Needs assessment
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Needs assessment

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<thead>
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<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>3W/4W</td>
<td>who, what, where (and when)</td>
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<tr>
<td>EWAR</td>
<td>early warning, alert and response</td>
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<td>GIS</td>
<td>geographical information system</td>
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<td>GPS</td>
<td>Global Positioning System</td>
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<td>HeRAMS</td>
<td>Health Resources and Services Availability Monitoring System</td>
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<td>HESPER</td>
<td>Humanitarian Emergency Settings Perceived Needs Scale</td>
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<td>HNO</td>
<td>humanitarian needs overview</td>
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<td>IASC</td>
<td>Inter-Agency Standing Committee</td>
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<tr>
<td>LGBTI</td>
<td>lesbian, gay, bisexual, transgender and intersex</td>
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<td>MIRA</td>
<td>multi-cluster/sector initial rapid assessment</td>
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<td>MSNA</td>
<td>multi-sector needs assessment</td>
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<tr>
<td>OCHA</td>
<td>United Nations Office for the Coordination of Humanitarian Affairs</td>
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<tr>
<td>PDA</td>
<td>personal digital assistant</td>
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<tr>
<td>PHSA</td>
<td>public health situation analysis</td>
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<tr>
<td>SMART</td>
<td>Standardized Monitoring and Assessment of Relief and Transitions</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>WASH</td>
<td>water, sanitation and hygiene</td>
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</table>
10. Needs assessment

10.1 General overview

The purpose of this chapter is to provide an overview on needs assessments in humanitarian settings, with specific focus on assessing health needs and how needs assessments fit within the Public Health Information Services standards. While it seeks to provide some basic information on the purpose of and means for conducting needs assessment, it should not be considered a comprehensive guide. Once a decision has been made to conduct an assessment and the type of assessment has been decided, further research should be done to ensure the information produced is as accurate and relevant as possible.

10.2 Purpose and definitions

Needs assessment is the collection and analysis of information that relates to the needs of affected populations and that will help determine gaps between an agreed standard and the current situation.

The Inter-Agency Standing Committee (IASC) defines people in need as those members [of a population]:

- whose physical security, basic rights, dignity, living conditions or livelihoods are threatened or have been disrupted, and
- whose current level of access to basic services, goods and social protection is inadequate to re-establish normal living conditions with their accustomed means in a timely manner without additional assistance.

The primary purpose of needs assessment is to identify which people are in need, disaggregated by different categories of people (for example, all affected persons, pregnant women, children) and different types of needs; determine the severity of their needs; and pinpoint the type of assistance they require to ensure prioritized, focused, response planning. It is triggered by a need to better assess and monitor a particular situation and the conditions faced by populations of concern, whether in the context of a response to a sudden crisis or as an ongoing planning effort during a protracted crisis.
10.2.1 Scope of needs assessment

A needs assessment seeks to understand some or all of the following:

- the spectrum of needs and risks
- geographical distribution of needs and severity
- temporal duration of needs (how long each need is expected to continue)
- estimated severity of conditions
- existing capacities and resources
- information available disaggregated by gender, age, minority group, vulnerability
- production of baseline data to measure future progress and inform future assessments.

10.2.2 Data collection methodologies

Any assessment is predicated on the compilation and analysis of data. These data can be either primary – data collected within that specific, time delimited, assessment (usually through fieldwork); or secondary – data or information existing prior to the specific time-bound assessment, including from prior field assessments. Wherever possible duplication of efforts should be avoided, so it is important to review the pre-existing (that is, secondary) information sources before moving ahead with any primary data collection.

Data are usually classified as either:

- quantitative – information that is quantifiable and can be analysed numerically, often presented with the use of statistics in tables or graphs; or

- qualitative – produced through exploratory research that results in non-numerical data.

Qualitative research can help to explore intangible factors by capturing feelings, attitudes, intentions or personal experiences, and provides contextual information that may not be clearly demonstrated in the collection of quantitative data.

10.2.3 Secondary data

Classification of secondary data

Secondary data in emergencies can be classified into two groups: pre-crisis and in-crisis. Some examples of each are shown in Table 10.1.
### Table 10.1 Pre-crisis data and in-crisis data: examples

<table>
<thead>
<tr>
<th>PRE-CRISIS DATA</th>
<th>IN-CRISIS DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Population figures</td>
<td>• Population estimates (including displacement figures)</td>
</tr>
<tr>
<td>• Demographics</td>
<td>• Humanitarian access constraints</td>
</tr>
<tr>
<td>• Vulnerabilities and minority groups</td>
<td>• Geographical area affected</td>
</tr>
<tr>
<td>• Socioeconomic data</td>
<td>• Existing data on water, sanitation and hygiene (WASH), e.g. water sources</td>
</tr>
<tr>
<td>• Morbidity and mortality rates</td>
<td>• Location of infrastructure (including health facilities)</td>
</tr>
<tr>
<td>• Existing data on water, sanitation and hygiene (WASH), e.g. water sources</td>
<td>• Environmental and seasonal data, e.g. timing of rainy season to note when vector-borne diseases might become an issue</td>
</tr>
<tr>
<td>• Location of infrastructure (including health facilities)</td>
<td>• Legal and political data</td>
</tr>
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</table>

It is important that a secondary data review be conducted prior to any assessment involving primary data collection.

### Secondary data review

A secondary data review is an integral component of any assessment. It involves reviewing any and all pre-existing information related to the assessment. Secondary data reviews help to provide the background information critical to understanding the wider context and can ensure all existing data are incorporated before resources are allocated to primary data collection. In the context of the health cluster, the key framework for capturing existing secondary data, and identifying information gaps that may require primary data collection, is the public health situation analysis.

One component of ensuring a comprehensive secondary data review is maintenance of an assessment repository where any health-related assessment is outlined, along with the organization that conducted it and the methodology used.
10.2.4 Primary data

Below is an overview of some of the most commonly used methodologies for collecting primary data. In many cases an assessment will employ mixed methodologies, using multiple means for collecting information to fill the identified information gaps.

Direct observation

Direct observation helps to add context and meaning to collected data. It can be collected in one of two ways.

- **Structured** *(looking for)* – where specific behaviour, objects or events are looked for.¹ An example is monitoring whether patients are offered the services of an interpreter or translator at a clinic where such services are supposed to be provided. Structured observation is often used for assessing the physical status of items (such as buildings or health care facilities).

- **Unstructured** *(looking at)* – where a situation is monitored to see what issues may exist. An example is monitoring how men and women seek medical assistance at a clinic. A set of questions can be outlined for the observer to answer.

Observation helps provide a snapshot of a given situation and is something that often occurs in the course of collecting data, whether intentionally planned or not. However, observation requires skilled observers to collect data, as they need to understand what to look for (and be informed enough to know when to focus on the unexpected). It is also at high risk of bias, as the observer’s own beliefs will impact what is observed. Furthermore, the presence of an observer can often result in changed behaviour. Even so, observation does not require significant resources and can be used to rapidly collect different types of information in emergency settings. Information can be collected through physical observation on the ground, through windows while driving by an area (drive-by), or by looking over an area from the air (fly-over).

Key informant interview

Key informants are individuals identified for the specific knowledge they have relating to a topic being covered by the assessment. They can provide answers on behalf of a larger community (in which case they are not only answering about their personal experience), also referred to as “lay” key informants, often community or religious leaders; or about a specific technical topic, such as water quality or health care availability (“expert” key informants). Note that the same person may serve as both a key informant and an individual respondent in a survey.
Key informant interviews are conversations with key informants that can be either structured or semi-structured.

- **Structured.** A preset list of questions is compiled about a selected topic. The questions may also include answer options. This type of interview ensures collected data can be aggregated and comparisons made. The inclusion of answer options can also help speed up data collection as well as accuracy. Care should be taken, however, not to lead key informants by reading out answer options, and to allow for answers outside the prescribed list. It is important to weigh the benefits of faster analysis provided by structured interviews against the loss of contextual information that can be offered by using a more open methodology. Structured interviews also have the potential of introducing bias by only focusing on topics presumed to be the most relevant.

