Introduction

This protocol is one of a series which focuses on rapid health assessment in emergencies. It has been prepared to assist WHO personnel support country-level efforts to rapidly assess the immediate and potential health impact of a broad range of emergencies and disasters. The protocols are also intended to serve as possible guidelines for national health personnel who are both interested in and have specific responsibilities for emergency preparedness and response, including epidemic detection and control.

The following protocols have been developed:

Introduction to Rapid Health Assessment *ERO/EPR/90.1.1*

Rapid Health Assessment in Epidemics: First Steps *ERO/EPR/90.1.2*

Rapid Health Assessment in Meningitis Outbreaks *ERO/EPR/90.1.3*

Rapid Health Assessment in Outbreaks of Viral Haemorrhagic Fever, Including Yellow Fever *ERO/EPR/90.1.4*

Rapid Health Assessment in Outbreaks of Acute Diarrhoeal Disease *ERO/EPR/90.1.5*

Rapid Health Assessment in Sudden Impact Natural Disasters *ERO/EPR/90.1.6*

Rapid Health Assessment in Sudden Population Displacements *ERO/EPR/90.1.7*

Rapid Health Assessment in Suspected Famine Situations *ERO/EPR/90.1.8*

Rapid Health Assessment in Chemical Emergencies *ERO/EPR/90.1.9*

They are organized into three sections:.

Section A: Preparedness Checklist

Provides a simple checklist of key questions for WHO and national health personnel to review when assessing the preparedness capacity of the health sector at a national level.

Section B: Rapid Assessment Protocol

Outlines the major principles and steps in rapid assessment of emergencies and disasters, and includes a strong emphasis on preparedness.

Section C: Information Checklist and Telex Requirements

Summarizes the key items of information necessary to collect during a rapid assessment of a potential or actual health emergency. It gives an example of a telex or fax to be transmitted to the regional office and WHO headquarters, which includes key information required at these levels to support national emergency response.

Section A
Preparedness Checklist

These general questions can be adapted for specific types of health emergencies They can also provide a focus for health preparedness activities at regional, district and community levels.

Key Health Preparedness Questions

1	Is there a national health policy regarding emergency preparedness and relief? Is the policy being implemented?	.....
2.	Is there a person within the MOH in charge of promoting, developing and coordinating emergency preparedness and relief activities?	.....
3.	What coordination in emergency preparedness activities exists between the health sector, civil defense and key ministries (such as Ministry of the Interior, Agriculture, etc.)?	... .
4.	What joint activities in emergency preparedness/response are undertaken between the MOH, the U.N. agencies, bilateral organizations and NGO's?	....
5.	Are there operational plans for health response to natural, man made or other emergencies?	.....
6.	Have mass casualty management plans been developed (both prehospital and hospital) at national level as well as for individual hospitals?	..... .
7.	What health/nutrition surveillance measures have been taken for the early detection and response to health emergencies? (High-risk seasons, geographic areas identified, early-warning procedures in place; national reference laboratory established; surveillance system established and working?).	.....
8.	What preparedness steps have been taken by environmental health services to respond to emergencies and disasters?	....
9.	Have facilities/areas been identified/designated as temporary settlements in the event of disasters? What provisions have been made for health care? (include details such as general or special health services, staffing, supplies, water and sanitation etc)	....
10.	What training activities are devoted to emergency preparedness/response in the health sector? (at national, regional and district levels, institutions or organizations involved).	....
11.	What resources are available to facilitate a rapid health response? (Organized communications centre in the MOH, emergency budget, access to transport or emergency medical supplies).	....
12.	Is there some kind of system for updating information on the key human and material resources needed for an emergency health response (e.g., updated inventories of essential drugs, 4 WD vehicles, etc)?	.. ..
13.	What opportunities exist to test the effectiveness of emergency plans through simulation exercises, drills etc?	. ...

Section B
Rapid Assessment Protocol

This rapid assessment protocol is divided into four parts:

1. Assessment Purpose and Background

1.1 Assessment Purpose

The purpose of a rapid health assessment is to:

- assess the magnitude of the displacement.
- assess major health and nutrition needs of the displaced population.
- initiate a health and nutrition surveillance system.
- assess local response capacity and immediate needs.

