

Minimum Standards in Health Action



How to use this chapter

This chapter is divided into two main sections:

Health systems

Essential health services

A health systems approach to the design, implementation, monitoring and evaluation of health services is adopted as a framework for organising health services during disaster response. This is the best approach to ensure that priority health needs are identified and met in an efficient and effective manner. Principles such as supporting national and local health systems, coordination and standardisation of tools and approaches are stressed throughout.

The Protection Principles and Core Standards must be used consistently with this chapter.

Although primarily intended to inform humanitarian response to a disaster, the minimum standards may also be considered during disaster preparedness.

Each section contains the following:

- **Minimum standards:** These are qualitative in nature and specify the minimum levels to be attained in disaster response regarding the provision of health services.
- **Key actions:** These are suggested activities and inputs to help meet the standards.
- **Key indicators:** These are 'signals' that show whether a standard has been attained. They provide a way of measuring and communicating the processes and results of key actions; they relate to the minimum standard, not to the key action.
- **Guidance notes:** These include specific points to consider when applying the minimum standards, key actions and key indicators in different situations. They provide guidance on tackling practical difficulties, benchmarks or advice on priority issues. They may also include critical issues relating to the standards, actions or indicators, and describe dilemmas, controversies or gaps in current knowledge.

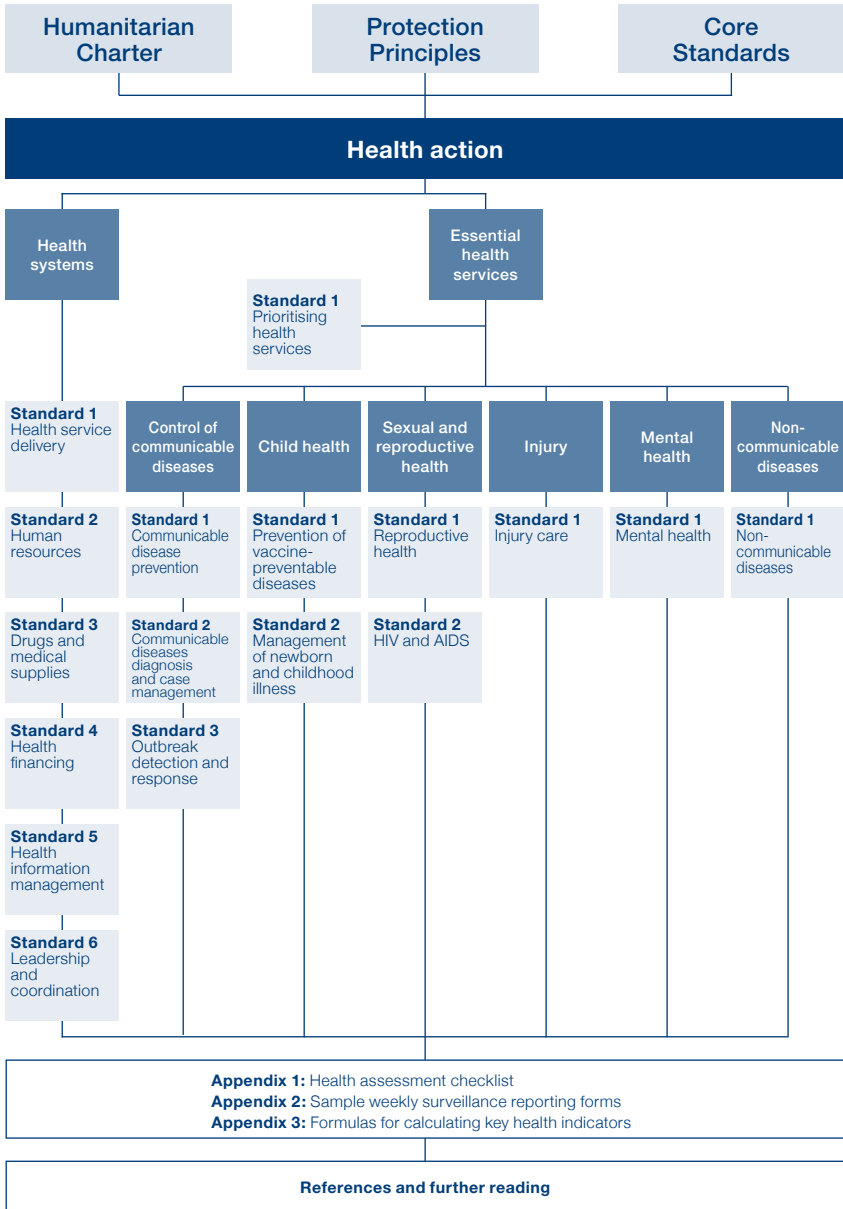
If the required key actions and indicators cannot be met, the resulting adverse implications on the affected population should be appraised and appropriate mitigating actions taken.

Appendices at the end of the chapter include a checklist for health service assessments, sample surveillance reporting forms and formulas for calculating key health indicators. A references and further reading section is also provided.

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Introduction

Links to the Humanitarian Charter and international law

The minimum standards in health action are a practical expression of the shared beliefs and commitments of humanitarian agencies and the common principles, rights and duties governing humanitarian action that are set out in the Humanitarian Charter. Founded on the principle of humanity, and reflected in international law, these principles include the right to life with dignity, the right to protection and security, and the right to receive humanitarian assistance on the basis of need. A list of key legal and policy documents that inform the Humanitarian Charter is available for reference in Annex 1 (see page 356), with explanatory comments for humanitarian workers.

Although states are the main duty-bearers with respect to the rights set out above, humanitarian agencies have a responsibility to work with disaster-affected populations in a way that is consistent with these rights. From these general rights flow a number of more specific entitlements. These include the rights to participation, information and non-discrimination, as well the specific rights to water, food, shelter and health that underpin these and the minimum standards in this Handbook.

Everyone has the right to health, as enshrined in a number of international legal instruments. The right to health can be assured only if the population is protected, if the professionals responsible for the health system are well trained and committed to universal ethical principles and professional standards, if the system in which they work is designed to meet minimum standards of need, and if the state is willing and able to establish and secure these conditions of safety and stability. In times of armed conflict, civilian hospitals and medical facilities may in no circumstances be the object of attack, and health and medical staff have the right to be protected. The carrying-out of acts or activities that jeopardise the neutrality of health facilities, such as carrying arms, is prohibited.

The minimum standards in this chapter are not a full expression of the right to health. However, the Sphere standards reflect the core content of the right to health, especially during emergencies, and contribute to the progressive realisation of this right globally.



The importance of health action in disasters

Access to healthcare is a critical determinant for survival in the initial stages of disaster. Disasters almost always have significant impacts on the public health and well-being of affected populations. The public health impacts may be described as direct (e.g. death from violence and injury) or indirect (e.g. increased rates of infectious diseases and/or malnutrition). These indirect health impacts are usually related to factors such as inadequate quantity and quality of water, breakdowns in sanitation, disruption of or reduced access to health services and deterioration of food security. Lack of security, movement constraints, population displacement and worsened living conditions (overcrowding and inadequate shelter) can also pose public health threats. Climate change is potentially increasing vulnerability and risk.

The primary goals of humanitarian response to humanitarian crises are to prevent and reduce excess mortality and morbidity. The main aim is to maintain the crude mortality rate (CMR) and under-5 mortality rate (U5MR) at, or reduce to, less than double the baseline rate documented for the population prior to the disaster (see table on baseline reference mortality data by region on page 311). Different types of disaster are associated with differing scales and patterns of mortality and morbidity (see table on public health impact of selected disasters opposite), and the health needs of an affected population will therefore vary according to the type and extent of the disaster.

The contribution from the health sector is to provide essential health services, including preventive and promotive interventions that are effective in reducing health risks. Essential health services are priority health interventions that are effective in addressing the major causes of excess mortality and morbidity. The implementation of essential health services must be supported by actions to strengthen the health system. The way health interventions are planned, organised and delivered in response to a disaster can either enhance or undermine the existing health systems and their future recovery and development.

An analysis of the existing health system is needed to determine the system's level of performance and to identify the major constraints to the delivery of, and access to, health services. In the early stages of a disaster, information may be incomplete and important public health decisions may have to be made without all of the relevant data being available. A multi-sectoral assessment should be conducted as soon as possible (see Core Standard 3 on page 61).

Better response is achieved through better preparedness. Preparedness is based on an analysis of risks and is well linked to early warning systems. Preparedness

includes contingency planning, stockpiling of equipment and supplies, establishment and/or maintenance of emergency services and stand-by arrangements, communications, information management and coordination arrangements, personnel training, community-level planning, drills and exercises. The enforcement of building codes can dramatically reduce the number of deaths and serious injuries associated with earthquakes and/or ensure that health facilities remain functional after disasters.

Public health impact of selected disasters

NB: Even for specific types of disaster, the patterns of morbidity and mortality vary significantly from context to context.

Effect	Complex emergencies	Earthquakes	High winds (without flooding)	Floods	Flash floods/ tsunamis
<i>Deaths</i>	Many	Many	Few	Few	Many
<i>Severe injuries</i>	Varies	Many	Moderate	Few	Few
<i>Increased risk of communicable diseases</i>	High	Varies*	Small	Varies*	Varies*
<i>Food scarcity</i>	Common	Rare	Rare	Varies	Common
<i>Major population displacements</i>	Common	Rare (may occur in heavily damaged urban areas)	Rare (may occur in heavily damaged urban areas)	Common	Varies

* Depends on post-disaster displacement and living conditions of the population
Source: Adapted from Pan American Health Organization, 2000

Links to other chapters

Because of the impacts of the different determinants of health on health status, many of the standards in the other chapters are relevant to this chapter. Progress in achieving standards in one area often influences and even determines progress in other areas. For a disaster response to be effective, close coordination and collaboration are required with other sectors. Coordination with local authorities, other responding agencies and community-based organisations is also necessary to ensure that needs are met, that efforts are not duplicated and that the use



of resources is optimised and the quality of health services is adequate. Reference to specific standards or guidance notes in other technical chapters is made where relevant. Reference is also made to companion and complementary standards.

Links to the Protection Principles and Core Standards

In order to meet the standards of this Handbook, all humanitarian agencies should be guided by the Protection Principles, even if they do not have a distinct protection mandate or specialist capacity in protection. The Principles are not 'absolute': it is recognised that circumstances may limit the extent to which agencies are able to fulfil them. Nevertheless, the Principles reflect universal humanitarian concerns which should guide action at all times.

The Core Standards are essential process and personnel standards shared by all sectors. The six core standards cover people-centred humanitarian response; coordination and collaboration; assessment; design and response; performance, transparency and learning; and aid worker performance. They provide a single reference point for approaches that underpin all other standards in the Handbook. Each technical chapter, therefore, requires the companion use of the Core Standards to help attain its own standards. In particular, to ensure the appropriateness and quality of any response, the participation of disaster-affected people – including the groups and individuals most frequently at risk in disasters – should be maximised.

Vulnerabilities and capacities of disaster-affected populations

This section is designed to be read in conjunction with, and to reinforce, the Core Standards.

It is important to understand that to be young or old, a woman, or a person with a disability or HIV, does not, of itself, make a person vulnerable or at increased risk. Rather it is the interplay of factors that does so: for example, someone who is over 70 years of age, lives alone and has poor health is likely to be more vulnerable than someone of a similar age and health status living within an extended family and with sufficient income. Similarly, a 3-year-old girl is much more vulnerable if she is unaccompanied than if she were living in the care of responsible parents.

As the health action standards and key actions are implemented, a vulnerability and capacity analysis helps to ensure that a disaster response effort supports

those who have a right to assistance in a non-discriminatory manner and who need it most. This requires a thorough understanding of the local context and of how a particular disaster impacts on particular groups of people in different ways due to their pre-existing vulnerabilities (e.g. being very poor or discriminated against), their exposure to various protection threats (e.g. gender-based violence including sexual exploitation), disease incidence or prevalence (e.g. HIV or tuberculosis) and possibilities of epidemics (e.g. measles or cholera). Disasters can make pre-existing inequalities worse. However, support for people's coping strategies, resilience and recovery capacities is essential. Their knowledge, skills and strategies need to be supported and their access to social, legal, financial and psychosocial support advocated for. The various physical, cultural, economic and social barriers they may face in accessing these services in an equitable manner also need to be addressed.