- **Semi-structured.** Interviews are guided by a set of open-ended questions designed to stimulate dialogue between interviewer and interviewee. Semi-structured interviews have the benefit of providing a richer data set, though interviewers need to be careful not to be judgemental or too rigid in preconceived notions. While this style of interview can provide very rich information, it requires that interviewers are well versed in the topics being covered and know when to push for further information. Beyond the higher degree of skill required in data collection, this type of qualitative data is more time consuming to process and analyse.

Key informant interviews have the benefit of providing a flexible methodology that can allow for exploration of new ideas and issues. They can also be conducted relatively quickly and do not require large teams of individuals. Furthermore, key informant interviews can be useful in collecting information on areas that are remote or hard to reach. However, the data produced are not measurable (quantitative), and the quality of the data collected is heavily reliant on the knowledge and objectivity of the key informant.

Remember: key informant interviews provide a subjective perspective, and all information will have an individual and cultural bias that needs to be taken into account during analysis.

**Focus group discussion**

Focus group discussions are structured discussions with a small, homogeneous group of people identified by preselected criteria. These are often conducted in the community with a group from the same geographical area. Focus group discussions generally encourage discussion within the group, fostering an air of constructive debate where information can be cross-checked and issues probed. It is important...
to ensure the right dynamic between discussion participants and to be careful that the views of some members are not muted by the presence of others. For example, female residents may not speak openly when in a group with males, or minority representatives may not voice certain issues if they are in a group with community leaders from the majority group. The size of the focus group discussion plays an important role, as enough people are required to ensure a lively discussion, but it should remain small enough that voices are not lost to the group. Where possible these groups should aim at four to eight individuals (though in some crisis settings it may be difficult to avoid the gathering of larger groups). Where focus group discussions are run it is useful to have two facilitators in order to ensure one person is able to take notes while another facilitates the discussion. While it may be necessary to identify potential answer options in a questionnaire to facilitate analysis, it is important that the wider discussion is recorded, and new and unforeseen responses should always be encouraged.

Community group discussion

Community group discussions differ from focus group discussions in that they are far less organized. They are characterized by discussions with people from a community and are often larger than focus group discussions without the same level of targeting to identify participants. Community group discussions are used in the earlier stages of a crisis, as they are a useful means of collecting information quickly and have lower logistical requirements than more standard focus group discussions. A community group discussion can still employ a structured tool, but levels of bias should be considered when analysing results, as the mixed grouping of participants may result in certain voices being lost in favour of the views of more dominant individuals.

Survey

Surveys consist of a set of structured interviews with either members of a household (speaking on behalf of their whole household) or individuals for the purpose of gaining information on their direct experiences, perceptions, expectations, and situations or conditions (rather than about the experiences of the broader community, in which case they would be acting in the capacity of key informants). They are often combined with observation (for example, collecting information on household conditions coupled with observations from the enumerator on materials used). It is important to have a degree of contextual understanding prior to undertaking a survey, so that accurate answer options are provided.
10.2.5 Measurement levels

Data are usually measured at one of the following levels.

- **Community.** Information is collected at the community level (for example, through community group discussions), and is designed to provide an overview of a specific community or key informants reporting on a specific geographical area.

- **Institution.** Information is collected at the level of an institution or facility. This type of data gathering is commonly employed in health assessments, particularly under the Health Resources and Services Availability Monitoring System (HeRAMS).  

- **Household.** Surveys will often ask questions that require a respondent to report as a representative of an entire household.

- **Individual.** Surveys can also ask questions at the individual level (requiring the respondent to report on their own opinions, experiences and perceptions). It is also possible to interview at the individual level.

10.2.6 Sampling

A sample is a subset of the population that takes part in the survey and is expected to represent the wider group of affected individuals. Most assessments will use a sample, as there is unlikely to be sufficient time to conduct a full census (surveying all individuals).

Participants can be selected through one of three main sampling methods.

- **Purposive sample.** Specific respondents are sought out for the survey, for example pregnant women or members of an ethnic minority.

- **Convenience sample.** Individuals are interviewed who are easy to reach, for example people first encountered when visiting the affected area.

- **Representative sample.** Statistical methods are used to identify which households or individuals to interview. Representative samples are used to estimate the distribution of opinions, experiences and needs. Simply put, if a properly constructed representative sample is collected it is possible to use the data to determine (within a certain margin) what the wider group (outside the sample) would have answered to each question.
The choice of selection method is largely dependent on available resources and expertise. Surveys with representative sampling can be time consuming and expensive to implement, as well as requiring specialized skills in sampling methodology and statistical analysis. An expert should be consulted prior to undertaking a representative survey.

### 10.3 Types of needs assessment

Needs assessments can be classified by when in the crisis time frame they take place, by the focus they have, and by their design. Below is a description of each type.

- **Initial assessments** are undertaken promptly at the outset of a crisis or following a new event or sudden change. They seek to identify whether a response is required and to what scale. Initial assessments are based primarily on secondary data and may include rapid and largely unstructured field visits.

- **Rapid assessments** are conducted following an initial assessment, usually within the first two weeks of the event that sparked the initial assessment. They are based on a combination of primary and secondary data.

- **In-depth assessments** are undertaken when more detailed information is required to inform operations and programme design. These assessments may cover multiple clusters or sectors or may focus on a single cluster or sector. They employ rigorous methodologies adapted to the context.

- **Monitoring assessments** are continuously undertaken, usually tracking one or a few key issues over time. The process of monitoring the situation helps to ensure a timely operational response. A common example of a type of monitoring assessment is early warning systems.

Table 10.2 presents the key features of each type of assessment.
### Table 10.2 Types of needs assessment: key features

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>INITIAL</th>
<th>RAPID</th>
<th>IN-DEPTH</th>
<th>MONITORING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time frame</strong></td>
<td>24–72 hours</td>
<td>3–14 days</td>
<td>2 weeks +</td>
<td>Ongoing</td>
</tr>
<tr>
<td><strong>Assessment duration</strong></td>
<td>3 to 5 days</td>
<td>1 to 4 weeks</td>
<td>1 to 6 months</td>
<td>Varies, but should be relatively swift if conducted regularly</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Define scale and severity of the health crisis</td>
<td>Define impact of crisis</td>
<td>Define and quantify needs, including more in-depth sectoral information</td>
<td>Track potential risks and hazards</td>
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<tr>
<td></td>
<td>Identify and locate affected areas</td>
<td>Estimate populations in need</td>
<td>Provide detailed and statistically representative data</td>
<td>Track existing capacities and resources</td>
</tr>
<tr>
<td></td>
<td>Establish key immediate priorities</td>
<td>Assess severity of needs of affected groups and areas</td>
<td>Capture representative views of affected populations through joint consultation</td>
<td></td>
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<tr>
<td></td>
<td>Define access constraints</td>
<td>Establish key priorities with affected populations</td>
<td>Establish baseline for needs and response monitoring</td>
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<td></td>
<td></td>
<td>Identify information gaps</td>
<td></td>
<td></td>
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<tr>
<td><strong>Type of decisions to inform</strong></td>
<td>Initial response decisions</td>
<td>Initial planning of humanitarian response</td>
<td>Inform detailed planning</td>
<td>Identify when a situation becomes concerning or when significant changes are occurring</td>
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<td></td>
<td>Rapid assessment design</td>
<td>Define focus for subsequent in-depth assessments</td>
<td>Adjust ongoing response</td>
<td>Trigger an assessment (initial/rapid)</td>
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<td></td>
<td>Emergency funding appeals</td>
<td>Provide recommendations for strategic planning</td>
<td>Provide recommendations for programme and operational planning</td>
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<tr>
<td><strong>Design</strong></td>
<td>Secondary data analysis</td>
<td>Secondary and primary data analysis</td>
<td>Secondary and primary data analysis</td>
<td>Primary data continually reported</td>
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<tr>
<td></td>
<td>Small number of field visits, if feasible</td>
<td>Primary data are gathered primarily at community level Qualitative research methods</td>
<td>Primary data are gathered at community, institution, household or individual level Quantitative and qualitative research methods</td>
<td></td>
</tr>
<tr>
<td><strong>Sampling</strong></td>
<td>Convenience or purposive sampling</td>
<td>Purposive sampling (rarely representative)</td>
<td>Representative sampling</td>
<td>Varies, can include a full census</td>
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### Needs assessment

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<th>Paragraph</th>
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<td>Box</td>
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10.3.1 Coordinated assessments

Needs assessments should be coordinated wherever possible in order to ensure efficient use of resources, improve the quality of the output, and promote buy-in by having as many partners involved as is relevant to the assessment. Coordinated assessments can be classified into two groups.

