Many governments, already burdened with the impact of humanitarian crises, may struggle to ensure an effective response, leaving communities affected by conflict, violence, and displacement at the risk of being left even further behind when major disease outbreaks occur with long-term impacts on education, livelihoods, health, and well-being.

For these reasons, it is critical that humanitarian actors and outbreak response actors work together to implement an effective response to large-scale outbreaks. In humanitarian crises experiencing or resulting from a major infectious disease event OCHA and WHO enact an Inter-Agency Standing Committee (IASC) approved protocol to assess, recommend, and communicate response priorities and response structure (e.g., the IASC System-wide Scale-Up Activation Protocol for the Control of Infectious Disease Events).^{xvii} However, formal processes to facilitate coordination may be delayed or selectively applied, and as a result cooperation and coordination between the two sets of actors can prove complex and challenging during outbreak response.

The Humanitarian Cluster Approach

The humanitarian cluster system is established to coordinate humanitarian activities.^{xviii} The cluster approach, represented in Figure 1, is a set of structures, processes, principles, and commitments by which to coordinate humanitarian action when a national government requests international support. It aims to make the humanitarian community better organized and more accountable to crisis-affected people.^{xix}

Figure 1. Humanitarian Cluster Approach



Clusters are voluntary groups of humanitarian organizations working in specific technical sectors, as shown in the dark blue segments in the cluster diagram.

Cluster members can include NGOs, UN agencies, the Red Cross/Red Crescent Movement, and government bodies involved in humanitarian response. At the country level, clusters are usually co-led by the national government and a UN agency.

The Role of Humanitarian Clusters in an Outbreak Response

In a country where the cluster approach is active when a major outbreak occurs, the nature of the disease outbreak, the national government and health system capacity and culture, and the strength of the clusters and task force all influence the interaction between the task force and the humanitarian clusters. Though there is no formal process to direct engagement between the humanitarian cluster system and nationally led outbreak response task forces, there are some common ways of working together that humanitarian organizations can advocate for and support to help enable stronger links between the two and enable humanitarian actors to leverage the technical expertise and operational presence of cluster partners to contribute to an effective response. See Figure 2 for an illustrative example of a national-level outbreak coordination structure in humanitarian settings.

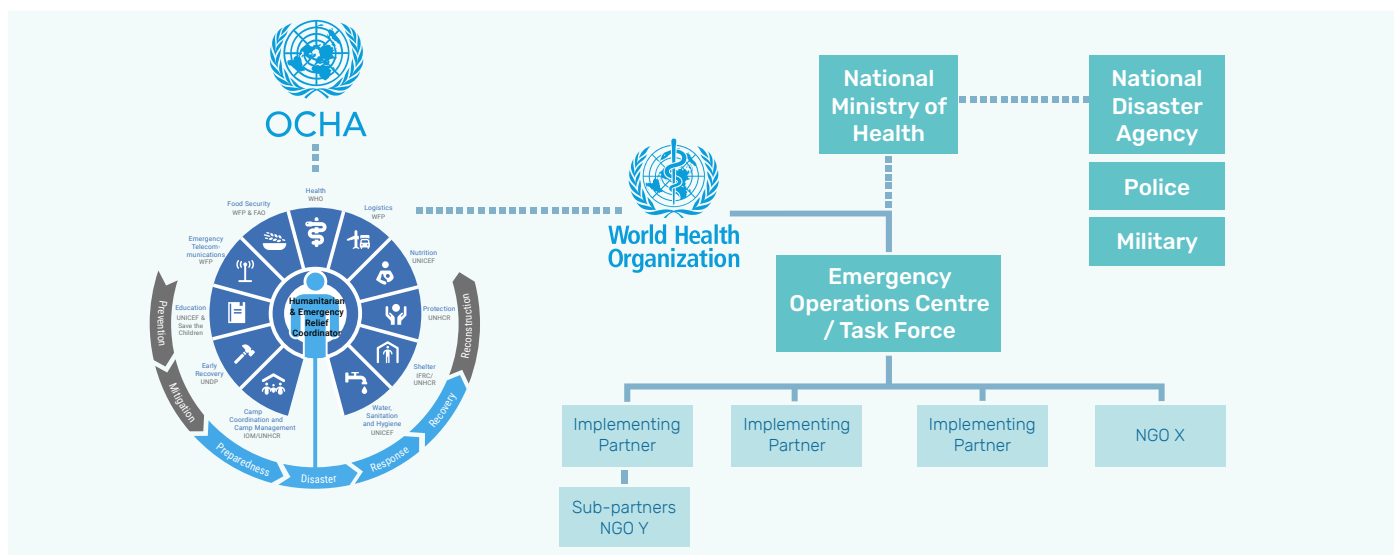
The WHO, via the health cluster, is often the direct link and formal communication channel between the task force and the clusters. Generally, the WHO task force representative will either attend health cluster meetings and update on national response plans and progress, or the health cluster coordinator will be invited to attend task force meetings and then update the health cluster afterward (on behalf of the task force), though increasingly, both the WHO task force representative and a cluster representative are present in task force meetings. Information is then cascaded by the health cluster coordinator at the inter-cluster coordination meetings. This is also an opportunity for actors not on the task force to share information on gaps and needs in their sector to be shared back to the task force. Typically led by the United Nations Office of Humanitarian Assistance (OCHA) and the Humanitarian Country Team, inter-cluster coordination is critical during an outbreak response to share information and requests from the task force, to update cluster response efforts and challenges, and to share relevant information back to the task force (and vice versa).

