Public Health Information Services (PHIS) Toolkit

Version: 20 December 2017
Authors
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Acronyms

CDC Centers for Disease Control and Prevention
DHIS2 District Health Information System 2
ENA Emergency Nutrition Assessment
EWARS Early Warning Alert and Response System
GHC Global Health Cluster
HC Health Cluster
HCC Health Cluster Coordinator
HeRAMS Health Resources Availability Monitoring System
HESPER Humanitarian Emergency Settings Perceived Needs
HMIS Health Management Information System
IASC Inter-Agency Standing Committee
IMO Information Management Officer
IRA Initial Rapid Assessment
MIRA Multi-Sector Initial Rapid Assessment
MVH Measuring Violence against Health
OIM Operational Indicator Monitoring
PHIS Public Health Information Services
PHO Public Health Officer
PHSA Public Health Situation Analysis
PRIME Public Health Risk Information Marketplace for Emergencies
PSD Preliminary Scenario Definition
RHA Rapid Health Assessment
SMART Standardised Monitoring and Assessment of Relief and Transition
SSA Surveillance System of Attacks on Health Care
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Acknowledgements

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1. INTRODUCTION

1.1 Background
At country and subnational levels, public health information needs are not consistently met by Health Clusters, partly due to short-staffed Health Cluster teams, and multiple and conflicting public health information priorities of different stakeholders. To cope with these challenges, Health Clusters usually attempt to develop local solutions, many of which vary significantly in quality and pose a high workload on Health Cluster teams.

The Global Health Cluster (GHC) is seeking to address these and other public health information challenges through the roll out of the Global Public Health Information Services (PHIS) Standards. These standards are also accompanied by a set of practical tools to simultaneously standardise and support public health information functions at national and sub-national levels.

1.2 Purpose of the PHIS Toolkit
This PHIS Toolkit complements the Global PHIS Standards. The Toolkit assembles guidance, templates and best-practice examples for each core, additional and context-specific public health information service, as outlined in the PHIS Standards. It also includes additional general tools and resources to support information management functions in activated Health Clusters.

1.3 Target audience
This toolkit has been developed by the PHIS Task Team of the GHC. Its intended audience consists of:

- Health Cluster Coordinators (HCCs) and Public Health Officers (PHOs), who have to instigate data collection, and interpret and act upon findings;
- Information Management Officers (IMOs); as well as epidemiologists who may be deployed to HCs for specific stand-alone activities), who bear the main burden of designing and executing data collection, management, analysis and reporting; and
- M&E/health program managers in individual GHC partner agencies.
<table>
<thead>
<tr>
<th>Domain</th>
<th>Service</th>
<th>Guidance for design/methodology</th>
<th>Data collection tool(s)</th>
<th>Recommended software/application</th>
<th>Reporting Template(s)</th>
<th>Guidance for interpretation/use</th>
<th>Other</th>
</tr>
</thead>
</table>
|        | Public Health Situation Analysis (PHSA) | • Public health information for needs assessment and analysis – Framework  
• Public health information for needs assessment and analysis - Key questions and data sources | • Public health information for needs assessment and analysis - Key Questions Worksheet  
• Public health information for monitoring the humanitarian health response - Key Questions | Not needed | Public Health Situation Analysis template | None | n/a |
|        | Rapid Assessment  
(No standardised method for rapid health-focused assessments) | Multi-Sector Initial Rapid Assessment (MIRA)  
• Multi-Sector Initial Rapid Assessment (MIRA) Guidance  
• MIRA Framework | MIRA Investigation Forms | Two applications to facilitate the choice of questions and questionnaire design under development by ACAPS and CDC. | • MIRA Preliminary Scenario Definitions (PSD) Template  
• MIRA Report Template | None | n/a |
|        | Initial Rapid Assessment (IRA) Tool | • Guidance Note  
• Aide Memoire for Field Teams  
• Initial Rapid Assessment for Adolescent Sexual and Reproductive Health in Emergency Settings (adjunct to main tool) | • Field Assessment Form  
• Secondary data template | • Data Entry and Reporting Tool  
• IRA Software User Guide | • Data Entry and Reporting Tool  
• IRA Software User Guide | None | n/a |
|        | Rapid Health Assessment (RHA) Tool  
Guidelines and comments | • Field Questionnaire  
• Data Compilation Template | None | • RHA Report Template | None | n/a |
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<thead>
<tr>
<th>Domain</th>
<th>Service</th>
<th>Guidance for design/methodology</th>
<th>Data collection tool(s)</th>
<th>Recommended software/application</th>
<th>Reporting Template(s)</th>
<th>Guidance for interpretation/use</th>
<th>Other</th>
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<tbody>
<tr>
<td>Early Warning Alert and Response System (EWARS)</td>
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<td></td>
<td>Global EWARS Project</td>
<td>Global EWARS Project</td>
<td>Global EWARS Project</td>
<td>Global EWARS Project</td>
<td>n/a</td>
</tr>
<tr>
<td>Population mortality estimation</td>
<td>The Standardised Monitoring and Assessment of Relief and Transition (SMART) method</td>
<td></td>
<td>ENA [Emergency Nutrition Assessment] software</td>
<td>The Standardised Monitoring and Assessment of Relief and Transition (SMART) method</td>
<td>The Standardised Monitoring and Assessment of Relief and Transition (SMART) method</td>
<td>SMART Capacity Building Toolbox</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>The WHO verbal autopsy method (not simplified for crises)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The WHO verbal autopsy method</td>
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<td></td>
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</tr>
<tr>
<td>Domain</td>
<td>Service</td>
<td>Guidance for design/methodology</td>
<td>Data collection tool(s)</td>
<td>Recommended software/application</td>
<td>Reporting Template(s)</td>
<td>Guidance for interpretation/use</td>
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<td>-------</td>
</tr>
<tr>
<td>Measuring Violence against Health (MVH)</td>
<td>None</td>
<td>None</td>
<td>Public Health Risk Information Marketplace for Emergencies (PRIME)</td>
<td>None</td>
<td>None</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>WHO, What, Where (3W) matrix</td>
<td>The GHC is currently developing and piloting a Web App with an accompanying manual for 3Ws.</td>
<td>None</td>
<td>PRIME ReportHub</td>
<td>None</td>
<td>None</td>
<td>n/a</td>
<td></td>
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<tr>
<td>Partners’ List</td>
<td>None</td>
<td>None</td>
<td>PRIME</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
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</tbody>
</table>
| Health Resources Availability Monitoring System (HeRAMS) | • HeRAMS user guide: Approach & Roles and Responsibilities of the Cluster  
• HeRAMS health services checklist | None | PRIME | None | None | n/a |
<table>
<thead>
<tr>
<th>Health System Performance</th>
<th>Service</th>
<th>Guidance for design/methodology</th>
<th>Data collection tool(s)</th>
<th>Recommended software/application</th>
<th>Reporting Template(s)</th>
<th>Guidance for interpretation/use</th>
<th>Other</th>
</tr>
</thead>
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<tr>
<td>Health Management Information System (HMIS)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Possible options: UNHCR’s TWINE in the acute phase DHIS 2 in the protracted phase.</td>
</tr>
<tr>
<td>Operational Indicator Monitoring</td>
<td>Global Health Cluster Suggested Set of Core Indicators and Benchmarks by Category</td>
<td>None</td>
<td>PRIME</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>n/a</td>
</tr>
<tr>
<td>Health Cluster Bulletin</td>
<td>n/a</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>A template is being developed.</td>
<td>None</td>
<td>n/a</td>
</tr>
<tr>
<td>Domain</td>
<td>Service</td>
<td>Guidance for design/methodology</td>
<td>Data collection tool(s)</td>
<td>Recommended software/application</td>
<td>Reporting Template(s)</td>
<td>Guidance for interpretation/use</td>
<td>Other</td>
</tr>
<tr>
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</tr>
</tbody>
</table>
| Ad hoc Infographics | For tables, graphs, diagrams, and dashboards:  
- Built-in infographic functionalities software/applications (e.g. Word, Excel, Access - ActivityInfo, STATA, SPSS, R, etc...)  
For mapping:  
- ArcGIS resource manuals  
- QGIS resource manuals  
- Adobe Illustrator  
- Adobe InDesign  
- AMCharts | n/a | For tables, graphs, diagrams, and dashboards:  
- Built-in infographic functionalities software/applications (e.g. Word, Excel, Access - ActivityInfo, STATA, SPSS, R, etc...)  
For mapping:  
- ArcGIS (proprietary)  
- QGIS (open-access)  
- Adobe Illustrator  
- Adobe InDesign  
- AMCharts | None | None | ArcGIS Training from Esri | MAPACTION Humanitarian Mapping Training |
| Additional Miscellaneous Public Health Information Tools & Resources | General Templates for Health Cluster Documents | n/a | n/a | n/a | Visual Identity Guidelines  
Health Cluster Logo Usage Policy  
Letterhead template  
Presentation template  
Document template | n/a | n/a |