The following highlight some of the key areas that will ensure that the rights and capacities of all vulnerable people are considered:

- ▶ Optimise people's participation, ensuring that all representative groups are included, especially those who are less visible (e.g. persons who have communication or mobility difficulties, those living in institutions, stigmatised youth and other under- or unrepresented groups).
- ▶ Disaggregate data by sex and age (0–80+ years) during assessment as an important element in ensuring that the health sector adequately considers the diversity of populations.
- ▶ Ensure that the right to information on entitlements is communicated in a way that is inclusive and accessible to all members of the population.



The minimum standards

1. Health systems

The World Health Organization (WHO) defines health systems as: “all the organizations, institutions and resources that are devoted to producing health actions”. It includes the full range of players engaged in the provision, financing and management of health services, efforts to influence determinants of health as well as providing direct health services, and encompassing all levels: central, regional, district, community and household.

The health system standards of Sphere are organised according to the WHO health system framework, consisting of six building blocks: leadership, human resources, drugs and medical supplies, health financing, health information management and service delivery. There are many interconnections and interactions between each of these functions and an action affecting one component can affect the others. These health system building blocks are the functions that are required to deliver essential health services. Health interventions during disaster response should be designed and implemented in a way that contributes to strengthening health systems.

Health systems standard 1: Health service delivery

People have equal access to effective, safe and quality health services that are standardised and follow accepted protocols and guidelines.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Provide health services at the appropriate level of the health system. Levels include household and community, clinic or health post, health centre and hospital (see guidance note 1).
- ▶ Adapt or establish standardised case management protocols for the most common diseases, taking account of national standards and guidelines (see guidance note 2).
- ▶ Establish or strengthen a standardised referral system and ensure it is utilised by all agencies (see guidance note 1).

- ▶ Establish or strengthen a standardised system of triage at all health facilities to ensure those with emergency signs receive immediate treatment.
- ▶ Initiate health education and promotion at community and health facility levels (see guidance note 3).
- ▶ Establish and follow safe and rational use of blood supply and blood products (see guidance note 5).
- ▶ Ensure that laboratory services are available and used when indicated (see guidance note 6).
- ▶ Avoid the establishment of alternative or parallel health services, including mobile clinics and field hospitals (see guidance notes 7–8).
- ▶ Design health services in a manner that ensures patients' rights to privacy, confidentiality and informed consent (see guidance note 9).
- ▶ Implement appropriate waste management procedures, safety measures and infection control methods in health facilities (see guidance notes 10–11 and Solid waste management standard 1 on page 117).
- ▶ Dispose of dead bodies in a manner that is dignified, culturally appropriate and based on good public health practice (see guidance note 12 and Solid waste management standard 1, guidance note 8 on page 120).

Key indicators (to be read in conjunction with the guidance notes)

- ▶ There are an adequate number of health facilities to meet the essential health needs of all the disaster-affected population:
 - one basic health unit/10,000 population (basic health units are primary healthcare facilities where general health services are offered)
 - one health centre/50,000 people
 - one district or rural hospital/250,000 people
 - >10 inpatient and maternity beds/10,000 people (see guidance note 1).
- ▶ Utilisation rates at health facilities are 2–4 new consultations/person/year among the disaster-affected population and >1 new consultations/person/year among rural and dispersed populations (see guidance note 4 and Appendix 3: Formulas for calculating key health indicators).

Guidance notes

1. **Level of care:** Health facilities are categorised by level of care according to their size and the services provided. The number and location of health facilities required can vary from context to context.



Health systems must also develop a process for continuity of care. This is best achieved by establishing an effective referral system, especially for life-saving interventions. The referral system should function 24 hours a day, seven days a week.

2. **National standards and guidelines:** In general, agencies should adhere to the health standards and guidelines of the country where the disaster response is being implemented, including treatment protocols and essential medicines lists. When they are outdated or do not reflect evidence-based practice, international standards should be used as reference and the lead agency for the health sector should support the Ministry of Health (MOH) to update them.
3. **Health promotion:** An active programme of community health promotion should be initiated in consultation with local health authorities and community representatives, ensuring a balanced representation of women and men. The programme should provide information on the major health problems, health risks, the availability and location of health services and behaviours that protect and promote good health, and address and discourage harmful practices. Public health messages and materials should utilise appropriate language and media, be culturally sensitive and easy to understand. Schools and child-friendly spaces are important venues for spreading information and reaching out to children and parents (see INEE Minimum Standards for Education – access and learning environment standard 3).
4. **Utilisation rate of health services:** There is no minimum threshold figure for the use of health services, as this will vary from context to context. Among stable rural and dispersed populations, utilisation rates should be at least 1 new consultation/person/year. Among disaster-affected populations, an average of 2–4 new consultations/person/year may be expected. If the rate is lower than expected, it may indicate inadequate access to health services. If the rate is higher, it may suggest over-utilisation due to a specific public health problem or under-estimation of the target population. In analysing utilisation rates, consideration should ideally also be given to utilisation by sex, age, ethnic origin and disability (see Appendix 3: Formulas for calculating key health indicators).
5. **Safe blood transfusion:** Efforts should be coordinated with the national blood transfusion service (BTS), if one exists. Collection of blood should only be from voluntary non-remunerated blood donors. Good laboratory practice should be established, including screening for transfusion-transmissible infections, blood grouping, compatibility testing, blood component production and the storage and transportation of blood products. Unnecessary transfusions can be reduced through the effective clinical use of blood, including the use of alternatives to transfusion (crystalloids and colloids), wherever possible. Appropriate clinical staff should be trained to ensure the provision of safe blood and its effective clinical use.

6. **Laboratory services:** The most common communicable diseases can be diagnosed clinically (e.g. diarrhoea, acute respiratory infections) or with the assistance of rapid diagnostic tests or microscopy (e.g. malaria). Laboratory testing is most useful for confirming the cause of a suspected outbreak, testing for culture and antibiotic sensitivity to assist case management decisions (e.g. dysentery) and selecting vaccines where mass immunisation may be indicated (e.g. meningococcal meningitis). For certain non-communicable diseases, such as diabetes, laboratory testing is essential for diagnosis and treatment.
7. **Mobile clinics:** During some disasters, it may be necessary to operate mobile clinics in order to meet the needs of isolated or mobile populations who have limited access to healthcare. Mobile clinics have also been proven crucial in increasing access to treatment in outbreaks where a large number of cases are expected, such as malaria outbreaks. Mobile clinics should be introduced only after consultation with the lead agency for the health sector and with local authorities (see Health systems standard 6 on page 307).
8. **Field hospitals:** Occasionally, field hospitals may be the only way to provide healthcare when existing hospitals are severely damaged or destroyed. However, it is usually more effective to provide resources to existing hospitals so that they can start working again or cope with the extra load. It may be appropriate to deploy a field hospital for the immediate care of traumatic injuries (first 48 hours), secondary care of traumatic injuries and routine surgical and obstetrical emergencies (days 3–15) or as a temporary facility to substitute for a damaged local hospital until it is reconstructed. Because field hospitals are highly visible, there is often substantial political pressure from donor governments to deploy them. However, it is important to make the decision to deploy field hospitals based solely on need and value added.
9. **Patients' rights:** Health facilities and services should be designed in a manner that ensures privacy and confidentiality. Informed consent should be sought from patients (or their guardians if they are not competent to do so), prior to medical or surgical procedures. Health staff should understand that patients have a right to know what each procedure involves, as well as its expected benefits, potential risks, costs and duration.
10. **Infection control in healthcare settings and patient safety:** For an effective response during disasters, continuing infection prevention and control (IPC) programmes should be enforced at both national and peripheral levels, and at the various healthcare facility levels. Such an IPC programme at a healthcare facility should include:
 - defined IPC policies (e.g. routine and additional infection control measures to address potential threats)



- qualified, dedicated technical staff (IPC team) to run infection control programme with a defined scope, function and responsibility
- early warning surveillance system for detection of communicable disease outbreaks
- defined budget for activities (e.g. training of staff) and supplies in response to an emergency
- reinforced standard precautions and additional specific precautions defined for an epidemic disease
- administrative controls (e.g. isolation policies) and environmental and engineering controls (e.g. improving environmental ventilation)
- personal protective equipment used
- IPC practices monitored and recommendations reviewed regularly.

- 11. *Healthcare waste:*** Hazardous waste generated in healthcare facilities can be segregated into infectious non-sharp waste, sharps and non-infectious common wastes. Poor management of healthcare waste potentially exposes health staff, cleaners, waste handlers, patients and others in the community to infections such as HIV and hepatitis B and C. Proper separation at the point of origin of the waste through to final category specific disposal procedures must be implemented in order to minimise the risk of infection. The personnel assigned to handle healthcare waste should be properly trained and should wear protective equipment (gloves and boots are minimum requirements). Treatment should be done according to the type of waste: for example, infectious non-sharp waste as well as sharps should be either disposed of in protected pits or incinerated.
- 12. *Handling the remains of the dead:*** When disasters result in high mortality, the management of a large number of dead bodies will be required. Burial of large numbers of human remains in mass graves is often based on the false belief that they represent a health risk if not buried or burned immediately. In only a few special cases (e.g. deaths resulting from cholera or haemorrhagic fevers) do human remains pose health risks and require specific precautions. Bodies should not be disposed of unceremoniously in mass graves. People should have the opportunity to identify their family members and to conduct culturally appropriate funerals. Mass burial may be a barrier to obtaining death certificates necessary for making legal claims. When those being buried are victims of violence, forensic issues should be considered (see Shelter and settlement standard 2, guidance note 3 on page 255).

Health systems standard 2: Human resources

Health services are provided by trained and competent health workforces who have an adequate mix of knowledge and skills to meet the health needs of the population.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Review staffing levels and capacity as a key component of the baseline health assessment.
- ▶ Address imbalances in the number of staff, their mix of skills and gender and/or ethnic ratios where possible (see guidance note 1).
- ▶ Support local health workers and integrate them fully into health services, taking account of their competence (see guidance note 1).
- ▶ Ensure adequate ancillary workers for support functions in each health facility.
- ▶ Train clinical staff in the use of clinical protocols and guidelines (see guidance note 2).
- ▶ Provide supportive supervision to staff on a regular basis to ensure their compliance with standards and guidelines, including provision of feedback.
- ▶ Standardise training programmes and prioritise them according to key health needs and competence gaps.
- ▶ Ensure fair and reliable remuneration for all health workers, agreed between all agencies and in collaboration with the national health authorities.
- ▶ Ensure a safe working environment, including basic hygiene and protection for all health workers.

Key indicators (to be read in conjunction with the guidance notes)

- ▶ There are at least 22 qualified health workers (medical doctors, nurses and midwives)/10,000 population (see guidance note 1):
 - at least one medical doctor/50,000 population
 - at least one qualified nurse/10,000 population
 - at least one midwife/10,000 population.
- ▶ There is at least one Community Health Worker (CHW)/1,000 population, one supervisor/10 home visitors and one senior supervisor.



- ▶ Clinicians are not required to consult more than 50 patients a day consistently. If this threshold is regularly exceeded, additional clinical staff are recruited (see guidance note 1 and Appendix 3: Formulas for calculating key health indicators).

Guidance notes

1. **Staffing levels:** The health workforce includes a wide range of health workers including medical doctors, nurses, midwives, clinical officers or physician assistants, lab technicians, pharmacists, CHWs, etc., as well as management and support staff. There is no consensus about an optimal level of health workers for a population and this can vary from context to context. However, there is correlation between the availability of health workers and coverage of health interventions. For example, the presence of just one female health worker or one representative of a marginalised ethnic group on a staff may significantly increase the access of women or people from minority groups to health services. Imbalance in staffing must be addressed through the redeployment and/or recruitment of health workers to areas where there are critical gaps in relation to health needs (see Core Standard 6 on page 71).
2. **Training and supervision of staff:** Health workers should have the proper training, skills and supervisory support for their level of responsibility. Agencies have an obligation to train and supervise staff to ensure that their knowledge is up-to-date. Training and supervision will be high priorities especially where staff have not received continuing education or where new protocols are introduced. As far as possible, training programmes should be standardised and prioritised according to key health needs and competence gaps identified through supervision. Records should be maintained of who has been trained in what by whom, when and where. These should be shared with the human resources section of the local health authorities (see Core Standard 6 on page 71).