- **Joint.** Assessments are designed and conducted jointly. These can be inter-cluster or inter-sector, such as MIRA or the multi-sector needs assessment (MSNA); or intra-cluster or intra-sector, where many partners may join together to conduct a health assessment.

- **Harmonized.** Assessments are run by individual organizations but adhere to a set of agreed standards (for example, the use of common operational data sets or a set of agreed indicators) in order to facilitate cross-analysis.
Harmonized assessments can be promoted early on in a crisis by agreeing to use common operational data sets and a set of key indicators. If partner organizations report on assessment activities prior to commencement it should be possible to facilitate sharing of secondary data and avoid duplication of assessment efforts within geographical regions. Funding does not always allow for joint assessments to take place, so the sooner key standards can be agreed upon by the cluster, the greater the chances that all organization-level assessments will be able to feed into wider cluster- or sector-level analysis.

Standardized coordinated assessments commonly used at present include the following.

Multi-cluster/sector initial rapid assessment (MIRA)

MIRA is a commonly used methodology for rapid assessments. It is an agreed interagency framework for conducting a rapid assessment that aims to provide information on the needs of affected populations and identify humanitarian priorities. A MIRA covers multiple clusters or sectors (2).

Initial rapid assessment

This assessment was developed by the Global Health, Nutrition and WASH clusters. It is designed for use by individuals with relevant knowledge but not necessarily a high degree of specialized technical expertise. An initial rapid assessment should be conducted within the first 24–48 hours of the onset of a crisis and include a secondary data review as well as very focused primary data collection. The output is a rapid overview of the emergency situation, identification of the immediate impact of the crisis, initial estimate of needs and an outline of the priorities for the early weeks of the humanitarian response.

Multi-sector needs assessment (MSNA)

An MSNA can technically refer to any needs assessment involving more than one sector, but often references a specific type of assessment used to inform the humanitarian needs overview. An MSNA is more in-depth than a MIRA, often incorporating household-level surveys if access is available to affected populations. To be classified as an MSNA, it must meet the following criteria:

- cover all affected population groups in all areas
- be endorsed by the inter-cluster coordination group and humanitarian country team
- include indicators that have been developed with relevant clusters
- be coordinated by the assessment working group (where it is active).
Post-conflict needs assessment

The post-conflict needs assessment is usually jointly supported by the United Nations and the World Bank. It is led by national authorities and supported by the international community, and aims at identifying long-term needs, actions and outcomes that are necessary to address the consequences of conflict and prevent renewed conflict. The assessment is usually conducted in the recovery phase.

Post-disaster needs assessment

The post-disaster needs assessment was developed by the United Nations Development Programme (UNDP) along with the World Bank and the European Union. The primary purpose is to assess the impact of a disaster and identify the long-term recovery needs and services as the basis for designing the recovery strategy. The post-disaster needs assessment is forward looking and incorporates restoration of infrastructure, services, systems, and government, as well as basic needs and livelihoods. It also seeks to emphasize disaster risk reduction and increased resilience.

10.3.2 Health-specific assessments

There are a number of assessment types that have been standardized for use in collecting or monitoring specific sectoral needs. In the health domain, the most commonly employed to help assess needs are as follows.

Public health situation analysis (PHSA)

This is a background document that synthesizes previously available data from a wide array of sources in order to provide an overview of epidemiological conditions, existing health needs and possible health threats faced by the crisis-affected population. It is then continuously updated as more information and primary data are collected. Templates are available in both a short form (preliminary PHSA incorporating only secondary data) and a long form (that includes results of primary data collection). The short form is designed for use as an initial assessment, while the long form is more of a rapid assessment. It is important to note that as a situation analysis, the information collected in the PHSA goes beyond the need to cover the wider status of operations, political structure and any other information relevant for informing the situation.

Rapid health assessment

The health cluster is currently updating the rapid health assessment (3) methodology. A rapid health assessment seeks to answer the following questions:
- Is there a health emergency?
- What is the type, impact and possible evolution of the emergency?
- Who is the most severely affected population and where is the most severely impacted area?
- What are the main health problems?
- What is the existing response capacity?
- What are critical information gaps for follow-up assessments?
- What are the recommended priority actions for immediate response?

**Population mortality estimation**

Population mortality estimation can be considered the ultimate metric of physical health, and is arguably the single most important measure of health status. However, it requires significant cost, effort and technical expertise to produce. For these reasons, estimation should be attempted only when all three of the following conditions are met.

- It is plausible that findings would improve the health of beneficiaries.
- Quality mortality estimation is feasible given local conditions, and resources and expertise have been secured.
- There is a clear, agreed plan for disseminating and acting upon findings.

Mortality estimation may be performed either on a one-off basis (in-depth assessment) or collected on an ongoing basis (monitoring).

**Health Resources and Services Availability Monitoring System (HeRAMS)**

HeRAMS is designed to systematically monitor the availability and functionality of health services to affected populations. HeRAMS helps to ensure service gaps are quickly identified and responded to in a timely manner. It is suggested that interviews and updates become a regular agenda item of cluster and sector meetings, and that HeRAMS not be utilized as a stand-alone survey (in-depth assessment) but rather be continually updated (monitoring). Even so, HeRAMS can serve as a one-off assessment of current capacities and service gaps.

**Early warning, alert and response (EWAR)**

An EWAR system is often set up in emergency situations when public health surveillance systems may be underperforming, disrupted or non-existent. It is designed to utilize a network of health facilities, with the aim of achieving universal coverage by strengthening the surveillance capacity and resources at all health facilities. Information from the system can help to identify when epidemic-prone diseases are identified and can trigger an initial, rapid or in-depth needs assessment depending on the circumstances and information needs.
10.4 Roles and responsibilities

Roles and responsibilities for various actors in a coordinated assessment are set out in Table 10.3, as proposed by the IASC (4).

Table 10.3 Roles and responsibilities for actors in a coordinated assessment

<table>
<thead>
<tr>
<th>ACTOR</th>
<th>ROLES</th>
<th>RESPONSIBILITIES</th>
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<tbody>
<tr>
<td>Humanitarian</td>
<td>Coordinates inter-cluster/sector</td>
<td>Appoints assessment focal point for initial assessment</td>
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<tr>
<td>coordinator</td>
<td>sector assessments</td>
<td>Coordinates assessments undertaken by clusters/sectors</td>
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<td></td>
<td></td>
<td>Promotes the use of tools for harmonized assessments</td>
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<td></td>
<td>Shares assessment data across clusters/sectors</td>
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<td></td>
<td></td>
<td>Supports inter-cluster/sector analysis</td>
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<td></td>
<td></td>
<td>Prioritizes needs and decides on strategic priorities</td>
</tr>
<tr>
<td>Cluster/sector</td>
<td>Supports inter-cluster/sector assessments</td>
<td>Supports inter-cluster/sector assessments</td>
</tr>
<tr>
<td>coordinator</td>
<td>Coordinates intra-cluster/sector</td>
<td>Coordinates assessments of cluster/sector members</td>
</tr>
<tr>
<td></td>
<td>assessments</td>
<td>Promotes the use of tools for harmonized assessments</td>
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<tr>
<td></td>
<td></td>
<td>Sets out standards for cluster/sector assessments</td>
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<td></td>
<td></td>
<td>Promotes joint assessments within the cluster/sector</td>
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<tr>
<td></td>
<td></td>
<td>Shares assessment data within the cluster/sector</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supports cluster/sector analysis</td>
</tr>
<tr>
<td>Cluster/sector</td>
<td>Supports and/or implements coordinated</td>
<td>Shares information on assessments with clusters/sectors</td>
</tr>
<tr>
<td>members</td>
<td>assessments</td>
<td>Uses tools for harmonized assessments</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Participates in joint assessments at the cluster/sector level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contributes to cluster/sector analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Uses key humanitarian indicators and common operational data sets</td>
</tr>
</tbody>
</table>

Source: IASC (4).