Table 1: Availability of guidance and applications to support PHIS
2. TOOLS FOR MEASURING THE HEALTH STATUS AND THREATS FOR AFFECTED POPULATIONS

2.1 Public Health Situation Analysis (PHSA)

The Public Health Situation Analysis (PHSA) is a background document, which initially synthesises the already available (i.e. secondary) data from a wide array of sources to characterize epidemiologic conditions, existing health needs and possible health threats faced by the crisis-affected population, and is then continuously updated as more information (including from primary data) is gathered. It identifies the major areas for health action to respond to and recover from the crisis at hand. It is relevant for preparedness as well as response planning.

<table>
<thead>
<tr>
<th>PHSA Tools</th>
<th>How to use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public health information for needs assessment and analysis – Framework</strong></td>
<td>This <strong>Framework</strong> sets out the key public health domains for which baseline (pre-crisis) and crisis-emergent information needs to be collected.</td>
</tr>
<tr>
<td><strong>Public health information for needs assessment and analysis - Key questions and data sources</strong></td>
<td>This document presents a set of questions presented in the order in which they should be answered. Recommended sources of information, what data to extract and what assumptions to make are indicated.</td>
</tr>
<tr>
<td><strong>Public health information for needs assessment and analysis - Key Questions Worksheet</strong></td>
<td>This document presents a <strong>worksheet</strong> that facilitates completion of the <strong>Key Questions</strong>.</td>
</tr>
<tr>
<td><strong>Public Health Situation Analysis template</strong></td>
<td>The <strong>PHSA Template</strong> is where all the information collected in the <strong>worksheet</strong> below is synthesized into a narrative document.</td>
</tr>
<tr>
<td><strong>Public health information for monitoring the humanitarian health response - Key Questions</strong></td>
<td>This document presents a list of key questions and suggested data to monitor the evolution of the crisis and provide information for <strong>updating</strong> the PHSA.</td>
</tr>
</tbody>
</table>

Table 2: Public Health Situation Analysis Tools

Training for PHSA is included in the curriculum for the joint Health Cluster Coordination Training for Health Cluster Coordinators and Information Management Officers. Please refer to this link for updates on up and coming courses: [http://www.who.int/health-cluster/capacity-building/training-courses/en/](http://www.who.int/health-cluster/capacity-building/training-courses/en/). As of 2017, several countries are piloting the PHSA.
2.2 Rapid Assessment

2.2.1 Multi-Sector Initial Rapid Assessment (MIRA)

The MIRA is the main inter-cluster approach to joint rapid assessments and is a particularly useful tool in sudden-onset emergencies. MIRA is a methodology; in each situation, customised data collection tools are developed for various methods, such as observations, key informant interviews, focus group discussions, and household surveys. The information is then summarised across sectors, including health. The contribution of the HC to MIRA may vary depending on the scenario and the feasibility of collecting data.

The MIRA Toolbox contains the following:

- **Multi-Sector Initial Rapid Assessment (MIRA) Guidance** outlines the key steps required, as well as associated roles and responsibilities.

- **MIRA Framework** asks key questions to inform initial planning. The role of the Health Cluster is to provide health-specific inputs into responses for key questions posed by the MIRA framework. A synthesized PHSA will simplify the process of providing inputs into the MIRA framework.

- **MIRA Preliminary Scenario Definitions (PSD) Template** is produced within the first 72 hours. The role of the Health Cluster is to provide health-specific inputs into the PSD. A synthesized PHSA will simplify the process of providing inputs into the MIRA PSD.