Health systems standard 3: Drugs and medical supplies

People have access to a consistent supply of essential medicines and consumables.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Review the existing lists of essential medicines of the disaster-affected country early in the response to determine their appropriateness (see guidance note 1).

- ▶ Establish and endorse a standardised essential medicines and medical equipment list that contains items appropriate for the health needs and the competence level of health workers (see guidance notes 1–2).
- ▶ Establish or adapt an effective medicines management system (see guidance note 3).
- ▶ Ensure essential medicines for the treatment of common illnesses are available.
- ▶ Accept donations of medicine only if they follow internationally recognised guidelines. Do not use donations that do not follow these guidelines and dispose of them safely.

Key indicator (to be read in conjunction with the guidance notes)

- ▶ No health facility is out of stock of selected essential medicines and tracer products for more than one week (see guidance note 4).

Guidance notes

1. **Essential medicines list:** Most countries have an established essential medicines list. This document should be reviewed, when necessary, in consultation with the lead health authority early in the disaster response to determine its appropriateness. Occasionally, alterations to essential medicines lists may be necessary, e.g. if there is evidence of resistance to recommended antimicrobials. If an updated list does not already exist, guidelines established by WHO should be followed, e.g. the WHO Model Lists of Essential Medicines. The use of standard pre-packaged kits should be limited to the early phases of a disaster.
2. **Medical equipment:** Care should be taken in defining a list of the necessary equipment available at different healthcare levels. This should also be linked to the required competency of the staff.
3. **Drug management:** Health agencies need to establish an effective system of drug management. The goal of such a system is to ensure the efficient, cost-effective and rational use of quality medicines, storage and correct disposal of expired medicines. This system should be based on the four key elements of the medicines management cycle: selection, procurement, distribution and use.
4. **Tracer products:** These include a list of essential or key medicines that are selected to regularly evaluate the functioning of the drug management system. The items to be selected as tracer products should be relevant to local public health priorities and should be available at all times at the health facilities. Examples include amoxicillin and paracetamol.



Health systems standard 4: Health financing

People have access to free primary healthcare services for the duration of the disaster.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Identify and mobilise financial resources for providing free health services at the point of delivery to the affected population for the duration of the disaster (see guidance note 1).
- ▶ Where user fees are charged through the government system, make arrangements for their abolition or temporary suspension for the duration of the disaster response (see guidance note 2).
- ▶ Provide financial and technical support to the health system to cover any financial gaps created by the abolition and/or suspension of user fees and to cope with the increased demand for health services (see guidance note 1).

Key indicator (to be read in conjunction with the guidance notes)

- ▶ Primary healthcare services are provided to the disaster-affected population free of charge at all government and non-governmental organisation facilities for the duration of the disaster response.

Guidance notes

1. **Health financing:** The cost of providing essential health services varies according to the context. Such a context includes the existing health system, the population affected by the disaster and the specific health needs determined by the disaster. According to the WHO Commission on Macroeconomics and Health, providing a minimum package of essential health services would require expenditure of at least US\$ 40/person/year in low-income countries (2008 figures). Providing health services in disaster settings is likely to incur higher costs than in stable settings.
2. **User fees** refer to direct payments by beneficiaries at the point of service delivery. User fees impede access to healthcare and result in poor and vulnerable people not always seeking appropriate healthcare when it is needed. A basic humanitarian principle is that services and goods provided by aid agencies should be free of charge to recipients. In contexts where this is not possible, providing members of the affected population with cash and/or vouchers can be considered to enable access to health services (see Food security – cash and voucher transfers standard 1 on page 200). Removal of

user fees must be accompanied by other measures to support the health system to compensate for the revenue forgone and increase use (e.g. paying incentives to health staff, providing additional supplies of medicine). The accessibility and quality of services must be monitored after the removal of user fees.

Health systems standard 5: Health information management

The design and delivery of health services are guided by the collection, analysis, interpretation and utilisation of relevant public health data.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Decide on the use of the existing health information system (HIS), its adaptation or the use of alternative HIS (see guidance note 1).
- ▶ When relevant, conduct assessments and surveys to collect information that is not available from the HIS and is critical for deciding on priority health services (see guidance note 2).
- ▶ Develop and/or utilise standardised case definitions for all reportable diseases and health conditions and ensure they are used by all agencies.
- ▶ Design surveillance and early warning (EWARN) systems for detection of outbreaks as a component of the HIS and build upon existing HIS whenever possible (see Essential health services – control of communicable diseases standard 3 on page 316 and Appendix 2: Sample weekly surveillance reporting forms).
- ▶ Identify and report priority diseases and health conditions through the HIS.
- ▶ All responding agencies agree upon and use a common figure, such as population (see guidance note 3).
- ▶ Health facilities and agencies submit surveillance and other HIS data to the lead agency on a regular basis. The frequency of these reports will vary according to the context and to the type of data, e.g. daily, weekly, monthly.
- ▶ Use supplementary data consistently from other relevant sources, such as surveys, to interpret surveillance data and to guide decision-making (see guidance note 2).
- ▶ Take adequate precautions for the protection of data to guarantee the rights and safety of individuals and/or populations (see guidance note 4).



Key indicators (to be read in conjunction with the guidance notes)

- ▶ All health facilities and agencies regularly provide a HIS report within 48 hours of the end of the reporting period to the lead agency.
- ▶ All health facilities and agencies report cases of epidemic-prone diseases within 24 hours of onset of illness (see Essential health services – control of communicable diseases standard 3 on page 316).
- ▶ The lead agency produces a regular overall health information report, including analysis and interpretation of epidemiological data, as well as a report on the coverage and utilisation of the health services.

Guidance notes

1. **Health information system:** A surveillance system should build upon the existing HIS whenever possible. In some disasters, a new or parallel HIS may be required. This is determined by an assessment of the performance and adequacy of the existing HIS and the information needs for the current disaster. During the disaster response, health data should include, but not be limited to, the following:
 - deaths recorded by health facilities including under-5 deaths
 - proportional mortality
 - cause-specific mortality
 - incidence rates for most common morbidities
 - proportional morbidity
 - health facility utilisation rate
 - number of consultations/clinician/day.
2. **Sources of data:** The interpretation and use of health facility data need to take into account the source of the information and its limitations. The use of supplemental data for decision-making is essential in a comprehensive HIS, for example estimates of prevalence of diseases or information on health-seeking behaviour. Other sources of data that may improve the analysis include population-based surveys, laboratory reports and quality of service measurements. Surveys and assessment must follow internationally recognised quality criteria and use standardised tools and protocols and, where possible, be submitted to a peer-review process.
3. **Disaggregation of data:** Data should be disaggregated by sex, age, vulnerability of particular individuals, affected and host populations, and context (e.g. camp versus non-camp situation) as far as is practical to guide decision-making. Detailed disaggregation may be difficult during the early stages of an emergency. However, mortality and morbidity data should at least be disaggregated for children under 5 years old. As time and conditions allow, more

detailed disaggregation should be sought to help detect potential inequalities and vulnerable people (see Core Standard 3 on page 61).

4. **Confidentiality:** Adequate precautions should be taken to protect the safety of the individual, as well as the data itself. Staff members should never share patient information with anyone not directly involved in the patient's care without the patient's permission. Special consideration should be given to persons with intellectual, mental or sensory impairment, which may compromise their ability to give informed consent. Data that relate to injury caused by torture or other human rights violations including sexual assault must be treated with the utmost care. Consideration may be given to passing on this information to appropriate actors or institutions if the individual gives their informed consent (see Health systems standard 1 on page 296 and Protection Principle 1, guidance notes 7–12 on page 35).

See Appendix 2 for sample mortality, EWARN and morbidity monitoring forms. See Appendix 3 for formulas for calculating key health indicators.

Health systems standard 6: Leadership and coordination

People have access to health services that are coordinated across agencies and sectors to achieve maximum impact.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Ensure that representatives of the Ministry of Health lead or at the very least are closely involved in the health sector coordination, whenever possible.
- ▶ When the MOH lacks the necessary capacity or willingness to provide leadership in the response, an alternate agency with the requisite capacity must be identified to take the lead in health sector coordination (see guidance notes 1–2).
- ▶ Hold regular health coordination meetings for local and external partners at central, sub-national and field levels within the health sector, and between health and other sectors and appropriate cross-cutting theme groups (see guidance note 3 and Core Standard 2 on page 58).
- ▶ Clarify and document the specific responsibilities and capacities of each health agency to ensure optimal coverage of the population (see guidance note 1).
- ▶ Establish working groups within the health coordination mechanism whenever a particular situation may require it (e.g. outbreak preparedness and response, reproductive health).



- ▶ Regularly produce and disseminate updates and health sector bulletins.

Key indicator (to be read in conjunction with the guidance notes)

- ▶ The lead agency has developed a health sector response strategy document to prioritise interventions and define the role of the lead and partner agencies at the onset of emergency response (see guidance note 2).

Guidance notes

1. **Lead health agency:** The Ministry of Health should be the lead health agency and be responsible for leading the health sector response. In some situations, the MOH may lack capacity or willingness to assume the leadership role in an effective and impartial manner. In this situation, WHO, as a lead agency for the global health cluster, will generally take on this responsibility. On occasion, when both the MOH and WHO lack capacity, another agency may be required to coordinate activities. The lead health agency should ensure that responding health agencies coordinate with local health authorities and that they support the capacities of local health systems (see Core Standard 2 on page 58).
2. **Health sector strategy:** An important responsibility of the lead health agency is to develop an overall strategy for the emergency response within the health sector. Ideally, a document should be produced that specifies health sector priorities and objectives and outlines the strategies for achieving them. This document should be developed after consultation with relevant agencies and community representatives ensuring as inclusive a process as possible.
3. **Coordination meetings** should be action-oriented and provide a forum in which information is shared, priorities are identified and monitored, common health strategies are developed and adapted, specific tasks are allocated and standardised protocols and interventions are agreed upon. They should be used to ensure that all health partners use common denominators and other relevant figures, tools, guidelines and standards, whenever possible. Meetings should be held more frequently at the beginning of the disaster.

2. Essential health services

Essential health services are preventive and curative health services that are appropriate to address the health needs of populations affected by disasters. They include interventions that are most effective in preventing and reducing excess morbidity and mortality from communicable and non-communicable diseases, the consequences of conflict and mass casualty events. During disasters, death rates can be extremely high and identification of the major causes of morbidity and mortality is important for the design of appropriate essential health services. This part of the health chapter outlines the essential health service standards categorised under six sections: control of communicable diseases; child health; sexual and reproductive health; injury; mental health; and non-communicable diseases.

Essential health services standard 1: Prioritising health services

People have access to health services that are prioritised to address the main causes of excess mortality and morbidity.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Collect and analyse data on health problems and risks with the aim of targeting the major causes of excess mortality and morbidity, in coordination with local health authorities (see Core Standard 3 on page 61).
- ▶ Identify vulnerable people (e.g. women, children, older people, persons with disabilities, etc.) who may be at particular risk (see Protection Principle 2 on page 36).
- ▶ Prioritise and implement health services that are appropriate, feasible and effective to reduce excess morbidity and mortality, in coordination with local health authorities (see guidance note 1).
- ▶ Identify barriers that impede access to prioritised health services and establish practical solutions to address them (see guidance note 2).
- ▶ Implement priority health services in coordination with all other sectors and/or clusters and cross-cutting themes (see Core Standard 2 on page 58).