10.5 When to conduct a needs assessment

Needs assessments should take place whenever there is likely to be a change in needs. This includes the onset of an emergency, after any developments during a continuing crisis – be they new crises (such as renewed fighting and displacement) or environmental or external factors (such as the onset of winter) – or changes that simply occur over time. Needs assessments not only provide the baseline...
information for future monitoring but are the evidence base for strategic planning. For this reason, it is important to ensure needs assessments comprise a continuous process throughout the response. Information may need to be updated as a situation evolves.

10.5.1 Humanitarian needs overview (HNO)

Information on needs is also required for the production of the HNO, which should be produced twice per year to support the humanitarian country team. The HNO is designed to support the development of a shared understanding of the impact and evolution of a crisis and inform the humanitarian response plan. It is the responsibility of the cluster or sector to provide the required information on health needs to inform the intersectoral HNO. Clusters and sectors are required to contribute to the development of the HNO and must provide people in need figures, ideally disaggregated by gender and age group, as well as flagging the most vulnerable groups and factors associated with critical problems related to physical and mental well-being. It is also necessary to quantify the severity of health needs.

Coordinated needs assessments are ideally conducted to help provide for people in need, but funding may not always be available for large-scale needs assessments. If a coordinated needs assessment is not possible, it is necessary to either conduct a sectorwide joint assessment (funding permitting) or pool existing harmonized data from completed assessments to create a concerted picture of need across the crisis-affected area. When producing information for the HNO, it is necessary to clearly document where the information came from and the process used to calculate all provided figures.

In order to facilitate the prioritization of needs, a standardized tool has been developed that provides a method and structure to prioritize needs by categorizing and weighting indicators along geographical areas, sectors, intersectoral aspects and demographics. This tool is available for use but remains optional at present (5).

10.5.2 People in need

People in need refers to the quantification of the number of people presenting needs, disaggregated as appropriate (6). It provides the number of people in need of, for example, health assistance, broken down by geographical region (the administrative level may vary by crisis but is often set around the district level) and often by category of service (such as people in need of reproductive health services). Data are usually disaggregated by women, men, girls and boys, as well as displacement status (refugee, internally displaced person, returnee) and, where possible, the prevalence of people with disabilities.
10.6 Steps for conducting a needs assessment

Figure 10.1 shows the steps for conducting a needs assessment. Further information on each step is provided in the following subsections.

**Figure 10.1 Steps for conducting a needs assessment**

<table>
<thead>
<tr>
<th>1. Plan and design</th>
<th>2. Implement</th>
<th>3. Clean and process</th>
<th>4. Analyse</th>
<th>5. Share findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify scope and objective</td>
<td>Secondary data review</td>
<td>Data entry</td>
<td>Preparatory analysis</td>
<td>Assessment report</td>
</tr>
<tr>
<td>Engage with stakeholders</td>
<td>Collect primary data - Enumerator training - Data collection - Enumerator debriefing</td>
<td>Data cleaning</td>
<td>Descriptive analysis</td>
<td>Dissemination</td>
</tr>
<tr>
<td>Define information needs</td>
<td>Design methodology</td>
<td>Data processing</td>
<td>Interpretive analysis</td>
<td></td>
</tr>
<tr>
<td>Logistics and operations</td>
<td>Design tools for data collection</td>
<td>Organize analysis</td>
<td>Anticipatory analysis</td>
<td></td>
</tr>
<tr>
<td>Organize analysis</td>
<td></td>
<td></td>
<td>Validation</td>
<td></td>
</tr>
</tbody>
</table>

Tasks in orange are the responsibility of the coordination team

Tasks in black are the responsibility of the assessment team

**Step 1: Plan and design**

1. *Identify scope and objective*

The first step in any assessment is to define the scope and objectives of the assessment. Most needs assessments will seek to answer the following:

- Who is most in need?
- What are the primary needs?
- Where is need most severe?

It is also necessary to identify what the outputs of the needs assessment will inform (for example, to provide information to set key health priorities for the next programme cycle). The scope of the assessment identifies the geographical coverage (for example, is focus only on urban areas? Or perhaps the assessment seeks to compare affected areas to unaffected areas, requiring a much wider geographical area).
2. Engage with stakeholders

It is important that coordination structures be clear throughout the assessment process. This is particularly so in the case of joint assessments, but even outside coordinated assessments it is important to avoid overlap of data collection activities. Once the objectives and scope are identified, stakeholder mapping can take place to identify which organizations may have information to feed into the needs assessment or those that may want to take part.

Where possible, effort should be made to include government in the assessment process. Access to communities and data collection areas requires approval from local authorities, and their engagement early on can help facilitate the coordination process. Engagement with local government can also help ensure a degree of national ownership and buy-in from local authorities.

3. Define information needs

Prior to implementing any needs assessment, it is imperative to identify the information needs. This should be done in coordination with any organizations involved in the assessment, along with any potential decision-makers the assessment is designed to inform. These may include any target groups for which specific information is required, and any additional key information that is needed to inform decision-makers. It is important to note that information needs are not the same as indicators or questions used in tools. Information needs will help the assessment team identify what types of tools are required and which questions should be asked.

When defining information needs, focus should be placed on the minimum amount of data that is needed to provide evidenced-based analysis, that is, distinguishing need to know from nice to know.

Some examples of information needs for health needs assessments are:

- What health resources are currently available in crisis-affected areas?
- Are mortality and morbidity rates affected by the crisis? If so, are they impacted evenly across the crisis-affected area or are some locations or groups more affected than others?
- Do minority groups have equal access to health facilities?
- Which areas are likely to have the greatest risk of vector-borne diseases?
- Is vaccination coverage the same in urban and rural areas?
4. Logistics and operations

As soon as the scale of the assessment is understood, it is necessary to identify the resources available to contribute to the assessment. Whether it be pooling resources or requesting funds, the implementation of the needs assessment cannot sufficiently progress without financial and human resources.

One of the key factors that has been attributed to the success of an assessment is the presence of a single coordinator throughout the process. With a large number of moving parts, it is beneficial to have one person who is involved from start to finish, who can keep their eye on the macro-level picture. With a larger needs assessment, this coordinator would need to be dedicated full time to the assessment, possibly with a team of other individuals who are also dedicated throughout the needs assessment.

The resources that need to be considered for an assessment are:
- needs assessment coordinator
- additional staff
- enumerators (for data collection)
- vehicles (for data collection)
- communication devices (or phone credit)
- per diem (for assessment team)
- mobile phones, tablets, or personal digital assistant (PDA) (if data are to be collected on mobile devices)
- printing facilities (if data are to be collected on paper questionnaires)
- facilities for trainings
- facilities for enumerator debriefings
- translation services (for tools and reports)
- interpretation services (if required for data collection or trainings)
- graphics support for the final report
- publishing services (if distributing hard copies)
- facilities to present findings to affected populations.

It is also useful to make a checklist of the various steps and information that will be required to complete the needs assessment from an administrative point of view, including:
- visa requirements for any assessment staff;
- permissions that might be required of local authorities to access targeted locations (note that formal institutional review board approval is not normally sought or required for needs assessments designed to inform humanitarian operations);
- security updates and any movement restrictions (for example, if travel to assessment sites is time consuming but there are restrictions on movement that limit driving to daylight hours, data collection may require extra time);
• seasonal calendar – in some locations collecting data at certain times of year (notably the rainy season or winter months) can be very difficult.

