Chapter

3

Humanitarian Crises and Forced Displacement

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Introduction

Crises, including natural or man-made disasters and complex emergencies, are a source of significant morbidity and mortality in low- and middle-income countries, including on the African continent. This chapter aims to present an approach to understanding and mitigating the health impacts of crises, whether those impacts are direct, through illness, injury or death, or indirect, due to forced displacement, loss of livelihoods, loss of health-care infrastructure or otherwise. This chapter outlines key definitions relevant to humanitarian crises and forced displacement and proposes a rights-based approach to priority setting and programming for humanitarian assistance in these contexts (Box 3.1).

A rights-based approach goes beyond the human rights enshrined in international and national legal frameworks to adopt the principles that underpin them. This concept prompts a change from traditional thinking to recognition that people experiencing humanitarian crises are entitled to a threshold of support necessary to sustain a life with dignity. Furthermore, international humanitarian actors increasingly use a rights-based approach over a more traditional needs-based approach in recognition that people experiencing humanitarian crises have both resources and agency and are active participants in decisions about their own health. This approach is consistent with the reaffirmation of the Astana declaration (WHO 2018), and the development of the humanitarian Sphere standards (Sphere Project 2018).

Over recent years, a body of literature has emerged in support of learning from responses to previous crises (see later section), developing an evidence base, and setting standards to guide agencies and actors in future humanitarian responses (Box 3.2).

Included in this literature are the Sphere standards, which aim to give practitioners a practical guide to planning, implementing and evaluating humanitarian responses based on the rights of people affected by conflict or disaster.

Box 3.1 Needs-based vs rights-based approach (UNHCR 2008)

Needs-based approach	Rights-based approach
Deserving	Claim and entitlement
No one has definite obligations	Clear obligations
Receiving – beneficiaries	Active participation – partners
Some are left out	Equal rights for all
Charitable and voluntary	Mandatory, legal obligation and accountability
Addresses symptoms	Addresses causes

What Is a Humanitarian Crisis?

Humanitarian crises, or humanitarian emergencies, are an event or series of events that represent a critical threat to the health, safety, security or wellbeing of a community or other

Box 3.2 Useful literature and handbooks

Blanchett K et al. 2017. Evidence on public health interventions in humanitarian crises. *Lancet* **390**(10109): 2287–2296.

Connolly MA (Ed). 2005. *Communicable Disease Control in Emergencies – A Field Manual*. Geneva: WHO.

Heyman DI (Ed). 2008. *Control of Communicable Diseases Manual*. Washington, DC: American Public Health Association.

Hopperus Buma APCC, Burris DG, Hawley A, Ryan JM and Mahoney PF (Eds). 2009. *Conflict and Catastrophe Medicine, A Practical Guide*. London: Springer.

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Perrin P. 1996. *War and Public Health*. Geneva: International Committee of the Red Cross.

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Townes D (Ed.). 2018. *Health in Humanitarian Emergencies: Principles and Practice for Public Health and Healthcare Practitioners*. Cambridge: Cambridge University Press.

Principles of Medicine in Africa, 5th edn, ed. David Mabey *et al.* Published by Cambridge University Press and Assessment. © Cambridge University Press & Assessment 2025

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large group of people, usually over a wide area, where local capacity to cope is overwhelmed therefore necessitating intervention by other actors (Humanitarian Coalition 2021).

This event (or series of events) may be:

- Disasters (natural or technological).
- Public health emergencies (e.g. major disease outbreaks).
- Conflict.
- Structural violence and deliberate persecution.
- Complex emergencies.

Definitions of these concepts are provided in the first section of this chapter to orient the reader to key terms frequently used in the description of humanitarian crises. Historically, different types of crises may have prompted responses by specialized agencies, for example nutrition or water and sanitation. Although various typologies of crises have been suggested, ultimately the causes of crisis largely overlap, as do the principles of response.

Disasters

A disaster can be defined as *a serious disruption of the functioning of a society, causing widespread human, material, or environmental losses which exceed the ability of the affected society to cope using its own resources* (UNISDR 2009). Typically, disasters are defined according to whether they manifest in the natural or technological sphere (Box 3.3).

Previous classifications according to cause (natural or man-made) have become tenuous with the recognition that natural disasters may arise from climate change or environmental degradation driven by human activity.

The frequency and impact of natural disasters and extreme weather events are expected to increase with global heating and a changing climate, along with increasing population size and urbanization. These disasters affect populations already experiencing instability, conflict or structural violence disproportionately as coping mechanisms are already under stress.

The most common natural disasters in the African region over the past 20 years were floods (CRED 2019), with record rainfall over recent years leading to floods across East, Central and West Africa. Regions of southern Africa, the Sahel and East Africa are frequently affected by drought. In addition, several countries in south-eastern Africa experience annual cyclones, with Cyclone Idai in 2019 causing significant levels of damage in Mozambique and Zimbabwe.

Box 3.3 Classification of disasters (CRED 2009)

Natural	Technological
Geophysical – e.g. earthquake, volcanic eruption, tsunami	Industrial accident
	Transport accident
Meteorological – e.g. storm, cyclone	Other – e.g. fire, explosion
Hydrological – e.g. flood, landslide	
Climatological – e.g. extreme weather, drought	
Biological – e.g. epidemic, pests	

Public Health Emergency

Public health emergencies, which could also be considered biological disasters as above, include events with a direct impact on health, typically infectious disease outbreaks. Not all public health emergencies constitute humanitarian crises: where a major disease outbreak occurs in a country with a health system which is sufficient to respond adequately and equitably this should not result in a humanitarian crisis. Public health emergencies may be the singular cause of a humanitarian crisis or, commonly, a component of crisis linked to other disasters or events.