Key indicators (to be read in conjunction with the guidance notes)

- ▶ The crude mortality rate (CMR) is maintained at, or reduced to, less than double the baseline rate documented for the population prior to the disaster (see guidance note 3).
- ▶ The under-5 mortality rate (U5MR) is maintained at, or reduced to, less than double the baseline rate documented for the population prior to the disaster (see guidance note 3).

Guidance notes

1. **Priority health services** are essential health services that are effective in addressing the major causes of excess mortality and morbidity. They vary according to the context, including the type of disaster and its impact. As far as possible, priority health services should be based on the principle of evidence-based practice and have a demonstrated public health benefit. Once mortality rates have declined to near-baseline levels, a more comprehensive range of health services can be introduced over time (see Core Standard 4 on page 65).
2. **Access to health services** should be based on the principles of equity and impartiality, ensuring equal access according to need without any discrimination. In practice, the location and staffing of health services should be organised to ensure optimal access and coverage. The particular needs of vulnerable people should be addressed when designing health services. Barriers to access may be physical, financial, behavioural and/or cultural, as well as communication barriers. Identifying and overcoming such barriers to the access of prioritised health services are essential (see Core Standard 3 on page 61 and Protection Principle 2 on page 36).
3. **Crude mortality rate and under-5 mortality rate:** The CMR is the most useful health indicator to monitor and evaluate the severity of an emergency situation. A doubling or more of the baseline CMR indicates a significant public health emergency, requiring immediate response. When the baseline rate is unknown or of doubtful validity, agencies should aim to maintain the CMR at least below 1.0/10,000/day.

The U5MR is a more sensitive indicator than CMR. When the baseline rate is unknown or of doubtful validity, agencies should aim to maintain the U5MR at least below 2.0/10,000/day (see Appendix 3: Formulas for calculating key health indicators).

Baseline reference mortality data by region

Region	CMR (deaths/ 10,000/ day)	CMR emergency threshold	U5MR (deaths/ 10,000/ day)	U5MR emergency threshold
Sub-Saharan Africa	0.41	0.8	1.07	2.1
Middle East and North Africa	0.16	0.3	0.27	0.5
South Asia	0.22	0.4	0.46	0.9
East Asia and Pacific	0.19	0.4	0.15	0.3
Latin America and Caribbean	0.16	0.3	0.15	0.3
Central and Eastern European region/CIS* and Baltic States	0.33	0.7	0.14	0.3
Industrialised countries	0.25	0.5	0.03	0.1
Developing countries	0.22	0.4	0.44	0.9
Least developed countries	0.33	0.7	0.82	1.7
World	0.25	0.5	0.40	0.8

* Commonwealth of Independent States

Source: UNICEF, *State of the World's Children 2009* (data from 2007)

2.1. Essential health services – control of communicable diseases

Morbidity and mortality due to communicable diseases tend to increase with disasters. In many conflict-affected settings, between 60 per cent and 90 per cent of deaths have been attributed to four major infectious causes: acute respiratory infections, diarrhoea, measles and malaria where endemic. Acute malnutrition exacerbates these diseases, especially in children under 5 years of age. Outbreaks of communicable diseases are far less commonly associated with acute-onset natural disasters. When outbreaks occur, they are generally associated with risk factors such as population displacement, overcrowding, inadequate shelter, insufficient and unsafe water and inadequate sanitation.



Essential health services – control of communicable diseases standard 1: Communicable disease prevention

People have access to information and services that are designed to prevent the communicable diseases that contribute most significantly to excess morbidity and mortality.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Develop and implement general prevention measures in coordination with relevant sectors (see guidance note 1).
- ▶ Implement appropriate vector control methods for malaria, dengue and other vector-borne diseases depending on local epidemiology (see guidance notes 2–3).
- ▶ Implement disease-specific prevention measures, e.g. mass vaccination against measles as indicated (see Essential health services – child health standard 1 on page 321).

Key indicator (to be read in conjunction with the guidance notes)

- ▶ Incidence of major communicable diseases relevant to the context are stable (not increasing).

Guidance notes

1. **General prevention measures:** This includes good site planning, provision of clean water and proper sanitation, access to hygiene facilities, vaccination against specific diseases, sufficient and safe food supply, personal protection and vector control, and community health education and social mobilisation. Most of these intervention should be developed in coordination with other sectors, including:
 - shelter – adequate numbers of shelters and sufficient space between them, adequately ventilated, insect-proofed and sited away from standing water, close enough to water and sanitation facilities (see Shelter and settlement standards 1–3 on pages 249–258 and Non-food items standard 2 on page 271)
 - water, sanitation, hygiene – sufficient quantities of safe water and adequate sanitation facilities and hygiene promotion (see Hygiene promotion standards 1–2 on pages 91–94, Water supply standards 1–3 on pages 97–103 and Excreta disposal standards 1–2 on pages 105–107)

- environmental sanitation and safe waste management and vector control (see guidance notes 2–3, Shelter and settlement standard 4 on page 262, Vector control standards 1–3 on pages 111–116, Solid waste management standard 1 on page 117 and Drainage standard 1 on page 121)
- food security, nutrition and food assistance – access to adequate food and management of malnutrition (see Infant and young child feeding standards 1–2 on pages 159–160, Management of acute malnutrition and micronutrient deficiencies standards 1–3 on pages 165–173 and Food security standard 1 on page 176)
- health education and social mobilisation – develop messages to ensure the effective implementation of the above preventive measures.

2. **Malaria prevention:** Implement malaria prevention methods according to the risk of infection, the phase of the emergency and mobility of the population, the type of shelters and behaviour of the local vector in a malaria-endemic region. Vector control measures such as indoor residual spraying (IRS) with an effective insecticide and the distribution of long-lasting insecticide-treated nets (LLINs) should be guided by entomological assessments and expertise. To be effective as a community control measure, IRS requires coverage of at least 80 per cent of dwellings. LLINs provide long-term personal protection and are the standard net of choice. Distributions of untreated nets are not recommended (see Non-food items standard 2 on page 271 and Vector control standards 1–3 on pages 111–116).

Prioritisation for LLIN distribution to risk groups depends on the phase of the disaster and level of malaria transmission. In the early phase of disasters in areas of high to moderate malaria transmission, hospital patients, severely malnourished people and members of their households, pregnant women and children under 2 years of age should be prioritised. The next priority is those enrolled in supplementary feeding programmes, children under 5 years of age and households of pregnant women and children under 2 years of age. Eventually, the entire population at risk would require protection with LLINs. In the early phase of disasters in low transmission areas, LLINs should be used in clinical settings (for example, residential therapeutic feeding centres and hospitals).

3. **Dengue prevention:** Vector (larval and adult) control is the main method of dengue prevention. Dengue vector control should be guided by surveillance data on the distribution of human cases and vector density. The most productive breeding sites, which vary from place to place, need to be targeted. In urban areas, *Aedes* mosquitoes breed in water storage containers and other artificial water accumulation sites (plastic cups, used tyres, broken bottles, flower pots, etc.). Periodic draining and removal of containers is the most effective way of reducing the number of breeding grounds. Water stored



in houses should be covered at all times and the containers cleaned and scrubbed weekly. The disaster-affected population should be provided with proper water storage containers with lids. Treatment of containers with an approved larvicide is also effective in eliminating larvae. Spraying with insecticide is effective in reducing the number of adult mosquitoes. Personal protection measures should also be promoted (see Non-food items standard 2 on page 271 and Vector control standards 1–3 on pages 111–116).

Essential health services – control of communicable diseases standard 2: Communicable disease diagnosis and case management

People have access to effective diagnosis and treatment for those infectious diseases that contribute most significantly to preventable excess morbidity and mortality.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Develop public health education messages to encourage people to seek care early for fever, cough, diarrhoea, etc.
- ▶ Provide healthcare at all first-level health facilities based upon standard case management protocol, or the Integrated Management of Childhood Illnesses (IMCI) and Integrated Management of Adult Illness (IMAI) where implemented and referral care for management of severe illness (see guidance note 1).
- ▶ Implement triage, diagnostic and case management protocols for early treatment of conditions such as pneumonia, malaria, diarrhoea, measles, meningitis, malnutrition and dengue and train staff on treatment protocols (see guidance notes 2–3 and Essential health services – child health standard 2 on page 323).
- ▶ Introduce tuberculosis control programmes only after recognised criteria are met (see guidance note 4).

Key indicator (to be read in conjunction with the guidance notes)

- ▶ Standardised case management protocols for the diagnosis and treatment of common infectious diseases are readily available and consistently used (see guidance notes 1–3 and Health systems standard 1 on page 296).

Guidance notes

1. ***Integrated Management of Childhood Illnesses and Integrated Management of Adult Illness:*** Mortality from communicable diseases can be reduced by early and accurate diagnosis and appropriate treatment. Use of IMCI and IMAI where implemented, or other national diagnostic algorithms, are important to triage and classify disease according to type and severity and to aid the administering of appropriate treatments. Danger signs are indications for referral to an inpatient facility. Standard case management protocols allow for appropriate diagnosis and rational drug use (see also Essential health services – child health standard 2 on page 323).
2. ***Pneumonia:*** The key to reducing mortality from pneumonia is prompt administration of oral antibiotics, such as amoxicillin, according to national protocols. Severe pneumonia will require hospitalisation and parenteral therapy.
3. ***Malaria:*** Access to prompt and effective treatment is key for successful malaria control. In malaria-endemic regions, establish a protocol for early (less than 24 hours) diagnosis of fever and treatment with highly effective first-line drugs. Artemisinin-based combination therapies (ACTs) are the norm for treatment of falciparum malaria. Drug choice should be determined in consultation with the lead health agency and the national malaria control programme. Consider drug quality when sourcing supplies. Malaria should preferably be diagnosed by laboratory test (rapid diagnostic test, microscopy) before treatment is started. However, treatment of clinical malaria should not be delayed if laboratory diagnosis is unavailable.
4. ***Tuberculosis (TB) control:*** Poorly implemented TB control programmes can potentially do more harm than good, by prolonging infectivity and by contributing to the spread of multidrug-resistant bacilli. While the management of individual patients with TB may be possible during disasters, a comprehensive programme of TB control should only be implemented if recognised criteria are met. These criteria include commitment and resources of agency, an assured stability of the population for at least 12–15 months and that a good quality programme can be delivered. When implemented, TB control programmes should be integrated with the national country programme and follow the Directly-Observed Therapy, Short-course strategy.

In the acute phase of an emergency, the potential interruption of all treatments for all chronic diseases including TB and loss of patient follow-up are likely to be a significant problem. Strong collaboration must be established between the emergency health workers and the established national TB programme services. This will help ensure that people who were already on treatment prior to the disaster continue with their treatment (see Essential health services – non-communicable diseases standard 1 on page 336).



Essential health services – control of communicable diseases standard 3: Outbreak detection and response

Outbreaks are prepared for, detected, investigated and controlled in a timely and effective manner.

Key actions (to be read in conjunction with the guidance notes)

Detection

- ▶ Establish a disease EWARN (early warning) surveillance and response system based on a comprehensive risk assessment of communicable diseases, as part of the broader health information system (see guidance note 1 and Health systems standard 5 on page 305).
- ▶ Train healthcare staff and Community Health Workers to detect and report potential outbreaks.
- ▶ Provide populations with simple information on symptoms of epidemic-prone diseases and where to go for help.

Preparedness

- ▶ Prepare an outbreak investigation and response plan (see guidance note 2).
- ▶ Ensure that protocols for the investigation and control of common outbreaks, including relevant treatment protocols, are available and distributed to relevant staff.
- ▶ Ensure that reserve stocks of essential material are available for priority diseases or can be procured rapidly from a pre-identified source (see guidance note 3).
- ▶ Identify sites for isolation and treatment of infectious patients in advance, e.g. cholera treatment centres.
- ▶ Identify a laboratory, whether locally, regionally, nationally or in another country, that can provide confirmation of outbreaks (see guidance note 4).
- ▶ Ensure that sampling materials and transport media are available on-site for the infectious agents most likely to cause a sudden outbreak (see guidance note 5).

Control

- ▶ Describe the outbreak according to time, place and person, leading to the identification of high-risk individuals and adapted control measures (see guidance notes 6–8).
- ▶ Implement appropriate control measures that are specific to the disease and context (see guidance note 9).