5. Design methodology

It is always important to ensure that the data collection methods identified are both appropriate and feasible. Figure 10.2 presents a flowchart that can be used to determine the most appropriate data collection methods to use.

Figure 10.2 Flowchart to determine most appropriate data collection methods

![Flowchart diagram]

CGD: community group discussion; FGD: focus group discussion; KII: key informant interview.

*Initial assessments should only be run when there is insufficient time to do any other type of assessment. If resources are scarce, but time is available, effort should be put into identifying information gaps and advocating for resources to enable a more appropriate needs assessment.

**When all other options have been exhausted, data can sometimes be collected from people who have recently relocated from the area that cannot be accessed. This is an option of last resort only as information is incredibly hard to verify and often the situation has already evolved rendering collected data obsolete.
When designing the methodology, it is useful to chart out information needs, broadening them into a list of indicators that can provide responses to those needs. This assessment framework allows for indicators to then be linked to data collection sources. Organizing the design process in such a way improves documentation and reduces the possibility of skipping steps.

Figure 10.3 provides an example to show the sort of information that may be included when drafting an assessment framework.

**Figure 10.3** Assessment framework: example of information for inclusion

<table>
<thead>
<tr>
<th>Information needs</th>
<th>Indicators</th>
<th>Key informant interviews</th>
<th>Community discussion group data gathering</th>
<th>Focus group discussions</th>
<th>Survey</th>
<th>Observation</th>
<th>Secondary data review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have mortality rates been affected by the crisis and are they impacting all groups evenly?</td>
<td>Disaggregated mortality rate pre-crisis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disaggregated current mortality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 6. Design tools for data collection

If primary data collection is required, tools will need to be designed to collect the data. Figure 10.4 shows the process that starts by taking the assessment framework and breaking down the relevant indicators (for each data collection method) into more detailed questions with the aim of collecting the data elements (for example, the numerator and denominator) that go into calculating each indicator.
For example, using the indicator “disaggregated current mortality” (Figure 10.3) would require questions that allow adequate disaggregation levels (such as gender, age, disability status, ethnic group or geographical location). It is advisable to keep the team that designs the tools small and limited to technical specialists with backgrounds in assessment. All questions added in a tool should be clearly linked to an information need in order to ensure only relevant data are collected. It is useful to keep in mind how data will be used when choosing the questions. If, for example, a representative household-level survey is being undertaken and there is a need for data disaggregated by displacement status and for information on distance to health care facilities, then questions will need to be asked on displacement status, and a question on the distance to the health care facility. There are various options for framing the question regarding the nearest health care facility. It can be asked by the amount of time it takes to travel there; a set of options can be given with ranges of time or distance; a number can be requested that measures distance in a set of units; or it can ask to provide the distance and the unit used. If there is a small, dedicated assessment team that will also be responsible for the analysis, and the team members already know they want to run some correlation tests so they can determine if access to health facilities is significantly different for each displacement group, they will choose to collect information in numeric form.9

When designing tools for data collection, it is important to remember to use standardized demographic questions in order to facilitate harmonized analysis. For example, the age ranges collected can vary quite significantly, so it is useful to standardize the age ranges to be collected early on during a crisis. It is also
useful to agree on standard geographical data to collect (for example, the various administrative levels and names that will be collected using the common operational data sets).

7. Organize analysis

The process of designing the methodology helps to form the basis for analysis, and if followed systematically does not require much further input. In some cases, for example coordinated assessments, where individuals may support certain components of the assessment and not others, it may be necessary to clearly outline the steps that will be required to combine the data in order to analyse them. Referring back to Figure 10.4, it is possible to see the link between the assessment objective, through the information needs, all the way to the various pieces of data. When organizing the analysis, the process simply runs in reverse, linking data to questions, which then link to indicators and then to information needs. Using the example provided above, when the people designing the questionnaire are also the people who will run the analysis, they will often design questions to fit with that analysis (for example, choosing to collect numeric data in order to be able to run some specific statistical tests to see if there is a correlation between displacement status and distance to health care facilities).

Where the design team does not comprise the entire analysis team, it is necessary to plot out the analysis steps so that those who will later process and analyse the data know what they need to do. This analysis plan should consider the structure of data and how variables may be combined to provide information for specific indicators. It is also necessary to detail what sort of statistical tests might need to be run if the assessment includes a representative sample. Going back to the previous example, it would be necessary to outline that the collected numeric data on distance to health care facilities need to be checked to ensure they are all in the same unit (and converted where they are not) and then run through the identified statistical tests comparing distance with displacement status.

8. Outline data management procedures

It is important to have discussions regarding data ownership, data security and data anonymization. Due to the protection concerns that exist with detailed personal information potentially being collected, information security should be carefully considered.

With large assessments, management of data is a major consideration. Enumerators (individuals collecting interviews on the ground) need to be clear on where to store data and ensure all records (such as recordings, questionnaires and field notes) are properly labelled and stored so data are not lost.
Data management procedures should also outline the metadata standards that will be in place, and requirements for recording and tracking any changes made to the data in the process of cleaning.

**Step 2: Implement**

1. **Secondary data review**

The first step in implementation is collecting all relevant, existing data and reviewing the information provided. It is important that this step take place prior to any data collection exercise to ensure no efforts are duplicated. In situations where no further information is required, the collection and coalition of secondary data comprise the entire implementation step. In cases where primary data are being collected, the secondary data review will help to provide background on the crisis and contextual information that can help during data collection.

Some key data sets and information sources that should be looked for to help inform the needs assessment are:

- population figures;
- location of health facilities;
- pre-crisis morbidity and mortality rates;
- records of any disease outbreaks;
- any health assessments that have been conducted in the area that the needs assessment is targeting (for example, census, Demographic and Health Surveys, and Multiple Indicator Cluster Survey data collected within the prior five years);
- HeRAMS, if it is available;
- PHSA;
- security data and humanitarian access constraints;
- 3W data, if available, showing humanitarian activities that have taken place in the assessment area;
- information produced by other clusters or sectors that may relate to health status (such as nutrition, food security and WASH data);
- information produced by or for the mental health and psychosocial support working group (if activated);
- information on attacks, looting and other threats in affected areas (can be sourced from operational partners, media reports, social media data mining, local human rights associations);
- United States Geological Survey (data for geophysical hazards);
- Famine Early Warning Systems Network (for drought-related crises).
Where possible, raw data should be collected so additional analysis may be conducted. In cases where raw data are being used, it is very important to ensure that the sampling methods and any information on limitations during data collection are included. When looking at time frames for data collection, the date of data collection should be determined, as opposed to the date the research was published (which is often significantly later).

2. **Collect primary data**

If there is insufficient information through secondary sources to respond to the identified information needs, primary data will need to be collected. To collect data from the field, the following steps should be followed.

**Enumerator training**

The process followed for collecting data on the ground will vary depending on the methodology. Timing of data collection should be carefully considered, with tools being staggered so they may help inform each other. For example, conducting qualitative focus group discussions may help to provide unforeseen answer options for some of the questions in a household-level survey, so it would help to conduct the focus group discussions first.

Once the time frame has been set, enumerators should be trained on data collection and the tools they will be using. Enumerator training should be as thorough as possible to ensure that all enumerators properly understand the questions they are to ask (Box 10.1).

**Box 10.1 Enumerator training for data collection**

Consider a question that asks how many people in a household are chronically ill, and two enumerators who each define “chronic illness” differently:

- Enumerator 1 – any illness at all, including sight issues that require glasses
- Enumerator 2 – severe illnesses that impact ability to work

When analysing the data there is no way to know that the answers to this question are not comparable. It is important that enumerator training be careful and thorough.