Conflict

Africa has more conflicts than any other continent, experiencing 25 state-based conflicts in 2019 (PRIO 2020). In those areas most affected, the causes are often complex but conflicts may proliferate due to the persistence of predisposing factors, including social and economic inequality, poor governance, political exclusion, historic grievances and resource competition, including as a result of environmental degradation. The direct and indirect effects of conflict on public health can be widespread, and the impact of conflict on infrastructure, the economy, health, education and standards of living continue after the conflict is resolved (Box 3.4).

Structural Violence and Persecution

Humanitarian crises may have a sudden onset, for example following a natural disaster. However, the set of circumstances under which the affected population came to be at risk of experiencing crisis are likely to have developed over a longer period, often through structural violence.

Structural violence, which may be interwoven with conflict although is distinct from it, describes a set of social arrangements that puts individuals and populations in harm's way (Farmer 2004). At a population level, structural violence manifests as diminished access to economic resources, political power, education, health care and other means of personal and social development. In the context of public health, it can manifest through social exclusion or neglect leading to reduced access to health care and subsequently resulting in higher levels of mortality, morbidity, mental illness and forced displacement (see Box 3.5).

Structural violence is on a continuum with deliberate persecution. It is not in and of itself a type of humanitarian crisis. Rather, structural violence operates as both a root cause for certain types of humanitarian crises, for example for conflict or famine, and a magnifier of impact, for example increasing infectious disease mortality following a natural disaster.

Complex Emergencies

In response to crises occurring in Africa in the late 1980s and 1990s, the concept of complex emergencies emerged to describe a *humanitarian crisis in a country, region or*

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Box 3.4 Effects of conflict on public health (adapted from Garry & Checchi 2020)

Direct

- Physical traumatic injury and disability in both combatant and civilian populations.
- Mental health impact arising from traumatic injury and disability.
- Sexual and gender-based violence (also indirect).

Indirect

- Increased spread of communicable diseases, related to overcrowding, loss of clean water and sanitation, exposure to new pathogens and vectors, and disruption to routine immunization.
- Sexual and gender-based violence, including disruption to established protection mechanisms.
- Mental health impact arising from forced displacement or loss of livelihoods.
- Destruction or damage to health-care infrastructure, causing disruption of access to health care.
- Disruption to reliable health information systems including disruption to surveillance.
- Spread of mis- or disinformation.
- Reduction in health system financing and resource allocation for public health.
- Loss of agricultural land and output, including deliberate destruction of land, presence of landmines and unexploded ordnance, displacement of farmers leading to food insecurity and undernutrition.

Box 3.5 Structural violence (adapted from Mukherjee 2007)

The HIV epidemic affecting South Africa constitutes a public health emergency, responsible for substantial excess morbidity and mortality over more than 30 years. The denial of social and economic rights to wide sections of the South African population under apartheid, which persisted for several decades prior to the first HIV cases in the late 1980s, has been a root cause and exacerbating factor behind the epidemic. This is a classic case of structural violence contributing to different health outcomes for different segments of the population.

Structural violence and its links to the HIV epidemic in South Africa can be identified in:

- Poverty leading to exploitation through work, which then leads to higher risk behaviours. For example, employment in mines preventing men living with their families and then engaging in commercial and 'non-commercial' sex with multiple partners, and women (and men) forced to engage in sex work.
- Reduced access to education, due to poverty and in particular for females, reducing agency and opportunities to engage in preventative behaviours.
- Lack of access to treatment, due to poverty and Government policy, including denial of and failure to recognize the impact of the epidemic.
- Sexual violence, particularly against women, as a source of HIV transmission.

society where there is total or considerable breakdown of authority resulting from internal or external conflict and which requires an international response that goes beyond the mandate or capacity of any single agency and/or the ongoing United Nations country program (OCHA 1999). The characteristics of complex emergencies are described in Box 3.6.

Examples of countries experiencing recurrent or ongoing complex emergencies are shown in Fig. 3.1.

Consequences of Humanitarian Crises

The above definitions aim to orient the reader to the causes and nature of humanitarian crises. However over recent years, the typology of humanitarian crisis and the understanding of the root causes and consequences of crises has developed substantially.

The consequences of humanitarian crises may include health consequences (death and disease), famine, poverty and the loss of livelihoods, insecurity, violence and forced displacement. However, the root causes and consequences of humanitarian crises often overlap, and common features of humanitarian crisis, such as conflict and displacement, can reproduce each other in a cyclical pattern, while at the same time producing other humanitarian needs.

Box 3.7 outlines a case study of a complex emergency describing the interplay between natural disaster, conflict, famine and displacement in a humanitarian crisis.

Forced displacement can be both a cause and a consequence of crises and has wide-ranging impacts on the health of the individual and societies.

Forced Displacement

People who have to flee their homes as a result of crises can be divided into two groups:

- Those who have crossed internationally recognized borders in search of sanctuary (refugees).
- Those who have moved within the borders of their country of residence (Internally Displaced Persons (IDPs)).

These two groups often have similar needs during a humanitarian crisis but when attempting to meet those needs humanitarian actors may face different problems. Globally, very large and increasing numbers of people fall into one of these two categories (Tables 3.1 and 3.2).