Key indicators (to be read in conjunction with the guidance notes)

- ▶ A written outbreak investigation and response plan is available or developed at the beginning of disaster response.
- ▶ Health agencies report suspected outbreaks to the next appropriate level within the health system within 24 hours of detection.
- ▶ The lead health agency initiates investigation of reported cases of epidemic-prone diseases within 48 hours of notification.
- ▶ Case fatality rates (CFRs) are maintained below acceptable levels:
 - cholera – 1 per cent or lower
 - Shigella dysentery – 1 per cent or lower
 - typhoid – 1 per cent or lower
 - meningococcal meningitis – varies, 5–15 per cent
 - malaria – varies, aim for <5 per cent in severely ill malaria patients
 - measles – varies, 2–21 per cent reported in conflict-affected settings, aim for <5 per cent (see guidance note 10).

Guidance notes

1. **Early warning system for outbreak detection:** The key elements of such a system will include:
 - a network of implementing partners
 - implementation at all health facilities and at community level if possible
 - a comprehensive risk assessment of all potential epidemic-prone diseases
 - identification, based on risk assessment, of a small number of priority conditions (10–12) for weekly surveillance and a select number of diseases for immediate ‘alert’ reporting (see Appendix 2: Sample weekly surveillance reporting forms)
 - clear case definitions for each disease or condition on the standard surveillance form
 - alert thresholds defined for each priority disease or condition to initiate investigation



- communications to ensure rapid notification of formal or informal alerts (rumours, media reports, etc.) to relevant health authorities
 - a system for recording and responding to immediate alerts
 - data reporting, entry into standard database and analysis on a weekly basis
 - feedback of weekly surveillance and immediate alert information to all partners
 - regular supervision to ensure data quality as well as timeliness and completeness of reporting
 - standard case investigation protocols and forms
 - standard procedures for information-sharing and initiation of outbreak response.
2. **Outbreak investigation and control plan:** This must be prepared with full participation of all stakeholders. The following issues should be addressed:
 - the criteria under which an outbreak control team is to be convened
 - the composition of the outbreak control team
 - the specific roles and responsibilities of organisations and positions in the team
 - the arrangements for consulting and information-sharing at local and national levels
 - the resources and facilities available to investigate and respond to outbreaks
 - the list of essential medicines, supplies and diagnostics needed.
 3. **Reserve stocks:** On-site reserves should include material to use in response to likely outbreaks. A pre-packaged diarrhoeal disease or cholera kit may be needed in some circumstances. It may not be practical to keep some stocks on-site, such as meningococcal vaccine. For these items, procedures for prompt procurement, shipment and storage should be determined in advance so that they can be rapidly obtained.
 4. **Reference laboratories:** Laboratory testing is useful for confirming the diagnosis during a suspected outbreak for which mass immunisation may be indicated (e.g. meningococcal meningitis) or where culture and antibiotic sensitivity testing may influence case management decisions (e.g. shigellosis). A reference laboratory should also be identified either regionally or internationally that can assist with more sophisticated testing, e.g. serological diagnosis of measles, yellow fever, dengue fever and viral haemorrhagic fevers.
 5. **Transport media and rapid tests:** Sampling materials (e.g. rectal swabs) and transport media (e.g. Cary-Blair media for cholera, *Shigella*, *E. coli* and *Salmonella*) and cold chain material for transport should be available on-site or readily accessible. In addition, several rapid tests are available that can be

useful in screening for communicable diseases in the field, including malaria and meningitis.

6. *Outbreak investigation:* The ten key steps in outbreak investigation are:

1. establish the existence of an outbreak
2. confirm the diagnosis
3. define a case
4. count cases
5. perform descriptive epidemiology (time, person, place)
6. determine who is at risk
7. develop hypotheses explaining exposure and disease
8. evaluate hypotheses
9. communicate findings
10. implement control measures.

These steps do not need to be implemented in any strict order and control measures should be implemented as soon as possible.

7. *Confirmation of the existence of an outbreak:* It is not always straightforward to determine whether an outbreak is present, and clear definitions of outbreak thresholds do not exist for all diseases. Nevertheless, thresholds exist for the diseases listed below:

- diseases for which a single case may indicate an outbreak: cholera, measles, yellow fever, viral haemorrhagic fevers
- diseases for which an outbreak should be suspected when cases of, or deaths due to, the disease exceed the number expected for the location or are double the previous weekly averages; shigellosis – in non-endemic regions and in refugee camps, a single case of shigellosis should raise concern about a potential outbreak
- malaria – definitions are situation-specific; an increase in the number of cases above what is expected for the time of year among a defined population in a defined area may indicate an outbreak. Without historic data, warning signals include a considerable increase in the proportion of fever cases that are confirmed as malaria in the past two weeks and an increasing trend of case fatality rates over past weeks
- meningococcal meningitis – in the meningitis belt, for populations above 30,000, 15 cases/100,000 persons/week; however, with high outbreak risk (i.e. no outbreak for 3+ years and vaccination coverage <80 per cent), this threshold is reduced to 10 cases/100,000 persons/week. In populations of less than 30,000, five cases in one week or a doubling of cases over a three-week period confirms an outbreak. In a camp, two confirmed cases in one week indicate an outbreak



- dengue – increase in fever cases in the past two weeks that show increased IgG levels (based on paired testing of consecutive sera-samples) of a febrile patient with 3–5 days illness and decreasing platelet count (<20,000).
8. **Outbreak response:** Key components of outbreak response are coordination, case management, surveillance and epidemiology, laboratory, specific preventive measures such as water and sanitation improvement depending on disease, risk communication, social mobilisation, media relations and information management, logistics and security.
 9. **Control measures:** Control measures must be specifically developed to halt transmission of the agent causing the outbreak. Often, existing knowledge about the agent can guide the design of appropriate control measures in specific situations. In general, response activities include controlling the source and/or preventing exposure (e.g. through improved water source to prevent cholera), interrupting transmission and/or preventing infection (e.g. through mass vaccination to prevent measles or use of LLINs to prevent malaria) and modifying host defences (e.g. through prompt diagnosis and treatment or through chemoprophylaxis) (see Health systems standard 5 on page 305, Water supply standards 1–2 on pages 97–100, Hygiene promotion standards 1–2 on pages 91–94 and Vector control standards 1–3 on pages 111–116).
 10. **Case fatality rates:** The acceptable CFRs for communicable diseases vary according to the general context, accessibility to health services and the quality and rapidity of case management. In general, aim to reduce CFRs to as low as possible. If CFRs exceed the minimum expected levels, an immediate evaluation of control measures should be undertaken and corrective steps followed to ensure CFRs are maintained at acceptable levels.

2.2. Essential health services – child health

During emergencies, children are especially vulnerable to increased rates of morbidity and mortality. Addressing their specific health needs requires child-focused interventions. Child health interventions must include those that address the major causes of excess morbidity and mortality, including acute respiratory infections, diarrhoea, measles, malnutrition and neonatal causes.

Essential health services – child health standard 1: Prevention of vaccine-preventable diseases

Children aged 6 months to 15 years have immunity against measles and access to routine Expanded Programme on Immunization (EPI) services once the situation is stabilised.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Make an estimation of measles vaccination coverage of children aged 9 months to 15 years at the outset of the disaster response, to determine the risk of outbreaks (see guidance note 1).
- ▶ When measles vaccination coverage is <90 per cent or unknown, conduct a mass measles vaccination campaign for children aged 6 months to 15 years, including the administration of Vitamin A to children aged 6–59 months (see guidance notes 1–2).
- ▶ Ensure that all infants vaccinated between 6–9 months of age receive another dose of measles vaccine upon reaching 9 months (see guidance note 3).
- ▶ For mobile or displaced populations, establish an ongoing system to ensure that at least 95 per cent of newcomers to a camp or community aged between 6 months and 15 years receive vaccination against measles.
- ▶ Re-establish the EPI as soon as conditions permit to routinely immunise children against measles and other vaccine-preventable diseases included in the national schedule (see guidance note 4).

Key indicators (to be read in conjunction with the guidance notes)

- ▶ Upon completion of measles vaccination campaign:
 - at least 95 per cent of children aged 6 months to 15 years have received measles vaccination
 - at least 95 per cent of children aged 6–59 months have received an appropriate dose of Vitamin A.
- ▶ Once routine EPI services have been re-established, at least 90 per cent of children aged 12 months have had three doses of DPT (diphtheria, pertussis and tetanus), which is the proxy indicator for fully immunised children.



Guidance notes

- 1. *Measles vaccination coverage:*** Determine measles vaccination coverage in the affected population through review of immunisation coverage data. Based on this review, determine if routine measles immunisation coverage has been ≥ 90 per cent for the preceding five years and/or if a measles vaccination campaign conducted in the preceding 12 months has reached ≥ 90 per cent of children aged 9 months to 5 years. If measles vaccination coverage is < 90 per cent, unknown or doubts remain regarding the coverage estimates, the campaign should be carried out on the assumption that the coverage is inadequate to prevent outbreaks.
- 2. *Age ranges for measles vaccination:*** Some older children may have escaped both previous measles vaccination campaigns and measles disease. These children remain at risk of measles and can serve as a source of infection for infants and young children who are at higher risk of dying from the disease. This is the reason for the recommendation to vaccinate up to the age of 15 years. In resource-poor settings, it may not be possible to vaccinate all children aged 6 months to 15 years. In these settings, priority should be given to children aged 6–59 months. All children in the target age group should be immunised against measles regardless of their previous immunisation status.
- 3. *Repeat measles vaccination for children aged 6–9 months:*** All children aged 6–9 months who received the measles vaccine should receive an additional dose of measles vaccine upon reaching 9 months of age, with at least one month between the two doses.
- 4. *Re-establishment of the national EPI programme:*** At the same time as the preparation of the mass vaccination campaign against measles, plans should begin to re-establish the EPI programme in coordination with national authorities. The prompt re-establishment of EPI vaccination not only protects children directly against diseases such as measles, diphtheria and pertussis, but has the added value of reducing the risk of respiratory infections.

Essential health services – child health standard 2: Management of newborn and childhood illness

Children have access to priority health services that are designed to address the major causes of newborn and childhood morbidity and mortality.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Design health education messages to encourage the affected population to seek early care for any illness (fever, cough, diarrhea, etc.) in the newborn. In the design of health education messages, consider children who do not have an adult caring for them (see Health systems standard 1, guidance note 3 on page 298).
- ▶ Provide essential newborn care to all newborns according to Integrated Management of Pregnancy and Childbirth (IMPAC) guidelines where possible (see guidance note 1).
- ▶ Provide healthcare to children at first-level health facilities using national protocol, or the IMCI guidelines where implemented, and hospital care for severely ill children (see guidance note 2).
- ▶ Establish a standardised system of emergency assessment and triage at all health facilities providing care to sick children to ensure those with emergency signs receive immediate treatment (see guidance note 3).
- ▶ Ensure that children attending health services are screened for their nutritional status and referred to nutritional services (see Management of acute malnutrition and micronutrient deficiencies standards 1–3 on pages 165–173).
- ▶ Establish an appropriate case management protocol for the treatment of diphtheria and pertussis in situations where the risk of outbreaks of these diseases is high (see guidance note 6).
- ▶ Make available essential medicines for treatment of common childhood illnesses in the appropriate dosages and formulations.

Key indicators (to be read in conjunction with the guidance notes)

- ▶ All children under 5 years old presenting with malaria have received effective anti-malarial treatment within 24 hours of onset of their symptoms (see Essential health services – control of communicable diseases standard 2 on page 314).
- ▶ All children under 5 years of age presenting with diarrhoea have received both oral rehydration salts (ORS) and zinc supplementation (see guidance note 3).



- ▶ All children under 5 years of age presenting with pneumonia have received appropriate antibiotics (see guidance note 5).