The task force updates may focus entirely on information sharing with no requested actions, or the task force may make requests of the clusters and member organizations, depending on the needs during the outbreak response. This could include requests to lead or support a specific response pillar or to become an implementing partner to lead specific activities within a pillar in one or more geographical area.

While some non-health clusters, such as WASH and protection, are more commonly engaged by the task force to identify gaps, share information, and coordinate implementing partners who can support specific components of the response strategy, all clusters can offer valuable information to the task force regarding the secondary impacts of the outbreak at the community level.

If a specific cluster is integral to the response, representatives from that sector will often be invited to join task force meetings and will have access to primary information and data. Individual implementing partners represented in both the cluster and the task force should update their respective clusters appropriately.

Figure 2. National Outbreak Response Coordination Illustrative Example



How Can My Organization Be an Effective Implementing Partner?

A question many humanitarian NGOs will have is how to engage in outbreak response coordination mechanisms to support nationally led outbreak response efforts most effectively. Participating in a task force will not be open to everyone and is often invitation-only. While task force membership is not necessarily required to implement response activities, organizations should never implement activities without the appropriate permission from the host government. Organizations should follow the outbreak response strategy and participate in coordination meetings as relevant. To become an effective implementing partner, it is likely you will need most, if not all, of the following characteristics:

Organizational Commitment

Your organization will need to demonstrate a high level of organizational commitment to responding. This includes the following:

- > **Speed:** Outbreak responses are, by nature, immediate. Your organization will need either to be in the country already or to be able to deploy quickly to the affected area.
- > **Adaptability and flexibility:** Your organization will need to be able to meet the emerging needs of the outbreak response.
- > **Availability of resources:** Your organization will need to have access to money, staff, equipment, and supplies to respond rapidly.
- > **Expertise in operations and priority response pillars:** For example, if your organization is supporting activities under the WASH pillar, you will likely need to have expertise in both logistics and WASH to support response activities under this pillar effectively.
- > **Duration of engagement:** Your organization must be able to commit to working on the response until the end of the outbreak or at least until the outbreak no longer threatens to overwhelm the ability of the national health authorities to manage it.

- > **Engagement and Support to established Coordination Mechanisms:** It is important for all responding organizations to work with and through established coordination mechanisms. When leading or supporting key activities, you will need to assign a representative of your organization to attend meetings and consistently to engage with the task force.