1.2 Background

Refugees

Refugees who have left their country of origin and crossed into a neighbouring country (termed the "host country"), may either move as a large group over a short period of time, or else move in small groups over a period of months or years. The sudden arrival of large numbers (sometimes hundreds of thousands) in a host country, can create a health emergency.

Refugees may be found in the following situations:

- Scattered in small groups beside a long stretch or border, in many instances living with local villagers of the same ethnic group, or even relatives.
- Massed in a relatively well-defined area near the border.
- Located in transit camps organized by local officials not far from a border;
- Clustered in small groups scattered along the coast of a host country. having fled by boat.
- Grouped together in urban or peri-urban settings.

Internally displaced populations

Internally displaced groups may have moved en masse to a defined area in a neighbouring region after a natural disaster. They may also be widely scattered among the local population, having fled in small groups over a period of time, especially if fleeing armed conflict. Large concentrations may be found in poor, peripheral, and under-served sections of large cities.

2. The Importance of Preparedness

When they occur, cross-border and internal population displacements put additional stress on existing health services. The resulting response by the international community, although often necessary, may also place additional demands on local institutions.

Health officials can however, take preparedness steps which improve their technical response, as well as their organizational capacity to streamline external health assistance when such displacements occur.

2.1 Organizational Preparedness

A rapid health assessment should help decision-makers respond more effectively to the needs of a displaced population. This requires the following measures, which are part of general health emergency preparedness, as well as useful strategies that will improve health response, should a sudden displacement occur.

a) The following health emergency structures should be in place:

- A position integrated within existing structures of the ministry of health with overall authority and accountability for emergency health response
- Formal structures at all levels with clear responsibilities for emergency health action (e.g. emergency committee in the ministry of health)
- A clear chain of command from central to peripheral levels for emergency health management
- Working links at all levels between the MOH and key national relief organizations, WHO, UNICEF, UNHCR, UNDP, WFP, Ngos, bilateral agencies.

b) Contingency plans should be prepared for population displacements

In countries at increased risk of internal or cross-border displacements, simple health contingency plans should be prepared, which detail the administrative and technical responsibilities/procedures for emergency health response.

Administrative aspects of contingency planning

The following administrative actions should be taken in advance to enable a prompt health response to a cross-border or internal displacement:

Compile and update information for improving response

- Establish procedures for regular exchange of information on population movement between health authorities, national relief agencies and international agencies/Ngos so that a prompt alert is signalled.
- Map the location and size of existing displaced groups, and use arrows to show likely movement patterns from one place to another.
- Keep updated, an inventory of Ngos working in health in-country, areas of expertise, and experience in emergency displacements.
- In areas at increased risk of population influxes, have detailed maps showing air fields, access roads, health facilities and major water sources.

Clarify areas of responsibility and accountability

- Clarify who is responsible for emergency health response at each administrative level.
- Determine which agency is responsible for; interagency coordination in the event of a displacement, leading the rapid assessment, clearance/storage/transport of relief items, directing health response, and other critical activities such as providing travel clearances.

Standardise approaches to international health assistance

- Clarify reporting channels/lines of accountability for international agencies and Ngos.
- Develop standard procedures for requesting external health assistance.
- Develop national guidelines for emergency drugs and other health relief items, and circulate these to international assistance agencies to avoid inappropriate donations in emergency displacements.
- Establish standard working procedures for the importation and expedited clearance of health relief items/drugs.

Technical aspects of contingency planning

In population displacements, excess mortality can be prevented with immediate public health measures. Emergency procedures should be built into ongoing health programmes to improve technical response within an existing structure.

- Prepare in advance, a simple mortality/morbidity surveillance form for use in emergency situations - as a complement to ongoing national health surveillance (see 4.1 for an example).
- Develop guidelines and procedures for emergency measles immunization as a complement to ongoing EPI.
- Develop guidelines for rapid nutrition surveillance and selective feeding within ongoing nutrition programmes.
- Prepare guidelines for the use of medicines/drugs in emergency displacements, as part of a national essential drugs programme.

2.2 Preparedness for Rapid Assessment

It is important to take the necessary preparedness steps so that a rapid assessment can in fact be carried out "rapidly".