- **MIRA Investigation Forms** are generic simplified data collection tools. This template can be used as is, or elaborated/edited by the Health Cluster when providing health-specific inputs into the MIRA design of data collection tools and training of enumerators.

- **MIRA Report Template** is where all the information collected in the assessment is synthesized into a narrative document. The role of the Health Cluster is to provide health-specific inputs into different sections of the MIRA report. A synthesized PHSA as well as information from the primary data will simplify the process of providing inputs into the MIRA framework.

- Two applications to facilitate the choice of questions and questionnaire design are under development by ACAPS and Centers for Disease Control and Prevention (CDC).

Since its introduction in 2012, and subsequent revision in 2015, MIRA has been implemented in several emergencies and some reports have been published. A good example of a MIRA report can be found here: [Escalation of conflict, Central African Republic, January 2014 (interagency initiative)](#).
SITUATION PRIOR TO THE DECEMBER CRISIS

The already weak health system in the CAR has virtually collapsed. Even before the latest upsurge in violence, the health situation in the country was precarious, with some of the worst health indicators in the region.

Assessments among affected populations indicate that many people are in dire need of health care. Health operational partners are few and coverage is inadequate to meet the needs, with humanitarian aid the sole source of health service provision in the country.

Of the 117 health facilities assessed to date in 8 (out of 16) Health Districts, 50% have been looted, 42% damaged, and 68% have a medicines/supply shortage. It is estimated that 80% of the country’s health workers have been displaced. Among the four hospitals in Bangui, three are partially functional.

There is an urgent need to continue to provide other health services such as routine immunization, management of mental and psychological disorders, and to expand and strengthen the technical platform services in health facilities still functional.

It is also necessary to enhance the safety of ambulance service for the collection of victims and the transfer of patients between sites and structures 24h/24h reference in collaboration with international forces.

Communicable diseases are a major concern: malaria is the leading cause of death for children under five years of age and recent surveillance in Bangui shows that malaria cases account for more than 40% of consultations, and there are shortages in anti-malaria drugs in all 22 health districts. Despite this, resistance against malaria remains low, even among the most vulnerable populations: availability of insecticide treated nets (ITNs) in the household (47.2%); children under 5 sleeping under ITNs (36.4%) and pregnant women sleeping under ITNs (40.4%).

CAR has very low immunization coverage (measles vaccine: 55.8%, diphtheria, pertussis and tetanus vaccine: 32.1%)¹, and with routine vaccinations interrupted for many months, measles epidemics have been ongoing (in November, affecting 15 out of 22 health districts). On 31 December 2013, six cases of measles have been confirmed in Bangui, in two IDPs sites. The insufficiency of safe water and sanitation, and overcrowded conditions will increase the risk of diarrheal disease and other waterborne diseases outbreaks such as cholera.

Health needs are the most widespread of all sectors, as the needs are caused or exacerbated by conflict, notably the influx of internal displaced people, war casualties, and seasonal outbreak of disease with high potential epidemics, destruction and looting of health facilities. All reasons have a direct impact on morbidity and mortality. CAR has the world’s highest death rate from infectious and parasitic diseases,¹⁰ and the healthcare system is inadequate to respond. CAR is part of the 10 out of 194 countries with the shortest life expectancy (48 years) and of those with the world’s worst mortality indicators¹⁰:

- Infant mortality rate (probability of dying by age one) of 112 per 1,000 live births (2009).
- Under-five mortality rate (probability of dying by age five) of 171 per 1,000 live births (2009).
- Under-five mortality is due to malaria (28 per cent), pneumonia (17 per cent), diarrhea (14 per cent), prematurity (8 per cent), birth asphyxia (7 per cent), HIV/AIDS (4 per cent), neonatal sepsis (4 per cent), congenital anomalies (1 per cent) and injuries (1 per cent). Other causes represent 15 per cent of deaths.

Priority populations are children under five years of age, women who are pregnant or of childbearing age, people vulnerable to violence and sexual or gender-based violence (SGBV), and people living with HIV/AIDS and other chronic diseases. An estimated 300,000 people between 0–49 years old are living with HIV/AIDS, with the prevalence of HIV infection among adults approximately 15%. Many of these people living with HIV do not have access to the continuity of their antiretroviral treatment.

Priority needs are in immediate and life-saving health care to people affected by difficult or extremely limited access to care, particularly emergency care (including access to emergency obstetrical care, EmOC), endemic diseases, malnourished children, epidemics and injury from conflict, and complications during childbirth.

Northern prefectures bordering Chad, located in the Sahelian meningitis belt, are the CCR areas of risk, but an outbreak of meningococcal meningitis has already affected other parts of the country. The risk of an outbreak of meningococcal meningitis will continue, including the risk of an outbreak linked with serotype A, given that vaccination with the long-acting conjugate vaccine A (MenAfriVac) has not begun yet in CAR.

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¹ Data from UNICEF and WHO. 

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Table 8: Impact of conflict on healthcare structures, access, capacity and medicines availability

<table>
<thead>
<tr>
<th>Site Type</th>
<th>Structures Before</th>
<th>Structures after</th>
<th>Reduction in structures</th>
<th>Access to healthcare</th>
<th>Capacity of health services</th>
<th>Medicines availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangui</td>
<td>45</td>
<td>24</td>
<td>-47%</td>
<td>31%</td>
<td>23%</td>
<td>5%</td>
</tr>
<tr>
<td>Urban (non-Bangui)</td>
<td>15</td>
<td>13</td>
<td>-13%</td>
<td>7%</td>
<td>51%</td>
<td>50%</td>
</tr>
<tr>
<td>Rural (n. Bangui)</td>
<td>60</td>
<td>65</td>
<td>-8%</td>
<td>37%</td>
<td>12%</td>
<td>16%</td>
</tr>
<tr>
<td>Capital</td>
<td>8</td>
<td>9</td>
<td>-12%</td>
<td>4%</td>
<td>30%</td>
<td>13%</td>
</tr>
<tr>
<td>Overall</td>
<td>20</td>
<td>17</td>
<td>-15%</td>
<td>40%</td>
<td>39%</td>
<td>25%</td>
</tr>
</tbody>
</table>
KEY FINDINGS FROM THE MIRA

Access to health services

Functional health structures have declined from 2 in September to 1.24 on average now. This is a 38% decrease for functional health facilities.