Guidance notes

1. **Care of the newborn:** All newborns should ideally receive skilled care at birth (preferably in a health facility), be kept warm and receive early and exclusive breastfeeding. All newborns should be assessed for any problems, particularly feeding difficulties. All sick newborns should be assessed for possible sepsis and local infections.
2. **Integrated Management of Childhood Illness (IMCI):** IMCI is an integrated approach to child health that focuses on the care of children under 5 at primary-care level. Where IMCI has been developed in a country, and clinical guidelines adapted, these guidelines should preferably be incorporated into the standardised protocols, and health professionals trained appropriately.
3. **Triage:** IMCI and referral care guidelines can be enhanced when used in combination with rapid triage and treatment. Triage is the sorting of patients into priority groups according to their medical need, the resources available and their chances of survival. Clinical staff involved in the care of sick children should be trained using Emergency Triage, Assessment and Treatment (ETAT) guidelines to conduct rapid assessments.
4. **Management of diarrhoea:** Children with diarrhoea must be treated with low osmolality ORS and receive zinc supplementation. Low osmolality ORS shortens the duration of the diarrhoeal episode and reduces the need for intravenous fluid.
5. **Management of pneumonia:** Children with a cough should be assessed for fast and/or difficult breathing and chest indrawing. Those with fast and/or difficult breathing should receive an appropriate oral antibiotic; those with chest indrawing should be referred to hospital.
6. **Pertussis or diphtheria outbreaks:** Pertussis outbreaks are common in settings of population displacement. A vaccination campaign in response to a pertussis outbreak is usually avoided due to concerns about adverse events among older recipients of whole-cell DPT vaccine. However an outbreak can be used to address routine immunisation gaps. Case management includes antibiotic treatment of cases and early prophylactic treatment of contacts in households where there is an infant or a pregnant woman. Diphtheria outbreaks are less common but always a threat in populations with low diphtheria immunity in crowded settings. Mass vaccination campaigns with three separate doses of vaccine have been conducted in camp settings in response to diphtheria outbreaks. Case management includes the administration of both antitoxin and antibiotics.

2.3. Essential health services – sexual and reproductive health

All individuals, including those living in disaster-affected areas, have the right to reproductive health (RH). To exercise this right, affected populations must have access to comprehensive RH information and services to make free and informed choices. Quality RH services must be based on the needs of the affected population. They must respect the religious beliefs, ethical values and cultural backgrounds of the community, while conforming to universally recognised international human rights standards.

Essential health services – sexual and reproductive health standard 1: Reproductive health

People have access to the priority reproductive health services of the Minimum Initial Service Package (MISP) at the onset of an emergency and comprehensive RH as the situation stabilises.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Identify a lead RH agency within the health sector or cluster to facilitate the coordination and implementation of the MISP and ensure that an RH officer (nominated by lead RH agency) is in place and functioning within the health sector or cluster (see guidance note 1).
- ▶ Implement measures to reduce the risk of sexual violence, in coordination with other relevant sectors or clusters (see guidance note 3).
- ▶ Ensure services for clinical management of sexual violence, including access to mental health and psychosocial support and legal assistance (see guidance note 3 and Protection Principle 2, guidance note 7 on page 37).
- ▶ Establish the minimum set of HIV prevention, treatment, care and support services to reduce the transmission of HIV (see Essential health services – sexual and reproductive health standard 2 on page 328).
- ▶ Ensure that emergency obstetric and newborn care services are made available and accessible including:
 - at health centres – skilled birth attendants and supplies for normal births and basic management of emergency obstetric and newborn complications; basic emergency obstetric care (BEmOC) and newborn care



- at referral hospitals – skilled medical staff and supplies for comprehensive management of obstetric and newborn complications; comprehensive emergency obstetric care (CEmOC) and newborn care
- a communication and transportation system to manage obstetric and newborn emergencies is established and functioning 24 hours a day, seven days a week from the community to the health centre and between the health centre and referral hospital

(see guidance note 4).

- ▶ Provide clean delivery kits to visibly pregnant women and birth attendants for clean home deliveries when access to a skilled health provider and health facility is not possible (see guidance note 4).
- ▶ Inform populations about the benefits and availability of clinical services for survivors of sexual violence and the emergency referral system for complications of pregnancy and childbirth (see guidance notes 3–4).
- ▶ Ensure that common contraceptive methods are available to meet demand (see guidance note 2).
- ▶ Plan to implement comprehensive RH services, integrated into primary healthcare, as soon as possible (see guidance note 1).

Key indicators (to be read in conjunction with the guidance notes)

- ▶ All health facilities have trained staff, sufficient supplies and equipment for clinical management of rape survivor services based on national or WHO protocols.
- ▶ All pregnant women in their third trimester have received clean delivery kits.
- ▶ There are at least four health facilities with BEmOC and newborn care/500,000 population.
- ▶ There is at least one health facility with CEmOC and newborn care/500,000 population.
- ▶ The proportion of deliveries by caesarean section is not less than 5 per cent or more than 15 per cent (see guidance note 4).

Guidance notes

1. **Minimum Initial Service Package:** The MISP defines those services that are most important for preventing RH-related morbidity and mortality among women, men and adolescents in disaster settings. It comprises a coordinated set of priority RH services that must be implemented simultaneously to prevent and manage the consequences of sexual violence, reduce the transmission of HIV, prevent excess maternal and newborn morbidity and mortality,

and begin planning for comprehensive RH services as soon as the situation stabilises. Planning for the integration of good-quality comprehensive RH activities into primary healthcare at the onset of an emergency is essential to ensuring a continuum of care. Comprehensive RH care involves upgrading existing services, adding missing services and enhancing service quality.

2. **RH supplies:** Supplies for the MISP must be ordered, distributed and stored to avoid delay in getting these essential products to the population. The Inter-agency Emergency Health Kit includes a limited quantity of medicines for patient post-exposure prophylaxis, magnesium sulphate and instruments and medicines for midwifery care, but not all supplies required for the MISP. The Interagency Reproductive Health Kits, developed by the Interagency Working Group on RH in crises, contain medicines and supplies for a three-month period.
3. **Sexual violence:** All actors in disaster response must be aware of the risk of sexual violence including sexual exploitation and abuse by humanitarians, and must work to prevent and respond to it. Aggregate information on reported incidents must be safely and ethically compiled and shared to inform prevention and response efforts. Incidence of sexual violence should be monitored. Measures for assisting survivors must be in place in all primary-level health facilities and include skilled staff to provide clinical management that encompasses emergency contraception, post-exposure prophylaxis to prevent HIV, presumptive treatment of sexually transmitted infections (STIs), wound care, tetanus prevention and hepatitis B prevention. The use of emergency contraception is a personal choice that can only be made by the women themselves. Women should be offered unbiased counselling so as to reach an informed decision. Survivors of sexual violence should be supported to seek and be referred for clinical care and have access to mental health and psychosocial support.

At the survivor's request, protection staff should provide protection and legal support. All examination and treatment should be done only with informed consent of the survivor. Confidentiality is essential at all stages (see Health systems standard 5, guidance note 4 on page 307 and Protection Principle 1, guidance notes 7–12 on page 35).

4. **Emergency obstetric and newborn care:** Approximately 4 per cent of the disaster-affected population will be pregnant women. Approximately 15 per cent of all pregnant women will experience an unpredictable obstetric complication during pregnancy or at the time of delivery that will require emergency obstetric care and 5–15 per cent of all deliveries will require surgery, such as caesarean section. In order to prevent maternal and newborn mortality and morbidity resulting from complications, skilled birth attendance at all births, BEmOC and neonatal resuscitation should be avail-



able at all primary healthcare facilities. BEmOC functions include parenteral antibiotics, parenteral uterotonic drugs (oxytocin), parenteral anticonvulsant drugs (magnesium sulfate), manual removal of retained products of conception using appropriate technology, manual removal of placenta, assisted vaginal delivery (vacuum or forceps delivery) and maternal and newborn resuscitation. CEmOC functions include all of the interventions in BEmOC as well as surgery under general anaesthesia (caesarean delivery, laparotomy) and rational and safe blood transfusion.

The referral system should ensure that women or newborns are referred and have the means to travel to and from a primary healthcare facility with BEmOC and newborn care, and to a hospital with CEmOC and newborn care services.

Essential health services – sexual and reproductive health standard 2: HIV and AIDS

People have access to the minimum set of HIV prevention, treatment, care and support services during disasters.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Establish standard precautions and safe procedures for waste disposal within all healthcare settings (see guidance note 2 and Health systems standard 1, guidance notes 10–11 on pages 299–300).
- ▶ Establish and follow safe blood supply and rational use of blood transfusion (see guidance note 2 and Health systems standard 1, guidance note 5 on page 298).
- ▶ Establish access to good-quality free male and female condoms, including information on proper condom use.
- ▶ Ensure that health facilities provide syndromic management to all patients presenting with symptoms of a sexually transmitted infection.
- ▶ Ensure that post-exposure prophylaxis (PEP) services are provided to individuals within 72 hours of the incident of potential exposure to HIV (see guidance note 3).
- ▶ Provide information in accessible formats and education on HIV prevention to both the general public and high-risk groups (e.g. sex workers).
- ▶ Ensure prevention of mother-to-child transmission (PMTCT) of HIV by ensuring access to contraceptives, clean and safe child deliveries (including

emergency obstetric care) and provision of anti-retroviral (ARV) drugs (see guidance note 4).

- ▶ Provide treatment, care and support for infants born from mothers known to be HIV positive, including guidance and counselling on infant feeding (see Infant and young child feeding standard 2 on page 160).
- ▶ Ensure that people living with HIV (PLHIV) receive healthcare including co-trimoxazole prophylaxis for HIV-related infections.
- ▶ Ensure that people who were previously on anti-retroviral therapy (ART) continue to receive treatment (see guidance note 4).
- ▶ Establish links between HIV and tuberculosis programmes where they exist.
- ▶ Ensure that people at higher risk of exposure to HIV have access to HIV prevention interventions for sexual transmission of HIV and access to clean injecting equipment for known injecting drug users where these services already exist.
- ▶ Initiate plans to broaden the range of HIV control services in the post-disaster phase (see guidance note 1).

Key indicators (to be read in conjunction with the guidance notes)

- ▶ People most at risk of exposure to HIV are targeted with a HIV prevention programme.
- ▶ Pregnant women known to be HIV positive have received ARV drugs for PMTCT.
- ▶ 100 per cent of transfused blood is screened for transfusion-transmissible infections including HIV.
- ▶ Individuals potentially exposed to HIV (occupational exposure in healthcare settings and non-occupational exposure) have received PEP within 72 hours of an incident.
- ▶ All primary healthcare facilities have antimicrobials to provide syndromic management to patients presenting with symptoms of an STI.

Guidance notes

1. **HIV control:** The minimum set of HIV prevention, treatment, care and support described in the key actions for this standard is comprised of actions that the health sector must take to prevent HIV transmission and to provide care and support to PLHIV. They should be implemented during the early stages of any disaster response.



2. **Prevention of HIV transmission in healthcare settings:** The prevention of transmission of HIV in healthcare settings (e.g. hospitals, health-care clinics, vaccination campaigns) is a priority during the early stages of disaster response. Essential actions are ensuring the application of standard precautions, establishing safe and rational blood transfusion practices and the correct disposal of healthcare waste (see Health systems standard 1, guidance notes 5, 10–11 on pages 298–300).
3. **Post-exposure prophylaxis:** PEP to prevent HIV infection includes counselling, HIV exposure risk assessment, informed consent, assessment of the source and provision of ARV medicines. However, PEP should not be provided to a person who is known to be HIV positive; counselling and testing should never be mandatory nor should the provision of PEP be delayed while waiting for the test results.
4. **Anti-retroviral drugs:** The provision of ARV for PMTCT, PEP and long-term ART in disaster situations is feasible. Continuation of ART for those already on treatment prior to the disaster must be considered a priority during disaster response. Pregnant women already taking ART should continue taking ARV without interruption. Pregnant women known to be HIV positive should receive ARV for PMTCT according to the national protocol where possible.

Note

Caritas Internationalis and its Members do not promote the use of, or distribute any form of, artificial birth control.