In the immediate aftermath of displacement people may be in flight, presenting difficulty with enumeration, access and prediction of movements. Over time, displaced

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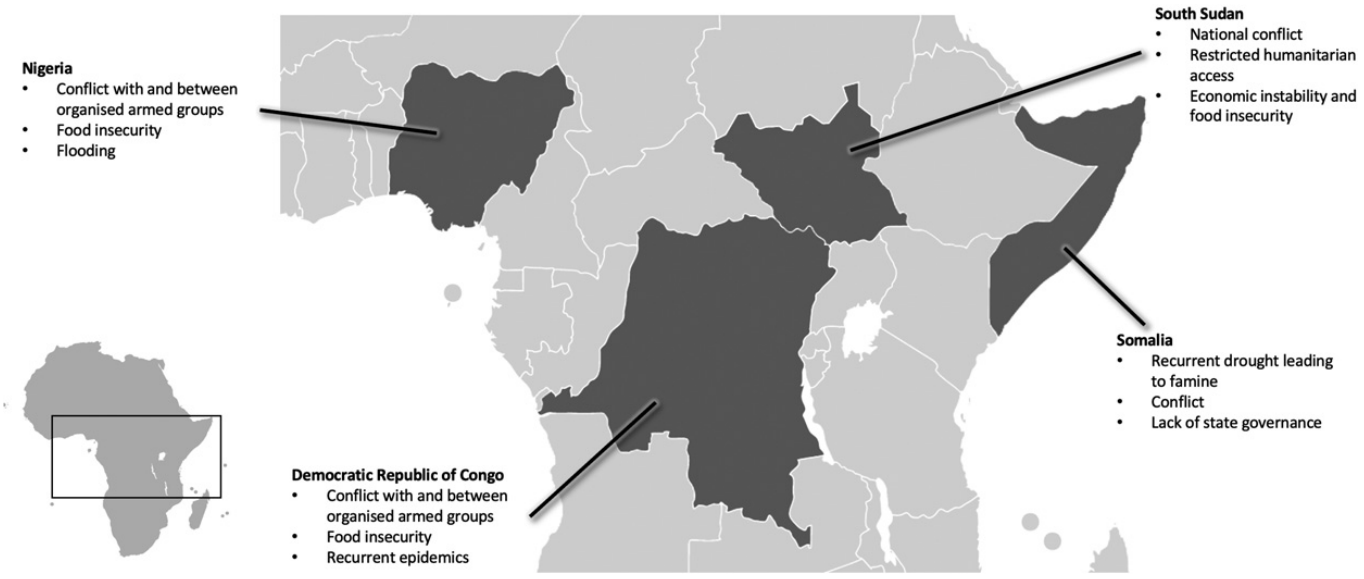


Fig. 3.1 Examples of complex emergencies in sub-Saharan Africa.

Box 3.6 Characteristics of complex emergencies (Humanitarian Coalition 2021)

Complex emergencies are often characterized by:

- Extensive violence and loss of life.
- Displacements of populations.
- Widespread damage to societies and economies.
- The need for large-scale, multi-faceted humanitarian assistance.
- The hindrance or prevention of humanitarian assistance by political and military constraints.
- Significant security risks for humanitarian relief workers in some areas.

Box 3.7 Somalia famine (adapted from Maxwell & Fitzpatrick 2012)

The Somalia famine in 2011 led to the deaths of over 250,000 people, alongside the displacement and loss of livelihoods of many thousands more.

Globally, famines have followed drought, crop failure or disease and are often associated with subsistence agriculture. Famines can also result from damage to agricultural land and displacement of farmers following natural disasters or conflict, or misdirected government policy. However, conditions for famine to occur necessarily include political factors.

The 2011 Somalia famine, whilst precipitated by drought, had multiple root causes including conflict, the absence of a central state authority and long-term environmental degradation.

Box 3.7 (cont.)

Proximate Factors

- Drought – the 2010 dry season saw the lowest rainfall in the region in 50 years.
- Rapidly rising global food prices coupled with drops in rural incomes due to decline in trade.
- Conflict involving both external and local actors, resulting in displacement and hampering response.

Underlying Factors

- Prolonged insecurity leading to erosion of coping strategies and loss of livelihoods (largely through displacement).
- Lack of an effective government leading to an absence of infrastructure, loss of access to services and marginalisation of certain population groups.

Complicating Factors

- Insecurity reducing the space for humanitarian actors to intervene.
- Restrictions on aid agencies – including both local restrictions on food distribution by *Al Shabaab*, the Islamist militant group and de facto authority in large parts of southern Somalia, and restrictions on aid from foreign donors due to the presence of *Al Shabaab*, a designated terrorist group by many governments, in the affected area.
- Wide-scale population movements both into and out of the affected areas during the course of the famine.

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Table 3.1 Forcibly displaced people protected and /or assisted by UNHCR by region, 2022

	IDPs	Refugees	Others of concern and other people in need of international protection*	Total
Africa**	25,142,076	7,839,682	293,942	33,275,700
Americas	7,415,493	590,907	9,688,925†	17,695,325
Asia and Pacific	4,957,118	7,599,900	314,635	12,871,653
Europe	6,045,890	7,172,262	572,533	13,790,685
Middle East and North Africa	12,634,248	7,198,430	56,616	19,889,294

*Describes those who are essentially refugees but for whom refugee status has not been ascertained; **excludes North Africa; †includes Venezuelans displaced abroad.

Table 3.2 Destination countries with highest numbers of forcibly displaced people protected and/or assisted by UNHCR in Africa, 2022

IDPs		Refugees*	
Democratic Republic of Congo	5,541,021	Uganda	1,463,090
Sudan	3,552,717	Sudan	1,005,104
Nigeria	3,286,881	Ethiopia	877,578
Somalia	2,967,800	Chad	694,222
Ethiopia	2,730,000	Kenya	591,299

* Includes refugees and others of concern.

Box 3.8 Definition of a refugee (Convention Relating to the Status of Refugees 1951)

Any person who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside his country of nationality and is unable or, owing to such fear is unwilling, to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear is unwilling, to return to it.

Box 3.9 Definition of internally displaced persons (OCHA 2004)

Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border.

people may move into the community. However, due to their precarious legal status many are often housed in specifically constructed camps. The health and humanitarian response implications of these distinct settings are described in later sections. In situations of protracted crisis people may live in camps for decades, such as Somali refugees in Dadaab, Kenya.

Refugees

A precise definition of a refugee was made in 1951 by the Convention Relating to the Status of Refugees (Box 3.8).