The actions below must be taken:

- The rapid health assessment should be an integral part of the contingency plans prepared. There should be a clear mechanism for incorporating health assessment findings into decisions on emergency response.
- A team of qualified health personnel should be identified in advance to carry out the assessment.
- Standard forms should be developed for data collection during the rapid assessment.
- There should be access to special assessment equipment (e.g. MUAC tapes, weighing scales, height boards, etc).
- A store of current maps of high-risk areas for population displacement should be maintained, showing road/rail links, air fields, health facilities, location of Ngos.

3. Conducting the Rapid Assessment

The time needed to carry out an initial health assessment of a displaced population will depend on several factors which include; the remoteness of the location, availability of transport, the security situation in the area and the availability of appropriate specialists to do the assessment. It is also affected by the receptiveness of the host country to involve external agencies in health assistance.

In small countries with secure borders, good communications and transport, the assessment might be completed in four days. In other situations, this could take up to two weeks.

Before the field assessment, review any recent information collected and compiled on the displaced group by ministries or relief organizations based in the capital city. Also determine whether there have been any preliminary requests/orders or actual procurement of food, medical, or other relief supplies.

3.1 Assess Health Status

a) Demographic characteristics

In both internally and externally displaced populations, families are often intact, with the exception of young men, who may be actively involved in the armed conflict which the population is fleeing. In many cases, entire villages move as one unit.

Why the information is needed:

- The total population is the denominator for all mortality, injury and morbidity rates which might be estimated at later stages.
- It enables the calculation of relief supplies.
- A breakdown of the population by age and sex enables the targeting of special interventions (e.g. immunization and care for pregnant and lactating women).
- Therefore, it is essential for planning emergency health assistance.

What information to collect:

- Total population size, and ethnic composition
- Age-sex breakdown (e.g. "0-4 years" and "five years and over")
- Identification of at-risk groups, (e.g. children 0-4 years, pregnant and lactating women, female-headed households, single adolescent women, unaccompanied children, disabled and wounded)
- Average family/household size.

Strategies for collecting information:

Review registration records:

- If a camp administrative structure has been established, contact camp authorities for possible information.
- Contact local government officials for possible registration information.

Contact leaders within the displaced groups:

- Community leaders may have records, especially if entire villages have fled.
- In some situations, where political groups and liberation movements have organized an exodus, lists of families may be available.

Walk through the settlement or camp

- This gives a quick visual impression on sanitary conditions and population density.
- It is unwise however to base conclusions about population size/composition on visual impressions alone. Depending on the time of day and/or cultural habits, the population may be different (e.g. people gathering firewood away from the settlement).

Carry out a small survey

- Visit a sample of dwellings (e.g. fifty), starting at a randomly chosen point in the settlement and visiting every fifth or tenth house.
- For all fifty dwellings, record the number of family members, age and sex of each family member, and the number of pregnant/lactating women.
- Estimate the average number of persons per dwelling visited, then the total number of dwellings in the camp/settlement.

- This gives a rough estimate of the population, and the proportion comprising "vulnerable groups".

Establish a system for registering new arrivals

- Record the names of household heads, number of family members by age and sex, former village and region of residence, and ethnic group where applicable.

b) Background health information

Why this information is needed:

This information is essential for the most effective planning of health services for displaced populations. Planners should be aware of traditional beliefs, taboos and practices to avoid mistakes (e.g. inappropriate relief foods, omitting traditional midwives from health worker training programmes).

What information to collect:

- Main health problems in place of origin, and since displacement the emergence of diseases not previously experienced.
- Previous sources of health care (e.g. traditional healers).
- Important health beliefs and traditions (e.g. food beliefs in pregnancy).
- Social organization (e.g. are they grouped in their traditional villages, what types of social/political organization exist?).
- Strength and coverage of public health programmes in place of origin (e.g. immunization).

Strategies for collecting information:

Review documents:

- Obtain documents/reports from the host government (for refugees) and ministry of health/universities (internally displaced), as well as international and non governmental organizations - on endemic diseases and public health programmes in the displaced population's place of origin.

Interview knowledgeable refugees

- Contact refugee leaders, household heads, traditional midwives.

