Global Health Cluster (GHC) Guidance Note on Health People in Need (PiN) and Severity Calculation Version 3.1

GHC Note on Health PiN and Severity

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Content

Introduction

Humanitarian crises often exceed national response capacities, requiring international intervention to address the challenges they pose. In these contexts, Health Clusters play a crucial role in coordinating and delivering health services.

To fulfill this purpose, Health Clusters are responsible for support the Humanitarian Needs Overviews (HNOs) by providing health-related information[1], estimating the number of People in Need (PiN) of health assistance and assessing the severity of the situation.

To ensure consistent and accurate needs assessments across sectors, the Joint and Intersectoral Analysis Framework (JIAF) has evolved into its second version, enhancing needs analysis, and promoting a unified approach. Therefore, clusters are expected to align their analysis with this methodology and the GHC standards.

It is crucial to recognize that public health analysis often requires a tailored approach, as health needs may not follow the same trend and behavior as other sectors. This guidance seeks to address these complexities and provide clear guidance for calculating health figures, ensuring accuracy and reliability. By adhering to this guidance, health clusters can enhance their understanding of health needs, contribute to a more thorough analysis, and ultimately improve the targeting and delivery of health assistance in humanitarian emergencies.

Therefore, this guidance begins with an introductory overview of JIAF 2.0, outlining the general process and referencing corresponding resources for its implementation. It then delves into the health-focused approach for analyzing humanitarian needs and concludes with considerations regarding the necessary Health Expert Discussions, the Joint and Intersectoral Analysis to reach consensus on final sectoral and intersectoral results, and some common challenges and best practices from the field.

To aid navigation through this guidance and its associated tools and resources, a comprehensive decision tree is included after the introduction. For practical implementation, it is recommended to review the accompanying Health PIN and Severity Calculator Template alongside this document, and available at HDX and the tutorials on the GHC YouTube Channel.

If you require specific support or further guidance, please feel free to contact the Global Health Cluster at healthcluster.im@who.int or reach out to the Global JIAF Helpdesk through OCHA.

Purpose

The purpose of this guidance note is to provide a comprehensive framework and methodology for analyzing health needs in humanitarian emergencies and supports the role of Health Cluster Coordinators (HCC) and Information Management Officers (HC IMO) in the development of the Humanitarian Needs Overview (HNO).

Version Control

Vr	Note	Focal point	Email	Date
1.0	First version	Alexandra DAVIS	davisa@who.int	August 2020
2.0	Adjusted to include COVID-19 indicators	Alexandra DAVIS	davisa@who.int	September 2021
2.1	Adjusted according with JIAF 2.0	Alberto CASTILLO	castilloalb@who.int	September 2023
3.0	Adjusted according with JIAF 2.0 Lessons Learned	Alberto CASTILLO	castilloalb@who.int	March 2024
3.1	Adjusted including JIAF2.0 MTWG guidance	Luis AGUILAR	aguilarl@who.int	June 2024

[1] Morbidity and mortality indicators, and Public Health Situation Analysis (PHSA).

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We are particularly grateful to the members of the World Health Organization, especially the colleagues and former colleagues at the Global Health Cluster Unit. Your support, dedication, and collaboration have been crucial in making this guidance a comprehensive resource for the humanitarian health community.

Thank you to everyone who has contributed to this document and to those who continue to work tirelessly to improve health outcomes in humanitarian emergencies. Your efforts are deeply appreciated and make a significant difference in the lives of many.

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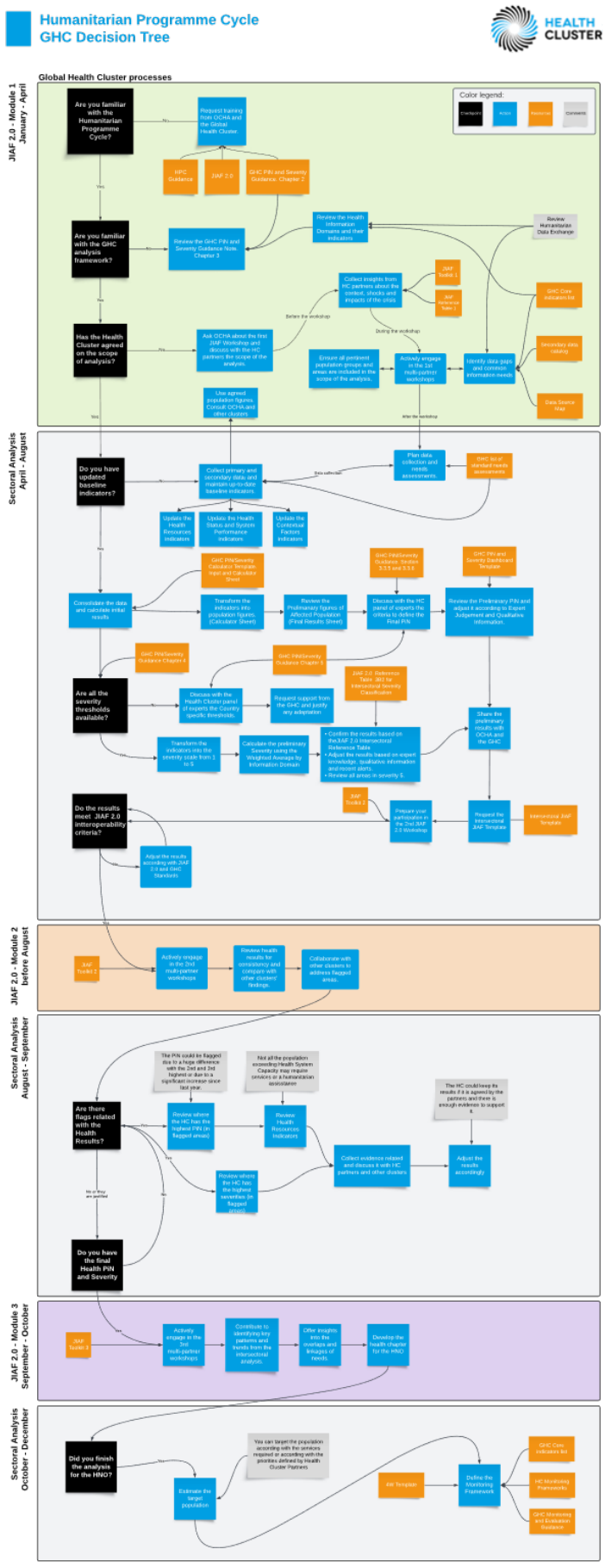
- Ukraine: Karien Stuetzle, Mohammad Erekat, among others

Figure 1. Decision Tree: Developing the Humanitarian Programme Cycle for Health Clusters



Reference tools and resources

Interactive version available at https://hpc.healthcluster.org

- HPC implementation package
- JIAF Resources
- Analysis and Assessments tools
- JIAF toolkit 1
- JIAF reference table 1
- GHC Core indicators list
- GHC Secondary Data Catalog
- GHC Data Source Map template

- GHC List of standard assessments
- GHC PiN/Severity Calculator
- 3.5.4 Adjusted service capacity
- 3.5.6 Calculating the Final PiN
- 3.6 Health Severity Calculation
- JIAF 2.0 Reference Table 3B2
- JIAF toolkit 2
- Intersectoral JIAF Template

- JIAF toolkit 2

- JIAF toolkit 3

- 4W Template
- GHC Monitoring Frameworks

1. Background

The Joint and Intersectoral Analysis Framework (JIAF) is a collaborative effort designed to enhance shared analysis and strategic decision-making for humanitarian crises. Over the years, the JIAF has undergone significant evolution, with the latest iteration, JIAF 2.0, aimed at addressing gaps identified in previous versions and aligning with the evolving needs of the humanitarian community, including the health sector.