2.4. Essential health services – injury

Injury is usually the major cause of excess mortality and morbidity following acute-onset natural disasters such as earthquakes. Many acute-onset natural disasters are mass casualty events, meaning more people are made patients than the locally available resources can manage using routine procedures. Injury due to physical violence is also associated with complex emergencies. During armed conflict for example, most trauma-related deaths occur in insecure regions away from health facilities and therefore cannot usually be prevented by medical care. Interventions that aim to protect the civilian population are required to prevent these deaths (see Protection Principle 3, guidance notes 1–5 on pages 38–39).

Essential health services – injury standard 1: Injury care

People have access to effective injury care during disasters to prevent avoidable morbidity, mortality and disability.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Ensure that local health workers and those coordinating the health-sector response are familiar with mass casualty management (see guidance note 1).
- ▶ In mass casualty events, establish a standardised system of triage with clear guidance on assessment, prioritisation, basic resuscitation and referral (see guidance note 1).
- ▶ Ensure essential principles and skills for provision of first aid and basic resuscitation are widely understood by health workers (see guidance note 2).
- ▶ Ensure that local health workers are familiar with core principles of wound management (see guidance note 3).
- ▶ Provide a tetanus vaccine that contains toxoid to those with dirty wounds and to those involved in rescue or clean-up operations (see guidance note 4).
- ▶ Establish standardised protocols for the referral of injured patients for advanced care, including surgery and post-operative care (see guidance note 5).
- ▶ Ensure that definitive trauma and surgical services and post-trauma and post-surgical rehabilitation are established only by agencies with appropriate expertise and resources (see guidance note 5).



- ▶ Ensure standard assistive devices and mobility aids (e.g. wheelchairs, crutches) are available for injured patients and persons with disabilities as soon as practical and that these aids can be repaired locally (see guidance note 6).

Key indicator (to be read in conjunction with the guidance notes)

- ▶ All health facilities have trained staff and systems for the management of multiple casualties.

Guidance notes

1. **Triage:** Triage is the process of categorising patients according to the severity of their injuries or illness, and prioritising treatment according to the availability of resources and the patients' chances of survival. In mass casualty events, those with severe, life-threatening injuries may receive a lower priority than those with more survivable injuries. There is no standardised system of triage and several are in use throughout the world. The most common classification uses the four-colour code system: red signals high priority, yellow for medium priority, green is used for ambulatory patients and black for deceased.
2. **First aid and basic medical care:** Critical procedures include restoring and maintaining breathing which may require clearing and protecting the airway, along with controlling bleeding and administering intravenous fluids when required. These procedures may help to stabilise individuals with life-threatening injuries before transfer to a referral centre and greatly increase their chances of survival, even for severe injuries. Other non-operative procedures are equally vital, such as cleaning and dressing wounds and administering antibiotics and tetanus prophylaxis.
3. **Wound management:** In most disasters, many patients will present for care more than six hours after injury. Delayed presentation greatly increases the risk of wound infection and preventable excess mortality. It is, therefore, critical that local healthcare workers are familiarised with appropriate principles and protocols to prevent and manage wound infection, which include delayed primary closure and wound toilet and surgical removal of foreign material and dead tissue.
4. **Tetanus:** In sudden-onset natural disasters where there are usually a large number of injuries and trauma cases, risk of tetanus can be relatively high. While mass tetanus immunisation is not recommended, tetanus toxoid-containing vaccine (DT or Td – diphtheria and tetanus vaccines – or DPT, depending on age and vaccination history) is recommended for those with dirty wounds and for those involved in rescue or clean-up operations that put them at risk. Individuals with dirty wounds who have not previously been

vaccinated against tetanus should receive a dose of tetanus immune globulin (TIG), if available.

5. **Trauma and surgical care:** Trauma surgical care and war surgery save lives and long-term disability and require specific training and resources that few agencies possess. Inappropriate or inadequate surgery may do more harm than doing nothing. Moreover, surgery provided without any immediate rehabilitation can result in a complete failure in restoring functional capacities of the patient. Only organisations and professionals with the relevant expertise should, therefore, establish these services that save lives and prevent disability.
6. **Post-operative rehabilitation for trauma-related injury:** Early rehabilitation can greatly increase survival and enhance the quality of life for injured survivors. Patients requiring assistive devices (such as prostheses and mobility devices) will also need physical rehabilitation. Where available, partnership with community-based rehabilitation programmes can optimise the post-operative care and rehabilitation for injured survivors.

2.5. Essential health services – mental health

Mental health and psychosocial problems occur in all humanitarian settings. The horrors, losses, uncertainties and numerous other stressors associated with conflict and other disasters place people at increased risk of diverse social, behavioural, psychological and psychiatric problems. Mental health and psychosocial support involves multi-sectoral supports (see the ‘intervention pyramid’ diagram below). These supports require coordinated implementation e.g. through a cross-cluster or cross-sectoral working group. The mental health standard below focuses on actions by health actors. Readers should also consult Core Standard 1 on page 55 and Protection Principle 3 on page 38.

Essential health services – mental health standard 1: Mental health

People have access to health services that prevent or reduce mental health problems and associated impaired functioning.

Key actions (to be read in conjunction with the guidance notes)

- ▶ Ensure interventions are developed on the basis of identified needs and resources.



- ▶ Enable community members including marginalised people to strengthen community self-help and social support (see guidance note 1).
- ▶ Ensure that community workers including volunteers and staff at health services offer psychological first aid to people in acute distress after exposure to extreme stressors (see guidance note 2)
- ▶ Ensure that there is at least one staff member at every health facility who manages diverse, severe mental health problems in adults and children (see guidance note 3).
- ▶ Address the safety, basic needs and rights of people with mental health problems in institutions (see guidance note 4).
- ▶ Minimise harm related to alcohol and drugs.
- ▶ As part of early recovery, initiate plans to develop a sustainable community mental health system (see guidance note 5).

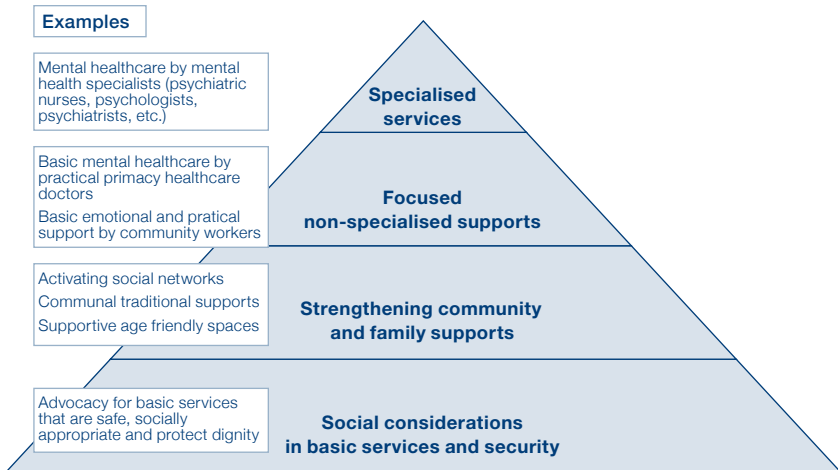
Key indicator (to be read in conjunction with the guidance notes)

- ▶ All health facilities have trained staff and systems for the management of mental health problems.

Guidance notes

1. **Community self-help and social support:** Community self-help and social support form a key element of overall mental health and psychosocial multi-sectoral supports (see diagram below) (see Core Standard 1 on page 55 and Protection Principle 4, guidance notes 9-13 on page 43 and Protection Principle 3, guidance note 15 on page 40). Health agencies often employ or engage community workers and volunteers who can enable community members, including marginalised people, to increase self-help and social support.

Intervention pyramid



Source: Interagency Steering Committee Reference Group on Mental Health and Psychosocial Support, 2010

2. **Psychological first aid:** Acute anxiety after exposure to extreme stressors (e.g. traumatic events) is best managed following the principles of psychological first aid, which is often mistakenly seen as a clinical intervention. Rather, it is a description of a humane, supportive response to a fellow human being who is suffering and who may need support. It entails basic, non-intrusive pragmatic care with a focus on listening but not forcing talk, assessing needs and concerns, ensuring that basic needs are met, encouraging social support from significant others and protecting from further harm. Psychological debriefing (i.e. the promotion of ventilation by encouraging the person to briefly but systematically recount perceptions, thoughts and emotional reactions experienced during a recent, stressful event) is at best ineffective and should not be applied. Similarly, benzodiazepines should be avoided in the management of acute distress because they may interfere with natural recovery.
3. **Basic mental healthcare:** People's mental health problems may be emergency-induced, pre-existing or both. People with severe mental health problems should have access to a network of community-based social supports as well as clinical care through available health services (e.g. general hospitals, primary care clinics, etc.). Organising basic clinical mental healthcare usually involves either organising rapid training and supervision of general health staff or adding a mental health professional to the health clinic. Essential psychotropics and anti-epileptics need to be available. Individuals



who have been receiving mental health treatment before the crisis need to have access to continued treatment.

4. **People in institutions:** Mental hospitals and residential homes for people with severe mental problems need to be visited regularly, especially early in the crisis, because the risk of severe neglect or abuse of people in institutions is extremely high. Safety, basic physical needs (water, food, shelter, sanitation and medical care), human rights surveillance and basic psychiatric and psychosocial care must be provided throughout the crisis.
5. **Early recovery:** Because humanitarian crises increase the rates of a broad range of mental disorders, plans need to be initiated to develop the mental health system to scale up effective mental health treatment coverage across the affected area (see Core Standard 4 on page 65).

2.6. Essential health services – non-communicable diseases

Population ageing and increase in life expectancy have shifted disease profiles from infectious to non-communicable diseases (NCDs) in many countries including low- and middle-income countries. As a result, NCDs are growing in importance as a major public health issue in disaster settings. Increases in health problems due to the exacerbation of existing chronic health conditions have become a common feature of many disasters.

Essential health services – non-communicable diseases standard 1: Non-communicable diseases

People have access to essential therapies to reduce morbidity and mortality due to acute complications or exacerbation of their chronic health condition.

Key actions (to be read in conjunction with the guidance note)

- ▶ Assess and document the prevalence of NCDs and share the data with agencies responding to the disaster (see guidance note 1).
- ▶ Ensure identification of individuals with NCDs who were receiving treatment before the emergency and ensure that they continue to do so. Avoid sudden discontinuation of treatment.

- ▶ Ensure that people with acute complications and exacerbations of NCDs that pose a threat to their life (e.g. heart diseases, severe hypertension) and individuals in pain (e.g. pain due to advanced cancer) receive treatment.
- ▶ In situations where treatments for NCDs are unavailable, establish clear standard operating procedures for referral.
- ▶ Ensure that essential diagnostic equipment, core laboratory tests and medication for the routine, ongoing management of NCDs are available through the primary healthcare system. This medication must be specified on the essential medicines list.
- ▶ Ensure that assistive devices (e.g. walking aids) are available for people with mobility or communication difficulties.

Key indicators (to be read in conjunction with the guidance note)

- ▶ All primary healthcare facilities have clear standard operating procedures for referrals of patients with NCDs to secondary and tertiary care facilities.
- ▶ All primary healthcare facilities have adequate medication for continuation of treatment to individuals with NCDs who were receiving treatment before the emergency.

Guidance note

1. **Non-communicable diseases** include heart disease, stroke, hypertension, chronic renal failure, bronchial asthma, dialysis-dependent chronic renal failure, insulin-dependent diabetes and epilepsy. During emergencies, individuals with chronic medical conditions are particularly vulnerable to exacerbations of their condition or to complications such as secondary infections and are at risk when treatment is interrupted. Clinical stabilisation and maintenance of therapy should be the mainstay of the health-sector response in humanitarian settings.

People with NCDs need long-term medication and follow-up. The routine, ongoing management of NCDs should be available through the primary healthcare system, using medications from the essential medicines list. But it is generally not recommended to introduce new therapeutic regimens or programmes for the management of chronic health conditions during the relief effort especially if the regimen or programme is unlikely to be continued after the emergency phase.