Contact other sources

- Contact development agencies, private companies, missionaries with past experience with the displaced population.

c) Nutritional status

Why this information is needed:

There is much evidence that nutritional status of displaced populations is closely linked with their survival. A rapid assessment of nutritional status helps determine the degree of urgency for delivering food rations, the need for immediate selective feeding programmes and the presence of important micronutrient deficiencies.

What information to collect:

- Prevalence of weight-deficit in 0-4 year olds
- Nutritional status prior to displacement
- Prevalence of micronutrient deficiencies.

Strategies for collecting information:

If new arrivals are still coming

- Carry out anthropometric screening of new arrivals by measuring middle upper arm circumference for all children, (or each third or fourth child if there are insufficient personnel, or too many new arrivals).
- If time and resources permit, use weight-for-height.
- Estimate the proportion who are below a predetermined cut-off point (refer *"Rapid Nutrition Assessment in Suspected Famine Situations", ERO/EPR/90.1.8.*).
- Look for clinical signs of severe anaemia, and Vitamin A, B and C deficiencies.

- Set up a permanent screening programme for new arrivals - as a useful source of baseline information

If there is some type of settlement/camp

- Walk through the settlement, visiting dwellings randomly, observing the appearance of children under five years.
- Combine this with a rapid assessment of nutritional status using mid-upper arm circumference or weight-for-height during the survey of fifty houses described earlier.
- Review local hospital records for information on the nutritional status of the displaced population (e.g. admissions, deaths due to undernutrition).
- Interview resource people amongst the displaced to assess food availability prior to displacement and duration of the journey from place of origin to their present site.

Gathering baseline data for evaluating feeding programmes

- Plan a cluster sample survey of the population, to be carried out as soon as possible (e.g. within two weeks), using appropriate technical expertise.

d) Mortality

Why this information is needed:

In the initial stages of a population displacement, mortality, expressed as deaths/10,000/day, is an essential indicator of improving or deteriorating health status. In many African countries, the daily crude mortality rate is approximately **0.5/10,000** in non-emergent conditions.

In general, health workers should be concerned when crude mortality rates in a displaced population exceed **1/10,000 per day**.

What information to collect:

Crude, age-specific and cause-specific mortality rates.

Strategies for collecting information:

- Check local hospital records, and records of local burial contractors. Interview community leaders.
- Set up a system for mortality surveillance. One approach is to designate a single burial site for the camp/settlement monitored by 24 hour grave-watchers, and develop a standard verbal autopsy procedure for expected causes of death (e.g. standard forms).
- Other methods include mandatory registration of deaths, issuing of shrouds to families of deceased to help ensure compliance, monitoring of records of private burial contractors, or the employment of volunteer community informants who report deaths for a defined section of the population (e.g. fifty families).
- The population needs reassurance that death registration will have no adverse consequences (e.g. reduced rations because the population size is declining).

Calculating crude mortality rates

- Population numbers are absolutely essential for calculating mortality rates. These provide the denominator for estimating death rates in the entire population, and in specific vulnerable groups.
- It is essential to set up simple mortality surveillance system, using simple (refer to examples in Section 4.1 and 4.2.).
- Daily crude mortality rates can be calculated by following the steps below:

1) Total the deaths for a given number of days (e.g. one week).
2) Divide this total by the number of days data were gathered:

   This gives the average number of deaths per day.
3) Divide this figure by the size of the displaced population (which is the population denominator)
4) Multiply by 10.000 **for a daily crude mortality rate.**

e) Morbidity (major causes of illness)

Why this information is needed:

Data on severe morbidity are useful for planning an effective preventive and curative health programme for the displaced population, particularly; the procurement of appropriate medical supplies, the recruitment and training of health personnel, and better targeting of environmental sanitation efforts (e g. toward mosquito control in areas of high malaria prevalence).

Strategies for collecting information:

- Review records of local hospitals and clinics if these are accessible to the displaced population.
- Examine patient registers/records in camp/settlement clinics, hospitals or feeding centres and tally common causes of morbidity.
- Interview resource people within the displaced population (e.g. midwives, other health workers).
- Set up a simple morbidity surveillance system as soon as curative services begin - ensuring this includes feeding centres (refer to Section 4.1 and 4.2).

  Certain public health actions need not wait the appearance of a disease for action (e.g. measles immunization should be implemented immediately and not await the appearance of measles amongst the displaced).