**Data collection**

Once data collection is in the field, the teams should be debriefed each day in order to identify any potential issues as swiftly as possible. Issues that can arise during data collection are numerous and occur often. It is important to stay informed about
what is occurring and be flexible to find solutions. Some examples of issues that might be faced are:

- bad weather
- sudden change in security situation
- revoked authorization of entry (or different local authorities denying entry)
- community resistance
- transportation issues
- high non-response rates.\textsuperscript{12}

While data are being collected, efforts should be made to check the incoming data (the database if mobile collection techniques are being used, or the paper questionnaires if they are in use). As it is often necessary to request field teams to validate certain findings, constantly checking the incoming data can help speed up the validation process and ensure that all necessary information is collected while the field teams are still on site. For example, if an individual reports their age as 105 years, it is useful to follow up with the enumerator and check if that is a data entry error or if the person really is that old. Validation rules on mobile data forms can reduce the number of nonsensical results, such as males that are recorded as pregnant.

**Enumerator debriefing**

Where possible, debriefing should be a continuous process of collecting feedback from data collection teams. This feedback can form part of the observational data and can help inform the assessment and assist in data validation. If it is not possible to constantly debrief teams, a debriefing session should be organized immediately after data collection is completed.

Doing the debriefing as a group can help bring out more information, as some individuals may not find something relevant until it is mentioned by someone else.

**Step 3: Clean and process data**

1. **Data entry**

The ever-increasing use of mobile data collection tools has greatly reduced data entry requirements (as data are entered as they are collected), but where paper questionnaires are utilized, it is necessary to make sure data are entered into a database. This process can be time consuming and can also result in errors.

Where qualitative data are collected, information may be recorded or handwritten in notes and would also need to be transcribed or entered.
2. Data cleaning

The first step in data cleaning is validating the information. If paper questionnaires were used (and data only entered once), it is necessary to randomly check data against the hard copies of the questionnaires to ensure they have been entered properly.

Where longer answers have been included, or data transcribed, it may be necessary to translate information into the language that will be used during analysis. Translation may also be needed for units collected (for example, distance to the nearest health facility may be collected in a mix of different units, such as kilometres, miles, and local distance units, or there may be a combination of ages in months and years—these would need to be converted into one common unit).

Though cleaning and validation requirements are greatly reduced with mobile data collection, it is still necessary to check each variable and make sure the answers provided make sense. Sometimes the easiest way of achieving this is looking at summaries of the data (minimum, maximum, mean).

Survey questions often include an “other” option, with a request to specify what “other” means. This information needs to be carefully examined to see if it actually fits into a pre-existing category (as perhaps the enumerator incorrectly classified it as “other”) or can potentially lead to the creation of a new category if enough individuals or households reference a similar answer.

Cleaning may also be required for raw data compiled from secondary sources. This is particularly true if multiple data sets are utilized from different sources. The process of compiling data sets can be quite complicated and needs to carefully consider the data collection methodologies used.13

When cleaning data, it is imperative that the steps outlined in the data management plan are followed (such as keeping a log of any changes made).

3. Data processing

Data processing is the process of adjusting the data so they can be easily analysed.

With a growing interest in the use of compound indices to help standardize needs classification at the global level, it is possible that such indices will need to be processed. To calculate a compound index, it is often necessary to create a new variable that is calculated from the data collected in other variables. For example, the coping strategies index asks respondents how often they used various coping strategies over the prior seven-day period. The index then multiplies the answer to
each strategy by a weight (that is provided) and sums them all up into one “coping strategy index”. When these types of questions are included it is important that the new variables be properly calculated prior to undertaking analysis.

Data processing can also be necessary for certain visualizations, as some software or graph types require data to be input in a specific format. In some cases, the data may need to be processed into a pre-identified set of tables so they can be ready for analysis. This type of need should be identified in the analysis plan and implemented during this step.

Where geographical data are collected, it is often useful to incorporate place codes (P-codes) into the data set so information can be easily mapped if required.

**Step 4: Analyse**

**1. Preparatory analysis**

The first step involves summarizing the key observations and findings. It can be achieved by systematically working through the analysis plan and ensuring all key variables (questions) are summarized. This may include breaking them down by target groups.14

**2. Descriptive analysis**

In the second step, compare results and identify patterns, trends, anomalies, outliers and any stories that may be relevant to the objectives and information needs.

**3. Interpretive analysis**

Interpretive analysis brings together the various components of the needs assessment (secondary data review along with different sources of qualitative and quantitative data). An effort should be made to seek connections and relationships between observations and across different data sources. Any correlations and links to underlying processes or factors that may help to explain the reason for specific findings should be sought. One of the goals of interpretation is to determine and explain the *why*? of the situation and impart meaning. Arguably one of the most difficult steps in an assessment, interpretation helps to illuminate why certain findings may be seen in data.

Moving beyond explaining the combined findings, interpretation of needs assessment data often seeks to answer the following.
4. Anticipatory analysis

The final stage of the analytical process is to forecast developments and potential outcomes. Anticipation often includes the development of potential scenarios, including projections of how needs might evolve should those scenarios occur. Anticipatory analysis can be greatly facilitated by including forward-looking questions in the assessment – for example, asking what respondents feel their main health issues will be at some specific time in the future (compared with the issues they are reporting currently). Forward-looking questions not only help speed up the process of projection scenarios, they also help to ensure that the voice of the affected population is incorporated in the anticipatory analysis. Figure 10.5 shows how the analytical steps fit together.

Figure 10.5 Analytical steps of needs assessment

Source: Adapted from the chart provided in the Guidance and toolbox for the basic needs analysis (7).
5. Validation

It is important that all analytical steps are validated. Group discussions, workshops and meetings can facilitate the validation process. Ensuring a rigorous validation process helps to ensure buy-in once the results of the assessment are released, and also makes certain that a variety of expertise is taken into account in the analysis and interpretation of findings. As objectivity is essential to any needs assessment, a wide variety of discussions during the validation phase are encouraged.

Step 5: Share findings

1. Assessment report

A report should be drafted and structured with the assessment objective and information needs in mind. When drafting reports, it is essential to start by defining the intended audience and ensuring that the writing is targeted at that audience. For example, a report aimed for distribution among health professionals is likely to contain a much higher degree of technical terminology and explanations than one targeted at a wider, non-specialized group.

All reports should contain the following sections (or equivalent).

- **Executive summary** – a short description of key findings and conclusions.

- **Overview of the assessment** (scope) – introductory description of what the objectives and scope of the assessment were.

- **Background** (context) – based largely on the secondary data review, the background should provide relevant information on the crisis context.

- **Methodology** – a detailed description of the design, data collection and analysis process outlining tools used and sampling structure. It is important to be clear about the methodology, as this section is often used during future secondary data reviews to determine both the comparability of contained data and the confidence level in the information provided.

- **Findings** – should provide a breakdown of the analysis and interpretation, being sure to clearly explain all information presented and conclusions drawn.

- **Moving forward** – include any projected scenarios, needs forecasting and next steps.
- **Annexes** – annexes should include the tools used to collect data and, where possible, the actual data.

It is important to balance the need to be thorough against the need to ensure the information is consumed. In humanitarian crises, most needs assessments are designed not only for advocacy but also for use on the ground. Considering that many humanitarians are extremely overburdened, they may not always have the time to read large documents. For this reason, having a concise executive summary that is written in such a way that it may stand alone if required can be very useful. Where possible, use visualizations to expand on points and make the document user friendly.

**A note on sharing data**

While it can be very useful to share raw data, respondent privacy and risks associated with sharing data must be taken into consideration. Discussions should take place to determine what level of anonymization is required to protect respondents. Anonymization removes all variables that would enable someone to identify the individual or household based on such information. This includes any personal identification numbers, Global Positioning System (GPS) points, names and potentially village and even slightly higher administrative levels, depending on the population in the area. There are a number of options to consider when thinking of sharing data sets:

- sharing data publicly through available platforms, such as the Humanitarian Data Exchange;
- sharing data upon request through a focal point;
- sharing summary tables as opposed to raw data.

**2. Dissemination**

Findings can be shared in the form of:
- written report
- executive summary
- infographics designed to explain key findings (graphs, charts, etc.)
- PowerPoint presentation
- StoryMaps
- dashboard
- briefing notes.
Methods for disseminating information include:

- email
- workshop
- verbal briefings
- one-on-one discussions
- interpretive dance
- web posting (Humanitarian Data Exchange, ReliefWeb, Global Health Cluster sites)
- hard copy.