The Global Health Cluster (GHC) has been actively engaged throughout the development journey of JIAF 2.0, recognizing the importance of a robust analytical framework for informing health response planning and decision-making. The GHC has maintained a consistent and participatory presence in the JIAF Steering Committee, Advisory Group, and Methodological Technical Working Group, ensuring that the health perspective is adequately represented and integrated into the revised framework.

The origins of JIAF can be traced back to 2019 when OCHA developed its first version, JIAF 1.0, based on inputs from various clusters and partners. Concurrently, the Global Health Cluster developed its initial PiN and Severity Calculation Guidance note. However, the advent of the COVID-19 pandemic highlighted the need for a revised version to overcome the challenges imposed by this unprecedented global crisis.

In response, OCHA and the clusters collaboratively improved the JIAF, based on the lessons learned from the last iteration, resulting in the development of JIAF 1.1. However, in 2021 an independent review was conducted by Yale University, which called for substantial changes to the framework. This prompted OCHA and the clusters to initiate a Strategic Moment of Reflection, during which key stakeholders defined the parameters for a comprehensive revision of the JIAF, paving the way for the development of JIAF 2.0.

The journey towards JIAF 2.0 involved an iterative approach, encompassing multiple rounds of testing, simulations, and pilot implementations across various countries, including Egypt, Colombia, Iraq, and Somalia[2]. The Global Health Cluster played a crucial role in these field tests, providing valuable insights and feedback to refine the framework's applicability to the health sector.

Each iteration of JIAF 2.0 incorporated lessons learned and feedback from field experiences, ensuring that the revised framework was tailored to the diverse contexts in which it would be applied, including health emergencies and protracted crises. The GHC's active participation in these iterative cycles ensured that the specific analytical requirements and operational realities of the health sector were adequately addressed.

After a rigorous development process, JIAF 2.0 was officially rolled out globally in August 2023, with the GHC playing a pivotal role in disseminating the revised framework and providing guidance to country-level health clusters on its implementation. The GHC's continuous engagement throughout the JIAF 2.0 evolution ensured that the framework remained relevant and aligned with the health sector's needs, facilitating improved analysis and decision-making for health response planning.

This concept note aims to outline the specific application of JIAF 2.0 in determining the Health People in Need (PiN) and Severity Methodology, leveraging the enhanced analytical capabilities of the revised framework. By aligning with JIAF 2.0, the health sector can benefit from a more robust and collaborative approach to joint intersectoral analysis, ultimately leading to more effective and coordinated humanitarian responses.

[2] Testing the JIAF methodology: A people-centred approach to planning and prioritization in crises

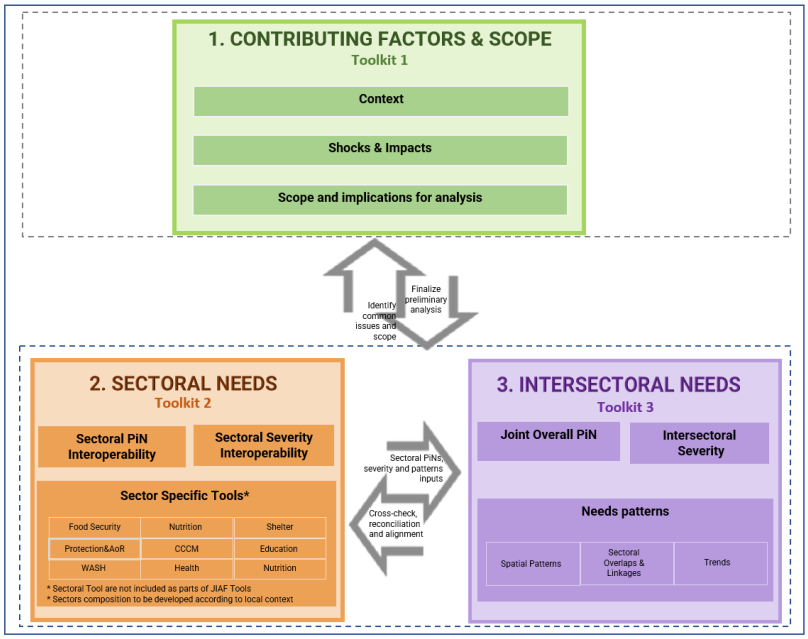
2. Joint and Intersectoral Analysis Framework 2.0

The Humanitarian Needs Overview (HNO) is guided by the Joint and Intersectoral Analysis Framework (JIAF) 2.0, which sets global standards and a system for assessing and analyzing humanitarian needs and protection risks[3].

JIAF 2.0 consists of three modules that follow a sequential and iterative process. The first module focuses on analyzing the contributing factors of the crisis to define the scope of the analysis. This encompasses the selection of geographic areas, administrative units[4], and population groups[5] to be assessed. It also involves checking alignment with global cluster's standards and ensuring the interoperability of sectoral methods.

This first module is typically conducted through a multi-partner workshop, ideally scheduled between February and April. During this phase, Health Clusters are expected to actively participate in the analysis, supply essential health-related data, and guarantee that all relevant population groups and regions are covered.

Figure 2. JIAF 2.0 Modules



1° MODULE
When: February-April
Activity: Multi-partner workshop 1
Key Outputs: initial analysis; agreed scope of analysis, review of interoperability of sectoral methods.

2° MODULE
When: from initial analysis to August
Activity: Sectoral calculations and Multi-partner Workshop 2
Key Outputs: Sectoral Severity and PiN, identification of inconsistencies, revision of preliminary intersectoral results

3° MODULE
When: September-October
Activities: Multi-partner Workshop 3
Key Outputs: Final intersectoral analyses:
- Identification of drivers of the crisis
- Impact of drivers at the system and population level
- Linkage between sectoral issues
- Sectoral PiN and Overall PiN
- Sectoral and Intersectoral Severity

The second module centers on sectoral analysis. Each cluster conducts its analysis independently, adhering to global standards. Coordination with the Global Clusters is essential for any country-specific adaptations to ensure both methodological consistency and comparability. In this module, a second multi-partner workshop is held to collaboratively review initial sectoral results.

A flagging system[6] assist in pinpointing areas with potential inconsistencies due to sectoral findings' disparities. After this review, clusters are encouraged to conduct further analysis and gather additional evidence to address these flagged areas or refine their results.

[3] Guidance is available at jiaf.info/resources/ and PHAP
[4] Admin 1 like states, provinces, or departments; admin 2 like districts and municipalities; admin 3 like electoral boundaries, urban and rural regions, villages, etc.
[5] Population groups corresponds to ethnic minorities, refugees, migrants, internally displaced people (IDPs), etc. All the analysis should include a disaggregation by sex, age, disability, and gender if possible.
[6] Further details on this process are provided in the chapter five and the JIAF 2.0 - Technical Manual.

It's crucial to note that the goal is not to supervise or question methodologies and results, but to ensure the analysis's quality and transparency. Hence, promoting collaboration and information exchange among clusters before the workshop is advised. Such collaborative approach facilitates evidence convergence and enriches the entire process.

The third module encompasses another workshop that focuses on reviewing the intersectoral findings. The objective is to reach a consensus on the Overall People in Need (PiN) and the Intersectoral Severity, as well as to analyze the overlaps, linkages, spatial patterns, and trends of sectoral needs. This collaborative session enables clusters to collectively examine the intersectoral analysis and ensure a comprehensive understanding of the humanitarian situation. Additional guidance can be found at Resources - Joint Intersectoral Analysis Framework.