The Convention also stressed the principle of *non-refoulement*, which states that refugees cannot be forcibly returned to countries from which they have fled. This Convention is at the heart of the international refugee protection system and has now been expanded to include those affected by other types of disaster and the mandate of the UN High Commission for Refugees (UNHCR), the body responsible for the care of refugees, has been enlarged to include those fleeing generalized danger rather than just individual persecution.

Internally Displaced Persons

A descriptive definition of IDPs is provided in Box 3.9. Unlike for refugees, no specific legal definition exists.

Refugees have, at least in theory, considerable international legal protection. Nations that have ratified the Convention have well-defined duties to care for refugees and to allow the UNHCR and other international bodies access to them. IDPs are in a very different legal position, as they are still within the boundaries of their home country and therefore the international community may have less access to them. They may also be acutely vulnerable, especially if they are associated with groups considered in opposition to the national government.

Enumeration, determination of health needs and provision of health services for IDPs can be extremely difficult, even if access is permitted, as many move into urban areas where they may integrate to a degree with the host community, or remote areas of forest or bush. However, IDPs may also be housed in camps, which are for the most part the same as refugee camps.

Those who have remained at home, often now lacking basic infrastructure, and those who host IDPs or refugees

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also have a right to assistance. Countries have a moral (and usually national legal) obligation to address the needs of IDPs. However, in many cases the national response does not include the local host population. Populations hosting IDPs often also live in precarious circumstances and the impact of hosting displaced populations may increase their risk of crisis.

Anticipation and Identification of Humanitarian Crises

Early Warning Systems and Epidemic Intelligence

The response to humanitarian crises ideally begins before they occur, through a process of planning, preparedness, early detection and early mitigation of risks to public health. Early warning provides the opportunity to take early action to reduce the impact of disasters or public health emergencies, provided the system is timely, accurate and reaches the right decision makers. Epidemic intelligence, a form of early warning, describes the systematic collection and collation of information to identify emerging outbreaks of infectious diseases.

Improved methods for collecting data and improved tools for prediction and planning have made planning an emergency response easier. Key tools for gathering information on early warning of crises and epidemic intelligence are listed in Box 3.10.

Emergency Preparedness

Emergency preparedness refers to *the knowledge and capacity developed by governments, recovery organizations, communities, and individuals to anticipate, respond to and recover from the impact of potential, imminent or current hazard events, or emergency situations that call for a humanitarian response* (OCHA 2021). Emergency preparedness focuses relatively narrowly on putting in place measures to reduce the lead time to deliver interventions in response to a crisis. The components of emergency preparedness are likely to include (MSF-OCB 2016):

- Risk analysis, hazard identification and monitoring.
- Continuous minimum preparedness actions, laying the foundations for emergency readiness.
- In the event of higher-risk situations, advanced preparedness actions to increase the emergency preparedness level to emergency readiness.

Box 3.10 Sources of information on early warning

- *ProMed*, a global electronic reporting system for outbreaks of emerging infectious diseases and toxins.
- *GPHIN*, internet based early warning system for outbreaks of infectious diseases.
- *HealthMap*, a geographic information system providing outbreak early warning in context of local infrastructure.
- *EIOS*, a WHO platform for epidemic intelligence from open sources incorporating news, social media and other established reporting systems.
- *FEWS NET*, the famine early warning system network reporting on food insecurity.
- *Reliefweb*, which provides information, maps and documents on the world's humanitarian disasters.
- *The Inter-Agency Standing Committee (IASC) Humanitarian Early Warning Service HEWSweb*, an inter-agency partnership project aimed at establishing a common platform for humanitarian early warnings and forecasts for natural hazards.

The Health Response to Humanitarian Crises

Humanitarian crises result in excess mortality. Accepted thresholds used to identify an emergency are:

- Crude mortality rate >1/10,000 per day.
- Under 5 mortality rate >2/10,000 per day.

The crude mortality rate is calculated as (Sphere Project, 2018):

$$\frac{\textit{Total number of deaths during time period}}{\textit{Mid–period population at risk} \times \textit{Number of days in time period}} \times 10,000$$

Region-specific thresholds may also be used, although comparison with reliable baseline mortality data is most useful.

Three conditions – malaria, acute respiratory infection (ARI) and diarrhoeal diseases – consistently account for the largest morbidity in crisis-affected populations (Sphere Project, 2018), with malnutrition exacerbating the situation for children under 5 and older people. As a proportion of causes of morbidity in children living in camps, malaria (~23%), pneumonia (~17%) and diarrhoeal diseases (~10%) may together account for around half of childhood illness. Proportions of child deaths due to these diseases are similar (Hershey et al. 2011). Measles also presents a substantial risk although does not represent a high burden due to the prioritization of measles vaccination by humanitarian actors – in the absence of widespread measles vaccination, and historically, measles also accounts for high morbidity and mortality particularly among children. In crises, mortality is increased in all age groups, but commonly children and pregnant women are disproportionately affected. The burden of HIV, TB and non-communicable diseases is also likely to be higher in crises, depending on the context.

Attack and case-fatality rates due to ARI are particularly high in malnourished children, especially when living in overcrowded conditions such as displacement camps. Crises also promote devastating outbreaks of diarrhoeal disease. In 1994 one million Rwandan refugees in Goma were exposed to cholera and dysentery: more than 50,000 died in the first month. Measles is potentially lethal in unvaccinated children, especially the under-5s. It can also precipitate acute

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kwashiorkor in children with borderline malnourishment and exacerbate vitamin A deficiency leading to blindness. Those who are not immune to malaria, and who move into areas where malaria endemicity is higher than their home area, are at high risk of severe malaria. There is no evidence that people moving from areas of high endemicity to low endemicity areas will increase the risk of malaria epidemics.

