

PART 2: TECHNICAL NOTES

The technical notes are the second of four parts contained in this module. They provide an overview of health assessments and the link with nutrition. The technical notes are intended for people involved in nutrition programme planning and implementation. They provide technical details, highlight challenging areas and provide clear guidance on accepted current practices. Words in italics are defined in the glossary.

Summary

There are strong links between health and nutrition status. *Undernutrition* and infectious diseases are closely linked and reproductive health status impacts the nutritional status of both mothers and children. Nutrition programming in emergencies (prevention, promotion and treatment) is conducted through the health system by a variety of health and nutrition staff.

Given the close links between health and nutrition status and programming, it is essential that staff conducting assessments approach the work from a holistic perspective: nutrition staff should ensure that key health issues are appropriately included/considered in nutrition assessments, while health staff must ensure key nutrition issues are appropriately included/considered in health assessments. Other sectors which influence health and nutrition status will also need to be considered (E.g. *food security*, shelter availability, water supply and sanitation).

These technical notes are based on the following references and the Sphere standard in the box below:

- The Sphere Project (2011). *Humanitarian Charter and Minimum Standards in Humanitarian Response*, Chapters 1,2 and 5, (The Core Standards; Minimum Standards in Water Supply, Sanitation and Hygiene Promotion; and Minimum Standards in Health Action)
- United Nations Inter-agency Standing Committee (UN-IASC) Health, Nutrition and WASH Clusters (2009). *Initial Rapid Assessment (IRA) Tool*. IASC.
- Connolly, M. A. (ed.) (2005). *Communicable disease control in emergencies, a field manual*. Geneva: WHO.
- The Johns Hopkins University & International Federation of Red Cross and Red Crescent Societies (2008). *Public Health Guide for Emergencies*, 2nd edition. Baltimore: The Johns Hopkins University and IFRC.
- IASC Global Health Cluster (2009). *Health Cluster Guide*
- Interagency Working Group (2010). *Interagency Field Manual for Reproductive Health in Humanitarian settings*
- IASC (2006). *Gender Handbook in Emergency Action*
- IASC (2010). *Guidelines for addressing HIV/AIDS in humanitarian settings*
- IASC (2007). *Guidelines on Mental Health and Psychosocial Support in Emergency Settings*

Introduction

In emergency situations the health environment often deteriorates rapidly. An emergency-affected population may be living in overcrowded situations with inadequate shelter and may not have access to adequate food supplies, clean water or sanitation facilities or access to basic preventative and curative health services. In addition, the population may have been subjected to psychological trauma as a direct result of the emergency, while in a conflict situation there will be an increased incidence of physical trauma/injury. The health of an emergency-affected population is impacted by all of these issues and so health assessments and interventions must consider and appropriately address them.

Key messages

1. A variety of health assessments will be undertaken during the various phases of an emergency to assess the health status and the risk for the affected population; the availability and capacity for provision of services; and the health system performance.
2. Assessment is a process not a single activity event. Initial and Rapid Assessments provide the basis for subsequent in depth assessments that deepen understanding from (but do not repeat) earlier assessments.
3. Coordinated multi sector assessment and analysis of an emergency-affected population is essential to identify the health and nutrition status of the population and potential risks and to prioritise programming interventions.
4. Important assessments to make in an emergency include:
 - *Crude Mortality Rate (CMR)* and *Under-Five Mortality Rate (U5MR)* as these are indicators of the overall health status of a population.
 - Morbidity trends in the emergency-affected population, including the main changes in morbidity from the pre-disaster situation, to provide an understanding of the main health risks.
 - Provision of child health care services and reproductive health care (RH). Children's access to basic services for prevention and treatment of infections will have a positive impact on nutritional status while adequate RH services will have a positive impact on both maternal and child health and nutritional status. Furthermore, many of the nutrition interventions will be implemented with/through these services.
5. An *Early Warning And Response System (EWARS)* is rapidly required (may be built around pre-disaster EWARS) to detect selected *epidemic-prone* conditions and implement immediate outbreak control measures as needed.
6. It is important that assessors appropriately consider specific groups vulnerable to health and nutrition problems in an emergency, including those with chronic diseases such as HIV&AIDS, unaccompanied elderly and unaccompanied children.
7. Gender based violence, mental health and psychosocial issues will also impact the nutritional status of infants and young children and should be assessed.
8. Assessors should also consider other gender issues in relation to health when conducting assessments. As soon as possible data should be disaggregated by age and sex. Detailed breakdown may not be possible at the early stage of an emergency, nevertheless it is essential to differentiate the **needs** of adults/children and men/women immediately.
9. Up to date information is required on a continuous basis during the crises to inform decisions on response and monitor the effects of health interventions. The Health Information System (HIS) should be built on the existing system and adapted to the context of the crisis as necessary.
10. In the initial phase of an emergency HIV prevention is addressed through implementation of the Minimal Initial Service Package (MISP) for Reproductive Health. However, after the initial response there is need for reestablishment of core HIV-related services, so an assessment of the needs of the emergency-affected population for HIV treatment, care and support and an assessment of the capacity of existing health services to provide priority services should be conducted.
11. Health assessments are conducted using a variety of qualitative and quantitative methods. The selection and mix of methods used depends on the type of information required.

Sphere Core Minimum Standard 3 – Assessment

The priority needs of all people affected by disaster are identified through a systematic assessment of the context, risks to life with dignity and the capacity of the affected people and relevant authorities to respond.

There are strong links between health and nutrition. The framework of the causes of maternal and child undernutrition and its consequences (See figure 1) is a useful starting point in understanding these links and the need to analyse and address the issues using a multi-sectoral approach, to prevent excess mortality and morbidity and undernutrition in an emergency context.

Nutrition programming in emergencies includes prevention (E.g. micronutrient *supplementation*), promotion (E.g. optimal *Infant and Young Child Feeding (IYCF)* practices) and treatment (E.g. therapeutic care and supplementary feeding) and each of these components is conducted through the health system, at both facility and community level, by a variety of health and nutrition cadres. Nutrition programming can flounder if managers simply add emergency nutrition activities to the regular work load of health staff without considering the existing skills, experience and workload of staff members and developing strategies to support establishment of nutrition interventions.

A variety of health and nutrition assessments will be undertaken during the various phases of an emergency to assess: the health and nutritional status of the population; the potential health and nutritional risks; the availability of and capacity for provision of services; and the health system performance.

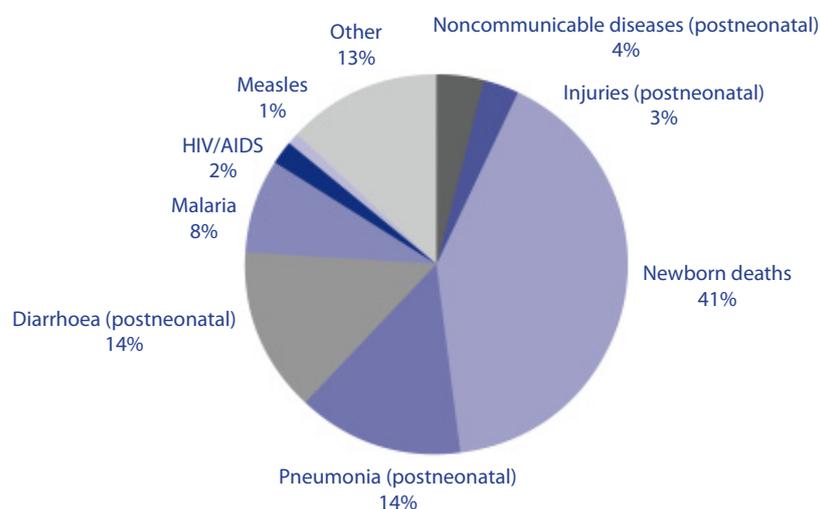
Findings from these various assessments will be used to plan appropriate interventions and monitor their effectiveness.

Given the close links between health and undernutrition and health and nutrition programming it is essential that staff conducting assessments approach the work from a holistic perspective: nutrition staff should ensure that key health issues are appropriately included/considered in nutrition assessments, while health staff must ensure key nutrition issues are appropriately included/considered in health assessments. Other sectors which influence health and nutrition status will also need to be considered (E.g. food security, shelter availability, water supply and sanitation).

The link between undernutrition and health

The World Health Organisation (WHO) estimates that undernutrition contributes to more than one third of all child deaths 0-59 months¹. Leading causes of death in under-five children are pneumonia, diarrhoea and health problems during the first month of life. A child's risk of dying is highest in the neonatal period, the first 28 days of life. About 40% of child deaths under the age of five take place during the neonatal period and safe childbirth and effective neonatal care are essential to prevent these deaths.

Figure 1: Major cause of death in new-borns and children WHO 2008



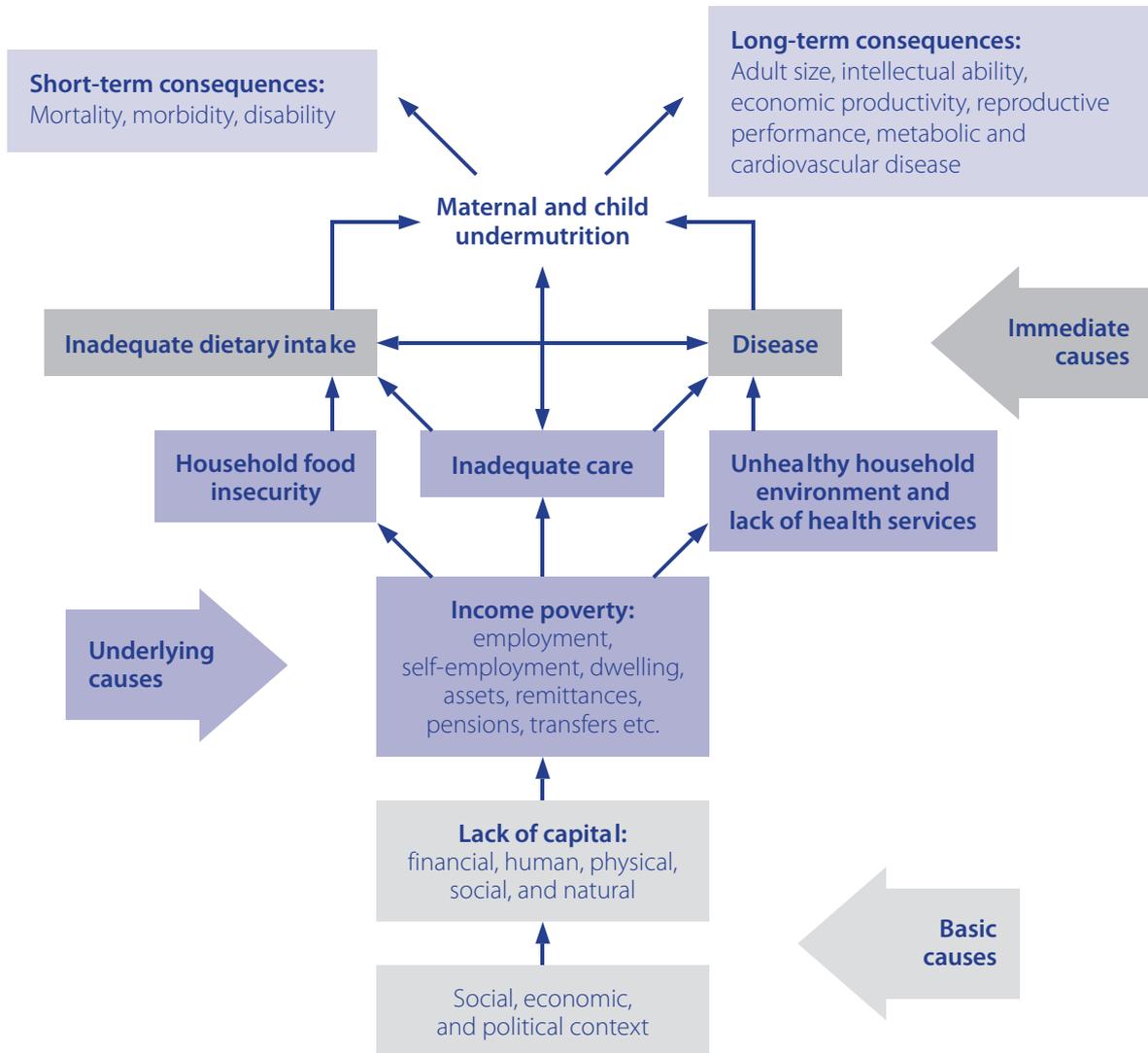
Source: World Health Statistics 2010, WHO

Preterm birth, birth asphyxia (lack of breathing at birth), and infections cause most neonatal deaths. From the end of the neonatal period and through the first five years of life, the main causes of death are pneumonia, diarrhoea, *malaria*. Undernutrition is the underlying contributing factor in over one third of all child deaths 0-59 months, making children more vulnerable to severe disease.

The conceptual framework of the causes of maternal and child undernutrition and its consequences was developed to facilitate greater understanding about the multiple and interrelated causes of undernutrition. It is shown in figure 2 and discussed in detail in Module 15.

¹ WHO World Health Statistics 2010

Figure 2: Framework of the causes of maternal and child undernutrition and its short term consequences



Source: Lancet series on Maternal and Child Undernutrition 2008 – adapted from United Nations Children’s Fund (1997), *Conceptual framework for analysing the causes of malnutrition*, UNICEF, New York.