Appendix 1

Health assessment checklist

Preparation

- ▶ Obtain available information on the disaster-affected population.
- ▶ Obtain available maps and aerial photographs.
- ▶ Obtain demographic and health data.

Security and access

- ▶ Determine the existence of the ongoing natural or human-generated hazards.
- ▶ Determine the overall security situation, including the presence of armed forces.
- ▶ Determine the access that humanitarian agencies have to the disaster-affected population.

Demographics and social structure

- ▶ Determine the total size of the disaster-affected population; age and sex breakdown of the population.
- ▶ Identify groups at increased risk, e.g. women, children, older people, persons with disabilities.
- ▶ Determine the average household size and estimates of the number of female- and child-headed households.
- ▶ Determine the existing social structure, including positions of authority and/or influence.

Background health information

- ▶ Identify pre-existing health problems in the disaster-affected area prior to the disaster.

- ▶ Identify pre-existing health problems in the country of origin in refugees (area of origin for internally displaced persons).
- ▶ Identify existing risks to health, e.g. potential epidemic diseases.
- ▶ Identify previous sources of healthcare.
- ▶ Analyse the performance of health system functions.

Mortality rates

- ▶ Calculate the crude mortality rate.
- ▶ Calculate the age-specific mortality rates (e.g. under-5 mortality rate).
- ▶ Calculate cause-specific mortality rates.
- ▶ Calculate proportional mortality rate.

Morbidity rates

- ▶ Determine incidence rates of major diseases that have public health importance.
- ▶ Determine age- and sex-specific incidence rates of major diseases where possible.

Available resources

- ▶ Determine the capacity of the Ministry of Health of the country affected by the disaster.
- ▶ Determine the status of national health facilities, including total number by type of care provided, physical status and access.
- ▶ Determine the numbers and skills of available health staff.
- ▶ Determine the available health budgets and financing mechanism.
- ▶ Determine the capacity and functional status of existing public health programmes, e.g. Extended Programme on Immunization.
- ▶ Determine the availability of standardised protocols, essential medicines, supplies and logistics systems.
- ▶ Determine the status of existing referral systems.
- ▶ Determine the level of environmental health in healthcare facilities.
- ▶ Determine the status of the existing health information system.



Data from other relevant sectors

- ▶ Nutritional status
- ▶ Food and food security
- ▶ Environmental conditions
- ▶ Shelter – quality of shelter
- ▶ Education – health and hygiene education

Appendix 2

Sample weekly surveillance reporting forms

Mortality surveillance form 1*

Site:

Date from Monday: To Sunday:

Total population at beginning of this week:

Births this week: Deaths this week:

Arrivals this week (if applicable): Departures this week:

Total population at end of week: Total under 5 years population:

	0-4 yrs		5+ yrs		Total
	male	female	male	female	
<i>Immediate cause</i>					
Acute lower respiratory infection					
Cholera (suspected)					
Diarrhoea – bloody					
Diarrhoea – watery					
Injury – non-accidental					
Malaria					
Maternal death – direct					
Measles					
Meningitis (suspected)					
Neonatal (0–28 days)					
Other					
Unknown					
<i>Total by age and sex</i>					
Underlying cause					
<i>Underlying cause</i>					
AIDS (suspected)					
Malnutrition					
Maternal death – indirect					
Non-communicable diseases (specify)					
Other					
<i>Total by age and sex</i>					

* This form is used when there are many deaths and therefore more detailed information on individual deaths cannot be collected due to time limitations.

- Other causes of mortality can be added according to context and epidemiological pattern.

- Age can be further disaggregated (0–11 mths, 1–4 yrs, 5–14 yrs, 15–49 yrs, 50–59 yrs, 60–69 yrs, 70–79 yrs, 80+ yrs) as feasible.

- Deaths should not be reported solely from health facilities, but should include reports from site and religious leaders, community workers, women's groups and referral hospitals.

- Whenever possible, case definitions should be put on back of form.



Mortality surveillance form 2*

Site:

Date from Monday: To Sunday:

Total population at beginning of this week:

Births this week: Deaths this week:

Arrivals this week (if applicable): Departures this week:

Total population at end of week: Total under 5 years population:

No	Sex (m, f)	Age (days=d, mths=m, yrs=y)	Direct cause of death													Underlying causes						
			Acute lower respiratory infection	Cholera (suspected)	Diarrhoea – bloody	Diarrhoea – watery	Injury – non-accidental	Malaria	Maternal death – direct	Measles	Meningitis (suspected)	Neonatal (0–28 days)	Non-communicable dis. (specify)	Other (specify)	Unknown	AIDS (suspected)	Malnutrition	Maternal death – indirect	Other (specify)	Date (dd/mm/yy)	Location in site (e.g. block no.)	Died in hospital or at home
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						

* This form is used when there is enough time to record data on individual deaths; it allows analysis by age, outbreak investigation by location and facility utilisation rates.

- Frequency of reporting (i.e. daily or weekly) depends upon the number of deaths.
- Other causes of death can be added as fits the situation.
- Deaths should not be reported solely from site health facilities, but should include reports from site and religious leaders, community workers, women’s groups and referral hospitals.
- Whenever possible, case definitions should be put on back of form.

Sample weekly EWARN reporting form*

* This form is used in the acute phase of the emergency when the risk of epidemic-prone diseases is high

Date from Monday: To Sunday:

Town/Village/Settlement/Camp:

Province: District: Subdistrict:

Site name: . . . • Inpatient • Outpatient • Health centre • Mobile clinic

Supporting agency(ies): Reporting officer & contact number:

Total population: Total under 5 years population:

A. WEEKLY AGGREGATE DATA

New cases of:	MORBIDITY		MORTALITY		Total
	< 5 years	5 years & over	< 5 years	5 years & over	
TOTAL ADMISSIONS					
TOTAL DEATHS					
Acute respiratory infection					
Acute watery diarrhoea					
Acute bloody diarrhoea					
Malaria – suspected/confirmed					
Measles					
Meningitis – suspected					
Acute haemorrhagic fever syndrome					
Acute jaundice syndrome					
Acute flaccid paralysis (AFP)					
Tetanus					
Other fever > 38.5°C					
Injuries/wounds					
Others					
Total					

- More than one diagnosis is possible; the most important should be recorded. Each case should be counted only once.
- Include only those cases that were seen (or deaths that occurred) during the surveillance week.
- Write "0" (zero) if you had no case or death during the week for one of the syndrome listed in the form.
- Deaths should be reported only in the mortality section, NOT in the morbidity section.
- Case definitions for each condition under surveillance should be written on the back on this form.
- Causes of morbidity can be added or subtracted according to the epidemiology and risk assessment of disease.
- The purpose of EWARN surveillance is the early detection of epidemic-prone diseases.
- Data on conditions such as malnutrition should be obtained through surveys (prevalence) rather than surveillance (incidence).

B. OUTBREAK ALERT

At any time you suspect any of the following diseases, please SMS or phone or email with maximum information on time, place and number of cases and deaths:

cholera, shigellosis, measles, polio, typhoid, tetanus, hepatitis A or E, dengue, meningitis, diphtheria, pertussis, haemorrhagic fever

(this list of diseases will vary depending on the disease epidemiology of the country).



Sample routine morbidity surveillance reporting form*

* Morbidity surveillance can be expanded from EWARN after the acute phase to include other diseases and monitoring of other indicators as appropriate

Site:
 Date from Monday: To Sunday:
 Total population at beginning of this week/month:
 Births this week/month: Deaths this week/month:
 Arrivals this week/month (if applicable):
 Departures this week/month:
 Total population at end of week/month: Total under 5 years population:

Morbidity	Under 5 years (new cases)#			5 years and over (new cases)			Total	Repeat
	Male	Female	Total	Male	Female	Total	new cases	Total
Diagnosis*								
Acute respiratory infection**								
Acute watery diarrhoea								
Acute bloody diarrhoea								
Malaria – suspected/confirmed								
Measles								
Meningitis – suspected								
Acute haemorrhagic fever syndrome								
Acute jaundice syndrome								
Acute flaccid paralysis (AFP)								
Tetanus								
Other fever > 38.5°C								
AIDS – suspected ***								
Eye diseases								
Malnutrition ****								
Injuries – accidental								
Injuries – non-accidental								
Sexually transmitted infections								
Genital ulcer disease								
Male urethral discharge								
Vaginal discharge								
Lower abdominal pain								
Skin diseases								
Non-communicable diseases (e.g. diabetes)								
Worms								
Others								
Unknown								
Total								

* More than one diagnosis is possible; causes of morbidity can be added or subtracted according to context and epidemiological pattern.

** Acute respiratory tract infections: in some countries, this category may be divided into upper and lower tract infections.

*** HIV and AIDS prevalence is best assessed through surveys.

**** Malnutrition prevalence is best assessed through rapid surveys (MUAC or weight/height screening) as surveillance only reveals those who come to seek care.

Ages can be further disaggregated as feasible.

OUTBREAK ALERT

At any time you suspect any of the following diseases, please SMS or phone or email.....with maximum information on time, place and number of cases and deaths: cholera, dysentery/shigellosis, measles, AFP, typhoid, tetanus, hepatitis, dengue, meningitis, diphtheria, pertussis, haemorrhagic fever.

Visits to health facility	Under 5 years			5 years and over			Total	
	Male	Female	Total	Male	Female	Total	Male	Female
Total visits								

Utilisation rate: Number of visits per person per year to health facility = total number of visits in 1 week / total population x 52 weeks

- Ages can be further disaggregated (0–11 mths, 1–4 yrs, 5–14 yrs, 15–49 yrs, 50–59 yrs, 60+ yrs) as feasible.

Number of consultations per clinician: Number of total visits (new and repeat) / FTE clinician in health facility/number of days health facility functioning per week.



Appendix 3

Formulas for calculating key health indicators

Crude mortality rate (CMR)

Definition: The rate of death in the entire population, including both women and men, and all ages.

Formula:

$$\frac{\text{Total number of deaths during time period}}{\text{Mid-period population at risk x Number of days in time period}} \times 10,000 \text{ persons} = \frac{\text{Deaths/}}{10,000 \text{ persons/ day}}$$

Under-5 mortality rate (U5MR)

Definition: The rate of death among children below 5 years of age in the population.

Formula:

$$\frac{\text{Total number of deaths in children <5 years during time period}}{\text{Total number of children <5 years x Number of days in time period}} \times 10,000 \text{ persons} = \frac{\text{Deaths/}}{10,000 \text{ children under 5 years/ day}}$$

Incidence rate

Definition: The number of new cases of a disease that occur during a specified period of time in a population at risk of developing the disease.

Formula:

$$\frac{\text{Number of new cases due to specific disease in time period}}{\text{Population at risk of developing disease x Number of months in time period}} \times 1,000 \text{ persons} = \frac{\text{New cases due to specific disease/}}{1,000 \text{ persons/ month}}$$

Case fatality rate (CFR)

Definition: The number of people who die of a disease divided by the number of people who have the disease.

Formula:

$$\frac{\text{Number of people dying from disease during time period}}{\text{People who have the disease during time period}} \times 100 = X\%$$

Health facility utilisation rate

Definition: The number of outpatient visits per person per year. Whenever possible, a distinction should be drawn between new and old visits, and **new** visits should be used to calculate this rate. However, it is often difficult to differentiate between new and old visits, so they are frequently combined as total visits during a disaster.

Formula:

$$\frac{\text{Total number of visits in one week}}{\text{Total population}} \times 52 \text{ weeks} = \frac{\text{Visits/ person/ year}}{\text{person/ year}}$$

Number of consultations per clinician per day

Definition: Average number of total consultations (new and repeat cases) seen by each clinician per day.

Formula:

$$\frac{\text{Total number of consultations in one week}}{\text{Number FTE* clinicians in health facility}} \div \frac{\text{Number of days health facility open per week}}{\text{per week}}$$

* FTE (full-time equivalent) refers to the equivalent number of clinicians working in a health facility. For example, if there are six clinicians working in the outpatient department but two of them work half-time, then the number of FTE clinicians = 4 full-time staff + 2 half-time staff = 5 FTE clinicians.



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