Not all crises affect the nutrition of the people, but in the event of destruction of livestock, crops and stored food there is likely to be at least a short-term effect. Food shortages are worse where conflict has prevented farming and disrupted or disorganized transport, communications and social and economic routines may mean that, even though food stores exist, the population may not have access to them. Refugees and IDPs who are on the move or in camps in remote areas are at serious risk of malnutrition.

Priorities and Standards in the Event of a Humanitarian Crisis

Standards for humanitarian actors have been outlined in the Sphere Handbook, based on the rights of affected populations to health, water supply and sanitation, food security and nutrition, and shelter (Sphere Project 2018). In a crisis, many of these rights will be equally pressing. In such circumstances, a framework of priorities for humanitarian actors can be useful (Box 3.11).

Assessment and Surveillance

When crises occur, a useful response is likely to require preliminary investigation. For initial assessment, a balance should be sought between gathering enough information to mount an effective programme and avoiding wasting time gathering data that will not immediately feed into operational decision making.

Assessment is dynamic and consists of:

- Initial assessment, to support programming.
- Repeat assessments, as part of the evaluation process, to check the effectiveness of the response.
- New assessments at any time if the situation changes or a new crisis (e.g. a new refugee encampment) is discovered. These may require a variety of methods of data collection.

A distinction should be made between what you need to know and what you would like to know. All crises are different, although there will always be core essential information that is required so needs assessment protocols can be produced: information is required on the needs of the population (both refugee/IDP and local), the resources available to meet those needs, and the capacity of the local population, the host government and the relief agency itself to respond. Key components of a rapid health assessment are described in Box 3.12.

The initial assessment is the foundation for the response and must contain relevant, accurate, timely, representative and easily analysed information. The ATPAR process (assess–think–plan–act–review), or an equivalent tool can be followed as part of continuing assessment.

Specific surveys are also likely to be required, for example for mortality, nutrition and vaccination coverage. An approach to conducting a mortality survey is provided in Box 3.13.

Surveillance is the systematic collection, transmission, analysis and feedback of public health data for decision making. Surveillance in humanitarian crises provides an overview of the evolving health status and needs of the population. Although typically focused on emerging infectious diseases, the remit of surveillance can be much wider. It should be tailored to the context and will be defined as part of the initial assessment.

Features of a surveillance system could include:

- Clear definitions and thresholds for action.
- Information on mortality, nutritional status, morbidity and diseases of epidemic potential.
- Information on access to food, clean water and health (health care and health promotion activities).
- Information on human rights abuses, such as episodes of violence.
- Modelling to allow for recognition of blocked access to health care, differential exposure to violence, population movement, obstruction to aid and/or human rights abuses.
- Inbuilt evaluation of the surveillance system itself.

Surveillance is only effective if it results in a response: outreach and response teams should therefore be integrated with the surveillance system from the start.

Vaccination in Humanitarian Emergencies

Humanitarian emergencies carry a high risk for epidemics due to population movement, inadequate shelter and overcrowding, reduced access to safe water and sanitation, poor nutritional status, and loss of access to health care including routine immunization.

Preventing measles outbreaks is a priority in situations of mass displacement and in the context of overcrowding. Current Sphere Project standards suggest targeted measles vaccination

Box 3.11 Priorities for situations with displacement of populations (adapted from Jobanputra 2019)

1. Assessment and surveillance.
2. Vaccination in humanitarian emergencies.
3. Control of communicable diseases and epidemics.
4. Site planning and shelter.
5. Water, sanitation and hygiene (WASH).
6. Food security and nutrition.
7. Organization of health care.
8. Advocacy.
9. Collaboration and coordination.
10. Monitoring, evaluation, accountability and learning.

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Box 3.12 Framework for a rapid health assessment (MSF-OCB 2011)

1. Demographic information
- Total population size.
- Average household size.
- Age and sex distribution.
- Vulnerable groups.
2. Mortality
- Crude and under 5 mortality rates before, during and after displacement.
- Causes of death.
3. Morbidity
- Disease incidence.
- Prospective surveillance.
- Interruption to treatment for HIV, TB and NCDs.
- Sexual and gender-based violence (SGBV).
4. Nutritional status
- Prevalence of global and severe acute malnutrition in children 6–59 months.
5. Health services and infrastructures
- Access for affected population (including financing and capacity for emergency influx).
- Facilities (e.g. number and type, level of services).
- Health staff.
- Drugs and equipment.
6. Vital needs
- Food quantity, quality, distribution in place, access, food habits and availability.
- Water sources, quantity and access.
- Hygiene and sanitation facilities, including excreta disposal, soap and adequacy of burial.
7. Shelter and non-food items
- Type of shelter, space and materials.
- Cooking equipment, personal possessions, fuel for cooking.
8. Security
- Safety and security of the population in the current location.
- Risk of future violence from within or outside the population.

Box 3.13 Approach to mortality survey in humanitarian crisis

Preparation

1. Define the population of interest and the aims for the survey.
2. Obtain ethical approval.
3. Create a survey instrument and supporting data collection system.
4. Train survey staff and obtain relevant resources and materials – consider transport and security constraints.

Survey design

5. Enumerate population in the study area – accurate estimation of the population denominator is essential for calculating mortality rates.
6. Determine sampling approach (typically two-stage cluster sampling).
7. Establish recall period – a shorter recall period will provide a more up to date mortality estimate, at the expense of a larger sample size.
8. Calculate sample size.

Completing the survey

9. Identify clusters and subsequently sample households.
10. Obtain consent from sampled households and conduct survey, which should include as a minimum the age and sex of people who had arrived, left, were born or died during the recall period, educational status of those persons and cause and time of death.
11. Data analysis – a variety of templates using freely available statistical software exist.
12. Communication of results.

for all children aged 6 months to 14 years, accompanied by vitamin A distribution for children under 5 (Sphere Project 2018). As recent outbreaks in refugee settings have had >50% of cases older than 15 years, measles epidemiology among the displaced and host populations should be taken into consideration when defining target age groups (Jobanputra 2019).