The framework clearly illustrates the multiple causes of undernutrition at various levels.

The immediate causes of undernutrition are inadequate dietary intake (in terms of quantity and quality) and disease. There is a reciprocal relationship between these two immediate causes and the interplay between the two tends to create a vicious cycle: where a child is undernourished, immunity to infection is compromised, thus the child may fall ill and then undernutrition worsens, leading to further reduction in resistance to illness. Children who enter this undernutrition – infection cycle can quickly fall into a potentially fatal spiral, as the severity and duration of illnesses increases and one condition feeds off the other.

The underlying causes of undernutrition are household food insecurity, inadequate maternal and child care practices; unhealthy household and environment (including water and sanitation) and lack of health services.

The basic causes of undernutrition include the lack of resources and deficiencies in the management of available resources (including financial, human and physical) and these factors are ultimately determined by the larger political, economic and social context.

Emergencies directly impact the basic and underlying causes of undernutrition.

This framework is a useful starting point in understanding the links between health and nutrition and the need for multi-sector assessment and the multi-sector interventions to prevent mortality and morbidity and undernutrition in an emergency context:

- Prevention of undernutrition is as important as treatment of undernutrition – food security interventions will have an impact on the health and nutritional status of a population in both the short and long term.
- Provision of adequate living facilities will go a long way towards preventing outbreaks of measles and *acute respiratory infection* in children, which will subsequently have a positive impact on the nutritional status of the children
- Provision of adequate water and sanitation facilities will significantly contribute to prevention of outbreaks of diarrhoea, which will subsequently have a positive impact on the nutritional status of the children
- Adequate provision of basic health services to treat the major common childhood diseases will also have a positive impact on nutritional status of the children

Case example 1: Inadequate health care in Democratic Republic of Congo: 2006

The volatile security situation in the Democratic Republic of Congo in 2006 caused displacement and food insecurity. In one district, levels of acute malnutrition at the end of 2006 were estimated at 11.3 per cent, with severe acute malnutrition levels at 3.2 per cent. Mortality rates for children under age five were high at 2.07/10,000/day.

Inadequate health care due to a disruption of supplies and services and steep increases in the cost of medicine was seen to be a major cause of the high levels of acute malnutrition. Only 0.9 per cent of children surveyed had proof of having had a measles vaccination, although 50 per cent claimed to have been vaccinated.

Source: World Food Programme, 2006.

Case example 2: Inadequate health care and poor health care practice in Darfur 2004

Following mass population displacement in West Darfur an International NGO established a Community-Based programme for Management of Acute Malnutrition. Significant contributory factors to the high levels of acute malnutrition in children were clearly recognised as being lack of provision of basic child health care services, poor infant and young child feeding and care practices and inadequate quality and quantity of water supply.

Source: Forsythe V personal communication

Major causes of excess morbidity and mortality in emergencies

The major causes of excess morbidity and mortality in emergencies are: *Acute respiratory infections, diarrhoeal diseases, malaria* (Where prevalent), *measles* and *undernutrition*. Other communicable diseases such as meningococcal disease, tuberculosis and typhoid, have also caused large-scale epi-demics among emergency-affected populations. Both trauma and Reproductive Health issues significantly contribute to excess morbidity and mortality in emergencies, while gender based violence (GBV) and its consequences, including HIV, are a concern. Mental health and psychosocial issues also contribute to excess morbidity.

A more extensive list of common diseases in emergencies has been attached (Annex 1).

Because undernutrition and disease are closely linked, there is likely to be an increase in the incidence of infectious diseases, especially among young children and other vulnerable groups, as the general nutritional situation worsens. This illness can subsequently contribute to further deterioration in nutritional status of the population.

Although the above table highlights the major causes of excess morbidity and mortality it should be recognised that **the patterns of morbidity and mortality vary significantly from context to context**. Increased rates of morbidity and mortality due to communicable diseases occur more frequently in association with complex emergencies than with acute onset natural disasters.

Table 1: Major causes of excess morbidity and mortality in emergencies - contributing factors and preventative measures

Disease	Major contributing factors	Preventative measures
Acute respiratory infections	<ul style="list-style-type: none"> Inadequate shelter – crowded with poor ventilation Lack of blankets and clothing Indoor cooking – in living area Undernutrition (Preventative measures listed in last row) 	<ul style="list-style-type: none"> Minimum living space <i>standards</i> and proper shelter Adequate clothing, sufficient blankets
Diarrhoeal diseases	<ul style="list-style-type: none"> Overcrowding Contaminated water and food Poor personal hygiene Poor washing facilities Poor sanitation Lack of soap Undernutrition 	<ul style="list-style-type: none"> Adequate living space Public health education Distribution of soap Good personal and food hygiene Safe water supply and sanitation
Malaria	<ul style="list-style-type: none"> New environment – area with higher endemic levels/strain to which the refugees are not immune Interruption of vector control measures Increased population density Stagnant water Flooding Inadequate health care services Undernutrition 	<ul style="list-style-type: none"> Destruction of mosquito breeding places, larvae and adult mosquitoes by spraying Provision of mosquito nets Drug prophylaxis (E.g., pregnant women and young children according to national protocols)
Measles	<ul style="list-style-type: none"> Overcrowding Measles vaccination coverage below 90% Undernutrition 	<ul style="list-style-type: none"> Minimum living space standards Immunization of children with distribution of Vitamin A –immunization from 6 months up to 15 years (rather than the more usual 5 years) is recommended because of the increased risks from living conditions.
Undernutrition	<ul style="list-style-type: none"> All the above+ Maternal malnutrition Inadequate IYCF Inadequate care practices Food insecurity Inadequate household food distribution Illness/infections 	<ul style="list-style-type: none"> All the above+ Promote optimal maternal care (Including education, health care, micronutrient supplementation and food security) Promote optimal IYCF and care practices Ensure food security (Quality and quantity) Provision of accessible basic health services

Source: Adapted from WHO (2005) *Communicable diseases Control in emergencies, a field manual*

However, while in many complex emergencies communicable diseases and undernutrition are the major causes of morbidity and mortality, in other complex emergencies violent trauma/physical injury is a major cause of morbidity and mortality. Earthquakes can also cause high numbers of physical injuries and consequently deaths.

Reproductive Health

The health and nutritional status of pregnant women will significantly impact the health, wellbeing and nutritional status of infants; and inadequate provision of reproductive health care contributes significantly to excess morbidity in emergencies.

Inadequate diet (Quality and quantity) in pregnancy, lack of micronutrient supplementation, and/or multiple pregnancies (Due to lack of utilisation of, or availability of, appropriate family planning services) will contribute to poor intra-uterine growth, *low birth weight* of a baby and subsequent suboptimal growth and development of a child. Teenage pregnancy will also affect the health of the infant – a baby is much more likely to be born with low birth weight if the mother is in her teens.

Malaria in pregnancy increases the risk of miscarriage and will also contribute to low birth weight of a baby; while inadequate provision of quality antenatal, safe delivery, post natal and new-

born care results in very high rates of maternal, newborn and neonatal deaths (neonatal period 0-28 days).

Gender Based Violence includes sexual violence such as rape, sexual abuse, sexual exploitation and forced prostitution; domestic violence; forced and early marriage; harmful traditional practices (such as female genital mutilation and honour crimes); and trafficking². While sexual violence has been recognised as part of war the nature and extent of GBV varies from context to context and although GBV in emergencies is under-reported, it has been widely documented in many humanitarian settings.

“Approximately 50 000 to 64 000 internally displaced women in Sierra Leone reported experiencing sexual violence at the hands of armed combatants. And half of internally displaced women who had face to face contact with combatants reported experiencing sexual violence.

The majority of Tutsi women in Rwanda’s 1994 genocide were exposed to some form of gender based violence: of those, it is estimated that between 250,000 and 500,000 survived rape.”

Source: Inter-Agency Field Manual on Reproductive Health in Humanitarian Settings 2010

The physical consequences of GBV include unintended pregnancies; unsafe and complicated abortions; adverse pregnancy outcomes, including miscarriage; low birth weight and foetal death; Sexually Transmitted Infections (STIs) including HIV and Urinary Tract Infections (UTIs). The psychological consequences of GBV include anxiety disorders, such as post-traumatic stress disorder, depression, feelings of inferiority, inability to trust, fear, increased substance abuse, sleep disturbance, eating disorders, sexual dysfunction and suicide. GBV also has a major impact on the social health of individuals and the community, in terms of stigma, isolation and rejection (including by husbands and families); loss of women’s potential income, interrupted education of adolescents; and homicide (e.g. honour killings). These consequences (physical, psychological and social health) all impact negatively on the nutritional status of infants and young children.

HIV

A significant proportion of people affected by emergencies are people living with HIV.³ Humanitarian crises, which are often linked to displacement, food insecurity and poverty, increase *vulnerability* to HIV and negatively affect the lives of people living with HIV.

The factors that determine HIV transmission during a humanitarian crisis are complex and depend on the context. Existing gender inequalities may be further exacerbated, making women and children disproportionately more vulnerable to HIV, e.g. sex work and sexual exploitation may increase as a

consequence of loss of livelihood and lack of employment opportunities. Population displacement may lead to separation of family members and breakdown of community cohesion and of the social and sexual norms that regulate behaviour. Women and children may be used by armed groups and may be particularly vulnerable to HIV infection as a result of sexual violence and exploitation, while rape may be used as a weapon of war.

Pre emergency HIV services may be disrupted during humanitarian crises – people may no longer have access to information about HIV prevention, to Voluntary Counselling and Testing (VCT), to condoms or to services for Prevention of Mother to Child Transmission (PMTCT). People living with HIV may suffer due to disruption of services for treatment of opportunistic infections and for *antiretroviral therapy* (ART). Their health is put at risk as nutritional needs are not met and palliative and home based care may be disrupted.

Breakdown in reproductive health services leading to lack of availability of family planning services, antenatal and safe delivery services, and treatment of STIs may also accelerate the spread of HIV in emergencies.

The impact of an emergency on mothers and other carers living with HIV (as above) may impact their ability to provide optimal nutrition and care for the children in their care and subsequently affect the nutritional status of those children.

² Inter-Agency Working Group on Reproductive Health in Crisis (2010) *Field Manual on Reproductive Health in Humanitarian Settings*

³ IASC Guidelines for addressing HIV in Humanitarian Settings 2010

Mental Health

Mental health and psychological problems occur in all humanitarian situations. The horrors, losses and uncertainties the emergency-affected population is exposed to in both conflict-related and natural disasters erode normal protective supports, increase risk of diverse problems and amplify pre-existing problems of social justice and inequality. Natural disasters generally have a disproportionate impact on poor people: e.g. in many flood situations it is the poor who were living in relatively dangerous places who are most seriously affected.

Many people show resilience and have the ability to cope relatively well with the horrors, losses and uncertainties that an emergency brings. It is the numerous interacting social, psychological and biological factors which influence whether people develop problems or exhibit resilience and cope.

IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings (2007) describe mental health and psychosocial problems in emergencies as predominately social or psychological in nature but add that that they are generally interconnected.

Post traumatic mental and psychological stress on a mother may impact her ability to provide optimal nutrition and care for her children and subsequently affects the nutritional status of the children.

Availability and capacity for provision of health services in emergencies

(See module 15 for full discussion on health interventions in emergencies and links to nutrition)

Health care is a critical determinant for survival in a disaster. In many developing countries, the *healthcare system* is unable to deliver affordable, high quality care to all those who need it. Access to good health services is often limited and the capacity to deliver is poor due to a lack of resources and management problems. Frequently, the worst services are found in the poorest, most remote parts of the country. In emergencies, health systems that are already overstretched can be easily overwhelmed and require substantial support or temporary replacement services to meet the needs of the impact of an emergency.

In some emergency situations health facilities may have been destroyed by conflict and/or looting, whereas in other situations, while the physical health facilities may be in existence, there are inadequate numbers of trained health staff in post; staff may be reluctant to come to remote areas and/or may have left the area due to conflict; or existing staff simply cannot cope with the increased workload due to the impact of the emergency.

The role of the health sector/operational health agencies in emergencies is to provide essential health services that effectively reduce health risks.

Essential health services are priority health interventions (Curative, preventative and promotional) that are effective in addressing the major causes of excess morbidity and mortality.

Prioritisation of health services in an emergency requires a clear understanding of the affected community's prior health status, needs, health risks, available resources and capacities. In the initial stages of an emergency – when mortality rates are elevated or there is a risk that they could soon rise, priority interventions must focus on survival needs, including basic medical care. Once survival needs have been adequately met a more comprehensive range of health services should be developed/re-established.

The way health interventions are planned, organised and delivered in response to an emergency can either enhance or undermine the existing health system and its future recovery and development, so implementation of essential services should be carried out in a way that supports and strengthens the health system and does not undermine it.

Sphere outlines the **health systems** requirement in emergencies in line with the WHO health system model with six building blocks/functions:

- Health service delivery,
- Human resources,
- Drugs and Medical supplies,
- Health financing systems,
- Health information management system (HIS),
- Coordination

Priority health interventions will vary according to the context, type of disaster and its impact but should be based on evidence-based practices for public health benefit. The health services should be established at the various levels of the health system – household/community, peripheral health facilities, central health facilities and referral hospital – and should be designed to support existing health systems, structures and providers.

It is essential to ensure that health services address the health need of vulnerable groups and that vulnerable people have equal access to health services.