3.2 Assess Environmental Conditions

a) Why this information is needed:

Information on local environmental conditions which affect the health of the displaced population assist in setting priorities for public health programmes

b) What information to collect:

Climatic and geographic conditions

- Average temperatures, rainfall pattern
- Soil, slope, drainage

Information of public health importance

- Local disease epidemiology (endemic infectious diseases e.g. malaria, schistosomiasis)
- Local disease vectors and breeding sites (mosquitoes, flies, ticks)
- Existing sanitation arrangements (latrines, open areas)
- Presence of a burial site and its distance from dwellings

Information on environmental resources

- Type of shelter existing for the displaced
- Accessibility of wood for shelters, water and fuel - and distances to collect these
- Type and quality of water sources (wells, tanks, rivers)
- Availability of land for agriculture/home gardening.

c) Strategies for collecting information:

This assessment is largely carried out by visual inspection. Interviews with local officials and technical specialists are useful. In some instances, special surveys should be performed (e.g. by entomologists for local disease vectors, water engineers to assess water resources).

3.3 Assess Local Response Capacity and Immediate Needs

a) Assess local response capacity

Food supplies

- Assess the quantity and type of food available to the population. If food is already being officially distributed, estimate the average number of calories received per capita for the period of time for which food distribution records are available.
- Assess the quality of the food available - particularly its micronutrient content, and its acceptability to the recipient population.

- Inspect local markets for food availability and prices. Assess what foods are being traded, and their exchange value.
- Conduct a quick survey of dwellings and estimate food stores in each household.
- Look for obvious inequalities between different families, ethnic or racial groups.

Food sources

- Assess local, regional and national markets for availability of appropriate relief foods.
- Assess the cash and material resources of the displaced population to estimate their local purchasing power.

Food logistics

- Assess transport availability, storage facilities (size, security) and seasonal conditions of access roads.

Feeding programmes

- Assess established feeding programmes (mass feeding, selective feeding) set up by local officials, Ngos, church groups or local villagers.
- Assess attendance criteria, figures for enrollment, attendance and discharge, quantity/quality of food provided, managerial competence, availability of water, utensils, storage.

Local health services

- Assess ease of access by the displaced population (e.g. official attitudes, location).
- Note condition and size of facilities.
- Assess extent and appropriateness of medicines and equipment.
- Assess capacity of health personnel (special training in EPI, diarrhoeal disease control, surveillance skills, environmental sanitation/vector control and community nutrition).
- Review cold storage facilities, vaccine supplies, logistics and communication support.

Health Services Set Up for the Displaced Population

Available personnel:

- Type of health personnel and relevant experience (sanitarian, public health nutritionist, nurses, doctors)
- Health workers available in the displaced population (traditional healers, traditional midwives, doctors, nurses)
- Interpreters.

Facilities:

- Type of facilities (clinic, hospital, feeding centre)
- Size, capacity, structure (tent, local materials, permanent structure)
- Adequacy of health facility water supply, refrigeration facilities and generator/fuel back-up.

Drugs and vaccines:

- Essential drugs and medical supplies
- Essential vaccines and immunization equipment

Logistics:

- Storage facilities
- Transport, fuel and communications.

b) Determine immediate needs

Deciding on the need for emergency response: .

- Is there likely to be widespread illness or death amongst the displaced due to disease or malnutrition?
- If so, are outside resources needed to prevent it?

If the answer to both questions is "yes", then an emergency response is needed.

3.4 Taking First Steps

- Summarise rapid assessment findings, according to the headings listed in this document.
- Estimate and quantify needs for outside assistance, based on preliminary findings (e.g. food, drugs, technical personnel, equipment for improving water quality, vector control measures).
- Prepare and convey assessment findings to appropriate emergency health decision-makers at subnational, national and international levels;
- **As soon as possible, send a telex or fax to the WHO regional office and Headquarters with a summary of findings (see attached example).**

Weekly Surveillance Reporting Form

From: ____/ ____/ ____/ To: ____/____/____

Town/Village/Settlement/Camp: _____

I. **Population**

A. Total pop. at beginning of month: _____ At the end of month: _____

B. Births: _____ Deaths: _____

C. Arrivals: _____ Departures: _____

D. Total population under five years of age: _____

II. **Mortality**

Reported Primary Cause of Death	Children 0-4 years	≥ 5 years	TOTAL
Diarrhoeal Disease			
Respiratory Disease			
Malnutrition			
Malaria			
Measles			
Trauma			
Other/Unknown			
TOTAL			
Total Under Five			