Preventive vaccination in camp settings is desirable, where outbreaks can quickly spread if not rapidly controlled. Immediate vaccination of new arrivals (for example in reception centres) may provide high coverage. In addition, routine extended programme of immunisation (EPI) should be implemented to replace the primary health services which the affected population may have lost access to during displacement. The WHO Framework and Implementation guide (2017) and MSF Guidance document on Preventative Vaccination in Emergencies provide an approach for deciding which vaccines, if pre-emptively and properly delivered at the outset of an emergency, would constitute high priority public-health interventions and would reduce avoidable death and disease.

Communicable Disease Control

Deaths from disease can be overwhelming in disasters. In the Rwandan crisis of 1994 when between 500,000 and 800,000 refugees crossed into DRC in less than one week, it is estimated that 50,000 people died of infectious diseases (including cholera) within the first month. This is a crude mortality rate of 20–35 per 10,000 per day.

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Core aspects of communicable disease prevention include identifying risk, establishing an effective surveillance system linked to early and appropriate responses, integrated infection prevention and control, reduced overcrowding and adequate shelter, safe water and food supply, safe disposal of excreta, vector control, vaccination and prophylaxis. Outreach activities should include home visits for early case finding and active screening with rapid referral of suspected cases for high-risk diseases.

To understand risk of disease in a displaced population, consider:

- The diseases likely to affect them – find out the disease patterns in the area, especially those different to their area of origin, e.g. malaria.
- Their area of origin – they may bring with them diseases not normally found in their new location, presenting a risk to their host population or may not have had access to similar preventative measures (such as vaccination) making them at higher risk, e.g. diphtheria.
- The route they have taken to their place of refuge – they may have been exposed to unfamiliar infections, to which they have little natural resistance, e.g. hepatitis A.

Selected priority measures for important diseases are listed in Table 3.3.

Site Planning and Shelter

In situations of displacement camps will need to be established for housing and services for the population. Appropriate site planning needs to consider:

- Access to water.
- Safety and security.
- Space (both for immediate and potential future needs).
- Infrastructure needs of services (e.g. health and education).
- Shelter needs, including consideration of privacy and provisions of supplies.
- Cultural norms associated with housing.

Current standards suggest a minimum settlement space of 30–45 m^2 per person dependent on whether communal services are provided, and a minimum 3.5 m^2 of living space per person (Sphere Project 2018).

Appropriate shelter is essential for promoting health: shelter should be acceptable to the population, of safe construction, provide sufficient protection from heat or cold and ensure dignity.

Water, Sanitation and Hygiene

Water, sanitation and hygiene (WASH) actions are among the most effective means of controlling and preventing disease transmission and of reducing disease reservoirs in situations of displacement.

WASH interventions contain both an education and health promotion component ('software components') and technical interventions ('hardware components'). The focus for displaced populations is generally on ensuring the safe treatment and distribution of potable water (access to 15 litres of water per person per day to account for drinking, food preparation and hygiene as an emergency minimum standard (Sphere Project, 2018)), the construction of sanitary facilities which meet cultural and religious needs and which are safe to access, especially for women and

Table 3.3 Priority measures for important communicable diseases in humanitarian crises

Measles	Malaria	Acute respiratory infection	Diarrhoea
Minimum living space standards	Provide long-lasting insecticide-treated bed nets to people and households of people who are pregnant, aged under 5, malnourished, living with HIV or unaccompanied children	Reduce overcrowding, improve ventilation, and address indoor smoke pollution	Minimum living space standards
Conduct a mass measles vaccination campaign for children aged 6 months to 15 years	Consider targeted seasonal chemoprophylaxis where regionally appropriate or mass drug administration if health services not yet established	Timely identification (with decentralized management if needed to improve access), oral antibiotics and referral of severe cases	Ensure sufficient quantity of clean water, safe access to sanitation and distribution of soap
Include vitamin A for children aged 6–59 months	Ensure access to rapid diagnostic testing led case management for malaria (with decentralized management if needed to improve access) and referral of severe cases	Ensure adequate nutrition, and vaccination against measles, diphtheria and pertussis and ideally pneumococcus	Public health education
Re-establish Expanded Programme of Immunization promptly including PCV where available	Destroy mosquito breeding places, larvae and adult mosquitoes by spraying	Distribution of clothes and sufficient blankets	Increase access to and use of oral rehydration therapy, anti-helminthics and zinc supplementation
			Encourage continued and increased breastfeeding
			Ensure access to rapid diagnostic testing for cholera and hepatitis E (especially if jaundice is noted)

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children. Additionally, WASH activities should include wastewater management, health-care waste management, vector control, and promotion of hygiene through the construction of handwashing facilities and distribution of soap and other hygiene materials.

Food Security and Nutrition

Displaced populations, who may be experiencing undernutrition even before displacement, are at increased risk of further macro- and micronutrient deficiencies during crises. Assessment should focus on:

- Food sources, availability, reliability and general food security.
- Prevalence of Global Acute Malnutrition (GAM) and Severe Acute Malnutrition (SAM) in children age 6 months to 5 years as an overall indicator of population nutrition status.
- Special considerations, such as overall crude mortality (high mortality from malnutrition or other causes where malnutrition was a factor may hide the extent of undernutrition identified in a survey), season, quality of food, security and political context.

Nutrition interventions aim to provide adequate food rations to the population as both prevention of and treatment for moderate and severe acute malnutrition. An adequate general food ration has been established as 2100 kcal per person per day, along with appropriate micronutrients to protect against scurvy, pellagra, thiamine, iron, iodine and vitamin A deficiencies (Sphere Project 2018).