Agencies have an obligation to train and support health workers. Health professionals and other health workers from the affected population should be integrated into the health service system as/where appropriate. A variety of community level health cadres play an essential role in health and nutrition service provision (both preventative and curative) in developing countries and their role is equally essential in emergency response situations. While community health workers/volunteers and traditional birth attendants provide an invaluable service to the community, they require support and supervision, and this becomes even more critical in an emergency response when they can be central to assisting with basic health provision and preventative activities at community level.

Drug donations should only be accepted if they are on the essential drug list and meet international standards (Quality).

Basic health care should be provided free of charge to disaster-affected populations.

The HIS should be built upon the existing HIS whenever possible, however when the existing system is inadequate a new or parallel system may be developed.

Representatives of the Ministry of Health (MOH) should lead the health sector response whenever possible as Chair or Co-Chair of the Health Cluster (Foot note on health cluster to be inserted).⁴ Where MOH lacks the capacity to plan and lead the response, the Cluster Lead Agency (Usually WHO) should take the lead and support the active engagement of the MOH.

Sphere outlines the **essential health services** in emergencies under the six most important areas:

- Communicable diseases (including outbreaks),
- Child health,
- Sexual and Reproductive health,
- Injuries,
- Mental health and
- Non-communicable diseases.

General principles and guidance on Assessments in humanitarian crises (All sectors)

It is essential that personnel conducting health assessments in emergencies are familiar with Sphere general guidelines on assessments and that health assessments are conducted in close coordination with other humanitarian partners.

The Sphere Project provides general information about assessments in humanitarian crises in *The Core Standards* chapter. The Technical Chapters provide specific technical information related to the technical area. Each Chapter (Core and technical sector) outlines standards, key actions, key indicators and guidance notes⁵.

Sphere Core Minimum Standard 3 – Assessment

The priority needs of all people affected by disaster are identified through a systematic assessment of the context, risks to life with dignity and the capacity of the affected people and relevant authorities to respond.

Sphere Guidance Notes

Sphere guidance notes on assessment outline the following issues:

- The importance of collaborative pooling of available pre-disaster information for initial and rapid assessments. Information on context (E.g. political, social, economic, security, conflict) and population (E.g. culture, education, health, spirituality).
- Assessment is a process not a single event – Initial and Rapid assessments provide the basis for subsequent in-depth assessments that deepen (but do not repeat) earlier assessments. Repeated assessment of sensitive protection concerns such as gender based violence can be more harmful than beneficial to communities and individuals (See Sphere protection section).

⁴ The Cluster Approach was introduced in 2006/2007 as part of the Humanitarian Reform process. The Global Health Cluster (GHC), led by WHO, is mandated to build global capacity in humanitarian response. The country level health cluster should serve as a mechanism for organisations to work together to harmonise efforts and use available resources efficiently for the benefit of the affected population under the guidance of the Health Cluster Coordinator, usually from WHO.

⁵ Sphere Project (2011) Sphere Handbook; *Humanitarian Charter and Minimum Standards in Humanitarian Response*.

TECHNICAL NOTES

- While detailed disaggregation of data is rarely possible initially, never the less it is of critical importance to identify the different needs and rights of children and adults of all ages. At the earliest opportunity, further disaggregate by sex and age: 0-5 male/female, 6-12 male/female, 13-17 male/female; and then in 10 year brackets and by sex.
- Sources of primary information include direct observation, focus group discussion, surveys, discussion with as wide a range of people and groups as possible (E.g. local authorities, male and female community leaders, older men and women, health staff, teachers, traders and other humanitarian agencies). Special efforts are needed to include the old, the housebound and other people/groups less easily assessed but often at risk, such as those with disabilities, children and youth, who may be targeted as child soldiers or subjected to gender based violence.
- Speaking openly may be difficult or dangerous for some people. Children are unlikely to talk in front of adults and in most cases women and girls should be consulted separately to men. Aid workers engaged in collection of information from people who have been abused or violated should have the necessary skills and systems to do so safely and appropriately. In conflict areas information could be misused and place people at further risk and/or compromise an agency's ability to operate. Only with an individual's consent may information about an individual be shared with other agencies.
- While some people may be vulnerable because of individual factors such as age (Old and young), in others vulnerability is more due to social and contextual factors – so it is important to assess factors which contribute to vulnerability such as discrimination and marginalisation (I.e. low status and power of women and girls), social isolation, poverty, ethnicity, religious or political affiliations.
- Assessment information on population movement and numbers should be cross-checked, validated and referenced by as many sources as possible. If multi-sector assessments are not initially possible, pay extra attention to linkages with other individual sectors, protection and cross-cutting assessments.
- There are many assessment checklists available based on agreed humanitarian standards. Use of checklists enhance the coherence and accessibility of data to other agencies, ensure that all key areas have been examined and reduce organisational or individual bias. In some responses a common inter-agency assessment format will have been developed prior to a disaster, or agreed during the response. In all cases, assessment should clarify the objectives and methodology to be used and generate impartial information about the impact of the crisis on those affected.
- A mix of quantitative and qualitative methods appropriate to the context should be used. Assessment teams should, as far as possible, be composed of a mix of women and men, generalists and specialists, including those with skills in the collection of gender-sensitive data and communicating with children. Teams should include people familiar with the language(s) and area who are able to communicate with people in culturally acceptable ways.
- Communities have capacities for coping and recovery – some are sustainable and positive, whilst others may be considered “distressed coping mechanisms” with potentially long term harmful consequences. Assessments should identify the positive strategies that increase resilience as well as the causes of damaging strategies.
- An assessment of the safety and security of disaster-affected and host populations should be carried out in all initial and subsequent assessments, identifying threats of violence and any forms of coercion or denial of subsistence or basic human rights.
- Assessment reports provide invaluable information to other humanitarian agencies and should be shared to increase the transparency of response decisions. Regardless of variations in individual agency design, assessment reports should be clear and concise and enable users to identify priorities for action and allow comparative analysis if required.

Types and approaches to coordinated assessments

In an effort to improve the coordinated assessment process, the IASC approved the establishment of a Needs Assessment Task Force (NATF) in 2009, which has been working on operational guidelines for Coordinated Assessments in Humanitarian Crises. The following section has been taken from the NATF draft guidelines.⁶

Coordinated assessments are those which are planned and carried out in consultation with other humanitarian partners, with the results shared with the wider humanitarian community to judge (and then plan to meet) the needs of the entire disaster affected population. Such assessments may be carried out jointly or by a single agency, but are coordinated with other humanitarian actors to avoid gaps and overlaps and to maximise the usefulness of the assessment results.

⁶ Operational Guidance for Coordinated Assessment NATF draft guidelines 2010 – to be updated and finalised.

Table 2: NATF framework for coordinated assessments

Phase/timeframe	Assessment type	Methodology
Phase 0 Before crises	Joint contingency planning based on cluster contingency plan	Joint contingency planning process (Using secondary data)
Phase 1 First days	Initial assessments resulting in preliminary scenario definition within 3 days	Use of pre crises information, initial reports from the field, media reports, flyovers and satellite imagery, Quick visits and rapid assessments, as feasible, using Key Informant Interview (KII), Observation and Focus Group Discussion (FGD)
Phase 2 First 2 weeks	Multi-cluster rapid assessment: maximum 12 days including report Single agency coordinated rapid assessments	Secondary Data and primary data through purposive sampling using a single data collection form adapted to context
Phase 3 Second 2 weeks	In depth multi-cluster/sector and single cluster/sector assessments Single agency coordinated in depth assessments	Qualitative and quantitative data collection through purposive and representative sampling methods, using harmonized cluster/sector specific tools
Phase 4 Second months+	In-depth multi-cluster/sector and single cluster/sector assessments Single agency coordinated in-depth assessments	Community and/or household surveys, FGD, monitoring systems, individual level data including personally identifiable data triangulation

Many of the challenges of assessment, particularly in relation to large-scale quick onset emergencies, are linked to gaps in coordination. **Recurring problems highlighted repeatedly in Evaluations and After Action Reviews include:**

- Duplication and gaps in assessment – too much data collected from the same people and places in easily accessible areas, whereas remote areas are not visited
- Assessment data is not sufficiently shared and even when it is shared the lack of compatible methodologies and formats make the results difficult to compare and analyse
- The capacity to collate and analyse data and communicate the results is limited so the analysis is incomplete and arrives too late to be useful
- Potentially useful resources (baseline data ect) that were available prior to the disaster are insufficiently used
- Rapid multi sector assessments try to gather too much information about a variety of sectoral and cross cutting issues, causing delays in the data processing and analysis and in the dissemination of the results
- Disincentives to engage in coordinated assessment processes, both because of demands on the time of busy staff and competition between agencies for funding, given the direct link between assessment information and fundraising

- Lack of clarity about who will do what and where during assessment following a disaster event

Joint planning, information sharing and good multi-cluster co-ordination and cooperation are essential in conducting any type of coordinated assessment since all sectors/clusters link and influence each other.

NATF categorises the main types of coordinated assessments in humanitarian crises:

Joint assessments are those in which more than one agency conduct the assessment together, using one agreed methodology. The primary data strategy, collection and analysis are aligned into a single process between all stakeholders involved. This could involve multiple clusters, or a number of agencies within a single cluster. Furthermore, NATF makes a distinction between the initial assessment (First 72 hours), a rapid assessment (First 2 weeks) and the subsequent in-depth assessments.

Single agency assessments can and should also be conducted in a coordinated fashion. Single agencies can conduct their own assessments coordinated with other stakeholders either through harmonisation or by use of a coordinated design, common operational data set and joint planning.

The NATF framework for coordinated assessments outlines the various types of assessment that should be carried out during each of the four phases of an emergency.

Table 3: Different types of health information to be collected during each of the four phases of an emergency (Adapted from GHC and NATF draft guidelines)

Phases	Days	Type of Assessment	Methodologies
One	0-3	Initial Rapid Health Assessment	Secondary data review of pre-crisis info and initial reports, quick visits, KII, FGD (With community and health facility representatives) and Observation.
Two	4-15	Follow up Rapid Health Assessment	Secondary data review, KII, FGD, Observation, Review of Health Facility (HF) information (Staffing profile, number of consultations, morbidity trends and existence/capacity of Early Warning and Response System (EWARS)/Disease Surveillance System (DSS)
Three	15-45	In-Depth Health Assessment, Sub Sector Assessments, surveys and on-going surveillance Depending on context and findings from the initial assessments (Day 0-15) additional assessments and surveys may be conducted (See column four)	HF assessment (Facilities, staffing, services, Quality of Care (QOC) and access) Various surveys/studies using both purposive and representative sampling (Nutrition, Mortality and Morbidity rates, Reproductive Health (RH), Mental Health (MH)). EWARS and DSS to be established from/ strengthen existing pre-crisis systems
Four	45+	As above days (15-45) plus additional special studies/surveys/analysis Depending on context and findings from assessments conducted (Day 0-45) additional assessments, surveys and studies may be conducted (See column four)	As in phase 3 – HF assessment (Facilities, staffing, services, QOC and access) Various surveys/studies using both purposive and representative sampling (Nutrition, Mortality and Morbidity rates, RH, MH), EWARS and DSS Additionally – Special studies/surveys, e.g. Sexual Violence, Safe motherhood, IYCF practices, Knowledge, Attitude and Practices (KAP)/behaviour surveys, Micronutrient surveys; Routine monitoring systems

The table 2 is useful to illustrate the various purposes of assessments in the different phases of an emergency, however it is recognized that in practice the timeframe will vary according to context and that there is not usually a clear separation between the different phases.

Health Assessments in an Emergency

Over the years a wide variety of tools and methodologies have been developed for health assessments in emergencies, incorporating many different types of assessments, focussing on various aspects and objectives, to be conducted over the course of an emergency.

The Cluster Approach was introduced in 2006/2007 as part of the Humanitarian Reform process. The Global Health Cluster (GHC) led by WHO is mandated to build global capacity in humanitarian response by i) providing guidance, tools, standards and policies; ii) establishing systems for rapid deployment of experts; iii) building partnerships to implement and promote the work.

The country level health cluster should serve as a mechanism for organisations to work together to harmonise efforts and use available resources efficiently for the benefit of the affected population, under the guidance of the Health Cluster Coordinator, usually from WHO.

The Health Cluster Guide developed by the GHC⁷ outlines four different phases of an emergency and the various types of information collection and assessment to be undertaken during each phase.

It is important to appreciate the various phases of an emergency and that different data is required at these different phases. However it is also important to recognise that in practice the phases are not so clear cut. The essential issue to understand is that **health information collection/assessment is a process** and that each assessment activity should build on previous assessment activity to provide a deeper understanding of the situation and needs, not replicate previous activity.

The Global Health Cluster has also defined three core areas of health information needs for planning, implementing and monitoring an emergency health response; and suggests some tools and methodologies for collecting/analysing the information in relation to each of the three core areas.