Health clusters play a crucial role in the JIAF 2.0 process by integrating health inputs into intersectoral analyses for HNOs and HRPs. Table 1 outlines the specific responsibilities of Health Cluster Coordinators (HCC) and Health Cluster Information Management Officers (HC-IMO) to facilitate this integration effectively.

Table 1. Responsibilities of Health Clusters in JIAF 2.0

Workshop 1 - Scope • Provide health-related data, including information on mortality and morbidity. • Actively engage in multi-partner workshops. • Ensure all pertinent population groups and areas are included in the scope of the analysis, • Identify data gaps and plan data collection and needs assessments.
Sectoral analysis • Collect primary and secondary data and maintain up-to-date baseline indicators. • Adhere to global standards for sectoral severity and PiN estimations. • Coordinate with global clusters for country-specific adaptations. • Justify any deviations or adaptations in the analysis. • Share preliminary sectoral analysis results with OCHA and other clusters. • Involve development partners in the analysis when feasible. • Ensure transparency and foster collaboration throughout the analysis. • Incorporate feedback from relevant stakeholders.
Workshop 2 – Examination • Review health results for consistency and compare with other clusters' findings. • Provide feedback to other clusters. • Collaborate with other clusters to address flagged areas. • Stay receptive to feedback and insights from other clusters and stakeholders.
Sectoral revision • Review carefully the results in flagged areas. • Refine the findings if inconsistencies were identified. • Document and justify decisions to uphold flagged results.
Workshop 3 – Final intersectoral analysis • Actively participate in analyzing sectoral overlaps and linkages. • Contribute to identifying key patterns and trends from the intersectoral analysis. • Offer insights into the overlaps and linkages of needs. • Advocate for incorporating needs assessments into the HRP to tackle data gaps.

3. Analyzing health needs

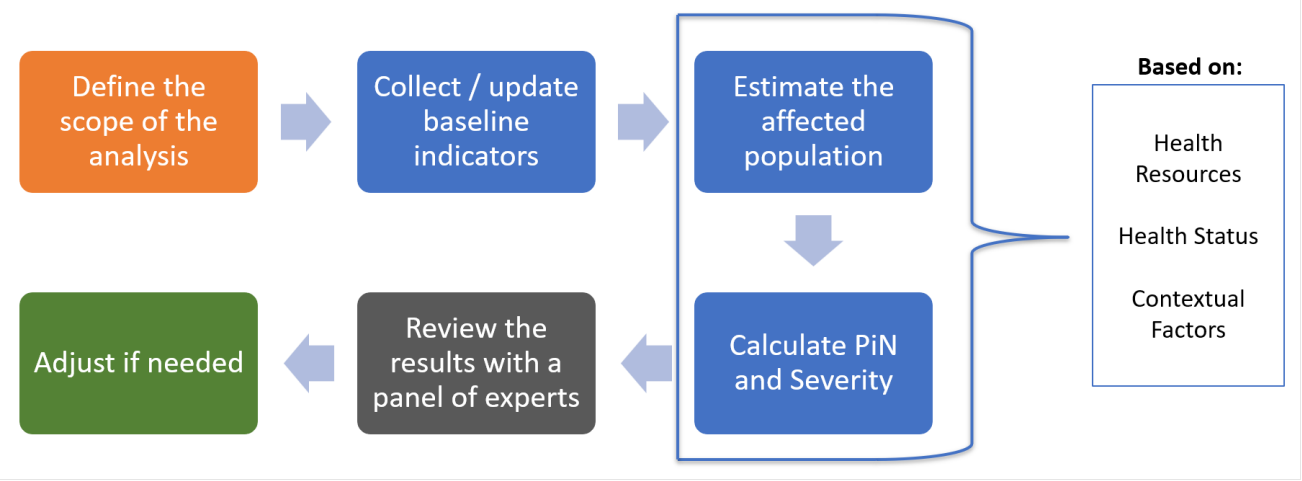
This section outlines a structured approach for analyzing health needs. As demonstrated in Figure 3, it begins by defining the analysis scope, including geographic areas, population groups, and specific health concerns.

Next, it involves reviewing existing data sources and collecting baseline indicators related to health resources, health status, and contextual factors. This information is used to estimate the

affected population and their health needs, including the calculation of People in Need (PiN) and severity assessments.

The process includes validation by subject matter experts to ensure accuracy and completeness, with room for adjustments based on new information. If you are familiar with the humanitarian population figures and the health cluster analysis approach, you can go directly to section Estimating health affected population and People in Need (PiN).

Figure 3. Process to analyze health needs.



3.1 Humanitarian population figures and analysis scope.

Evaluating humanitarian needs becomes particularly challenging given time constraints, data scarcity, and the overlap with underlying developmental challenges. In sudden crises, the estimation is typically more straightforward by contrasting the current scenario to pre-crisis conditions. However, when crises become protracted, the distinction between humanitarian and development needs becomes blurred due to the feedback loop between them.

Acknowledging this challenge, the IASC defined the affected population as “all those whose lives have been impacted as a direct result of the crisis” and stated that “when a crisis becomes protracted and its effects deepen and spread, the definition of Population Affected may need modification, to include population geographically distant from the center of the initial shock and not having been physically/emotionally impacted but experiencing secondary effects of a disaster/crisis. These could manifest as economic implications, such as price increases and commodity shortages, or the consequences of damaged infrastructure, such as water supply or electricity[7].”

This clarification is crucial for the Health Cluster, as the impacts on the Health System can have far-reaching consequences, even in areas initially unaffected. For instance, the relocation and concentration of health resources can result in a decline in health conditions in regions distant from the initial impact or affect additional population groups. Understanding these chain effects is vital for addressing broader health needs. Therefore, clusters should be actively involved in shaping the analysis's scope, considering areas and population groups indirectly impacted and the far-reaching effects.

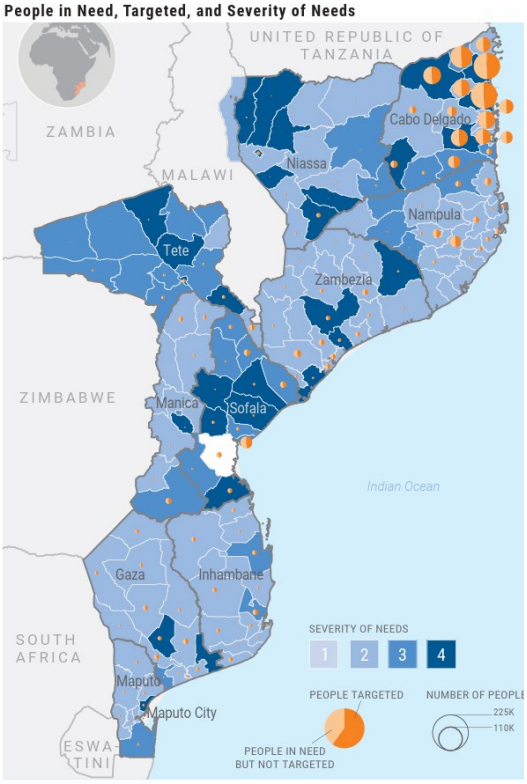
Therefore, JIAF 2.0 recognizes the challenges in defining the scope of the analysis and calculating the population affected and in need. For this reason, the methodology clarifies that:

[7] IASC-IMWG: Humanitarian Profile Support Guidance: Humanitarian Population Figures

- "Due to the difficulty of demonstrating that a specific need is directly driven by a crisis, affected populations are operationalized for JIAF as those that are located in areas or are part of population groups that are directly or indirectly affected by a crisis and included in the scope of the Humanitarian Needs Overview (HNO) analyses".

- "In exceptional cases, populations in areas outside the scope of HNO analyses can be included if these areas experience high-level of deprivations. These cases will be decided by the Humanitarian Coordinator based on inputs and discussions with the sectors including needs outside the scope of analysis. These cases need to be flagged" and discussed.