There are three types of feeding programmes, beyond basic food ration distribution (Jobanputra 2019):

- Therapeutic Feeding Programme: reduces mortality in children with SAM.
- Targeted Supplemental Feeding Programme: prevent SAM and to reduce mortality in children with moderate acute malnutrition and those discharged from therapeutic feeding programmes.
- Blanket Supplemental Feeding Programme: reduce mortality and prevent worsening of nutritional status in clearly defined populations such as children, pregnant and lactating women, socially or medically vulnerable people, and the elderly.

Coordination in feeding programmes is essential, involving organizations including WFP, UNHCR, local NGOs and host country authorities.

Organization of Health Care in the Emergency Phase

Establishing health services in the emergency phase should be done in consultation with core heath system actors so that emergency services can be gradually integrated in standard care provision.

Health care for displaced populations can be organized in four levels (Table 3.4). An approach to establishing health care should be based on the following principles:

- Establish basic clinics with treatment protocols and limited drug prescribing.
- Move into the local community (proximity).
- Manage any epidemic with specific protocols (for example MSF guidelines for management of measles or cholera epidemics).
- Decide how to manage surgical/obstetric emergencies. Agree criteria for referral if possible or appropriate (determine what referral facilities are available during initial assessment).
- Get basic health education material available from the beginning; use leaders as they emerge in a camp. Encourage increased participation by the camp's inhabitants.

Table 3.4 Levels of organization of health-care delivery in humanitarian crises

Level	Number of structures	Activities
Home visitors	1 per 500–1000 persons	Data collection Information, health education Active case screening and research for defaulters Referral to health post or health centre
Community health workers	1 per 500–1000 persons	Malaria and integrated community case management (malaria, pneumonia and diarrhoea, and referral, including pre-referral treatment) – particularly when surge capacity is required Screening and surveillance SGBV triage
Health post/ mobile clinic	1 per 3000–5000 persons	Outpatients and basic antenatal care Dressing and oral rehydration Measles immunization Referral to health centre Data collection
Health centre	1 per 10,000–30,000 persons	Triage Outpatients Inpatients (observation) Emergency services Minimum package of reproductive health Minor surgery Dressing, injections and oral rehydration Measles immunization Referral to hospital Data collection and health surveillance Delivery of preventative measures e.g. long-lasting insecticidal nets (LLINs)
Hospital	Depending on the situation	Surgery and major obstetric emergencies Hospitalization Referral laboratory and transfusions

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- Get leaders to promote outreach and community health education programmes.
- Modify treatment protocols to suit local conditions.
- Begin new programmes to tackle less acute but potentially serious problems such as HIV, TB and sexually transmitted infections (STIs).

Child Health

A response should ensure children have access to priority health care for newborn and childhood illness, including:

- Integrated community case management (iCCM) for care of common conditions where access to health care may be limited.
- Paediatric curative care (or clinics for under 5s) which also includes identification and referral of sick children using standardized assessment and triage.
- Screening for early identification of malnourished children and referral to relevant nutrition services.
- Therapeutic and supplementary feeding programmes wherever indicated.
- Immunization in line with EPI recommendations.
- Supplementation with vitamin A and other micronutrients where indicated.
- Health education messages to encourage families to engage in health behaviours and seek early care.
- Identification of children with disability or developmental delay.

Sexual and Reproductive Health

Sexual and reproductive care can be critical in a crisis where lifesaving services may be disrupted. Emergency obstetric and newborn care facilities, along with skilled staff, will be required in all crises. The nature of crises can also mean wider sexual and reproductive health interventions are required, including health-care services for survivors of sexual violence. During the emergency phase, a Minimum Initial Service Package has been defined by UNHCR (MSF 1992):

- Prevention and management of the consequences of SGVB, including emergency post-coital contraception.
- Respect for universal precautions against HIV/AIDS.
- Availability of free condoms to anyone who requests them.
- Simple deliveries and organization of a referral system to deal with obstetric complications.
- Planning for provision of comprehensive reproductive health services.

Injury and Trauma Care

Although more morbidity and mortality in crises is likely to arise from disease rather than physical trauma, in the initial stages of response injuries can be a key priority. Key considerations are triage, referral systems, tetanus prophylaxis, access to rehabilitation services, mental health care and collection of data on injury and trauma.

Mental Health Care

Crises can inevitably increase the risk that people will develop mental health and psychological problems through exposure to extreme stress and the disruption of mental health services. An approach to mental health care includes psychological first aid, coordination across sectors, a multi-layered system of complementary support, identifying referral centres for in-depth assessment and continued care, working with the community, a basic clinical mental health care provision, minimizing harm from alcohol and drugs, and protecting the rights of people with severe mental illness.

Care of Non-communicable Diseases and Palliative Care

Access to care for people with non-communicable diseases (NCDs) requires a thorough needs and risk assessment of the pre-crisis burden of diseases, a supported primary care system, provision of continuity care and appropriate referral systems, provision of essential medicines and medical devices, appropriate training of health workers and health promotion and education. The principles of palliative care in humanitarian crises have recently been added to the Sphere Project standards. This emerging area reflects a broadening humanitarian focus from saving lives to providing a wider range of essential services.

Constraints

Crises frequently occur in difficult areas and inevitably there are many constraints to effective intervention (Box 3.14).

Advocacy

In conjunction with the direct health response, advocacy is an essential aspect of humanitarian work. It seeks to bring attention to a particular crisis, and the affected population, and to positively influence decisions that affect the health and wellbeing of the affected populations or individuals. The targets of advocacy efforts can vary considerably, but in general they are those who have the ability to impact the situation of the crisis-affected population.

There can be a tension between the positive intentions of advocacy and the real-world consequences. Meaningful engagement and discussion with the community therefore needs to be central to any advocacy efforts. Different tools and approaches are available, but collaboration, coordination and partnerships are required for effective and appropriate advocacy.