Table 4: GHC – Core areas of health information needs

A) Health Status and Risks	B) Health Resources and Services Availability	C) Health System Performance
Current health status of affected population groups (Major mortality, morbidity and their causes) and risks to health status of population (E.g. potential outbreaks/interruption of services/critical disease control programmes)	Initial focus on facilities, personnel, supplies and services of national health authorities, other national and non-state actors and international partners Later, when initial acute phase is over and especially when promoting recovery, the above and also other health management system components (Management systems, financing etc.)	The coverage and quality (Effectiveness) of the services currently available The access (Physical and temporal) that men, women, boys and girls have to those services and their utilization of them
Initial Rapid Assessment (IRA) Early Warning and Response System (EWARS)	Health Resources Availability and Mapping System (HeRAMS)	Health Information System (HIS) Various surveys and studies
In-depth health & sub-sector assessments of health status and risk, resource and service availability and health system performance including access (would include Nutrition, Mortality, various RH & MH studies, Health Facility and Outreach Capacity, Communicable disease of interest e.g. Malaria, (Including treatment and laboratory capacity), IYCF practice and other infant/community KAP/behaviour surveys, community perceptions of service provision etc.).		

A) Health status – and health risk

The primary goals of humanitarian response in humanitarian crises are to prevent and reduce excess mortality and morbidity and the health status of a population is a key indicator of the severity of the overall situation following an emergency. The IASC NATF has identified Crude Mortality Rate (CMR), Under-five Mortality Rate (U5MR), *Global Acute Malnutrition Rate* (GAM) and Severe Acute Malnutrition (SAM) as Top Level Outcome Indicators for assessing and monitoring an emergency situation.

The major causes of excess mortality and morbidity in emergencies are: *Acute respiratory infections, diarrhoeal diseases, malaria* (Where prevalent) and measles and undernutrition. The interplay between these common illnesses and undernutrition makes it essential that health and nutrition planners and managers consider both.

Other communicable diseases such as cholera, meningococcal disease, tuberculosis, typhoid, have caused large scale epidemics among emergency affected populations and trauma, including gender based violence, is another cause of illness and death in emergencies.

There are multiple links between reproductive health and nutrition. Good reproductive health status and provision of reproductive health services in emergencies will have a positive impact on the health and survival of mothers and the nutritional status of infants.

While the links between mental health and nutrition are not obvious, nevertheless they exist. Mental health illness is likely to impact a mother's ability to provide optimal feeding and caring practices for an infant. Thus it is important for nutrition planners and managers to ensure that RH and MH issues are considered during assessment.

⁷ Health Cluster Guide IASC GHC 2009

TECHNICAL NOTES

People living with HIV may suffer due to disruption of services for treatment of opportunistic infections and for ART. Their health may also be put at risk as nutritional needs are not met and palliative and home based care may be disrupted, so it is important to ensure that their health and nutrition needs are considered during assessment.

Assessing and monitoring mortality and morbidity

Assessing and monitoring mortality and morbidity rates and the main causes of mortality and morbidity in a population is essential to monitor trends in overall health status of population, to plan and implement appropriate interventions (Promotional, preventive and curative services) and subsequently, to monitor the impact of these interventions.

Calculation of deaths CMR and U5MR

This statement in an assessment report is not very helpful: *“We have an emergency here, there have been 44 deaths.”* It could be 44 deaths over the last 3 months, or 44 deaths yesterday. It could be 44 deaths out of a population of 100,000 or it could be out of a population of 100.

Always express deaths as CMR and/or U5MR.

A CMR is the rate of death in the entire population (all causes, both sexes and all ages). A CMR that is double the pre disaster baseline indicates a significant public health emergency. When the baseline is unknown or of doubtful validity, agencies should aim to maintain the CMR at least below 1.0/10,000/day – one death/per 10,000 pop/per day (Sphere Minimum Standards in Health Action chapter).

This is calculated by starting with the total number of deaths in a specific time period, dividing by the total population, multiplying by 10,000 and dividing by the number of days in the time period.

$$\frac{\text{Total number of deaths during time period}}{\text{Total population}} \times \frac{10,000 \text{ people}}{\text{Number of days in time period}}$$

More sensitive than the CMR is the U5MR – the rate of death among children below five years of age (both sexes) in the population. An U5MR double the pre disaster baseline also indicates a significant public health emergency. Again, when the baseline is unknown or of doubtful validity, agencies should aim to maintain the U5MR at least below 2.0/10,000/day (Sphere Minimum Standards in Health Action chapter).

This is calculated by totalling the number of deaths in children below five years of age, dividing by the total number of children below five years of age, multiplying by 10,000 and dividing by the number of days in the time period.

$$\frac{\text{Total number of deaths in children <5 years during time period}}{\text{Total number of children <5 years}} \times \frac{10,000 \text{ people}}{\text{Number of days in time period}}$$

Where the baseline CMR and U5MR are unknown Sphere Baseline Reference Mortality Data by Region may be used (See Annex 2).

Involvement of the local population in mortality calculations is essential as they will be aware of deaths in a community – religious leaders will handle funerals and community leaders may keep a registration of deaths.

Mortality

The (CMR) and Under-5 Mortality (U5MR) are the most useful indicators to assess and monitor the severity of an emergency situation and the general health status of the population. In an emergency scenario CMR and U5MR are expressed per day.

It is preferable to express the data as a rate, rather than a simple number since this aids comparisons between areas and over time. However, in the early stages of disasters (particularly rapid onset disasters), when population and other data is not available/unreliable it may be necessary to estimate the population figure.

Mortality data from MOH and other health facilities should be monitored, however it is important to appreciate that most deaths are happening in the community rather than at a health facility.

Counting graves is another way of measuring mortality, for example, in a new camp for displaced persons or refugees. This may be done as part of an initial assessment and also part of assessing the situation long-term, such as in Case example 3 below.

Case example 3: Mortality estimates from grave counting Somalia: 2006

Six months after the massive arrival of displaced persons at Hoddur, Somalia, 5900 graves were counted for a population of 28,000. This meant that in six months, 19 per cent of the initial population (28,000) had died, which corresponded to a CMR of 11.5. (5,900 divided by 28,000, multiplied by 10,000 divided by 183 days). The high CMR signalled the seriousness of the emergency.

Source: Médecins Sans Frontières (2006) *Rapid health assessment of refugee or displaced populations*, MSF, Paris.

Case example 4: Retrospective mortality data: Sudan 2004

WHO and the Sudan Ministry of Health carried out a retrospective mortality study in Darfur in 2004 and reported the CMR to be 1.5 deaths per 10,000 people per day in North Darfur and 2.9 per 10,000 people in West Darfur. Such high rates were a cause for concern. The mortality rate for children <5 years of age was reported to be: 2.5/10,000/day in North Darfur and 3.1 in West Darfur.

Source: World Health Organization (2004), *Retrospective Mortality Survey Among the Internally Displaced Population, Greater Darfur, Sudan*, WHO, Geneva.

Retrospective mortality surveys are sometimes conducted in the absence of available mortality data, using a cluster sampling methodology. However these surveys require significant time and human resources (which may not be the best use of resources in earlier stages of an emergency) and if the recall period is long, the validity of the results will be reduced.

Standardized Monitoring and Assessment of Relief and Transitions (SMART) is an inter-agency initiative, which aims to assist agencies to carry out, analyse, interpret, and report on survey findings in a standardized manner while maintaining the reliability of nutrition/health data. Furthermore, it provides a mean for decision-makers to better prioritize programme activities and interventions in the most vulnerable groups.

This initiative was launched in 2002 by a network of organizations and humanitarian practitioners including donors, policy-makers, leading experts in emergency epidemiology and nutrition, food security, early warning systems, and demography.

In brief, the SMART methodology is an improved survey method **based on the two most vital, basic public health indicators for the assessment of severity in humanitarian crisis – namely the nutritional status of children under-five and the mortality rate of the population**. These indicators are useful for prioritizing resources as well as for monitoring the extent to which the relief system is meeting the needs of the population, and thus the overall impact of the relief response.

In order to standardize and simplify the collection of high quality data, a survey manual was collaboratively developed to be used as a tool in conjunction with accompanying analy-

tical software called Emergency Nutrition Assessment (ENA). The manual was designed for use by field staff with limited epidemiological and statistical knowledge. Training materials are also available on the website⁸.

To reiterate, the main goal of SMART is to make the survey process as easy as possible for the field staff and as reliable as possible for the decision-makers. It is recognized as being a critical step in improving worldwide emergency assessment.

Interpreting mortality data

Where the CMR and/or U5MR are raised it is important to determine the main causes of excess mortality so it is necessary to also calculate cause-specific mortality rates. It is also essential to disaggregate CMR&U5MR by sex and age. Are there disproportionate deaths (generally and cause specific) among women, girls, boys, and/or men? And is so what are the reasons?

While assessing CMR and U5MR and monitoring trends in the CMR and U5MR is essential, it is important to recognise that in many situations these are “late indicators” as conditions need to be bad for CMR and U5MR to increase to double the pre-crisis baseline. While some sudden onset disasters, such as earthquakes, are likely to have high mortality rates immediately, in other situations it may take a while for the impact of the consequences of the disaster (Such as displacement, overcrowding in camps, inadequate food, shelter, health services, water and sanitation facilities) to affect mortality rates.

While mortality is a late indicator, it is nevertheless important to include it in an initial assessment and to interpret the findings in relation to other data, such as measles vaccination rate, *food availability*, and the water and sanitation situation.

⁸ www.smartindicators.org

Practical challenges in assessing mortality rates

There are a number of practical challenges when assessing the mortality rates in emergencies. Firstly, it is necessary to know the total population to calculate the denominator. However, emergencies often result in displacement and we do not have an exact population figure, in which case it will be necessary to estimate a population figure. Secondly, deaths may be under-reported – refugees and displaced people may not want to report a death in the family as they want to continue receiving the food ration – or they may be exaggerated in efforts to attempt to receive more assistance. It is therefore very important to triangulate mortality data, using a variety of sources.

Sphere provides two templates for mortality surveillance

(Sphere Minimum Standards in Health Action Chapter, Appendix 2). See Annex 4.

Form 1: **Summary of numbers of death** by cause, age and sex classification. Sphere emphasises that deaths should not be reported solely from health facilities, but should include reports from site managers, religious leaders, community workers, women's groups and referral hospitals.

Form 2: **Data recorded for each individual death**. This form should be used when there is time to record data on individual deaths. This allows for greater analysis by location/facility utilisation etc. As with Form 1 deaths should not be reported solely from health facilities, but should include reports from site managers, religious leaders, community workers, women's groups and referral hospitals.

Morbidity

It is essential to determine the number of cases/incidence rates of the main causes of morbidity in the population and the main changes in morbidity from the pre disaster situation. Where possible (and as soon as possible) data on incidence rates of major diseases should be disaggregated by age and sex.

Information on morbidity of the population may be obtained from discussion with community leaders and health workers as well as from audit of health facility consultation records.

When in existence, information on morbidity may be obtained from a functional DSS/EWARS. In a crisis situation a very responsive system is required to rapidly detect selected epidemic-prone conditions and implement immediate outbreak control measures when needed. An EWARS is needed with weekly routine reporting and immediate reports of specified critical conditions by regular health facilities and all health and medical relief teams. In the early stages of a humanitarian crisis EWARS should be built around existing pre-disaster DSS. Specific expertise should be mobilised, usually through WHO, to establish and support implementation of the EWARS as soon as possible after the onset of an emergency. Numbers of children presenting with SAM may be included as one of the selected

conditions to monitor, however it is essential that a clear case definition of SAM is agreed and understood by the responsible clinicians, otherwise the information is not standardised and will lead to confusion and inaccuracy in reporting. SAM is defined by low *weight-for-height* (WFH) and/or low *Mid-Upper Arm Circumference* (MUAC)⁹ and/or the presence of bilateral pitting oedema. Cut off points for anthropometric measurements for the diagnosis of SAM are WFH <-3 z-score or MUAC <11.5cm.

The GHC EWARS software tool and a Health Information and Nutrition Tracking System software tool developed by WHO and used to capture and analyse the data generated by EWARS, may be obtained from the GHC website Tools Section.

Sphere provides a sample template for routine morbidity reporting and a sample template for EWARS (See Sphere Minimum Standards in Health Action Appendix 2). See Annex 4.

Assessing Health Risks

In addition to the health status it will be important to identify/ assess and monitor health risks to the population including:

- a) Pre-existing health problems in the disaster-affected population prior to the disaster – in country of origin for refugees and area of origin for Internally Displaced Persons (IDPs).
- b) Current existing risks to health of the disaster-affected population including:
 - Risk of potential outbreaks due to the consequences of the disaster – e.g. inadequate water supply and sanitation facilities and inadequate quality/quantity of food ration, poor planning of camp design/shelter,
 - Gaps in health service delivery
 - Gaps in communicable diseases control programmes (See next section)
 - Risk of sexual violence
 - Poor infant and young child feeding and care practices
 - Micronutrient deficiencies

⁹ Refer to HTP Module 6: Measuring Malnutrition, for measurements (weight, height/length and MUAC) and WFH index

Case example 5: Lugufu refugee camp, Tanzania – Challenges of assessing mortality rates

Following an influx of newly arrived refugees to an established camp in Tanzania in 1999 the CMR and U5MR increased significantly in the camp. However as these rates did not exceed Sphere benchmarks (CMR <1 death per 10,000 per day and U5MR <2 deaths per 10,000 per day) the situation was not defined as an acute emergency.

As this had been an on-going emergency pre influx CMR and U5MRs rates were known. When a retrospective study was conducted six months into the influx it compared data during the influx against the pre influx period (i.e. pre disaster baseline). This showed that the CMR and U5MR had more than doubled during the influx (2.4 and 2.7 respectively) and so the situation should have been considered an acute emergency and had warranted investigation and intervention much earlier.