Figure 4. Scope of the analysis and geographical prioritization of Mozambique for 2024



Source: Mozambique Humanitarian Response Plan 2024 | Humanitarian Action

Geographic scope

These considerations shed light on the geographic scope of analysis within the HPC. While most countries typically analyze the entire country, exceptions exist for some nations, like these facing sudden crises and localized crises. In such cases, the focus narrows to the directly affected areas. For instance, for 2024 Mozambique[8] prioritized the northern region due to armed conflict, as well as the southern region, primarily impacted by Cyclone Freddy in 2023.

Therefore, Health Clusters must reach consensus on the prioritized health regions for ensuring its inclusion in the intersectoral analysis.

Geographic unit of analysis

Geographical disaggregation typically relies on Admin 2 (municipalities or districts), yet data often exists at Admin 1 (Department or State) levels. In such cases, proportional distribution or using proxy variables at Admin 2 is feasible and advisable to estimate the results at this level. However, note that any disaggregation may introduce bias into the analysis. Hence, clusters and OCHA must address this issue. If your cluster requires support or further guidance, please feel free to contact GHC at healthcluster@who.int.

Population groups

An essential aspect to consider is which population groups to incorporate into the analysis within Health Clusters. Traditionally, Health Clusters encompassed all vulnerable groups such as IDPs, Refugees, Asylum Seekers, and both Host and non-Host communities from a public health standpoint. However, certain factors warrant careful consideration. For instance, in countries where host communities have access to healthcare services while IDPs do not, the response may need to prioritize the latter group. Nevertheless, a comprehensive analysis is imperative to prevent leaving anyone behind or inadvertently excluding individuals in need from the response efforts.

[8] Mozambique Humanitarian Response Plan 2024 | Humanitarian Action

Consider Figure 5 as an example. Health Clusters may encounter pressure to exclude "development needs" and infrastructure indicators. To navigate this, a thorough comprehension of the GHC Analysis Framework and the Nexus Approach is essential. Detailed guidance is provided in the document Bridging the divide: guide to implementing the Humanitarian-Development-Peace Nexus for health.

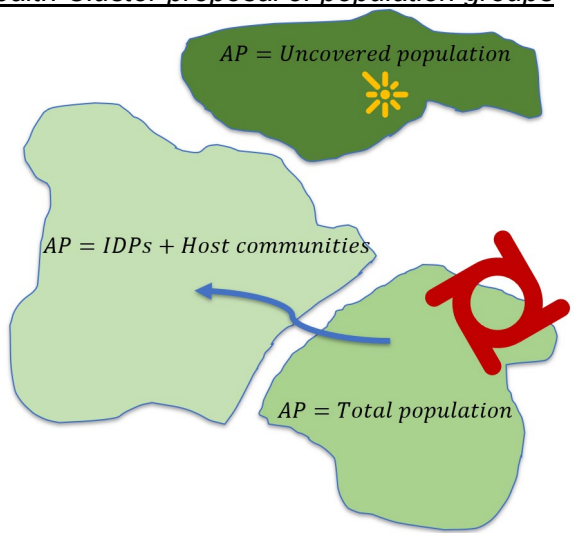
Figure 5. Defining the Scope of Analysis: An Example

Consider a country with three islands. The northern island faces an ongoing armed conflict, the eastern one recently experienced a hurricane, and the western island received IDPs from its neighbors.

In the initial workshop, some clusters proposed that the analysis should be focused only on IDPs.

However, the Health Cluster raised concerns about the northern island, where a significant portion of the population lacks access to healthcare and suggested including non-IDPs. While some clusters believe this falls under the purview of development actors, the Health Cluster contends that the prevailing security conditions are the primary cause of these needs, classifying them as humanitarian. Similarly, the HC points out that the influx of IDPs to the western island is impacting the host communities. Therefore, it recommends including them in the scope of the analysis.

Health Cluster proposal of population groups



Note: AP refers to affected population. In protracted crises, it is recommended to define AP as the population not covered by available health services to reduce the overlapping of development needs.

After a long discussion, clusters agreed on requesting advice from global clusters and the Global JIAF Helpdesk.

Since the northern island is directly impacted, it's advisable to include non-IDPs as well. For the western island, the arrival of IDPs can be viewed as a direct consequence, hence the inclusion of host communities is recommended.

You can find some good practices implemented by national clusters in section 3.5.6 Calculating the Final PiN. If you require specific support or further guidance, please feel free to contact the Global Health Cluster at healthcluster@who.int.

3.2 Health Analysis Framework and baseline indicators

Once the scope of the analysis is defined, clusters need to gather both primary and secondary data, update baseline indicators and review population figures. Using this data, clusters should determine their affected population, people in need, and assess the severity of the crisis.

The first step in needs estimation is to accurately define the total population[9]. Then, it's essential

[9] This can be challenging in humanitarian settings due to data availability and coverage limitations. In cases where such data is not readily available, clusters should reach consensus on the figures to use and consider the possibility of conducting demographic surveys to gather the necessary information or use alternative data sources such as satellite imagery and remote sensing.

to understand specific definitions for this process. For instance, the Health Cluster defined affected population as those individuals who experience or have a high risk of experiencing adverse health outcomes in terms of physical, mental, and psychosocial well-being due to the disruptions caused by the crisis. These disruptions can manifest as limited access to vital healthcare services, goods, and equipment; environmental degradation; loss of familial and community support systems; disruption of daily routines and activities; and the adoption or worsening of negative behaviors and coping mechanisms.

On the other hand, the People in Need is the affected populations who experience or are at imminent risk of experiencing negative health consequences that result from disruptions to the standard who are:

1. in areas affected by the crisis, or
2. in areas where morbidity and mortality are above the emergency level[10]. These areas may extend beyond the geographical boundaries of the directly affected areas outlined in the analysis scope.

It's essential to recognize that crises directly impact individuals' well-being and public services, leading to heightened public health threats[11]. This results in increased morbidity, mortality, and addiction rates. Furthermore, crises can amplify needs across various sectors, creating a feedback loop where challenges in one sector exacerbate those in another. This is clearly explained in Figure 6 by Checchi et al (2017)[12].

Understanding this interdependence is crucial. Moreover, Health needs are complex to quantify as they are not solely determined by an individual's health status. Therefore, Health Clusters are urged to undertake comprehensive analyses of the public health situation, covering health resources, overall health status, health system performance, and contextual factors. The Global Health Cluster Indicators List stands as a key tool to guide the prioritization of indicators and identify data deficiencies.

Figure 7 highlights the key health indicators, most of which can be found on platforms such as Humanitarian Data Exchange (HDX), Global Health Data Exchange | GHDx, GHC - Secondary Health Data Catalog, and the GHC Catalog on HDX. Nonetheless, we strongly advise consulting your country's Ministry of Health website and the National Bureau of Statistics for comprehensive and up-to-date databases and additional information.