Collaboration and Coordination with Other Health Actors

If the response to a crisis is to be successful, coordination is fundamental. Humanitarian coordination in crises brings together humanitarian actors to ensure a coherent response. Coordination seeks to improve effectiveness by ensuring greater coherence, alignment, predictability and accountability among humanitarian actors (Box 3.15).

The prevailing model of humanitarian coordination is the UN cluster system (Fig. 3.2). The cluster system is based upon operational clusters of agencies that have the same functions and expertise.

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Various models have been developed to support UN agencies in humanitarian programming, including the UNHCR Refugee Coordination Model and the IASC Humanitarian Programme Cycle. Other actors, including NGOs, use a range of different processes and tools.

Local health systems play an important role in prevention, preparedness, response and recovery. Humanitarian actors should, where possible, work alongside local health system actors in a way that is supportive and builds local capacity such that the local health system can manage effectively when the humanitarian actor leaves. In the event of complete breakdown or absence of a health system in a region, humanitarian actors may find themselves as the sole health-care providers, which may result in substantial practical and moral dilemmas.

Box 3.14 Constraints to effective humanitarian intervention

- Security.
- Limited access (distance and roads).
- Logistics and infrastructure (roads, water, electricity).
- Communication between host government and outside organizations.
- Coordination of local and relief agencies.
- Lack of functioning health system to work alongside humanitarian actors.
- Pressure from media to intervene before adequate plans based on local data.

Local health infrastructure may be damaged by the disaster, health systems may be defunded by governments participating in conflict, or services may be deliberately withdrawn from marginalized populations. Useful tools have been developed to assess local health systems, such as HeRAMS (www.who.int/initiatives/herams). Whilst the UN affirms an approach to humanitarian response that explicitly seeks to strengthen local health systems, NGOs may be less likely to take this approach. The potential negative impacts on the local health system from the presence of humanitarian actors in a crisis should also be kept in mind.

Monitoring, Evaluation, Accountability and Learning

In humanitarian crises it has been difficult to produce consistent and repeatable needs assessments that can be used both for initial determination of need and as tools to monitor

Box 3.15 Principles of humanitarian coordination (UNHCR 2021)

Coordination involves

- Identifying overall humanitarian needs.
- Developing a realistic plan of action and mobilizing resources.
- Developing common strategies with partners, convening coordination forums and addressing common problems.
- Monitoring progress and adjusting as necessary.

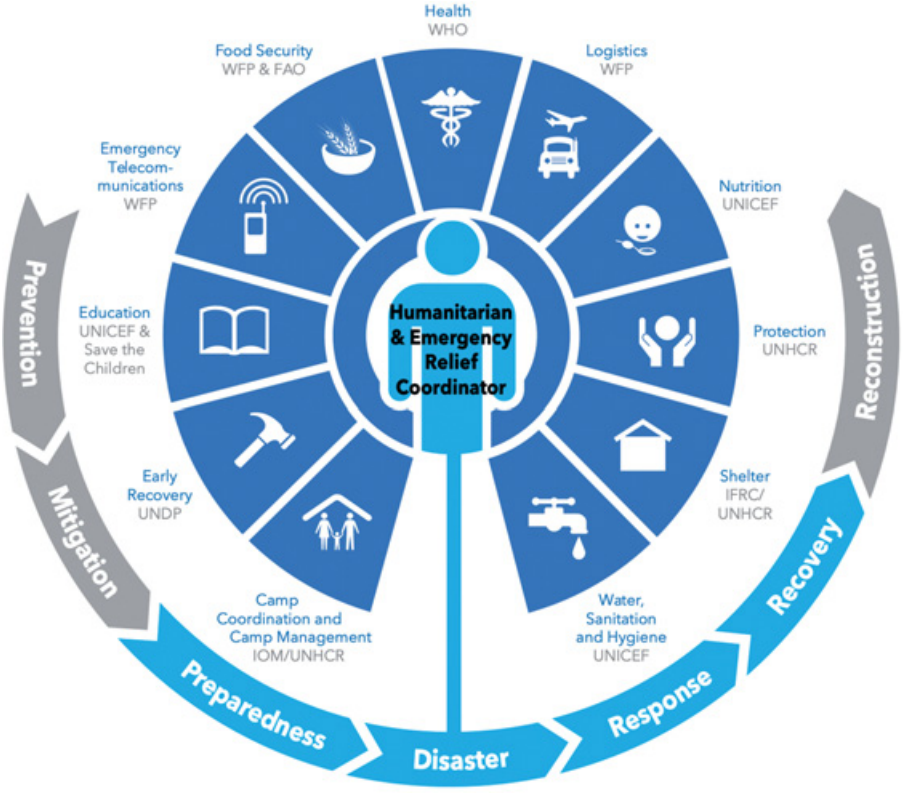


Fig. 3.2 UN Cluster system (WHO 2015).

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a programme's progress. Monitoring – the systematic collection and analysis of information about the response to enable the response to be adapted and improved – is a dynamic concept and continues as the programme progresses. The specifics monitored will depend on the intervention plan, the objectives and the indicators defined.

Evaluation is a more formal, structured process, conducted at the end of, or at key points during, the intervention. It typically involves determining to what extent the intervention has achieved its initial objectives, based on key performance indicators defined at the start. Evaluation is therefore also critical for accountability, by producing objective, timely, and shareable information for funders, policymakers and the public.

Agencies that respond to disasters must be held accountable to both donors and beneficiaries. Guidelines on best practice have been laid down in documents such as the *Code of Conduct for the International Red Cross and Red Crescent Movement and Non-Governmental Organizations in Disaster Relief* and the Sphere Project handbook, which have defined the essential standards that must be met by agencies in the field.

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