Findings should be shared with all relevant stakeholders, including national authorities and affected communities. When sharing with the local population, it is often necessary to ensure that messages are translated into the local language and that any information can be easily understood by all stakeholders. The types of access the affected population has to different information sources should be considered when deciding which methods to use for distribution.

### 10.7 Tools

#### 10.7.1 Technology and needs assessment

It is important to use the most suitable technology rather than focusing on the best and most advanced technology available.

**Mobile data collection**

One of the most useful technological advancements for needs assessments in recent years has been the rise of mobile data collection systems. Beyond the environmental impact of reducing paper usage, mobile data collection systems can integrate skips, loops and extended answers far better than paper-based systems (where there is heavy reliance on enumerators to properly read, understand and implement instructions). They also greatly reduce data entry errors by eliminating issues that can arise from having to read illegible notes, not enough space on the paper, and inputting responses in the wrong location.

Even with these benefits, mobile data collection is not always the best option. It may be difficult to quickly enter information into a mobile device in the midst of an interview, and interrupting the respondent repeatedly may compromise rapport. In some circumstances, carrying around devices to collect information is associated with intelligence agencies and can lead to mistrust in the population being surveyed. In certain circumstances, local government may not be comfortable with use of devices that can collect GPS coordinates. In the rare event that data are
being collected cross-border, there can sometimes be logistical issues relating to sanctions and donor agreements about carrying inputs across borders (and the ability to guarantee their return). In besieged areas, where there may be no physical contact with data collection teams, it may be necessary to use paper surveys if they do not have the tools to use the mobile collection techniques on hand.

Data storage

As data set size and complexity increases, it is necessary to consider how to store data. Many organizations will have policies in place that govern data management. When it comes to needs assessment, how data are stored is slightly less of a concern than that they are stored. All data should be stored in a secure location that is not susceptible to hacking, particularly when personal data are collected.

Software

There is a wealth of software that can support the needs assessment process. The information below provides an overview of the various software types, with some suggestions for currently used software included. Technology continues to advance and new software is constantly under development; for this reason the software options provided should not be considered exhaustive.

Survey software

Most commonly used for mobile data collection, survey software can also be employed to collect data online. The most common software used to collect data on mobile devices is presently based on XLS forms. In humanitarian settings, KoBoToolbox and Open Data Kit are the most popular options, with SurveyMonkey and LimeSurvey often being used to collect online surveys. The possibilities for remote survey collection are being explored by a number of organizations, but at present no simple solution has been identified. As smart phones are not universally utilized and Internet access can be unreliable (or unavailable) in some areas, most efforts have focused on running surveys through cell phone networks. There are a number of logistical issues that have arisen out of working with mobile phone networks, and this type of data collection has not yet become commonplace. It should only be looked into in circumstances with the most severe access constraints.

Geographical information systems (GIS)

Geographical analysis is very useful to include in the analytical process if a GIS specialist is available. GIS software is not limited to displaying geographical information; for example, it can also be beneficial for calculating a random sample.
Previously, random samples required a list of potential respondents that could then be used to randomly select a sample. Now, if reasonably updated dwelling information is available (satellite imagery can greatly help in this case), GIS software can be used to select points on the map where interviews can take place. The main GIS analysis software remains Esri’s ArcGIS, but use of the open-source QGIS continues to grow.

**Statistical software**

A variety of statistical software is available to help process data and run statistical tests that can be included in results. SPSS and Stata remain the most popular paid statistical analysis software, with R (an open-source alternative) growing in popularity.

**Qualitative data analysis**

There is a slowly growing number of applications that can assist in the analysis of qualitative data. A key feature of this type of software is that it enables tagging of key findings through various input documents. The applications usually support a variety of document formats, including voice recordings, pictures, PDFs, quantitative data sets and text documents. While NVivo is arguably the most robust tool for analysing qualitative data available, there are some lower-price alternatives, such as Dedoose, that may be used.

**Other software**

DEEP, currently in its beta edition,

is an intelligent web-based platform offering a suite of collaborative tools tailored towards humanitarian crisis responses. It includes common analysis workflows and frameworks for ... using both structured and unstructured, quantitative and qualitative data (8).

**Satellite imagery**

Satellite imagery has a number of uses in humanitarian needs assessments. It can be used in combination with sensor technology to conduct remote sensing (for example, in famine-related emergencies, local food availability can be monitored by mapping vegetation growth through analysis of visible infrared light); it can provide an overview of disaster-affected areas by comparing images from before and after the disaster event; it can provide the basis for mapping out areas and understanding settlement locations and population movements; and it can even aid in sampling design. Use of satellite imagery depends on access to images of sufficiently high resolution (with higher-resolution photos often requiring financial investment) and the software and skill sets needed to analyse them.
Drone technology

Aerial images (which can also be used for remote sensing) can be collected very quickly with the use of drone technology. However, use of drones can be extremely sensitive and proper authorization must always be sought first.

10.7.2 Checklist to give affected communities a voice

The following checklist can provide a guide to ensure participation by affected communities in a needs assessment. It is advisable to incorporate as many options as possible (9).

✓ Are all questions being asked in the local language?

✓ Are all individuals being interviewed asked to provide informed consent?

✓ Are consultations organized for a diverse group of actors (such as women, men, girls, boys, people with disabilities, older persons, youths, LGBTI (lesbian, gay, bisexual, transgender and intersex) persons, and minority groups)?

✓ Have the assessment findings and conclusions been presented to the affected population in a format the majority can understand, in terms of both medium and language?

✓ Have the data from various groups been triangulated to obtain information on the wide variety of experiences, with mention of any outliers?

✓ Have you incorporated the potential needs and themes that might be relevant to more marginalized groups in the assessment design (information needs and indicators)?

✓ Have you collaborated with specialized nongovernmental and community-based organizations that work with marginalized and isolated groups in order to enhance participation by those groups?

✓ Have you engaged with community structures (for example, youth groups, committees for women)?

10.7.3 Team checklist (composition, skills, equipment, training)

Table 10.4 outlines the competencies that may be required for conducting a needs assessment. This table can assist with identifying the correct individuals to participate in the process, and where no single individual possesses all of the necessary competencies, a team can be assembled of individuals with complementary skill sets to ensure a high-quality assessment.
<table>
<thead>
<tr>
<th>COMPETENCY – THE TEAM MEMBER IS ABLE TO:</th>
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<tr>
<td>Recognize the different typologies of crisis (armed conflict, displacement, natural disaster, etc.) and the key ways in which humanitarian action differs in these.</td>
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<td>Recognize the following generic features of health systems in resource-constrained settings: (a) different levels of care provision (from community to tertiary) and how they connect in a continuum; (b) the difference between preventive and curative health services; and (c) typical challenges, including shortage of skilled health workers, low utilization and financing problems.</td>
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<tr>
<td>Use available public health information to compose a general picture of risks, gaps and priorities.</td>
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<tr>
<td>Design, implement and analyse population sample surveys, including with complex sampling designs.</td>
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<tr>
<td>Source available georeferenced data sources and set up ad hoc collection of georeferenced data so as to implement geographical information system (GIS) spatial analyses, using appropriate software.</td>
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<td>Design, implement and analyse specific field data collection to rapidly estimate population size for planning purposes, when available sources do not appear robust.</td>
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<td>Use open-access software solutions to develop and manage simple websites in order to enhance use of information by partners.</td>
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*Source: Based on the common technical competencies outlined in the Standards for public health information services (10).*

One of the most important factors that can contribute to a successful assessment is the presence of one person responsible for coordinating the assessment from start to finish. For larger assessments this person would have to be dedicated to assessment tasks for the duration of the needs assessment.