AVERAGE TOTAL MORTALITY RATES
(Deaths/10 000 Total Population [ ]

FOR THE WEEK

AVERAGE UNDER-FIVE YEAR OLD MORTALITY RATES
(Deaths/10 000 Total Under-fives/day) [ ]

II. Morbidity

Primary Symptom/Diagnosis	Age		Total
	0-4 years	≥ 5 years	
	Number	Number	Number
Diarrhoea /Dehydration			
Fever with cough			
Fever and chills/malaria			
Measles			
Trauma			
Other/Unknown			
Total			

IV. Comments

ANNEX 4.2

Questionnaire for Grave-watchers

Town/Village/Settlement/Camp: _____

Date: _____

1. Name:

2. Age:

3. Family Head:

4. Address:

5. Cause of Death:

- ☐ Diarrhoea
- ☐ Cough, Fever
- ☐ Fever, Chills
- ☐ Women in childbirth
- ☐ Newborn child
- ☐ Malnutrition
- ☐ Other: _____

Section C
Information Checklist and Telex Requirements

1. Information Checklist

Although it may be difficult to collect information in the early stages of a population displacement, to accelerate response at all levels, the following data is essential.

- Estimated size of the displaced population;
- Settlement site(s), projected influx rate;
- Mortality, expressed per 10,000 per day (leading causes):
- Nutritional status (e g. MUAC survey or wt/ht);
- Specific information which is important for emergency response:

(such govt. focal point for response, involvement of NGOs,)

2. Telex/Telefax Requirements

When to Send? Where to Send?

Although data on each of the points listed above may not be available immediately, it is essential to sound a "health alert" as quickly as possible.

This information should be sent by telex/telefax or other means to:

- the WHO regional office;
- WHO Headquarters, attention Emergency Preparedness and Response (EPR).

What Information to Include?

- Time period for displacement (approximate dates);
- Estimated size of the displaced population;
- Estimates of mortality and malnutrition;
- Existence of epidemics (type);
- Measures undertaken so far;
- International health assistance requested or in the pipeline;
- Advice on forthcoming reports.

An Example

WORLD HEALTH ORGANIZATION

INCOMING TELECOMMUNICATION

ministry of interior reports continuing population movement away from famine-affected areas in ..... region

Key Information Categories	
Reporting period Estimated population size Arrival/settlement sites	aaa general information 1. from january 1 until february 10, government officials estimate 10,000 people have arrived at the outskirts of .....city and 15,000 at .... township in ......region
Projected influx rate	2. new arrivals to ....city are estimated at 1,000 per week and expected to continue
Assessment findings Mortality rate Leading causes of death Highest risk groups	bbb rapid health assessment findings 1. Based on survey of burial sites, mortality estimated at 1.5/10,000/day. most deaths reported in young children. leading causes diarrhoea and measles
Nutritional status MUAC/Weight for height results Vitamin deficiencies	2. Muac survey of 150 children 0-4 years in displaced population near ....city shows 25 percent less than 12.5 cm seriously malnourished). many children noted with signs of severe vitamin a deficiency
Measures taken so far	ccc measures taken 1. relief commission designated as national focal point for response, undp resident representative coordinating un inputs
	2. health response coordinated at national level by moh emergency committee and locally by regional director of health services
	3. .....ngo assisting local moh implement emergency health programme at both sites
	4. national epi in cooperation with unicef currently undertaking emergency measles immunization and vitamin a distribution
International assistance requested or in the pipeline	ddd international health assistance already requested/in pipeline 1. country representatives for ....govt and ....govt have indicated willingness to provide emergency drugs and essential drug kits
	2. unicef in cooperation with local authorities and red cross installing water pumps and providing plastic sheeting
	3. wfp preparing estimates of food requirements for general ration and selective feeding
Advice on forthcoming reports	eee will revert soonest with information on specific 1. needs for vaccines/medical supplies 2. needs for specialist technical assistance

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