The most important decline is in Bangui, from 5 to 2.61 (a 59% reduction). While there has been limited impact in urban areas outside Bangui (an 11% reduction), a 36% decline has been reported in rural areas where functional health facilities were already scarce.

Overall, the community, through the key informants, reported that access to health services is only at 46%, but with wide disparities: while no before/after data is presented, presumably access to healthcare in Bangui was better than elsewhere before the current access rate is estimated by key informant at only 26% and in 3rd Arrondissement at 0%, so this represents an enormous change. Conversely, in non-Bangui urban areas, access is estimated at 71%. In rural areas, access is only at 41% in large villages and 30% in small ones — this may well have been the case as well before the recent crisis.

Geographic variation in access to health structures

There exists a lot of variation by sub-prefecture, with certain areas like Dramana and Bawa with no access at all (though this is slightly skewed because no larger urban areas were evaluated in these sub-prefectures), whilst others such as Paoua, Batagou, Kega, Bandoro, Kabo and Nangha-Boguida reporting good access (~80%).

Causes of the restricted access to healthcare

Overall, the community informants reported a very wide range of causes that explain restricted access to health care. Lack of medication is the most oft-cited problem, appearing in 36% of communities’ top three problems (see Figure 12).

Geographically, the only significant differentiation is cost, which hardly anyone mentioned as being a problem in Ouham but was by far the most significant problem in Nana Mambéré.

Cost is generally a slightly more common problem in urban areas than in rural areas, whereas the lack of medication is more common rural areas.

Lack of security is the biggest problem preventing access to healthcare in Bangui Arrondissements.

Level of functionality of health structures

The overall perceived capacity of currently open health structures to offer basic health services is averaging at 39%, with Bangui is by far the worse at 26% (worse even than rural capacity at 52%).

Non-Bangui urban areas are relatively better off at 61%, although figure is already extremely worrying.

Out of the few currently functional or partly functional health structures, the least commonly provided services are surgery and chronic illnesses while Ante Natale Care (ANC) and vaccination are better covered.

Data again points to a complete collapse of services in Bangui, with vaccination provision and hospitalisation worse than both non-Bangui urban and even rural areas.

Main health concerns

It is no surprise, malaria is the largest health problem reported everywhere, with a score of 9.5 (where 10 represents all people citing it as the biggest problem), followed by diarrhea. Any other diseases is less than half problematic than malaria, without rank weighting, 98% of respondents cited malaria as amongst their top three concerns, and 77% indicated diarrhoea. The next closest with 45% is Parasites.

The order of reported diseases remains largely unchanged regardless of urban/rural or geographical divides, except for Malnutrition (3rd largest problem in Ombella-Mpoko and Nana Gribizi, but hardly mentioned in Nana Mambéré).

There is an overall shortage of medicines, with an average 25% coverage of needs. As with capacity and services, Bangui is in the direst situation (averaging at 5% coverage of medicine needs), with rural areas at 16% and a comparably much better situation in other urban areas at 64%.

Figure 11: Most frequently reported illnesses or medical issues

Percentage of key informants citing amongst top three concerns

<table>
<thead>
<tr>
<th>Illnesses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>98%</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>78%</td>
</tr>
<tr>
<td>Acute respiratory infection</td>
<td>45%</td>
</tr>
<tr>
<td>Acute gastroenteritis</td>
<td>43%</td>
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<tr>
<td>Malaria</td>
<td>30%</td>
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<tr>
<td>Acute gastroenteritis</td>
<td>31%</td>
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<tr>
<td>Pulmonary tuberculosis</td>
<td>21%</td>
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<tr>
<td>Pulmonary tuberculosis</td>
<td>19%</td>
</tr>
<tr>
<td>Pulmonary tuberculosis</td>
<td>14%</td>
</tr>
<tr>
<td>Pulmonary tuberculosis</td>
<td>13%</td>
</tr>
</tbody>
</table>

200 informants
2.2.2 Rapid Assessment Tools (other than MIRA and HESPER)

The two tools described below can be used by the Health Cluster as they are, or adapted to the local context. They can be used when organising and coordinating more in-depth, health-specific rapid assessments, or when supporting individual HC partners with their own local rapid health assessments.

The Inter-Agency Standing Committee (IASC)’s Health, Nutrition & WASH Clusters jointly developed an Initial Rapid Assessment (IRA) Tool. Unlike MIRA which is a methodological approach, IRA is a tool with questionnaires that cover in-depth sectoral information, specifically for health, WASH and nutrition (it covers populations risks as well as health facility assessments).

The IRA toolbox contains the following:

- Guidance Notes
- Field Assessment Form
- Secondary Data Template
- Data Entry and Reporting Tool
- Aide Memoire for Field Teams
- Initial Rapid Assessment for Adolescent Sexual and Reproductive Health in Emergency Settings (adjunct to main tool, developed jointly by Save the Children and UNFPA)

The Global Health Cluster’s Rapid Health Assessment Tool (RHA) is a component of the Inter-Cluster Rapid Assessment Tool. It can be used as part of a multi-cluster assessment or as a stand-alone tool.

The RHA toolbox contains the following:

- Guidelines and Comments
- Field Questionnaire
- Data Compilation Template
- Report Template

2.3 Humanitarian Emergency Settings Perceived Needs (HESPER) Scale

The Humanitarian Emergency Settings Perceived Needs Scale (HESPER) is a method for assessing perceived needs of populations affected by large-scale crises in a valid and reliable manner. HESPER information should complement secondary data and other assessment information in order to compose, and update, the Public Health Situation Analysis.

The HESPER manual includes the HESPER Scale and a detailed explanation of how to use the HESPER Scale, how to train interviewers, and how to organise, analyse and report on a HESPER survey. The WHO is currently developing an online HESPER tool.

Since its introduction in 2011, the HESPER scale has been used 4 times, including among Syrian refugees in Turkey in 2014. It remains the only tool that focuses on what crisis-affected populations perceive as their key needs.
2.4 Early Warning Alert and Response System (EWARS)

EWARS should be viewed as a complement to HMIS, with minimal overlap between the two and a different frequency of reporting. The event-based focus of EWARS is data-light and can be implemented rapidly even without incidence-based data reporting. The following tools are available to support EWARS implementation or strengthening:

- **Outbreak surveillance and response in humanitarian emergencies: WHO guidelines for EWARN implementation**. This guide provides a standard framework and best current practice for implementation of an EWARS following a crisis. These guidelines are intended for all individuals responsible for disease surveillance activities at all levels. The example of *Early Warning Disease Surveillance After a Flood Emergency in Pakistan in 2010* shows how the different components of EWARS were implemented.