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**Table 10.4 Needs assessment: competencies checklist**

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One of the most important factors that can contribute to a successful assessment is the presence of one person responsible for coordinating the assessment from start to finish. For larger assessments this person would have to be dedicated to assessment tasks for the duration of the needs assessment.
For smaller assessments they may be able to undertake additional tasks at certain points, but would need to have sufficient time allotted for completing each task (significant time would be required for the assessment design, debriefing, analysis and writing up the report). Assessment coordinators need to be able to understand the various components of the needs assessment and their relative importance as well as have sufficient knowledge of the sector and cluster system to be able to coordinate across multiple partners. It will be the primary responsibility of the assessment coordinator to interact with government representatives; working with such a broad array of actors requires strong diplomatic skills.

10.8 Basic principles for needs assessment

The following principles should underpin the entire needs assessment process.

- **Do no harm.** Information sources should be protected by complying with best practices regarding privacy, confidentiality and seeking informed consent. All primary data collection should start by describing the assessment and data being collected to the person partaking in the interview. That person must then agree to participate before any questions can be asked. It is necessary, when collecting data, to always be mindful of the potential for re-traumatization and vicarious victimization when asking people to relay potentially traumatic information. Assessment teams should have referral information available for when immediate mitigation and remedial health actions are needed. The principles of data responsibility in humanitarian action are meant to serve as a benchmark for the processing of non-personal data, particularly in sensitive contexts that may put certain individuals or groups of individuals at risk of harm (11). They are adapted from the United Nations Principles on Personal Data Protection and Privacy (12), as well as the core humanitarian principles, Sphere, and the Core Humanitarian Standard on Quality and Accountability (13, 14). If an assessment purports to collect anonymous data, it is essential that all data be anonymized before being shared, and that use of any personalized data be limited only to validation procedures (such as examining collected GPS points to compare with sampling plans).

- **Coordination.** All stakeholders should know when and where assessments are being carried out. Involving a broad set of actors will strengthen the quality and usability of findings and their impact on the humanitarian response.

- **Participation and inclusion.** Action must be taken to ensure that participation of a diverse sample of women, men, girls, and boys – including persons with disabilities, older persons, youths, and LGBTI persons – is adequately captured in a needs assessment. Communities should always be engaged in the needs assessment.
assessment process, and communication techniques should always consider cultural norms (such as language use and cultural practices). In any assessment it is necessary that findings are presented to affected populations as well as other stakeholders in order to avoid situations where people feel that they are constantly being asked for information but nothing comes of it.

- **Validity.** Standardized and rigorous procedures for the collection and analysis of data should be used to ensure credible results and minimize bias. Validation needs to be considered in both the design of the assessment, so that sampling plans and all processes factor in confidence requirements, and during implementation, when cross-checking findings with a variety of stakeholders to obtain buy-in for the conclusions drawn.

- **Relevance.** The purpose of the assessment must be kept in mind, so that only the required data are collected and analysed. Following the step-by-step design process that carefully builds upon information needs will ensure that all questions included in the tool design are relevant to the overall objective.

- **Adequacy.** The scope of the assessment should reflect the extent and nature of the crisis. Assessments are costly procedures and it is often necessary to adjust the design so that the plan is realistic, considering available resources. However, there comes a point when resources may be too limited to provide worthwhile information. This “tipping point” should be carefully considered when working on the assessment design.

- **Timeliness.** The need for accuracy, comprehensiveness and detail should be weighed against the speed with which critical decisions need to be made. While it is necessary to ensure that a needs assessment is adequate for informing the identified information needs, it is also essential that information is produced in sufficient time to be used for its objectives. Timeliness is the main factor that informs the type of assessment used. For example, initial assessments, which are characterized by some of the weakest methodological design but produce the fastest results, should only be utilized when timeliness is most crucial (for example, operations cannot proceed without the needs assessment information).

- **Continuity.** Steps should be taken in the design and implementation of each assessment to maximize comparability between data collected at different points in order to monitor trends.

- **Age, gender and diversity.** Health risks, needs, priorities, capacities, resilience and coping mechanisms are varied, depending not only on age, gender, social roles and other forms of diversity, but also on the extent to which groups are able to participate in finding durable solutions to their situations. It is important to
include consideration of the dynamics that accompany the interaction of various groups when planning primary data collection. For example, a focus group that has 10 individuals from the same community in it, where two are village leaders, some representatives from minority groups as well as a mix of genders, is unlikely to be of much use, because the information collected will probably reflect only the opinions of the most powerful individuals (village leaders). For this reason, it is often necessary to collect information from specific groups separately (for example, women versus men, dominant versus minority groups, young versus old).

- **Secondary data.** Maximum use should be made of available secondary data. Primary data collection should focus on determining what has changed, validating data, and filling gaps in validated available secondary information. To do this, a secondary data review should always be incorporated into any needs assessment process.

When analysing and sharing data, effort should be made to adhere to the following principles.

- **Impartiality.** A predefined analysis plan will ensure a predictive and objective process and will minimize bias, for example towards preconceived expectations about the severity of health needs.

- **Transparency.** Methodologies and approaches used during an assessment should be made available. This includes any assumptions made during the analysis or any potential limitations on either the accuracy of the data or the sources used.

- **Sharing.** Findings should be shared with other actors, national authorities, and the affected population, while adhering to data-sharing principles and agreed data-sharing protocols or agreements, as relevant. As mentioned above, it is important to consider protection concerns when sharing data and information, and to always share as much as is possible within the frame of “do no harm”.

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**Needs assessment**

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References


1. See Chapter 4.

2. See below and Chapter 4.

3. In some cases it may be the absence of behaviour, objects or events that is being sought.

4. See Chapter 4.

5. This type of monitoring assessment should be differentiated from the more typical programme monitoring that seeks to review programme implementation.

6. MSNAs are usually run through the assessment working group, if one exists. They are often coordinated by a combination of REACH and the assessment working group or REACH and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). REACH is a leading humanitarian initiative providing granular data, timely information and in-depth analysis from contexts of crisis, disaster and displacement. https://www.reach-initiative.org/

7. Note that the post-conflict needs assessment methodology is under review at the time of writing.

8. The IASC defines an indicator as “a specific variable, or combination of variables, that gives insight into a particular aspect of the situation”.

9. Data in surveys can be collected in a variety of formats but are most often classified as numeric (a number) or categorical (can be grouped). Text data can also exist that are not categorical, but they could not be used in statistical tests without first being coded into a numeric or categorical format.

10. Metadata are the descriptions included in a data set that provide guidance on that data set.

11. Raw data have not undergone any processing. They are most often found in the form of a spreadsheet where each column contains a different variable (question or question component) and each row contains a different observation (such as an interview).

12. The non-response rate is the percentage of targeted individuals who refuse to take part in the needs assessment.

13. Data should only be combined into a single data set if they can be disaggregated or aggregated into the same units.

14. Needs assessments will decide early on the level at which data needs to be provided. Usually geographical levels are taken into consideration (for example, allowing for district-level profiles), but it is also beneficial to consider disaggregation by certain vulnerable or minority groups, possibly by gender or age, or other factors that may show differences in health status. It is important to ensure that any criteria intended to be used for disaggregating are factored in during the sample design.

15. For example, there have been instances where health facilities are targeted in aerial attacks, so sharing maps that mark the location of health facilities could have severe consequences. The need to share information should always be weighed against the risks of someone adversely using it.

16. StoryMaps combine various types of information (graphics, images, maps, multimedia content and narrative text).

17. The private sector increasingly relies on qualitative data, and software is constantly under development to assist with analysis. Though data collection may include a slightly different process, the following software should also be considered as potentially useful: HubSpot; MAXQDA; Quirkos; Qualtrics; FreeQDA; and QDA Miner Lite.

18. Remote sensing is defined by the United States Geological Survey as the process of detecting and monitoring the physical characteristics of an area by measuring its reflected and emitted radiation at a distance (typically from satellite or aircraft).

19. It is useful to identify key groups in advance so a separate line item can be included for each group. Remember that all groups should be broken down by gender at a minimum (for example, women with disabilities may have very different experiences to males with disabilities) and possibly by age as well.

20. See Chapter 12.