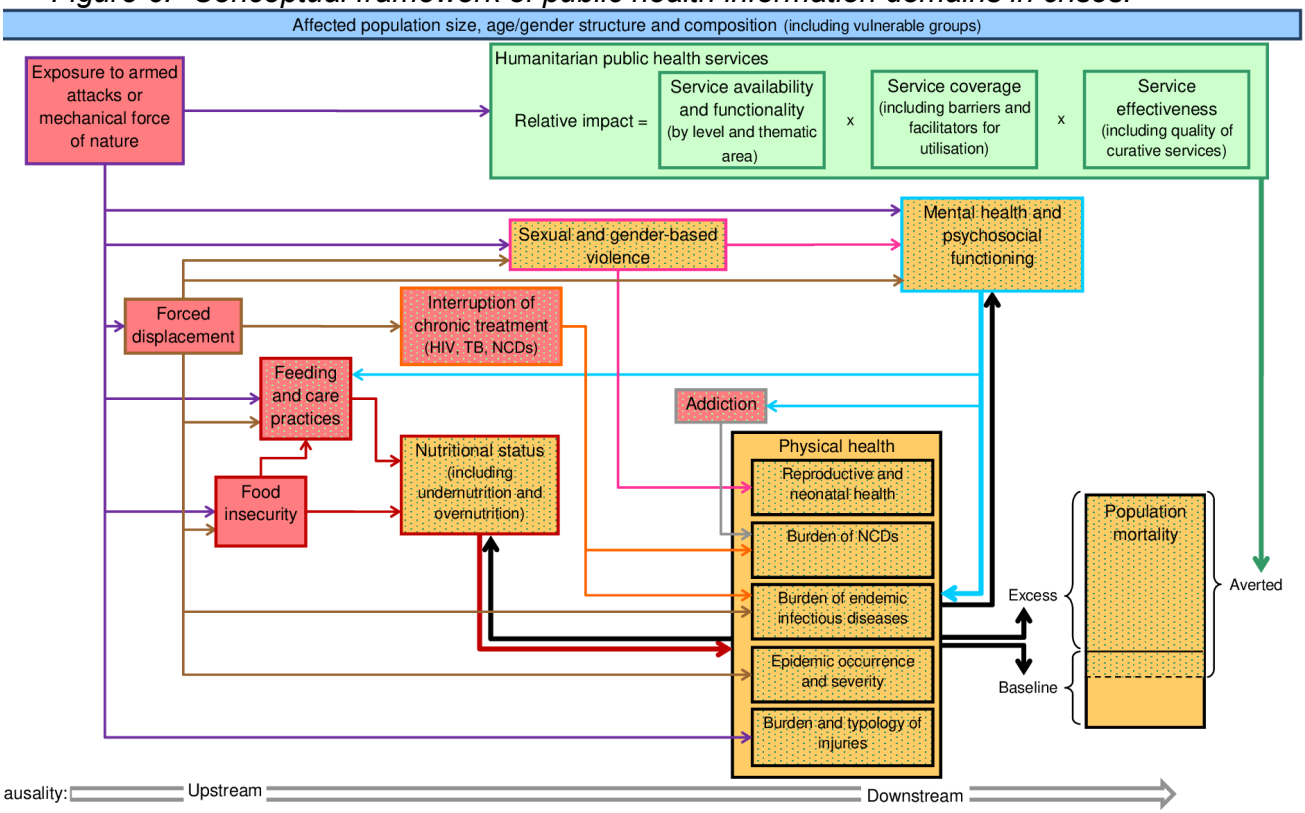
We highly recommend utilizing the Data Source Mapping Template created by GHC and detailed in the 5th module of the Health inequality monitoring foundations: Data sources on OpenWHO. This template simplifies the review of supplementary data sources and documents the sources used for analysis.

3.5 Estimating health affected population and People in Need (PiN)

Once the analysis scope is defined and baseline indicators are updated through secondary or primary data collection (e.g., needs assessments, key informant surveys), Health Clusters can progress to analyze affected populations and identify those requiring assistance.

[10] Emergency levels are defined according to the country's context considering excess mortality and the proportion of preventable deaths.
[11] such as forced displacement, reliance of negative coping strategies, food insecurity and interrupted medical treatments.
[12] [PDF] Public health information in crisis-affected populations: a review of methods and their use for advocacy and action | Semantic Scholar

Figure 6. Conceptual framework of public health information domains in crises.



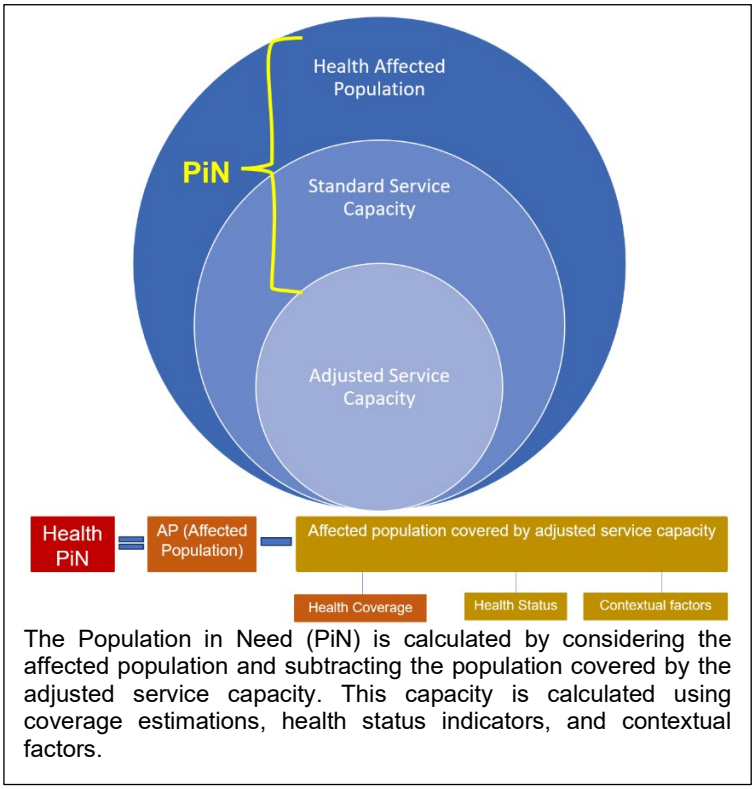
Note: Taken from Checchi et al (2017). Blue box = affected population size and composition. Red boxes = public health risk factors. Green boxes = public health interventions / services. Yellow boxes = public health outcomes (disease or injury) and impacts (mortality, mental disorders). Dotted boxes are those that humanitarian public health action can mitigate. Lines indicate causal effects.

Figure 7. Public health information domains

Health Resources	Health Status	Health System Performance	Contextual Factors
•Availability •Accessibility •Acceptability	•Trauma care •Morbidity •Mental Health •Disability •Maternal and antenatal care •Sexual and reproductive health •Gender-based violence •Mortality •Environmental Health	•Health Management Information System •Vaccination coverage •Operational Indicator Monitoring	•Access to WASH •Housing status and shelter •Nutrition status •Coping strategies •Logistics

It's crucial to analyze each information domain meticulously, considering their unique characteristics and challenges. This section offers a brief explanation of each health information domain and concludes with methods for aggregating figures, refining estimations, and arriving at the final PiN estimate.