- The **Global EWARS Project** is a simple, lightweight application that can be rapidly configured and deployed to support disease surveillance, alert and response in emergencies. In addition to the application, a start-up kit containing all the hardware needed to launch the EWARS project in-country (“EWARS in a Box”), is available from WHO.

2.5 Population Mortality Estimation

There is currently no consensus on the most appropriate method for mortality estimation in crises. The **Standardised Monitoring and Assessment of Relief and Transition (SMART) method** enables survey-based estimation of anthropometry, mortality and vaccination coverage. It is mainly conceived for fairly simple estimation scenarios. The **ENA (Emergency Nutrition Assessment) software** supports design, data management and analysis of SMART mortality and anthropometric surveys.

Here is an example of using the SMART methodology for mortality assessment from the Food Security and Analysis Unit - Somalia: **Guidelines for Emergency Nutrition & Mortality Surveys in Somalia, June 2011**.

A manual and automated analysis tool are available for the **WHO’s verbal autopsy method**, but is not simplified for crises. Analytical tools for cause of death assignment using the data collected by the WHO’s verbal autopsy method are **InterVA** and **Tariff**.

2.6 Measuring Violence against Health (MVH)

WHO is currently developing a Surveillance System of Attacks on Health Care (SSA). The purpose of the WHO SSA is to systematically collect and make available data on attacks on health care, and their impact on public health, in countries facing emergencies.

The SSA toolbox includes a standard SSA data collection template, a web-enabled secure global database for data entry and generation of automated infographics and reports, and a scoring algorithm for verification of reported attacks.
3. TOOLS FOR MEASURING HEALTH RESOURCES AND SERVICES AVAILABILITY

3.1 Who, What, Where (3W) Matrix

The ‘Who does What, Where?’ (3W) matrix systematically maps HC partner activities across the crisis-affected population. The HC-specific 3W Matrix in turn feeds into the all-sector, OCHA-led 3W Matrix. The 4W matrix adds an additional time dimension to the matrix (Who does What, Where and When), to map when and for how long agencies are conducting their activities in the field. In some crises, 5Ws is used, which collects data on beneficiaries under a ‘Whom’ – this practice is discouraged as it further complicates the data collection for the 3W matrix due to different interpretation of ‘beneficiaries’ by cluster members.

The 3/4W matrix is the main tool for collection of data from Health Cluster partners. There is no standard Health Cluster template for 3/4W; it is usually developed in-country according to the overall 3W matrix defined by OCHA. It usually includes information similar to that in table 3 below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Variable</th>
<th>Values</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who</td>
<td>Partner</td>
<td>Agency name or acronym</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partner type</td>
<td>Frontline</td>
<td>The agency is a Health Cluster partner that operates or supports health services at the patient side</td>
</tr>
<tr>
<td></td>
<td>Pipeline</td>
<td>The agency is a Health Cluster partner that enables or supports health service provision, but does not itself operate or support health facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-cluster</td>
<td>The agency is not a Health Cluster partner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CERF/CHF recipient?</td>
<td>Yes/No</td>
<td>Whether the partner is a recipient of CHF/CERF funding for health projects.</td>
</tr>
<tr>
<td>Where</td>
<td>Admin level 1</td>
<td>District</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Admin level 2</td>
<td>Sub-district</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Admin level 3</td>
<td>Camp, village, other specific location</td>
<td></td>
</tr>
<tr>
<td>What (frontline health services)</td>
<td>Community case mgt.</td>
<td>Yes/No</td>
<td>Network of community health workers trained and supplied to manage diarrhoea, ARI, malaria and refer patients as needed</td>
</tr>
<tr>
<td></td>
<td>Primary curative</td>
<td>Yes/No</td>
<td>Outpatient curative care for common conditions</td>
</tr>
<tr>
<td></td>
<td>EPI</td>
<td>Yes/No</td>
<td>Routine vaccination through the Expanded Programme on Immunization</td>
</tr>
<tr>
<td></td>
<td>Mass vaccination</td>
<td>Yes/No</td>
<td>Support to or implementation of mass vaccination campaign(s)</td>
</tr>
<tr>
<td></td>
<td>ANC</td>
<td>Yes/No</td>
<td>Antenatal and post-natal care</td>
</tr>
<tr>
<td></td>
<td>BEmONC</td>
<td>Yes/No</td>
<td>Basic emergency obstetric and neonatal care (includes safe birth attendance by skilled personnel)</td>
</tr>
<tr>
<td></td>
<td>CEmONC</td>
<td>Yes/No</td>
<td>Comprehensive emergency obstetric and neonatal care (includes Caesarean section and blood transfusion)</td>
</tr>
<tr>
<td></td>
<td>HIV</td>
<td>Yes/No</td>
<td>Services for people living with HIV (voluntary counselling and testing, prevention of mother-to-child transmission, and/or antiretroviral treatment)</td>
</tr>
<tr>
<td></td>
<td>TB</td>
<td>Yes/No</td>
<td>Testing and at least first-line treatment and follow-up of tuberculosis</td>
</tr>
</tbody>
</table>
### Table 3: Example of information collected for 3W