Technical Quality and Accountability to Affected People

Many implementing partners may be required to support an outbreak response even if they are not health actors, but all must have demonstrable expertise and ability to support one or more activities under the prioritized response pillars. It is possible for an NGO to either have expertise in one pillar or to contribute to multiple response pillars (or activities within a pillar).

Accountability to Affected People is the active commitment of humanitarian actors to ensure communities themselves have the power and influence to determine and act on their own priorities for preparedness, response and recovery and requires a proactive, consistent and strategic approaches. In practice, this means that as an organization, and as individuals, we behave ethically towards the communities and people we serve, and we engage fully and holistically with them, to hear their views and feedback, and to respond in ways that make sure the aid we offer is appropriate, useful and timely, and meets their real, expressed needs.^{xx}

Ultimately, health emergencies begin and end in communities and require a systemic approach to achieve health protection and a holistic response that meets the needs of affected populations and works with population to break transmission and mitigate secondary impacts. Infectious disease outbreak coordination is essentially about ensuring an effective response delivery whilst being accountable the affected communities.

Resources for Additional Information

- > Democratic Republic of Congo Ministry of Health. (2018). *National plan for the response to the Ebola virus disease epidemic in North Kivu Province*. https://www.who.int/docs/default-source/documents/spr-ebola-2019/srp1-drc-ebola-disease-outbreak-response-plan.pdf?sfvrsn=40799796_4
- > Global Education Cluster, Save the Children, & Translators without Borders. (2021). *Humanitarian coordination and the cluster approach: A quick guide for local and national organizations*. <https://resourcecentre.savethechildren.net/document/humanitarian-coordination-and-cluster-approach-quick-guide-local-and-national-organisations/>
- > Global Health Security Agenda. (n.d.). *Home*. <https://ghsagenda.org>
- > Hammer, C. C., Brainard, J., & Hunter, P. R. (2018) Risk factors and risk factor cascades for communicable disease outbreaks in complex humanitarian emergencies: A qualitative systematic review. *BMJ Global Health*, 3, e000647. <https://gh.bmj.com/content/3/4/e000647>
- > IASC Reference Group on Mental Health and Psychosocial Support in Emergency Settings. (2015). *Mental health and psychosocial support in Ebola virus disease outbreaks: A guide for public health programme planners*. <https://reliefweb.int/report/sierra-leone/mental-health-and-psychosocial-support-ebola-virus-disease-outbreaks-guide>
- > Inter-Agency Standing Committee. (2019). IASC scale-up protocol. <https://interagencystandingcommittee.org/iasc-transformative-agenda/iasc-protocol-control-infectious-disease-events-humanitarian-system-wide-scale-activation-2019>
- > Lamoure, G., & Juillard, H. (2020). *Responding to Ebola epidemics: An ALNAP lessons paper*. <https://www.alnap.org/help-library/alnap-lessons-paper-responding-to-ebola-epidemics>
- > Mohammed, A., Sheikh, T. L., Poggensee, G., Nguku, P., Olayinka, A., Oluabunwo, C., & Eaton, J. (2015, November). Mental health in emergency response: Lessons from Ebola. *Lancet*, 2(11), 955–957. [https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(15\)00451-4/fulltext](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(15)00451-4/fulltext)
- > OCHA. (2020). *Indonesia multi-sectoral response plan to COVID-19*.
- > Srivatsa, S., & Stewart, K. A. (2020). How should clinicians integrate mental health into epidemic responses? *AMA Journal of Ethics*, 22(1), E10–E15. <https://doi.org/10.1001/amajethics.2020.10>
- > When does a major outbreak become a public health emergency of international concern? *Lancet*, Volume 20 (August 2020), 887–889. <https://www.thelancet.com/action/showPdf?pii=S1473-3099%2820%2930401-1>
- > World Health Organization. (2005). *International health regulations*. https://www.who.int/health-topics/international-health-regulations#tab=tab_1
- > World Health Organization. (2021a). *COVID-19 strategic preparedness and response plan (SPRP 2021)*. <https://www.who.int/publications/i/item/WHO-WHE-2021.02>
- > World Health Organization. (2021b). *Ebola virus disease guinea outbreak 2021: Multi-country strategic readiness and response plan, operational planning guidelines*. https://cdn.who.int/media/docs/default-source/documents/spr-2021/who_ebola_opg-2021-13-.pdf?sfvrsn=608be181_5&download=true