The fundamental concept for the designation of an emergency phase of a complex emergency is not the magnitude of the mortality but an increase in the non-emergency baseline rate that is serious enough to require immediate action. This case example illustrates this and shows that the application of standards must be viewed within the context of each specific situation.

Source: Tally L. Speigel P. Girgis M. (2001), *An Investigation of increasing mortality among Congolese refugees in Lugufu refugee camp Tanzania, May-June 1999*: Journal of Refugee studies, Vol. 14, No 4.

Diarrhoea is one of the major causes of excess morbidity in emergencies and severe diarrhoea in a child will quickly affect nutritional status. Therefore to prevent undernutrition it is essential to assess the living conditions, water supply, sanitation facilities, and hygiene practices of a disaster affected population and to plan for provision of appropriate facilities/services and health promotion activities in line with best international practice (As per Sphere guidelines).

Measles is a serious communicable disease in any situation however it is of particular importance in emergencies and has significant links with undernutrition. Children with measles lose their appetite and many also suffer from diarrhoea, therefore vulnerability to undernutrition will increase. At the same time undernourished children who are not vaccinated are more vulnerable to measles. In situations where the health system was weak pre-disaster it is likely that childhood immunisation coverage is low, thus there is a serious risk of measles outbreak, which will subsequently impact on negatively on the nutritional status of children. It is therefore critical to assess the measles vaccination coverage rate of the disaster-affected population and also the capacity of the health system (Next section) to implement an appropriate measles vaccination campaign and/or routine services as appropriate.

Initial Rapid Assessment (IRA) tool¹⁰

An IRA tool has been developed collaboratively by the Health, Nutrition and Water, Sanitation and Hygiene (WASH) clusters. The tool includes an Aid Memoire, an Assessment Form, a Guide and a Data Entry and Analysis Tool. The final version IRA developed in 2009 has an eleven page assessment form with six sections:

- Population description Size, type (i.e. displaced or refugee), movement, vulnerable groups etc.)
- Shelter and essential non-food items,
- Water supply,
- Sanitation and hygiene,
- Food security and nutrition,

- Health risks and health status
- Health facility outreach assessment

The IRA Aid Memoire recommends that the IRA be initiated as soon as possible after the onset of a new sudden onset crisis (Within 72 hours/maximum 1 week), and that the whole process, including analysis and preparation of the report, is completed within 1-3 weeks. However, it is recognised that in most situations it is unlikely to be feasible to complete the whole assessment form (IRA 2009 version) comprehensively during an initial rapid assessment and certainly not if trying to complete the initial assessment within 72 hours as per NATF guidelines (Draft). Nevertheless, the IRA is a very useful template and assessors should aim to consider the **key issues from each of the six sections in the initial assessment** and gather all of the information on the IRA assessment form during initial and follow up rapid assessment(s).

¹⁰ See www.who.globalhealthcluster.org/tools section

Case example 6: Lack of comprehensive public health assessment in Darfur 2004

Following mass population displacement in Darfur an International Non-Governmental Organisation (INGO) sent a team to assess the situation in one of the states in May 2004. The team spent a month in the state, discussing the situation and potential responses with UN agencies and other INGOs. The INGO then initiated a Non Food Item (NFI) distribution in part of the north of the state in June/July 2004.

By July, high levels of malnutrition and mortality were being reported and projected by agencies around the main town¹¹. To address the situation the INGOs worked with the MOH and UN agencies to divide up the state geographically and target a spectrum of services including NFIs, health, nutrition and general food distribution.

The INGO established a Community-Based programme for Management of Acute Malnutrition (CMAM) in a number of IDP camps around the town. The INGO then conducted a rapid general assessment in part of the north of the state and on the basis of this assessment expanded CMAM service to this area. A specific nutrition assessment was not conducted at this stage and although basic health services were not available in this area the INGO did not establish basic health services.

During a project review 9 months after the initial intervention, staff members highlighted the fact that lack of provision of basic child health care services, poor infant and young child feeding and care practices, and inadequate quality and quantity of water supply were major contributory factors to the high levels of acute malnutrition in children.

While provision of adequate quantity and quality water was being addressed, poor IYCF and care practice and lack of provision of basic child health care services were not being addressed/supported in the north of the state where the INGO was implementing CMAM services.

The project review showed very good results in terms of beneficiary default and cure rates; however the appropriateness of the intervention, particularly in the north of the state, was questioned.

While there were certainly cases of acute malnutrition presenting for treatment, the overall GAM and SAM levels were not as high as predicted and a vertical nutrition programme in the absence of a wider health intervention made it impossible to address the underlying health problems.

“We are running a nutrition project when there are wider health problems which need to be addressed to reduce morbidity generally and to prevent acute malnutrition” (Staff member).

Recognising this as a major problem the INGO began to provide limited basic health care services informally alongside nutrition services. A comprehensive public health assessment of the area was commissioned and based on this the INGO established a wider Primary Health Care (PHC) programme to address reproductive, maternal and child health and nutrition holistically. This experience helped to change organizational policy on the need to view nutrition in emergencies within the context of the wider public health context.

Source: Forsythe V personal communication.

In addition to problems with coordination (See page 16), other common errors during initial rapid assessments include:

- The assessment team lacks the expertise needed.
- The estimated size of the target population – the critical denominator – is unreliable.
- The survey *sample* does not accurately represent the affected population.
- The assessment report does not consider the affected population's perceived needs.
- Causes of death are incorrectly attributed to the disaster even for slow-onset disasters, such as drought and famine.
- Assessment reports are not written up.¹²

After the floods in Pakistan in 2010 a Multi Cluster Rapid Assessment was conducted. MUAC was included in the health section of this assessment, however as the staff conducting the assessment had not been adequately trained to accurately measure MUAC, the results were inaccurate and unusable. (Personal Comment Edith Cheung UNICEF).

¹¹ MSF/EpiCentre had conducted a survey in several camps in and around the main town and reported a GAM of 25%. Additionally WHO released mortality figures that indicated emergency level following a survey carried out in May/June 04.

¹² John Hopkins and Red Cross/ Red Crescent (2008), Public Health Guide for emergencies.

Implementation of IRA in Haiti

Following the earthquake in Haiti in January 2010 a Multi-Agency Initial Rapid Assessment was conducted using the IRA (2009 version) as the template.

Reports of the process of implementation of the IRA in Haiti have revealed a number of challenges including:

- Many of the staff used to carry out the assessment did not have the necessary experience or appropriate technical background(s) to conduct the task.
- The IRA tool (2009 version) was not appropriately adapted, was too long, and the activity was conducted more as a survey rather than as a rapid assessment.
- Although the assessment provided a massive amount of information, it was difficult to interpret and use operationally.
- Difficulties with data entry and analysis resulted in the late release of findings with some of the information being out of date and not relevant by the time the report was released.

Some of the reported advantages of use of the IRA in Haiti include:

- It provided solid evidence of the vulnerability of the elderly as a group and the report was used as tool to successfully advocate for resources to address their priority needs.
- It helped bring about a process of strong collaboration between the various sectors and partners

Sources: Challenges – Report of Global Health Cluster Meeting Geneva June 2010, www.who.int/hac/global_health_cluster/events/en/index.html;
Advantages - Ververs, M. personal communication.

Lack of appropriate experience of staff conducting an IRA following the earthquake in Haiti has also been identified as a problem (Report of Global Health Cluster Meeting Geneva 2010, www.who.int/hac/global_health_cluster/events/en/index.html).

Use of the IRA facilitating much greater interagency collaboration and coordination was also reported by NGOs following the post-election violence in Kenya in 2008.¹³

Guidelines and principles for conducting an initial rapid health assessment

Planning and coordination – It is essential that an IRA is planned and conducted in coordinated fashion. The geographical area for assessment and the assessment format to be used should be agreed with the key partner agencies/health cluster lead agency (See next section for tools).

The need for planning and coordination of assessments

In a conflict area of Sri Lanka, which had become accessible, a sign was found outside a house, which read: *We have eight people living here, five children, we have three blankets, two buckets and we want no more questions!*

Source: Lloyd, A., personal communication

Gender and skills mix of team – Assessment teams should if possible be composed of a mix of male /female assessors, ideally with a mix of skills, generalists/specialists, including members with ability to collect gender-sensitive information and to communicate with children. Teams should include people familiar with the area, the people and the language. Where the team does not speak the language of the population then it is essential to have translators; again a mix of male/female translators is required.

Activity prior to site visit – There are several important activities to be conducted prior to travelling to an area to conduct an assessment.

- Collect and rapidly review available secondary data on the area to be visited (including pre-crisis situation and current in-crisis situation).
- Ensure team has thorough briefing on how the assessment will be undertaken and how reports should be written up
- At district level interview local government and line ministry staff, international and national agencies already in the area to find out more about i) the conditions before the crisis – including how services were organised ii) the extent to which services have been affected and the most affected areas, iii) main impact of the crisis, and iv) relief activities underway or planned

¹³ Merlin report (2010) *Workshop to improve effective NGO participation in humanitarian coordination mechanisms*, Nairobi.

Working with translators is challenging. Prior to the assessment it will be necessary to thoroughly brief translators on objectives of the assessment, on the methodology to be used and on key health and nutrition terminologies.

Selecting sites to visit – In most cases it will be necessary to choose a small number of sites to visit in the available time. Selection of sites to visit should be made that will enable the team **to understand the situation in the affected area as a whole**. From secondary data and KII determine if the impact is similar across the whole area and for all population groups. If so, randomly select a number of areas to visit; if not it will be necessary to map out the areas where impacts are believed to be different and to select a number of sites representing the worst affected areas and also some sites representing areas that are less affected.

Use of qualitative and quantitative methods

A mixture of qualitative and quantitative methods should be used during initial assessment.

Qualitative data should be obtained through a variety of methods:

Key Informant Interviews should be held with local authority representatives (Male and female), government staff, various relevant health facility staff, operational agencies, traders, male and female community representatives (Religious leaders, teachers etc.), community organisations etc.

Focus group discussions: select groups in relation to specific issues to be discussed, e.g. mother and carers to discuss child feeding and care practices/health seeking behaviour; patients waiting for consultation at health facilities regarding service availability/access.

Observation of area: transact walks through the area not following roads, or paths, to observe the overall situation/condition. Key points for observation are water collection points, food and non-food distribution points/queues, latrines and washing facilities, health facilities, grave sites.

If possible, also visit a few households (Selection may be random or purposive) to see the situation at household level.

Health facility visits: Observe facilities – physical state of facility, number of staff present, availability of equipment and drugs, queues waiting for treatment.

Quantitative data may be obtained from records held by local authorities/camp managers /community leaders, health facilities.

Disaggregation of data

While detailed breakdown by sex/age may not be possible in the very initial stages of emergency, it is essential to differentiate the needs of adults/children and men and women immediately.

Involvement of the community

It is important to ensure adequate involvement of broad community representatives in the assessment process, ensuring that women are actively involved, as well as including other marginalised and maybe less visible groups, particularly ethnic groups, the disabled or elderly.

Assess the capacity of the community

Communities have different capacities for coping with emergencies. It is important to ensure an assessment identifies existing and potential community support mechanisms and strategies to strengthen these mechanisms.

Analysis of data

At the end of each day of assessment the team should meet to discuss and compare findings:

- Triangulation of information from various sources will minimise bias and error, e.g. do findings from FGD with community leaders validate information provided by health facility staff?
- Analysis of cause and effect should also be conducted; morbidity and mortality data interpreted in light of other findings, e.g. impact of living conditions on Acute Respiratory Infections (ARIs), impact of water supply and sanitation facilities on diarrhoea rates.

Assessment Reports

Clear and concise assessment reports should be prepared by the assessment team on conclusion of the IRA. The report should outline the geographical area covered; objectives and methodology; overall general situation in the area; and key findings and recommendations. All IRA assessment reports (be they single agency or multi agency) should be shared with health cluster partners:

- To increase transparency
- To help build the overall bigger picture of the humanitarian situation in the affected area (Beyond the assessment area)
- To enable humanitarian partners to identify priorities for action

Various health assessments and studies conducted **as an emergency situation progresses** will provide more in depth information on the health status and morbidity of the population.

Assessing vulnerable persons/groups in humanitarian crises (summarised from Sphere guidelines¹⁴)

Being young, or old, a woman or a person with a disability or HIV, does not in itself make a person vulnerable or increase their risk. Rather it is the interplay of social and cultural factors on these issues which contribute to increased vulnerability and risk: an unaccompanied young child is much more vulnerable and at risk than a child in the care of responsible parents; similarly an elderly person in poor health who lives alone and has no income is much more vulnerable, or at risk, than someone of similar age and health status living within an extended family with an income.

A vulnerability/capacity analysis helps ensure that a disaster response supports those who have a right to assistance in a non-discriminatory manner and those who need it most. This requires understanding of the context and how a crisis impacts particular groups in different ways due to pre-existing vulnerabilities (E.g. being very poor or discriminated against); their exposure to various threats (Gender based violence); and disease incidence/prevalence.

Disasters will often make pre-existing inequalities worse and support for people's *coping strategies* and recovery capacities is essential. Access to social, legal, financial and psychosocial support and the various physical, cultural, economic and social barriers faced in accessing these services must be analysed and appropriately addressed.