<table>
<thead>
<tr>
<th>What (pipeline health services)</th>
<th>Yes/No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGBV</td>
<td>Yes/No</td>
<td>Clinical management of sexual and gender-based violence</td>
</tr>
<tr>
<td>MHPSS</td>
<td>Yes/No</td>
<td>Treatment of and referral for mental health and psychosocial support</td>
</tr>
<tr>
<td>Paediatric secondary care</td>
<td>Yes/No</td>
<td>Paediatric ward</td>
</tr>
<tr>
<td>General secondary care</td>
<td>Yes/No</td>
<td>General adult ward</td>
</tr>
<tr>
<td>Surgery and trauma</td>
<td>Yes/No</td>
<td>Surgical management of trauma injuries</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>Yes/No</td>
<td>Any other specific services, e.g. vertical neglected tropical disease programmes, vector control, eye care, etc.</td>
</tr>
<tr>
<td>Funding</td>
<td>Yes/No</td>
<td>Provision of funding to frontline providers</td>
</tr>
<tr>
<td>Drug donations</td>
<td>Yes/No</td>
<td>Donation of kits and other pharmaceutical supplies</td>
</tr>
<tr>
<td>Cold chain and vaccines</td>
<td>Yes/No</td>
<td>Provision of cold chain equipment, vaccines and vaccination supplies</td>
</tr>
<tr>
<td>Logistics support</td>
<td>Yes/No</td>
<td>Transport of drugs, patients or medical teams; warehousing; other logistics support for frontline providers</td>
</tr>
<tr>
<td>Coordination</td>
<td>Yes/No</td>
<td>Health Cluster coordination (national or sub-national)</td>
</tr>
<tr>
<td>Health information</td>
<td>Yes/No</td>
<td>Epidemic alert and response, health information on activities, health service functionality, health service performance, etc.</td>
</tr>
<tr>
<td>Training and technical support</td>
<td>Yes/No</td>
<td>Capacity building on specific areas of health service provision, supervision of service quality, creation and dissemination of technical guidelines and policy</td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td>Any other pipeline health services</td>
</tr>
</tbody>
</table>

WHO is encouraging activated Health Clusters to directly upload their own 3/4W information on its [Public Health Risk Information Marketplace for Emergencies (PRIME)](https://prime.who.int/) platform. The GHC is currently developing and piloting a Web App with an accompanying manual for 3Ws.

Some clusters are also using [ReportHub](https://reporthub.who.int) (supported by iMMAP) as their 3/4W reporting tool, including all clusters in Afghanistan and Health, WASH and Nutrition Clusters in Ethiopia. ReportHub also has built-in automated analysis and data visualization features. Once partners submit a report on ReportHub, cluster indicators become available in real-time and are directly linked to UNOCHA’s Humanitarian Programme Cycle tools for Humanitarian Response Plan reporting.

Once data are collected and compiled, 3W/4W products such as reports, infographics and maps can be produced.
3.2 Partners’ List

The Partners’ List is a constantly updated database of contact details for HC partners, collected to both facilitate communication among agencies the work of the HC coordination team.

The main tool here is the partner list template which mainly includes the type of membership in the cluster, contact details and some information on partner operations and capacities (but does not duplicate information in the 3Ws or HeRAMS).

There is no standard template for partner lists, but it usually includes the following information:

<table>
<thead>
<tr>
<th>Agency</th>
<th>Focal point name</th>
<th>Focal point designation/job title</th>
<th>Focal point email address</th>
<th>Focal point telephone number</th>
<th>Date of last update to information</th>
</tr>
</thead>
</table>

Table 4: Example of information collected for partner’s list

Examples of partner lists are:

- **Cyclone, Fiji, 2016**
- **Conflict, South Sudan, Health Cluster Partner Contact List, 2017**

WHO is encouraging activated Health Clusters to maintain the partners’ list on its [PRIME](#) platform.
3.3 Health Resources and Services Availability Monitoring System (HeRAMS)

The Health Resources and Services Availability Monitoring System (HeRAMS) is designed to systematically monitor the availability of health services to affected populations. It maps all health delivery points within the crisis-affected area.

The following tools are available to support HeRAMS implementation or strengthening:

- **HeRAMS user guide: Approach & Roles and Responsibilities of the Cluster.** This guide describes the rationale of HeRAMS, the data levels and requirements and the methodology.

- **HeRAMS health services checklist.** This document describes the key health services to be delivered at community, mobile, primary, secondary and tertiary levels. The document acts as a checklist for the services expected at the different levels of care. It is an essential tool when developing the localised design and data collection materials for HeRAMS in-country.

An online tool has been developed for HeRAMS and is currently hosted by WHO’s PRIME platform. More information on this HeRAMS online tool can be found in this flyer.
2. Functionality status

Functionality has been assessed at three levels: fully functioning which mean open and providing full package of essential services, partially functioning means open but not providing the full package of essential services, or not functioning. Out of 327 assessed health facilities, 74% (246) were reported fully functioning, 20% (66) partially functioning, 7% (23) out of service, this result in 26% of the facilities are non-functioning or partially functioning with low capacity. See Figure 2. 56% of the non-functioning health facilities were hospitals.

3. Condition of health facilities infrastructure

The condition of the health facilities infrastructure has been assessed at three levels: fully damaged: major damage requiring complete reconstruction, partially damaged: requiring substantial to large scale repair, and not damaged. 9% (102) health facilities were reported damaged [1% fully damaged and 8% partially damaged], 59% (215) were reported intact, while 32% (44) of health facilities were not relevant to evaluate. See Figure 3.

Trend analysis of functionality status of public health centres from 2014 to 2016 is presented in Figure 2. The total number of non-functional health centres in 3rd quarter 2016 still high (548) compared to 3rd quarter 2015 (468).
Figure 4: Excerpt from HeRAMS Report (Conflict, Yemen, 2016: Service Availability and Health Facilities Functionality in 16 Governorates):

- The level of damage to the health facilities has been measured in terms of either: fully damaged, partially damaged (parts of the infrastructure have been damaged) and not damaged (building is intact).
- The total number of totally damaged health facilities is 69 whereas those that are partially damaged are 205 HF.
- Damages in each governorate are shown in the map below; the color gradient changes based on their percentage from the total HF.