Endnotes

- i Because humanitarian crises vary in scale and complexity, coordination must adapt to the situation and may change as the response evolves. The cluster system applies when a national government has limited capacity to coordinate a humanitarian response and invites the UN to lead on coordination. In other contexts, national and local government authorities lead, with support from the UN agencies. In these cases, the coordination groups are usually referred to as sectors, not clusters. Sectors generally do not benefit from the same level of resourcing and support as clusters. In refugee contexts, the UN refugee agency, UNHCR, coordinates humanitarian action and establishes sectoral groups that may be led or co-led by host government bodies, NGOs, and other humanitarian organizations. Global Education Cluster, Save the Children, & Translators without Borders. (2021). *Humanitarian coordination and the cluster approach: A quick guide for local and national organizations*. <https://resourcecentre.savethechildren.net/document/humanitarian-coordination-and-cluster-approach-quick-guide-local-and-national-organisations/>
- ii A disease outbreak is the occurrence of cases of disease in excess of what would normally be expected in a defined community, geographical area, or season. An outbreak and an epidemic are similar, but an outbreak typically refers to a more limited geographical area. <https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section11.html>
- iii Primary impacts of an outbreak are defined as the direct and immediate consequences of the epidemic on human health. Secondary impacts are defined as those caused by the epidemic indirectly, either through the effect of fear on the population or as a consequence of measures taken to contain and control it. <https://www.unicef.org/media/66416/file/WASH-COV-ID-19-monitoring-and-mitigating-secondary-impacts-2020.pdf>
- iv Mohammed, A., Sheikh, T. L., Poggensee, G., Nguku, P., Olayinka, A., Oluabunwo, C., & Eaton, J. (2015, November). Mental health in emergency response: Lessons from Ebola. *Lancet*, 2(11), 955–957. [https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(15\)00451-4/fulltext](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(15)00451-4/fulltext)
- v Srivatsa, S., & Stewart, K. A. (2020). How should clinicians integrate mental health into epidemic responses? *AMA Journal of Ethics*, 22(1), E10–E15. <https://doi.org/10.1001/amajethics.2020.10>
- vi World Health Organization. (2021b). *Ebola virus disease guinea outbreak 2021: Multi-country strategic readiness and response plan, operational planning guidelines*. https://cdn.who.int/media/docs/default-source/documents/spr-2021/who_ebola_opg-2021-13-.pdf?sfvrsn=608be181_5&download=true
- vii OCHA. (2020). *Indonesia multi-sectoral response plan to COVID-19*.