Figure 8. Estimating the PiN

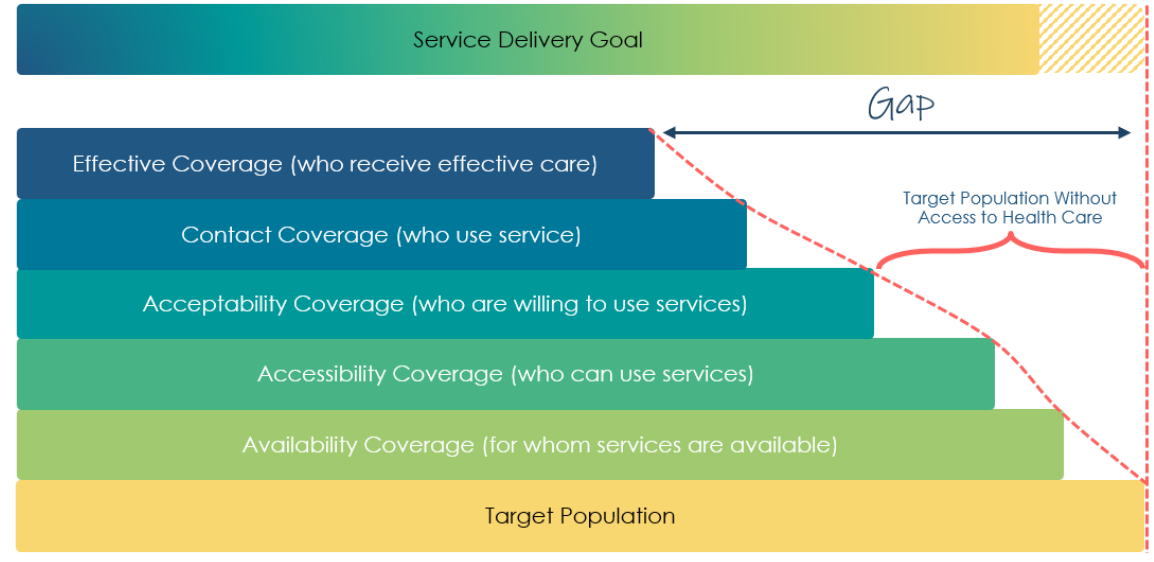


The Population in Need (PiN) is calculated by considering the affected population and subtracting the population covered by the adjusted service capacity. This capacity is calculated using coverage estimations, health status indicators, and contextual factors.

3.5.1 Health Resources

The Health Resources information domain encompasses the assessment and mapping of health-related resources within a specific area or population. This domain is integral to understanding the availability, distribution, and accessibility of health services and facilities. In humanitarian settings, such as conflict zones or after natural disasters, the analysis of health resources is pivotal for identifying gaps in service provision and planning effective interventions. This domain includes evaluating the infrastructure of health facilities, the availability of medical personnel, essential medicines, equipment, and the capacity of health systems to respond to emergencies. The objective is to ensure that health services are equitable, accessible, and of sufficient quality to meet the needs of the population, facilitating the targeted allocation of resources and the implementation of humanitarian health programs that address the most pressing health challenges.

Figure 9. Tanahashi's Model



Tanahashi's Model, shown in Figure 9, is a useful framework to evaluate health resources and health service delivery. It starts defining the target population[13] of the Health System and continues assessing the coverage across several dimensions, starting with the availability of services—whether the necessary health services are present. Next, it examines accessibility, determining if individuals can physically reach these services. Acceptability is then assessed,

[13] People who should benefit from health services. Coverage can be estimated by population groups, however the total population is often used.

looking at whether people are willing to use the services based on cultural, social, and personal factors. The model also considers contact coverage, which refers to whether individuals use the available services. Finally, it evaluates effective coverage, which measures whether the health services provided are of sufficient quality to improve health outcomes. This comprehensive approach allows for a detailed analysis of where health systems can be complemented to meet the needs of the population more effectively.

For these estimations it's important to identify the barriers or facilitators as outlined in Figure 10. The calculation then uses global thresholds, such as those set by the GHC Indicators List or the Sphere Manual. For instance, a standard is that there should be at least one health facility per 10,000 people. If the available capacity is exceeded, it is assumed that those beyond this threshold are adversely affected. More examples are available in Table 2.

Figure 10. Barriers or facilitating factors of health service coverage dimensions.

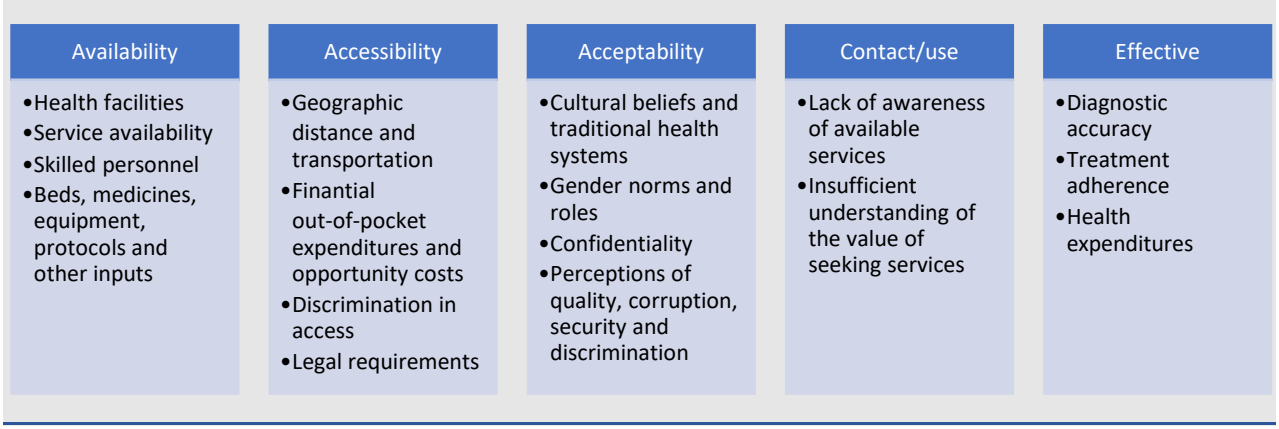


Table 2. Calculating service coverage according to Tanahashi's Model

Let's define "AP" as the Affected Population and "TP" as the Total Population. Therefore, to calculate the coverage, you may use one or several of the following methods:

Dimension	Options for calculating system coverage
Availability	$AP = TP - (Health\ Facilities * 10.000)$ $AP = TP - (HF\ with\ BEmOC\ or\ CEmOC^{14} * 500.000)$ $AP = TP - (Community\ health\ workers\ in\ rural\ or\ hard\ to\ reach\ areas * 500)$ $AP = TP - (Skilled\ birth\ attendant\ personnel * 10.000)$ $AP = TP - (In\ patient\ beds * 10.000)$
Accessibility	$AP = (Threshold - \%Population\ within\ one\ hour's\ walk\ from\ dweilings) * TP$ $AP = (Threshold - \%\ of\ people\ unable\ to\ access\ health\ services\ when\ required) * TP$ Needs assessments also provide additional indicators to assess accessibility.
Acceptability	Acceptability is assessed through qualitative evidence, such as focus groups, as well as needs assessments that inquire about the reasons people do not seek healthcare services and the barriers they encounter.

[14] Health Facilities with Basic Emergency Obstetric Care or Comprehensive Emergency Obstetric Care

Contact/Use	Contact coverage is analyzed through needs assessments that inquire whether individuals have accessed the healthcare system and if they are aware of the availability of specific services, such as contraception or mental health support. Additionally, reports on patient consultations can be used to evaluate the utilization of healthcare services.
Effective	Effective coverage is often challenging to estimate and analyze, which is why it is not commonly used in humanitarian settings. However, in some countries, there are quality measures and other indicators available that can help assess effective coverage.

In humanitarian crises, the analysis targets the gap between the health system's acceptability coverage and the intended service population, usually the area's total population, as described in Figure 9. For the GHC, those not covered by the health system are affected. To determine whether the impact is related to humanitarian, development, or peace issues, some clusters use tailored approaches that are aligned with their specific circumstances.

For example, in 2023, Haiti's affected population was estimated at 9.45 million due to a lack of health facilities and hospital beds. This estimate was refined to 5.5 million when focusing on the actual number of health facilities, as the number of inpatient beds often implies broader development challenges. In Colombia, those considered affected included people without access to health services in disaster and conflict zones, along with those vulnerable to epidemics and contextual factors in the rest of the regions. In Sudan, the Health Cluster relied on OCHA's estimates, focusing on IDPs and areas affected by armed conflict.