<table>
<thead>
<tr>
<th>Governorate</th>
<th>Total HF</th>
<th>Totally Damaged</th>
<th>Partially Damaged</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sa'udah</td>
<td>183</td>
<td>26</td>
<td>60</td>
<td>37.0%</td>
</tr>
<tr>
<td>Al Amran</td>
<td>86</td>
<td>12</td>
<td>28</td>
<td>29.4%</td>
</tr>
<tr>
<td>Aden</td>
<td>45</td>
<td>11</td>
<td>24</td>
<td>23.0%</td>
</tr>
<tr>
<td>Abyan</td>
<td>108</td>
<td>13</td>
<td>31</td>
<td>32.9%</td>
</tr>
<tr>
<td>Marib</td>
<td>130</td>
<td>30</td>
<td>21</td>
<td>22.4%</td>
</tr>
<tr>
<td>Al Jawf</td>
<td>84</td>
<td>10</td>
<td>21</td>
<td>21.7%</td>
</tr>
<tr>
<td>Al Bayda</td>
<td>175</td>
<td>54</td>
<td>25</td>
<td>13.6%</td>
</tr>
<tr>
<td>Hajjah</td>
<td>223</td>
<td>60</td>
<td>12</td>
<td>25.9%</td>
</tr>
<tr>
<td>Taiz</td>
<td>325</td>
<td>75</td>
<td>7</td>
<td>22.5%</td>
</tr>
<tr>
<td>Shabwa</td>
<td>134</td>
<td>25</td>
<td>9</td>
<td>9.9%</td>
</tr>
<tr>
<td>Lahej</td>
<td>134</td>
<td>21</td>
<td>11</td>
<td>8.6%</td>
</tr>
<tr>
<td>Sa'dah</td>
<td>105</td>
<td>7</td>
<td>13</td>
<td>6.6%</td>
</tr>
<tr>
<td>Al Hudeida</td>
<td>385</td>
<td>34</td>
<td>12</td>
<td>3.7%</td>
</tr>
<tr>
<td>Ibb</td>
<td>305</td>
<td>0</td>
<td>5</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

- Functionality of health facilities is categorized as follows: fully functional: the health facility is open and provides healthcare services at full capacity. Partially functional: health facility is operational but with partial capacity due to shortages in staffing, supplies, equipments or due to damages to infrastructure. Not functional: health facility is not providing any services due to any of the following reasons: damages, lack of essential operational inputs of staff and fund, inaccessibility due to insecurity or the facility is not yet operational.

- Out of total 3597 health facilities, 1670 (46.6%) were reported to be fully functional and accessible, 1348 (37.9%) were partially functional and 579 (16.5%) were not functional. The map below shows the number of non-functional health facilities in each governorate followed by its % out of the total HF.
4. TOOLS FOR MEASURING HEALTH SYSTEM PERFORMANCE

4.1 Health Management Information System (HMIS)

A Health Management Information System (HMIS) collects, analyses and reports data from health providers and facilities on causes of consultation and hospitalisation, services and patient clinical outcomes. The role of the HC is usually to support and improve existing HMIS in-country, and harmonise the different HMIS implemented by HC partners, by introducing a common set of indicators, data collection instruments and procedures, health facility datasets, catchment population assumptions, software application, etc.... In rare occasions where there is no existing HMIS in-country, the HC should support local health authorities and HC partners in setting up an HMIS.

The most widely used HMIS in most crisis-affected countries is District Health Information Software 2 (DHIS 2). This data analytics and management platform is completely web-based and has built-in visualization and analysis features. Extensive guidance on tools needed to implement and support DHIS2 operations can be found here. As DHIS 2 can be resource-intensive to implement, development of a lighter version for crisis settings is under discussion.

In acute crises, UNHCR’s TWINE is a possible existing option, and works especially well in camp and urban settings. Generic forms and complete guidance for roll-out is available on the website.

4.2 Vaccination Coverage Estimation

Vaccination coverage is a key indicator to evaluate the performance of vaccination services, assess the risk of epidemics, and to establish whether and what remedial vaccination activities are needed.

The WHO’s administrative method for vaccination coverage estimation manual describes how administrative coverage can be calculated using data available from routine EPI monitoring data. This estimation method is in contrast to the survey method below, which directly measures vaccination coverage in a representative sample.

\[
\text{Table: Calculation of administrative vaccination coverage using routine EPI data}
\]

<table>
<thead>
<tr>
<th>Community name</th>
<th>Annual target population</th>
<th>Doses of vaccine administered</th>
<th>Immunisation coverage (%)</th>
<th>Unimmunised (number)</th>
<th>Dropout rates (%)</th>
<th>Identified problems</th>
<th>Prioritize - highest number of unimmunized children is #1, and so on</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children ≥3 year of age</td>
<td>pental</td>
<td>pental</td>
<td>MCV1</td>
<td>pental</td>
<td>pental</td>
<td>pental</td>
<td>pental</td>
</tr>
<tr>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
<td>f</td>
<td>g</td>
<td>h</td>
</tr>
</tbody>
</table>

Figure 5: Calculation of administrative vaccination coverage using routine EPI data
The *WHO’s Vaccination Coverage Cluster Surveys: Reference Manual* covers the design of the sampling frame, planning and implementing the fieldwork, data entry, cleaning, and management, tabulations and analyses, as well as interpretation, formatting, and sharing results.

In addition, a separate set of guidelines exists for *Vaccine Coverage Post Implementation of a Mass Vaccination Campaign with Oral Cholera Vaccine*, and follows a similar cluster sampling method as outlined in the Reference Manual above.

**Figure 6: Excerpt from Vaccination Coverage Report (Conflict/Cholera Outbreak, Iraq, 2015):**

**OCV Coverage**

Among the 5,007 respondents from the 10 governorates, 87% reported 2-dose OCV coverage, and 7% reported 1-dose coverage (Table 2). Two-dose coverage was similar among male (86%) and female (88%) respondents and among age groups: 85% among children 1–4 years of age, 89% among children 5–14 years of age, and 87% among persons ≥15 years of age (Table 2). When vaccination coverage was stratified by sex and age group, the lowest 2-dose coverage was among boys 1–4 years of age (83%) and the highest was among girls 5–14 years of age (89%). OCV campaign vaccination cards were available for 79% of persons who reported being fully vaccinated; these cards indicated that 47% had received 2 doses, and 32% had received 1 dose. Among the respondents who reported receiving 2 doses, 27% had only 1 dose recorded on their vaccination cards. Among the respondents who reported receiving OCV, 90% reported receiving the vaccine at their residential structure, 6% at a health facility, 3% at school, and 1% at a market.

Two-dose OCV coverage in the northern governorates (91%) was higher than that in the southern and central governorates (80%), and 1-dose coverage in the northern governorates (6%) was lower than that in the southern and central governorates (10%) (Table 3). Among the northern governorates, 2-dose OCV vaccination coverage ranged from 90% in Dahuk to 93% in Erbil and Sulaymaniya; however, greater variability was seen between the southern and central governorates, where 2-dose coverage ranged from 21% in Babil to 98% in Anbar (Figure: Table 3).