- viii Democratic Republic of Congo Ministry of Health. (2018). *National plan for the response to the Ebola virus disease epidemic in North Kivu Province*. <https://www.who.int/docs/default-source/documents/spr-ebola-2019/srp1-drc-ebola-disease-outbreak-response-plan.pdf?sfvrsn=>
- ix Table 1: *The common pillars of an outbreak response* has been developed based on existing WHO guidance, specifically (a) [WHO: Ebola Virus Disease Guinea Outbreak 2021 Multi Country Strategic Readiness and Response Plan – operational planning guidelines](#), (b) [WHO: COVID 19 Strategic Preparedness and Response Plan](#), and (c) [WHO: Technical guidelines for Integrated Disease Surveillance and Response in the African Region, 3rd edition](#).
- x The Emergency Medical Team initiative is led by WHO's EMT Secretariat. Its purpose to improve the timeliness and quality of health services provided by national and international EMTs to enhance the capacity of national health systems in leading the activation and coordination of responses in the immediate aftermath of a disaster, outbreak and/or other emergency. Teams include health professionals and public health, logistics and operations expertise. EMTs must strive for self-sufficiency, meet the minimum standards for EMTs, and possess the quality of care that is appropriate for the context. Team must be classified by WHO to be an EMT that is internationally deployable. <https://extranet.who.int/emt/content/about-us>
- xi The Collective Service is a collaborative partnership between [IFRC](#), [UNICEF](#), [WHO](#) and [GOARN](#), as well as key stakeholders from the public health and humanitarian sectors. The Collective Service facilitates and enables collaboration between a wide range of organizations to increase the scale and quality of community engagement approaches. It catalyses and accelerates expert driven, collaborative, consistent and localised community engagement support for governments and partners involved in the national response to public health emergencies and other crises. <https://www.rcce-collective.net/>
- xii Case fatality ratio (CFR) is the proportion of individuals diagnosed with a disease who die from that disease and is therefore a measure of severity among detected cases.
- xiii The basic reproductive rate (R0) is the average number of people infected by one person in a susceptible population.
- xiv The WHO defines an EOC as: "a physical location for the coordination of information and resources to support incident management activities. Such a centre may be a temporary facility, or may be established in a permanent location" (<https://www.who.int/publications/i/item/framework-for-a-public-health-emergency-operations-centre>). The interface between a task force and an EOC is based on practicality and the existence of an EOC in a country. Generally, a task force will set up in the EOC to support effective and coordinated emergency management.
- xv When does a major outbreak become a Public Health Emergency of International Concern? *Lancet*, Volume 20 (August 2020), 887-889. <https://www.thelancet.com/action/showPdf?pii=S1473-3099%2820%2930401-1>
- xvi Hammer, C. C., Brainard, J., & Hunter, P. R. (2018) Risk factors and risk factor cascades for communicable disease outbreaks in complex humanitarian emergencies: A qualitative systematic review. *BMJ Global Health*, 3, e000647. <https://gh.bmj.com/content/3/4/e000647>
- xvii In the event that a large-scale outbreak becomes classified as a humanitarian emergency the IASC Scale-Up Activation for Infectious Disease Events Protocol would become activated. The protocol has been developed in the recognition that, in addition to major humanitarian crises triggered by natural disasters or conflicts, infectious disease events can result in humanitarian emergency situations (examples of these events could be the 2014 Ebola outbreak in West Africa and the COVID-19 pandemic). The IASC Scale-Up Protocol involves OCHA and WHO assessment, recommendation and communication of response priorities and structure. It is not often that large-scale outbreaks reach this level of humanitarian emergency where significant coordination and involvement from wider humanitarian actors is necessary. Should this happen, all the structures and mechanisms described in this document would still have happened in the stage prior to the IASC Protocol being activated.
- This guide describes coordination structures in most large-scale outbreaks in humanitarian settings but does not offer detail about outbreaks that become humanitarian emergencies in their own right. Coordination structures for this level of response is the subject of other documents, such as the IASC Scale-Up Protocol (<https://interagencystandingcommittee.org/iasc-transformative-agenda/iasc-protocol-control-infectious-disease-events-humanitarian-system-wide-scale-activation-2019>).
- xviii Background information regarding the origins of the cluster approach can be found on: <https://www.humanitarianresponse.info/en/coordination/clusters>
- xix Global Education Cluster, Save the Children, & Translators without Borders. (2020). *Humanitarian coordination and the cluster approach: A quick guide for local and national organizations*. <https://resourcecentre.savethechildren.net/document/humanitarian-coordination-and-cluster-approach-quick-guide-local-and-national-organisations/>
- xx UNICEF Office of Emergency Programmes. (2020). *Accountability to Affected Populations. A handbook for UNICEF and Partners*. https://www.corecommitments.unicef.org/kp/unicef_aap_handbook_en_webdouble.pdf