Actions to ensure the rights and capacities of all vulnerable people are considered include:

- Optimise people's participation, ensure that all representative groups are included, especially those which are less visible (Persons with communication or mobility difficulties, stigmatised youth and other under-represented groups)
- Disaggregate data by sex and age during assessment as an important element in ensuring that the health sector adequately considers the diversity of the population
- Ensure that the right to information on *entitlements* is communicated in a way that is inclusive and accessible to all members of the community.

Gender issues in relation to health in emergencies (Summarised from IASC gender handbook¹⁵)

In a crisis situation, the health of women girls, boys and men is affected differently. Social, cultural and biological factors increase the risks faced by women and girls. Available data suggests a pattern of gender differentiation in terms of exposure to and perceptions of risk, preparedness, response and physical and psychological impact.

Women and girls are often at increased risk of violence and may be unable to access assistance and/or make their needs known. They may be insufficiently included in community consultation and decision-making processes and thus their health needs are not met. Men may have to suffer other disadvantages because of gender differentiation, e.g. men's role as protectors may result in risk taking during and after an emergency.

Health programmes must meet the different needs and address the potential barriers that people may face and ensure that women and men can access services equally. Assessments therefore must include gender analysis.

The IASC Gender guidelines outline a number of Key Actions for conducting assessments to ensure gender equality programming in the health sector, and is a useful tool for assessors to ensure gender issues are appropriately addressed in health assessments:

- Ensure assessment teams include female assessors and translators
- Collect and disaggregate data by sex and age and apply gender analysis
- Find out which groups are hard to reach (Physical and social access) and/or marginalised, and the barriers preventing access
- Identify community response mechanisms to psychosocial problems and strengthen those that can support individuals
- Identify local practices and beliefs about caring for the sick in the community (Including home based care) and if these practices particularly burden women, girls, boys or men
- Map location, capacity and functional status of health facilities and public health programmes, including sex-specific essential services for women and men (E.g. reproductive health services for women and men)

¹⁴ The Sphere Project (2011), *Humanitarian Charter and Minimum Standards in Humanitarian Response*

¹⁵ IASC Gender Handbook 2007

TECHNICAL NOTES

- Identify existing trained health professionals in the community (Keeping in mind they may not be working due to family responsibility) and enable them to return to work, through provision of transport, security, child care, flexible work schedules as needed.
- Compile an inventory of local groups and key stakeholders in the health sector, including gender theme groups (Traditional healers, women's organisations), to find out what is being done where, by whom and for whom
- Assess availability of medical drugs and equipment for the provision of basic health services for women and men
- Ascertain the availability of standardised protocols, guidelines and manuals in line with current international guidance and find out if they include provision for equitable access for women, girls, boys and men to services and benefits. If not apply international standards
- Conduct qualitative assessments to determine perceptions about health services provided to the community and identify recommendations to address their concerns.
- Involve women, girls, boys and men from the outset, including those who belong to vulnerable groups, in health assessments and priority setting, programme design, interventions and evaluations.
- With the community, analyse the impact of the crisis on women, girls, boys and men, to identify physical and mental health needs and ensure equal access to health services
- Provide childcare support to enable women and men – especially those from single parent headed households to participate in meetings.

HIV

In a humanitarian crisis HIV should be viewed as a priority cross-cutting issue and appropriately addressed in all aspects and stages of the response. The IASC HIV guidelines outline nine

areas/sectors which should be actively engaged in HIV activity in a humanitarian crisis¹⁶:

- HIV awareness-raising and community support
- Health
- Protection
- Food security, nutrition and livelihood support
- Education
- Shelter
- Camp coordination and camp management
- Water, sanitation and hygiene
- HIV in the workplace

HIV-related issues should be integrated into all sectoral initial rapid assessments and the needs assessment data should be disaggregated by age and sex. Emergency-specific HIV needs should be assessed to determine which interventions are required, the scale of assistance needed, the priority interventions (And how resources should be allocated).

From the HIV awareness-raising and community support perspective, pre-crisis and existing prevention programmes and community support groups should be identified. These groups should be utilised for dissemination of appropriate messages and materials on prevention of HIV and GBV; availability of services for responding to GBV and provision of HIV treatment and care; and how to access ART.

After the initial assessment and establishment of initial responses the local HIV local situation should be further assessed to enable development of an appropriate expanded prevention and awareness programme (See module 15 for more details).

From a health perspective, implementation of the Minimum Initial Service Package (MISP) for reproductive health in emergencies including reduction of HIV transmission, is a Sphere standard; and *is designed to be implemented without a needs assessment*, since documented evidence already justifies its use.

The MISP, which includes reduction of HIV transmission as a component, outlines actions needed to respond to the priority lifesaving reproductive health need of a population (Including people living with HIV) in the early phase of an emergency.

Continuation of ART for those already on treatment pre-crisis (Including PMTCT) is included in MISP and should be considered a priority intervention and part of the minimum initial response to HIV even in the acute phase of an emergency.

In addition, the MISP includes prevention of excess neonatal and maternal morbidity and mortality, the prevention and clinical management of sexual violence, and coordination and planning activities, as critical minimum actions.

¹⁶ Inter-Agency Standing Committee (2010), *Guidelines for addressing HIV/AIDS in humanitarian settings*; UN, New York

After the initial response is established there is a need for re-establishment of core HIV-related services for the emergency-affected population. An assessment of the needs of the emergency-affected population for HIV treatment, care and support services and an assessment of the capacity of the existing health and social system to provide priority services should be conducted. Core HIV services should then be planned and implemented as soon as possible, taking into account the local context and priorities, the epidemiological profile of the population and the capacity of the sector/system to provide planned interventions/services (See module 15 for more details).

B) Health resources and services available

An assessment/analysis of the health system is required to determine the capacity of the system and to identify major constraints in the delivery of and access to health services.

This encompasses health care at the four different levels of the health care system:

- Household/community level
- Health post
- Health centre
- Hospital

Assessment of service provision will include:

- Number of, and physical status of, functional facilities managed by all providers
- Type of care provided (By sub-sector/component) and access (pre-disaster and current)
- Number and skills of available health staff
- Capacity of, and functional status of, existing public health programmes, e.g. Expanded Programme on Immunisation (EPI), RH, Nutrition
- Availability of supplies and equipment
- QOC – utilisation of standard diagnostic and treatment protocols and availability of key essential drugs in line with protocols for common diseases
- Supervisory system in place (Pre-disaster and current)
- Activity of various humanitarian actors involved in health (Specific focus of activity and geographical area)
- Available health budgets and financing mechanisms.

It will also be important to assess the capacity of the MOH at various levels to adequately support the health response in terms of:

- Technical capacity
- Logistical capacity, and
- Coordination skills

Nutrition programming in emergencies includes prevention (E.g. micronutrient supplementation), promotion (E.g. optimal IYCF practices) and treatment (E.g. therapeutic care and supplementary feeding) and each of these components is conducted through the health system, at both facility and community level, by a variety of health and nutrition cadres.

Thus it is essential for nutrition planners/managers to understand the capacity of the health system and the major constraints to delivery of and access to the health and nutrition services. Equally, it is essential that health assessment teams, planners and managers ensure nutrition staff and nutrition services are adequately considered in health assessments and planning of interventions at facility and community level.

Health Resources Availability Mapping System (HeRAMS) was developed in 2008 in Darfur, Sudan to assess and monitor health sector resource availability and health service provision by both the international and local agencies involved in responding to the humanitarian crisis. Based on this experience, HeRAMS evolved as a generic tool of the Global Health Cluster to be used in countries implementing the cluster approach to assist Health Cluster Coordinators and partners in assessing and monitoring the availability of health resources and the level of health services provided to the population affected by a humanitarian crisis. HeRAMS tool and additional information may be obtained from the GHC website, Tools Section.

HeRAMS is an interactive software-based information system that aims to rapidly capture and process the information at health facility level and community levels and to provide decision makers with timely, relevant, and reliable information about the available health resources and services provided.

HeRAMS encompasses three information areas: a) Health Facility Infrastructure and Mobile Clinics; b) Health Personnel; c) Health Services.

a) Health Facility Infrastructure and Mobile Clinics

This section is designed to collect set information related to the health facility infrastructure, including:

HF Location: precise specification of the location of the HF (static and mobile) to the lowest possible level (i.e. State# Locality# Administrative Unit# Settlement/Village), plus the coordinates of the HF (longitude and latitude)

HF Premises: includes the type of HF in relation to the PHC classifications (i.e. Primary Health Care Unit (PHCU) or Primary Health Care Centres (PHCC), etc.), the status of HF (Whether it is functioning or not), the nature of the HF building (whether it is permanent or a temporary building), the service coverage of the HF (Whether the HF is serving an IDP camp or a settlement, or both), and the inpatient capacity of the HF (Number of beds).

HF Management: indicates the health partners who run the HF, in terms of the main owner and manager of the facility and the supportive partners, if any.

b) Health Personnel

This section is designed to collect information about the health and nutrition staff working in the HF and in the community within the catchment area of the HF.

HF based staff: the medical cadre that run the HF, *such as Medical Officer (MO), Medical Assistant (MA), Nurses, Midwives*, etc.

Community based staff: categorised as voluntary workers (E.g. Village Volunteers) and paid workers (E.g., *Community Health Workers, Village Trained Midwives*)

c) Health Services

This section is designed to collect information in line with the GHC Health Service Check List – which categorises:

- the level of care (community, primary and secondary care)
- the nine sub sectors (General clinical services; Child health; Nutrition; Communicable diseases; STI& HIV/AIDS; Maternal and new born health; Sexual violence; Non-communicable diseases, injuries and mental health; and Environmental health) and
- the specific health service interventions by sub-sector to be implemented at each level of care.

See Annex 3, HeRAMS diagram, outlining levels of care, initial essential service package by sub-sector and health service checklist.

In a country where a health cluster is in situ the intention would be to utilize the HeRAMS system for mapping of health facilities, services and staff. It is the responsibility of the Health Cluster Coordinator (HCC) to lead this process, ensuring appropriately skilled staff members have responsibility for setting up and running the system and ensuring the tool has been contextualised to the specific country context (correct administrative boundary and health facility classifications, and clearly defined classifications of various health cadres).

Health Service and Infrastructure Assessment Guideline and Checklist

Key points to consider in assessment of health services and infrastructure have been outlined in Connelly M, A (editor) *Communicable Disease Control in Emergencies*¹⁷. The following Guideline and Checklist has been adapted from the Field Manual.

Access

- Access by the affected population to local, pre-existing health services (may be affected by finance, geographical distance, cultural or security issues)
- Ability of local health services to absorb the influx of people affected by the emergency

Facilities

Numbers, names and types of health facilities [available in the catchment area](#) e.g. clinics, hospitals, feeding centres and laboratories, and which services are provided at each facility, e.g. reproductive health, surgery, EPI, X-rays, mental health, community health, HIV and AIDS prevention and treatment, nutrition services.

For each facility it will then be necessary to gain understanding of

- Level of support – Ministry of Health or NGOs (May also be supported by religious institutions)
- Level of functioning
- Level of damage (Or rendered non-operational)
- Number of beds including maternity beds – total and occupied currently
- Average number of outpatients seen per day – 6 months ago and current
- Average number of deliveries during 1 week – 6 months ago and current
- Availability of operating theatres
- Numbers, type, size and capacity of health facilities set up for the displaced population if separate (E.g., tent, local material)

¹⁷ WHO, Connelly, M.A (ed.) (2005) *Communicable disease control in emergencies: A Field Manual*; Geneva, WHO

- Adequacy of water supply, vaccine cold chain (Freezers and refrigerators), generators or town electricity, toilets and waste disposal facilities and food for patients or malnourished.

Health personnel

- Per health facility above, types and numbers of health personnel and relevant skills and experience present in the hosting area – 6 months ago and current (Different emergencies will have different implications for staffing: in a refugee situation, there may be qualified staff within the refugee population)
- Health care staff also affected by disasters and thus either partly incapacitated (Family deaths, loss of housing and other assets) or died in the disaster; those in action are often totally exhausted when international agencies arrive to assess and set up programmes
- Health workers present among the displaced population, including traditional healers, traditional midwives/traditional birth attendants, doctors and nurses, laboratory technicians, and water and sanitation engineers
- Availability of interpreters

Drug and vaccine supplies

- Availability of essential drugs and medical supplies, considering the most common diseases seen in disasters
- Availability of the Interagency Emergency Health Kit (IEHK 2006) which contains antibiotics, and other drugs and medical supplies for 10,000 people for approximately 3 months; (Although it may not have enough drugs for chronic diseases)
- Storage and stock record for drugs and other supplies (And check expiry date for drugs)
- Availability of functioning cold chain, essential vaccines and vaccination equipment (E.g., measles vaccines, anti-tetanus sera, tetanus toxoid and injection material)

When visiting health facilities assessors should also observe:

- The general cleanliness of the facility,
- The record-keeping system,
- How patients are assessed and treated,
- Whether standard case definition and protocols are being followed, and
- Whether Integrated Management of Childhood Illness (IMCI) is being used for case management.

Assessors should also explore the system for referral of patients to hospitals and to other community health services and the system for supervision of the health facility.

C) Health system performance

Up to date information is needed on the continuous basis through a crises to inform decisions on response actions and monitor the effects of health interventions.