On the other hand, analyzing health resources in humanitarian crises using Tanahashi's model is challenging due to scarce or outdated data, expensive and time-consuming data collection processes. For instance, when a city receives new IDPs, existing service coverage estimates become inaccurate and conducting new needs assessments to update these estimates is often time-consuming. To overcome these challenges, this concept note suggests utilizing health status indicators and contextual factors to refine the analysis and calculate an "adjusted service capacity" more accurately. More guidance is available on 3.5.4 Adjusted service capacity.

Regarding data collection, surveys such as the Multi-Sector Needs Assessments (MSNA) typically inquire about health needs in the past three months and whether individuals received care. While this method is effective for assessing contact coverage, it might not capture the full extent of unmet needs. Fortunately, these surveys also ask about perceived barriers to healthcare access, which should be included into the analysis. However, only asking about the past three months can lead to underestimations, especially if the survey doesn't account for disease seasonality. For this reason, secondary data and Ministry of Health reports must be included in the analysis.

It's important to note that a lack of health resources and coverage doesn't automatically mean that everyone affected needs immediate humanitarian assistance. Hence, the PiN is in the middle range between the coverage of available services and their acceptability[15].

Additionally, population that has accessed healthcare services provided by health cluster partners should be subtracted from the calculations, because including them could increase the coverage estimation, potentially leading to a misleading interpretation and impacting resource mobilization and the sustainability of humanitarian service provision.

After calculating health resources coverage with the GHC List of Indicators and the Calculator

[15] Needs assessments typically focus on contact coverage to identify unmet needs. However, relying solely on these estimations to calculate the Population in Need (PiN) may underestimate the true extent of the population requiring assistance.

Template, Health Clusters derive a preliminary estimate of the affected population by taking the highest number from the various estimates. However, this figure needs to be refined by incorporating health status indicators and contextual factors to ensure accuracy. For a better understanding of this process please read the example on Figure 11.

Figure 11. Calculating service coverage: an example

The GHC has developed a template to streamline the calculation process. Using this tool, a cluster can integrate data on different indicators, such as the number of health facilities and the proportion of the population that can access a health facility within an hour's walk. These metrics are then used to estimate the affected population. For example:

					Input sheet		Calculator sheet	
Admin1	Admin1 P-code	Admin2	Admin2 P-code	Population	Number of Health Facilities (Primary)	Percentage of population that can access primary healthcare within one hour's walk from dwellings	Population exceeding health facility (HF) capacity.	Population that can't access primary healthcare within one hour's walk from dwellings
Admin1	pcode	Admin2	pcode	pop	HR_01	HR_08	HR_01	HR_08
Arnor	ME01	Arthedain	ME0101	2533424	64	45%	1,893,424	886,698
Arnor	ME01	Cardolan	ME0102	20287	5	62%	-	3,652
Arnor	ME01	Rhudaur	ME0103	2735	13	39%	-	1,121
Beleriand	ME02	East Beleriand	ME0201	4698	4	39%	-	1,926
Beleriand	ME02	West Beleriand	ME0202	31283	31	87%	-	-

Availability coverage

$$AP = TP - (Health\ Facilities * 10.000)$$
$$AP_{Arthedain} = 2.533.424 - (64 * 10.000)$$
$$AP_{Arthedain} = 2.533.424 - (640.000) = 1.893.424$$

Accessibility coverage

$$AP = (Threshold - \%population < one\ hour) * TP$$
$$AP_{Arthedain} = (80\% - 45\%) * 2.533.424$$
$$AP_{Arthedain} = 35\% * 2.533.424 = 886.698$$

For instance, in a prolonged crisis in Arthedain, the initial estimate of the affected population could be 1.893.424, based on the highest of the estimates. Hence, the PiN would be estimated to range between this number and 886,698.

However, these estimations depend on the particular situation and expert analysis. For example, if a district has no health facility but is near another district with a health facility that can serve both populations, additional indicators should be evaluated for the district lacking its own health facility.

More examples can be found in the GHC HDX Portal.

3.5.2 Health Status and Health System Performance

Evaluating health status and Health System Performance is essential to address humanitarian needs and adjust the estimations. For instance, even if a district has good availability and access to health services, factors like cultural beliefs or disease prevalence may indicate that more people are in need than what initial coverage calculations show.

For instance, consider a district where health facilities are sufficiently available, yet vaccination coverage remains low due to movement restrictions enforced by armed groups. In this scenario, even if the estimated affected population based on health facility availability is close to zero, the low vaccination rates indicate that there are indeed children who are affected and in need of assistance.

Therefore, for analyzing the Health Status and the System performance, standard indicators are converted into the number of individuals, using various thresholds based on their type. For indicators such as the number of cases of relevant diseases, this number is considered directly as a piece of the affected population, even if the data is from the previous year, because it is assumed that the situation would be similar if there are no forecasts available. For indicators that measure the

proportion of the population with a health condition, this percentage is applied to the total population to get the potential number of affected people.

In addition, there are some indicators with an acceptable threshold, for example it is acceptable a vaccination coverage of 90%. In that case the affected population would be the difference between the actual value and this threshold multiplied by the total population. All these calculations are formulated and automated in the GHC Calculator Template. However, some formulas are available in Table 3.

Table 3. Health Status Indicators

Type	Formula	Example of indicators
Count	$PiN_d = I_d$	Number of deaths of relevant diseases.
Proportion - Total	$PiN_d = N_d * I_d$	% of population identified as having disabilities
Incidence	$PiN_d = (I_d * N)$	Under-five mortality per 10.000
Inverse proportion	$PiN_d = N_d * (Threshold - I_d)$	Vaccination coverage

Note: let's assume *I* as the indicator in the *d* district, *N* the population, *T* an agreed threshold, and *NT* the population threshold. The agreed thresholds are available in the GHC Indicators List and the calculator template. These thresholds were agreed using Sphere standards and after discussions with the GHC partners between 2020 – 2021.

Many health status indicators generate small population estimations due to their specificity in capturing certain public health events. However, it is important to note that these indicators may be affected by access barriers, leading to an underestimation of the overall health situation. Therefore, when conducting this analysis, it is crucial to consider service coverage, expert judgment, and additional evidence to ensure a comprehensive assessment of the population's needs. In contrast, the specificity of these indicators is extremely valuable in assessing the severity of needs both at a general scale and among specific population groups. On the same line, clusters often consider the affected population, as measured by health status indicators, as the lower boundary of the PiN.

On the other hand, JIAF 2.0 recognizes the likelihood of current needs levels persisting into the foreseeable future. Consequently, clusters typically base their calculations for upcoming needs on the previous year's indicators. Nevertheless, in cases of changing trends, forecasts and projections should be carefully incorporated, relying on expert judgment. This approach is particularly important given the challenges of limited data availability and the lack of standardized methodologies.

Table 4. Most used health status indicators

• Population having disabilities, • Vaccination coverage, • Under-five mortality, • Maternal mortality, • Case fatality ratio,	• Number of cases, deaths, or incidence rates for diseases relevant to the context, • % of women who don't have access to modern contraceptive methods, • Antenatal care coverage	• Deliveries attended by unskilled personnel, • GBV and IPV survivors, • % of population with depressive disorders

More indicators are available in the GHC Indicators List.