**Reasons for Not Being Vaccinated**

The 2 most common reasons for not receiving vaccine during the first or second OCV vaccination round were being absent during the campaign (first round 35%, second round 39%) and teams not visiting the respondents’ residential structures (first round 30%, second round 36%) (Table 4). Other reasons for not being vaccinated during the first round were unavailability of vaccine (11%), lack of faith in the vaccine (4%), and being sick during the campaign (4%). The reasons for not being vaccinated during the second round were similar: unavailability of vaccine (2%), sick during the campaign (9%), and absence of the decision-maker at home at the time of the vaccinators’ visit (5%). In the 3 governorates with the lowest coverage (Baghdad, Kirkuk, and Babil), 46% of respondents stated vaccination teams did not visit their residential structure, and 22% stated they were absent during the campaign.

WHO has launched a learning initiative aimed at epidemiologists and statisticians interested in leading or supporting vaccination coverage surveys, the Vaccination Coverage Survey Scholar. Those interested are encouraged to regularly check the [WHO Immunization M&E webpage](http://www.who.int) as well as [TechNet-21](http://www.technet-21.net) for future course announcements as well as to access material on vaccination coverage surveys.

Other tools under development include software with standard code for analysing immunization survey data, training materials and methods, a step-by-step guide to survey implementation, and a discussion paper on defining the role of coverage surveys.
4.3 Operational Indicator Monitoring

The Operational Indicator Monitoring (OIM) service aggregates and reports a small set of key performance indicators for the HC response as a whole. OIM captures data generated by HC partners and other systems, e.g. HMIS (see above). The process for doing so is necessarily different in every HC, depending on available data sources.

There are no specific tools for the development and implementation of a HC’s OIM. However, there are some of useful tools to support the process:

- **Global Health Cluster Suggested Set of Core Indicators and Benchmarks by Category**: an excerpt from the Health Cluster Guide

- **Indicators Registry**: The indicators listed in the registry have been developed by the global clusters. It is recommended to adopt and use the indicators listed as ‘key’ to allow comparison of needs and response monitoring across countries

After data collection and analysis, various products using OIM information can be generated.

**Figure 7: Excerpt from Health Indicators Report (Conflict, Syria, 2017: Health indicators report - April 2017):**
4.4 Health Cluster Bulletin

The Health Cluster Bulletin is a frequent publication that provides an overview of the main public health needs, key health information including trends, and activities of HC partners. The Health Cluster Bulletin’s purpose is mainly to keep all HC partners and other stakeholders informed of Health Cluster activities.

A typical Health Cluster Bulletin should have the following structure:

- cover page with title, crisis name, reporting period, HC partners and observers;
- highlights of the previous time period (since publication of the last bulletin);
- information from health assessments during the time period;
- information from different surveillance / monitoring systems during the time period;
- summary needs and gaps during the time period;
- information about/from coordination meetings during the time period;
- agency activities during the time period;
- capacity building during the time period;
- funds requested and received during the time period;
- useful contact details, including key staff at national and/or at each sub-national level where the humanitarian activities are ongoing.

Currently, there is no standard Health Cluster bulletin, and active Health Cluster use different formats and frequencies for producing Health Cluster bulletins. The GHC is planning on developing a standard Health Cluster Bulletin template, which will be made available to all clusters.

4.5 Ad hoc Infographics

Infographics are typically commissioned by the HCC or prepared by an IMO to complement and help illustrate information arising from other public health information services, e.g. the PHSA, a HC Bulletin, or a HeRAMS report. Occasionally, they may be presented as a standalone information product, or included in presentations for various audiences. Infographics for PHIS can include tables, graphs, diagrams, dashboards or maps.

- Tools for tables, graphs, diagrams, and dashboards:
  - Automated/built-in infographic functionalities of word processing, spreadsheet and database management software/applications (e.g. Microsoft’s Word, Excel, Access).
  - Automated/built in infographic functionalities of data collection, analysis and reporting software (e.g. ActivityInfo, STATA, SPSS, R, etc…)

- Tools for maps:
  - ArcGIS (proprietary) with resource manuals
  - QGIS (open-access) with resource manuals
  - ArcGIS Training from Esri
  - MAPACTION Humanitarian Mapping Training
Figure 8: Excerpt from Health Cluster Dashboard (Conflict, Afghanistan, 2017):

64,361 beneficiaries reached of which 52,736 new

**Beneficiaries by activity**

- ANC: 1,386
- Fatp - Stabilization & Referrals (Civilian): 85
- Fatp - Stabilization & Referrals (Conflict): 655
- Fatp - Stabilization (Civilian): 2,822
- Fatp - Stabilization (Conflict): 5,198
- Health Education & Awareness: 18,447
- OPD Referrals: 28,667
- OPD Consultation: 518
- Physical Rehabilitation: 812
- Postnatal Care: 876
- Psycho Social: 13
- Skilled Birth Attendant: 1,282
- TCU - Major Surgeries: 872
- TCU - Minor Surgeries: 1,992
- Vaccination (Measles): 127
- Vaccination (Penta): 8

**Beneficiaries by gender and age**

- Women: 42%
- Men: 38%
- Child: 11%

**Beneficiaries by type and gender**

- Female
  - Protracted IDPs: 4,777
  - Pakistani Refugees: 2,772
  - White Areas: 528
  - Natural Disaster Affected: 328
  - Host Communities: 293
  - Conflict IDPs: 666
  - Conflict Affected: 12,856
  - Afghan Returnees (Undocumented): 55

- Male
  - Protracted IDPs: 9,378
  - Pakistani Refugees: 6,142
  - White Areas: 517
  - Natural Disaster Affected: 593
  - Host Communities: 655
  - Conflict IDPs: 555
  - Conflict Affected: 12,656
5. MISCELLANOUS PUBLIC HEALTH INFORMATION TOOLS & RESOURCES

5.1 General Templates
The GHC has developed branding guidelines and general templates for Health Cluster products. These include:

- Health Cluster Visual Identity Guidelines
- Health Cluster Logo Usage Policy
- Health Cluster letterhead template (Word)
- Health Cluster presentation template (PowerPoint)
- Health Cluster document template (Word)

5.2 Other Resources
Here are some miscellaneous tools that may be of use to PHIS functions in activated clusters.

- Field Guide for the Use of Geo-Codes: provides an overview of the use of geographic coding (known as geo-codes) or position codes (known as P-codes), which define unique identification numbers for areas and facilities.