Information is best gathered through a combination of methods, including

- Regular reports from all health facilities
- Regular reports from a carefully defined selection of health facilities serving as *sentinel sites* for some specific indicators
- Regular community-based reporting
- Periodic and ad-hoc one off surveys

During a crisis a Health Information System (HIS) should be built on an existing HIS, adapting to the context of the crisis as necessary. The Cluster Lead Agency or another cluster partner should take responsibility for monitoring and leading efforts to re-establish an appropriate HIS where needed.

The UN High Commission for Refugees (UNHCR) has developed a HIS system for standardised facility-based disease surveillance in refugee settings and supporting comprehensive data collection across the primary health care system. The key pillars of the HIS system are

- Standards and indicators – minimum data set for routine surveillance and support for data collection across PHC system
- Tools and guidelines – standardized toolkit of data collection and reporting tools and a manual and training materials to support frontline staff to collect and report data
- Management and use of data – simple database software to support data management and promotion of data ownership and use at all levels of health management.

In 2009 this HIS was in use in 85 camps in 17 countries for 1.5 million refugees. The system is now being piloted in a context of IDP and non-camp situations. Software for this HIS system can be accessed via the GHC website, Tools Section (http://www.who.int/hac/global_health_cluster/guide/tools/en/index.html).

Various health assessments and studies conducted **as an emergency situation progresses** will provide more in-depth information on health status and risks for the affected population; health resources and services availability; and health system performance, including:

a) Knowledge, Attitudes and Practice/Behaviour (KAP) Assessment

Following a disaster it will be important to assess community behaviours impacting the health status of the population generally and also in relation to specific population groups and, where required, to introduce appropriate behaviour change strategies.

The huge scale of use of traditional practices (Cutting and burning) for treatment of malnourished children and the subsequent late presentation of these children for conventional treatment was identified through KII with carers during a one day assessment of a camp in North Darfur, Sudan in 2009.

Forsythe V. personal comment

Depending on the concerns identified during the Initial Rapid Assessment about KAP and infant morbidity trends, more in depth assessment of KAP may be required to obtain more detailed information on common KAP and identified problems, to refine programme planning and to obtain baseline data against which changes in KAP may be measured.

Further in-depth assessment of KAP may be carried out, using a variety of qualitative and quantitative methods/tools. The selection and mix of quantitative and qualitative methodologies to be used is dependent on the objective of the study. (Refer to HTP module 19, Working with communities in emergencies, for more details on this subject; also refer to Behaviour Change Communications in Emergencies – a Toolkit, UNICEF: www.unicef.org/ceecis/BCC_full_pdf.)

b) Infant and Young Child Feeding Assessment

IYCF practices should be considered as part of the initial and follow up rapid assessments (Under health risks) to get a picture of the IYCF practices of the population at the very early stages of an emergency.

WHEN AVAILABLE, data on **pre-emergency feeding practices** provides important background information against which to compare changes resulting from the emergency (possible sources include: Demographic and Health Surveys (DHS), UNICEF Multiple Indicator Cluster Surveys (MICS), NGO surveys).

If data on pre-emergency feeding practices is not available then this information should be sought as part of a rapid assessment using KII, and assessors should compare the information obtained from different informants.

Focus on obtaining information on pre-emergency feeding practices on a few key behaviours, e.g.:

- Initiation of breastfeeding: When?
- *Exclusive breastfeeding* (EBF): For how long?; fluids/foods commonly introduced that interfere with EBF in the first 6 months

This should be considered as part of the initial and follow up rapid assessments (Under health risks) to get a picture of major behaviours impacting the health of the population in the early stages of an emergency. This information may be obtained through observation, KII and FGD with mothers, carers, community representatives and health care workers.

- Introduction of semi- and solid (Complementary) foods: when, what, why?
- Percentage of infants not breastfed: 0 up to 6 months; 6 up to 12 months
- *Artificial feeding* 0 up to 6 months: percentage of infants artificially fed

Methods and Sources: KII with health personnel familiar with infant feeding behaviours (Women leaders, etc.).

In terms of the current (emergency) situation it will be important to consider the following issues as part of a rapid assessment:

1. **Population demographics:** note especially if there are large numbers of orphaned/unaccompanied children, an over-representation of female population, single mothers with children or pregnant women in the population.
2. **Reported problems** with feeding (and malnutrition) and recent (post-emergency) **changes** in feeding practices, and how they are being **handled**, e.g.:
 - Breastfeeding (BF) difficulties
 - Problems accessing enough food (Familiar foods, foods suitable as complementary foods, problems with food preparation or feeding) for young children.
3. **Conspicuous availability of *Breast Milk Substitutes* (BMS), bottles, teats, etc.** (Get information on sources, if these have been introduced post-emergency) in commodity pipeline; local purchase/donations; etc.)
4. **Assistance/Resources:** Who is currently providing assistance? Who else is available to provide assistance? Are there any IYCF (or related) programs operating in the area?

Methods and Sources: observation, KII with health personnel and community representatives including women leaders, FDGs with mothers, health personnel working with infants, other relevant groups assisting the community.

It is important that IYCF expertise is used in analysis and to help determine immediate action and next steps, including follow up assessment.

Where appropriate, depending on the concerns raised by the Initial Rapid Assessment about IYCF practices and infant morbidity trends, more in-depth studies on IYCF practices may be required to obtain more detailed information and identify problems, to refine programme planning and to obtain baseline data against which changes in practices may be measured.

The selection and mix of quantitative and qualitative methodologies to be used is dependent on the objective of the study.

Where it is considered appropriate to conduct an IYCF survey, this may be carried out as a standalone activity, or conducted as part of/in conjunction with other relevant health surveys within the community, e.g. nutrition, reproductive health or KAP/Behaviour surveys. A set of standard questions has been developed for use in surveys to calculate globally-agreed IYCF indicators. See the following references for more details: Care USA (2010), IYCF practices collecting and using data – A Step by Step Guide; and USAID, UC Davies, WHO, UNICEF, IFPRI (2008), Indicators for Assessing IYCF practices. Also visit www.ennonline.net/ife for full information and a wide range of resources on Infant Feeding in Emergencies.

c) Reproductive Health Assessment

Reproductive Health should be considered as part of the initial and follow up rapid assessments (under health status and health risk; and health facility and outreach assessment). Assessors should enquire about:

- The total number of births (In the last 7 days) and number of those conducted with a skilled attendant
- Reports of sexual violence (Number of cases in the last 7 days)

- The number (And location) of people requiring MISP RH
- The number (And location) of health care staff providing (or capable of providing) MISP
- RH supply system in existence and the potential to establish one

This information may be obtained through observation, KII and FGD with community representatives, health care workers and women (Of reproductive age).

Various in-depth RH assessments and studies should then be conducted to get a clear picture in terms of RH risks within the population; functional services and available resources to provide services at facility level; existing and potential community support mechanisms.

Specific assessments may be conducted for each aspect/components of RH programming:

- Adolescent Reproductive Health,
- Family Planning,
- Maternal and Newborn Care,
- Comprehensive Abortion Care,
- Gender Based Violence,
- Sexually Transmitted infections
- HIV

Guidelines on conducting RH Assessments are provided in the Inter-Agency field Manual on Reproductive Health in Humanitarian Settings 2010 by the Interagency Working Group on Reproductive Health in Crises.

There are multiple links between RH and nutrition – optimal child spacing, provision of antenatal care including micronutrient supplementation, and optimal nutrition in pregnancy all contribute to the nutritional status of an infant. While optimal IYCF practices, and specifically, early initiation of breastfeeding and exclusive breastfeeding to six months should be promoted during pregnancy and immediately after delivery by RH staff.

Child Health and Nutrition managers should coordinate with RH managers to ensure that appropriate nutrition interventions are incorporated into routine RH services, as well as linking with community groups and other support services to link IYCF and other child care practices with various initiatives/services to support mothers/carers who have been subjected to GBV.

d) Mental Health and Psychosocial Assessment

Mental Health should be considered as part of the initial and follow-up rapid assessments (under health status and health risk; and health facility and outreach assessment). Assessors should look for/enquire about psychological trauma distress and available social support mechanisms. This information may

be obtained through observation, KII and FGD with community representatives and health care workers.

In-depth Mental Health and Psychosocial (MHPS) Assessment(s) should then be conducted to get a clear picture of the current situation in terms of

The links between mental health and nutrition are perhaps not so obvious, nevertheless they do exist. Mental illness is likely to impact an individual's capacity to take care of themselves and their family, while a mother who is suffering from a mental health issue may be unable to provide optimal feeding and caring practices for an infant.

Nutrition planners/managers may be able to work with MHPS providers to link IYCF and other child care practices with various initiatives/services to support mothers/carers who are suffering from mental health and psychosocial issues.

- Mental Health and Psychosocial problems within a population
- Previous and existing community mechanisms to support mental health and psychosocial issues
- Functional services and available resources to provide MHPS services

- Programming needs and opportunities

Guidelines on conducting MHPS Assessments are provided in IASC (2007), MHPS guidelines in emergency settings (http://www.who.int/mental_health/emergencies/guidelines_iasc_mental_health_psychosocial_june_2007.pdf).

Annex 1: Table to demonstrate common diseases that may increase in emergencies. Adapted from UNHCR handbook for emergencies (2000)

The shaded areas are the diseases which are the major killers and are more directly linked to malnutrition so are priorities for assessments.

Disease	Major contributing factors	Preventative measures
<i>Acute respiratory infections</i>	<ul style="list-style-type: none"> Inadequate shelter – crowded with poor ventilation Lack of blankets and clothing Indoor cooking – in living area Undernutrition (Preventative measures listed in last row) 	<ul style="list-style-type: none"> Minimum living space standards and proper shelter Adequate clothing, sufficient blankets
<i>Diarrhoeal diseases</i>	<ul style="list-style-type: none"> Overcrowding Contaminated water and food Poor personal hygiene Poor washing facilities Poor sanitation Lack of soap Undernutrition 	<ul style="list-style-type: none"> Adequate living space Public health education Distribution of soap Good personal and food hygiene Safe water supply and sanitation
<i>Malaria</i>	<ul style="list-style-type: none"> New environment – area with higher endemic levels/strain to which the refugees are not immune Interruption of vector control measures Increased population density Stagnant water Flooding Inadequate health care services Undernutrition 	<ul style="list-style-type: none"> Destruction of mosquito breeding places, larvae and adult mosquitoes by spraying Provision of mosquito nets Drug prophylaxis (E.g., pregnant women and young children according to national protocols)
Measles	<ul style="list-style-type: none"> Overcrowding Measles vaccination coverage below 80% Undernutrition 	<ul style="list-style-type: none"> Minimum living space standards Immunization of children with distribution of Vitamin A –immunization from 6 months up to 15 years (rather than the more usual 5 years) is recommended because of the increased risks from living conditions.
<i>Meningococcal meningitis</i>	<ul style="list-style-type: none"> Overcrowding in areas where disease is endemic (Often has local seasonal pattern) 	<ul style="list-style-type: none"> Minimum living space standards Immunisation only after expert advice when surveys suggest necessity
<i>Tuberculosis</i>	<ul style="list-style-type: none"> Overcrowding Malnutrition High HIV prevalence 	<ul style="list-style-type: none"> Minimum living space standards (But where it is endemic it will remain a problem) Immunisation
<i>Typhoid</i>	<ul style="list-style-type: none"> Overcrowding Poor personal hygiene Contaminated water supply Inadequate sanitation 	<ul style="list-style-type: none"> Minimum living space standards Safe water, proper sanitation Good personal, food and public hygiene and public health education <p><i>WHO does not recommend vaccination as it offers only low, short-term individual protection and little or no protection against the spread of the disease.</i></p>

TECHNICAL NOTES

The shaded areas are the diseases which are the major killers and are more directly linked to malnutrition so are priorities for assessments. (continued)

Disease	Major contributing factors	Preventative measures
<i>Worms especially hookworms</i>	<ul style="list-style-type: none"> • Overcrowding • Poor sanitation 	<ul style="list-style-type: none"> • Minimum living space standards • Proper sanitation • Wearing shoes • Good personal hygiene
<i>Scabies (Skin disease caused by burrowing mites)</i>	<ul style="list-style-type: none"> • Overcrowding • Poor personal hygiene 	<ul style="list-style-type: none"> • Minimum living space standards • Enough water and soap for washing
<i>Xerophthalmia (Vitamin A deficiency)</i>	<ul style="list-style-type: none"> • Inadequate diet • Following acute prolonged infections, measles and diarrhoea 	<ul style="list-style-type: none"> • Adequate dietary intake of vitamin A. If not available, provide vitamin A-fortified food. If this is not possible, provide vitamin A supplements. • Immunisation against measles; systematic prophylaxis for children, every 4 months to 6 months
<i>Anaemia</i>	<ul style="list-style-type: none"> • Malaria, hookworm, poor absorption or insufficient intake of iron and folate 	<ul style="list-style-type: none"> • Prevention/treatment of contributory disease • Correction of diet including food fortification
<i>Tetanus</i>	<ul style="list-style-type: none"> • Injuries to un-immunised population • Poor obstetrical practice causes neonatal tetanus 	<ul style="list-style-type: none"> • Good first aid • Immunisation of pregnant women and subsequent general immunisation within EPI • Training of midwives and clean ligatures scissors, razors, etc.
<i>Hepatitis</i>	<ul style="list-style-type: none"> • Lack of hygiene • Contamination of food and water 	<ul style="list-style-type: none"> • Safe water supply • Effective sanitation • Safe blood transfusions
<i>STIs/HIV</i>	<ul style="list-style-type: none"> • Loss of social organisation • Poor transfusion practices • Lack of information 	<ul style="list-style-type: none"> • Testing for syphilis during pregnancy • Testing of all blood before transfusion • Ensuring adherence to universal precautions • Health education • Availability of condoms • Treating partners

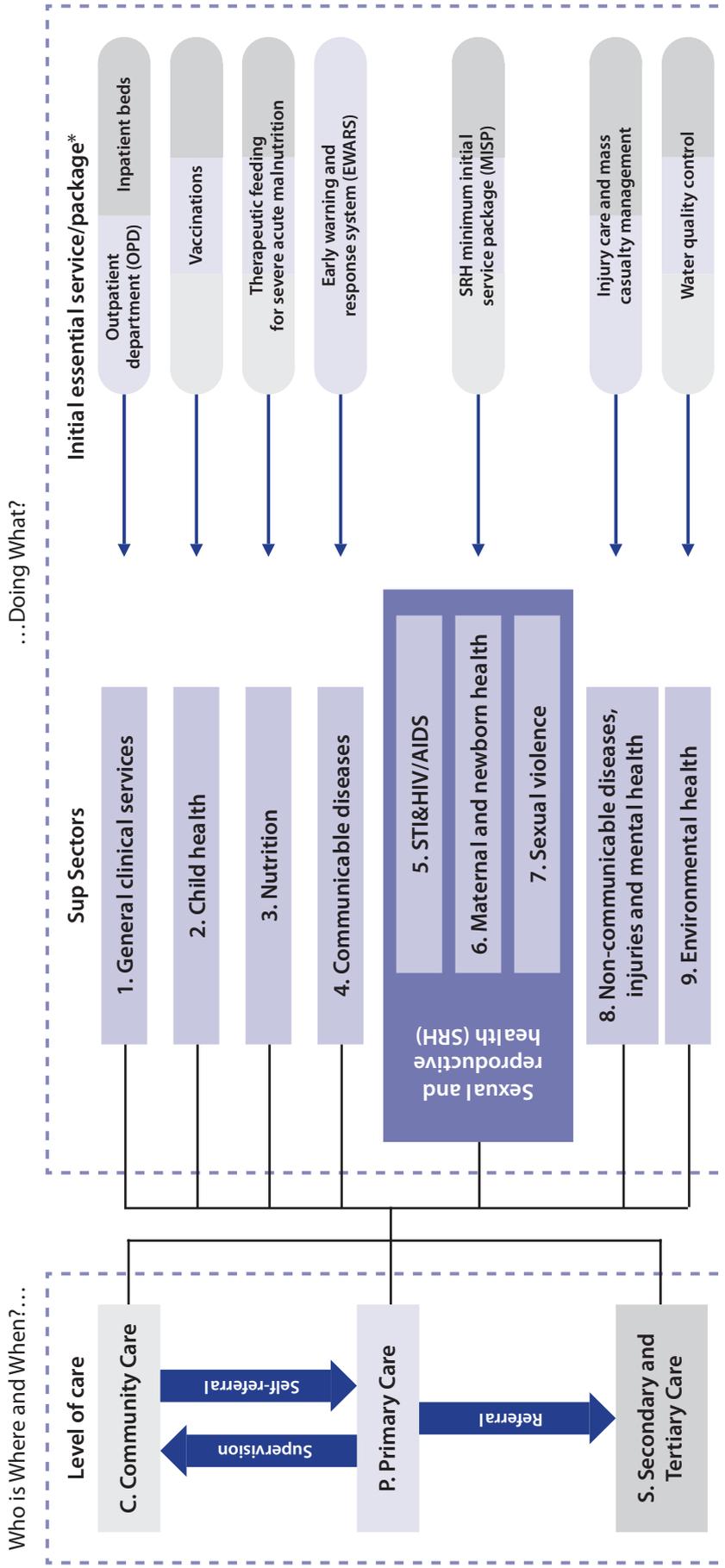
Annex 2: Baseline reference mortality data by region

Region	CMR (deaths/ 10,000/day)	CMR emergency threshold	U5MR (deaths/ 10, 000 U5s/day)	U5MR emergen- cy threshold
Sub-Saharan Africa	0.41	0.80	1.07	2.10
Middle East and North Africa	0.16	0.30	0.27	0.50
South Asia	0.22	0.40	0.46	0.90
East Asia and Pacific	0.19	0.40	0.15	0.30
Latin America and Caribbean	0.16	0.30	0.15	0.30
Central and Eastern European Region/CIS and Baltic States	0.33	0.70	0.14	0.30
Industrialised countries	0.25	0.50	0.03	0.10
Developing countries	0.22	0.40	0.44	0.90
Least developed countries	0.33	0.70	0.82	1.70
World	0.25	0.50	0.40	0.80

Source: UNICEF's *State of the World's Children 2009* (Data from 2007). This table is found in Sphere Health Action chapter (Page 17, version 20/09.2010)

Annex 3: Health resources Availability Mapping System

Health Resources Availability Mapping System (HeRAMS)



What is initial – HeRAMS
 The standard Health Cluster tool to be used during the first days/weeks of an acute crisis for the collection, collation and analysis of health sector information in affected areas, aggregated by administrative level (e.g. district or sub-district) on the number of active health partners; functioning health facilities (By type) and key health staff (Physician, nurse, midwives) as well as on the availability of initial essential health services.

What is HeRAMS
 The standard Health Cluster tool that should be used as soon as possible and throughout the duration of a crisis for the collection, collation and analysis of health sector information for each facility, mobile clinic or site with community-based interventions in order to monitor the availability of resources. There are: key characteristics of the points of delivery (Urban/rural area, IDP refugee camp) and of the facilities (functioning/non functioning, temporary/permanent, active health partner(s), management, other), number of staff (By type) and availability of services as per the list of 62 services (See reverse)

* The indicated initial essential services or packages are intended as the minimum response that has to be present at the beginning of any crisis. The services proposed for child health, nutrition, communicable and non-communicable diseases and environmental health sub-sectors may be changed with other priority service(s) as required by the nature of the crisis and/or the local context for the other sub sectors the recommended services or package should be in place in full before further expansion of the others services of the respective sub sectors.



HEALTH SERVICE CHECK LIST

By level of care, by health sub-sectors, for health facility/mobile clinic/community-based interventions at each point of delivery

		Health sub sectors	Health Services (RH MISP Services in bold)		Y N
C. Community Care	C0	Collection of vital Statistics	C01	Deaths and births	
			C02	Other: e.g. population movements; registry of pregnant women, newborn children	
	C2	Child Health	C21	IMCI community component: IEC of child care taker + active case findings	
			C22	Home based treatment of: Fever/malaria, ARI/pneumonia, dehydration due to actual diarrhoea	
			C23	Community mobilization for and support to mass vaccination campaigns and/or mass drug administration/treatment	
	C3	Nutrition	C31	Screening of acute malnutrition (MUAC)	
			C32	Follow up of children enrolled in supplementary/Therapeutic feeding (Trace defaulters)	
			C33	Community therapeutic care of acute malnutrition	
	C4	Communicable diseases	C41	Vector control (IEC+impregnated nets+in/out door insecticide spraying)	
			C42	Community mobilization for and support to mass vaccinations and/or drug administration/treatment	
			C43	IEC on locally priority diseases (E.g. TB self referral, malaria self referral, others)	
	C5	STI&HIV/AIDS	C51	Community leaders advocacy on STI/HIV	
C52			IEC on prevention of STI/HIV infections and behavioural change communication		
C53			Ensure access to free condoms		
C6	Maternal and newborn health	C61	Clean home delivery, including distribution of clean delivery kits to visibly pregnant women, IEC and behavioural change communication, knowledge of danger signs and where/when to go for help, support breast feeding		
C8	Non communicable diseases, injuries and mental health	C81	Promote self-care, provide basic health care and psychosocial support, identify and refer severe cares for treatment, provide needed follow-up to people discharged by facility-based health and social services for people which chronic health conditions, disabilities and mental health problems.		
C9	Environmental health	C91	IEC on hygiene promotion and water and sanitation, community mobilization for clean up campaigns and/or other sanitation activities		
P. Primary Care	P1	General clinical services	P11	Outpatients services	
			P12	Basic laboratory	
			P13	Short hospitalization capacity (5-10 beds)	
			P14	Referral capacity: Referral procedures, means of communication, transportation	
	P2	Child health	P21	EPI: Routine immunization against all national target diseases and adequate cold chain in place	
			P22	Under 5 clinic conducted by IMCI-trained health staff	
			P23	Screening of under nutrition/malnutrition (Growth monitoring of MUAC of W/H, H/A)	
	P3	Nutrition	P31	Management or moderate acute malnutrition	
			P32	Management of severe acute malnutrition	
	P4	Communicable diseases	P41	Sentinel site of early warning system of epidemic prone diseases,outbreak response (EWARS)	
			P42	Diagnosis and treatment of malaria	
			P43	Diagnosis and treatment of TB	
P44			Other local relevant communicable diseases (E.g. sleeping sickness)		

HEALTH SERVICE CHECK LIST (continued)

Health sub sectors		Health Services (RH MISP Services in bold)		Y	N
P. Primary Care	P5 STI&HIV/AIDS	P51	Syndromic management of sexually transmitted infections		
		P52	Standard precautions: disposable needles and syringes, safety sharp disposal containers, Personal Protective Equipment (PPE), sterilizer, P91		
		P53	Availability of free condoms		
		P54	Prophylaxis and treatment of opportunistic infections		
		P55	HIV counselling and testing		
		P56	Prevention of mother-to-child HIV transmission (PMTCT)		
		P57	Antiretroviral treatment (ART)		
	P6 Maternal and newborn health	P61	Family planning		
		P62	Antenatal care: assess pregnancy, birth and emergency plan, respond to problems (Observed and/or reported), advice/counsel on nutrition and breastfeeding, self care and family planning, preventive treatment(s) as appropriate		
		P63	Skilled care during childbirth for clean and safe normal delivery		
		P64	Essential newborn care:basic newborn resuscitation + warmth (Recommended method: Kangaroo Mother Care – KMC) + eye prophylaxis + clean cord care + early and exclusive breast feeding 24/24&7/7		
		P65	Basic essential obstetric care (BEOC): Parenteral antibiotics + oxytocic/anticonvulsivant drugs + manual removal of placenta + removal of retained product with manual vacuum aspiration (MVA) + assisted vaginal delivery 24/24&7/7		
		P66	Post partum care: Examination of mother and newborn (Up to 6 weeks), respond to observed signs, support breast feeding, promote family planning		
		P67	Comprehensive abortion care: Safe induced abortion for all legal indications, uterine evacuation using MVA or Medical methods, antibiotic prophylaxis, treatment of abortion complications, counselling for abortion and post-abortion contraception		
	P7 Sexual violence	P71	Clinical management of rape survivors (Including psychological support)		
		P72	Emergency contraception		
		P73	Post-exposure prophylaxis (PEP) for STI&HIV Infections		
	P8 Non Communicable diseases, injuries and mental health	P81	Injury care and mass casualty management		
		P82	Hypertension treatment		
		P83	Daibetes treatment		
		P84	Mental health care: support of acute distress and anxiety, front line management of severe and common mental disorders		
	P9 Environmental health	P91	Health facility safe waste disposal and management		
	S. Secondary and Tertiary Care	S1 General clinical services	S11	Inpatients services (Medical, paediatrics and obstetrics and gynaecology wards)	
S12			Emergency and elective surgery		
S13			Laboratory services (Including public health laboratory)		
S14			Blood bank service		
S15			X-ray service		
S2 Child health		S21	Management of children classified with severe/very severe diseases (Parenteral fluids and drugs, O2)		
S6 Mental and newborn health		S61	Comprehensive essential obstetric care: BEOC + caesarean section + safe blood transfusion		
S8 Non communi-cable diseases, injuries and mental health		S81	Disabilities and injuries rehabilitation		
		S82	Outpatient psychiatric care and psychological counseling		
		S83	Acute psychiatric inpatient unit		

Annex 4: Sphere sample forms for mortality and morbidity surveillance and EWARS.**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 the end of week: Total under 5 years population:

	0-4 yrs		5+ yrs		Total
	male	female	male	female	
Immediate cause					
Acute lower resp. 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					
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.

Sample Weekly EWARN Reporting Form*

* This form to be 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: Sub district:

Site name: Inpatient Outpatient Health centre Mobile Clinic

Supporting agency (IES): Reporting officer and contact number:

Total population: Total under 5 years population:

A. Weekly aggregate data

New cases of:	Morbidity		Mortality		Total
	<5 years	5 years <	<5 years	5 years <	
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					
Other					
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.
- Cause 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 condition such as malnutrition should be obtained through surveys (Prevalence) rather than surveillance (Incidence).

TECHNICAL NOTES

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 the end of week/month:..... Total under 5 years population:

Morbidity	Under years <new case			5 years and over <new <total repeat cases			new cases	Total
	Male	Female	Total	Male	Female	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 disease								
Vaginal discharge								
Lower abdominal pain								
Skin disease								
Non-communicable disease (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/AIDS prevalence is best assessed through surveys.
- **** Malnutrition prevalence is best assessed through rapid surveys (MUAC or W/H 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, 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)

Visit 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

– Age 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 consultation per clinician: Number of total visits (New and repeat)/FTE clinician in health facility/number of days health facility function.