Figure 12. Assessing Health Status and Health System Performance: an example

In this example, we use data on percentage of population having disabilities and the coverage of DTC3 to determine the affected population (AP) according to the total population (TP)

						Input sheet		Calculator sheet	
Admin1	Admin1 P-code	Admin2	Admin2 P-code	Population		% of the population identified as having disabilities (in line with the Washington Group Questions)	Coverage of DTC3 (DPT3 / PENTA3) in < 1 year old, by administrative unit	% of the population identified as having disabilities (in line with the Washington Group	Coverage of DTC3 (DPT3 / PENTA3) in < 1 year old, by administrative unit
Admin1	pcode	Admin2	pcode	pop		HS_01	HS_02	HS_01	HS_02
Amor	ME01	Arthedain	ME0101	2533424		16%	65%	405,348	633,356
Amor	ME01	Cardolan	ME0102	20287		10%	37%	2,029	10,752
Amor	ME01	Rhudaur	ME0103	2735		19%	87%	520	82
Beleriand	ME02	East Beleriand	ME0201	4698		29%	42%	1,362	2,255
Beleriand	ME02	West Beleriand	ME0202	31283		13%	72%	4,067	5,631

Disability

$$AP = TP * (\%People\ having\ disabilities)$$
$$AP_{Cardolan} = 20.287 * (10\%) = 2.029$$

Immunization coverage

$$AP = (Threshold - \%DTC3\ Coverage) * TP$$
$$AP_{Cardolan} = (90\% - 37\%) * 20.287 = 10.752$$

In Cardolan, there are 10,752 unvaccinated children and 2,029 individuals identified with disabilities. Since these groups are largely distinct, their numbers can be combined, resulting in 12,781 affected individuals. This figure is significantly higher than the 3,652 people identified through service coverage alone.

Since it's challenging to determine the intersection of individuals affected by health status and those impacted by the scarcity of health resources, the larger of these two figures could represent the total affected population. Therefore, the Population in Need (PiN) is likely to fall within the range of these two numbers.

3.5.3 Contextual factors

Contextual factors have a significant impact on health status and are essential for adjusting the affected population and PiN. These provide valuable insights of the broader context and help to understand the underlying factors contributing to health needs in humanitarian settings. Furthermore, these factors help identify and analyze health risks and potential needs, particularly in situations where data is limited or unavailable.

In line with this, IASC acknowledges the existence of inter-cluster response topics that require joint and collaborative action. These encompass malnutrition, cholera, mental health, and psyco-social support[16]. To promote effective intersectoral analysis and address the interrelated nature of needs, it is advisable to integrate indicators specifically aligned with these areas. In this regard, global agreements, frameworks, and guidelines serve as valuable resources to guide this process, these can be found in the GHC Analysis and Assessments Toolkit.

Contextual factor indicators are likewise quantified in terms of affected population numbers. Some of the most used include the following:

Table 5. Most used contextual factor indicators

• Severe Acute Malnutrition • IPC Phase • Access to WASH	• Overcrowding • Housing conditions and overcrowding • Protection risks	• Climate change and natural disasters • Cultural beliefs • Injured civilians

Incorporating contextual factors into the analysis won't result in double counting, even if other clusters also use these indicators. This is because, when calculating the Overall PiN, the highest value is selected according to the Mosaic Method outlined in JIAF 2.0, which prevents redundancy. More details are available at Resources – JIAF 2.0 and in section 5.1 Overall People in Need and the mosaic method.

[16] IASC Reference Module for Cluster Coordination

If the health cluster followed all the previous steps, it should have estimations of the affected population based on service coverage, and contextual factors, as well as a preliminary Population in Need (PiN) based on health status. However, further analysis is required to estimate the adjusted service capacity, combine these figures and calculate the final PiN.

3.5.4 Adjusted service capacity

Adjustments to service capacity consider contextual factors and health status variables. Although these adjustments primarily depend on expert judgment, they can be standardized for applicability across various contexts. However, it often requires a case-by-case analysis; for this purpose, collaborative discussions are essential.

In contexts where health services are primarily delivered by partners rather than the state, it's vital to differentiate these services from the total service capacity. Since the Health PiN aims to inform the Humanitarian Response Plan and funding appeals, services that must be sustained should prioritized and it's coverage excluded from the analysis. For example, if health services in an IDP camp are exclusively partner-provided, the entire population of the camp would be deemed affected and/or "in need" of health support. More examples are available in the following table:

Table 1. Analysis of Adjusted Service Capacity – Illustrative Examples

Example A: Restricted Access in Rural Areas **Scenario:** A district with a fully functioning health facility. **Challenge:** Armed groups restrict rural population's access to the facility. **Population:** 1,000 inhabitants, with 70% living in rural areas. **Decision:** Include the entire rural population (700 people) in the affected population. **Reason:** Rural population unable to access healthcare due to security issues. **Adjusted Service Capacity:** 300 urban inhabitants. **Adjusted Affected Population:** 700 rural inhabitants unable to access services. $Adjusted\ AP = 1.000\ Affected\ Population - (1.000\ Available\ Services - 700\ Adjusted\ capacity) = 700$
Example B: District with No Health Facilities but Good Referral Program **Scenario:** District A lacks health facilities but has a strong referral program to nearby District B. **Data Indication:** 0% availability coverage for District A. **Expert Adjustment:** Recognizing District B covers 60% of District A's needs. **Population:** 1,000 inhabitants in District A. **Decision:** Only 40% of District A's population considered in the PiN. **Adjusted Affected Population:** 400 inhabitants (40% of District A) lacking adequate healthcare access. $Adjusted\ AP = 1.000\ Affected\ Population - (0\ Available\ Services + 600\ Adjusted\ capacity) = 400$
Example C: District with low rate of births attended by skilled health personnel. **Context:** A district with available and accessible Obstetric Care for 100% of the population. **Observation:** 60% of births are attended by skilled health personnel. **Issue Identified:** Potential service acceptability issues, possibly due to cultural beliefs or perceptions about the health system.

Expert Judgment Requirement: Deciding whether the remaining 40% of unattended births by skilled personnel should be included in the Affected Population.
Considerations: Presence of traditional midwives or doctors who, despite being classified as unskilled, may effectively meet the population's needs.
Exclusion from Affected Population: If the needs of the population are being met by these practitioners, this group could be excluded from the PiN.

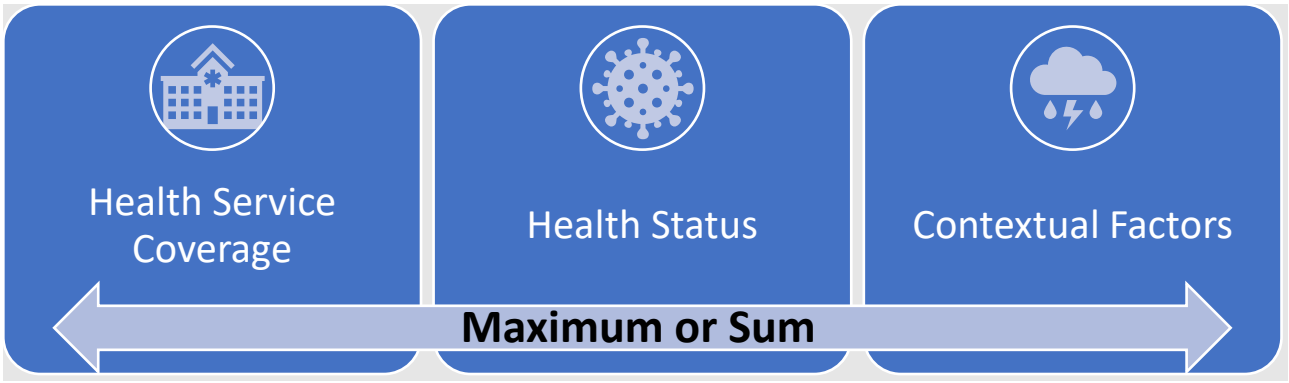
After adjusting the service capacity, the next step involves aggregating these figures to compute a preliminary People in Need (PiN) estimate. This estimate will then be reviewed and discussed with the Health Cluster's panel of experts.

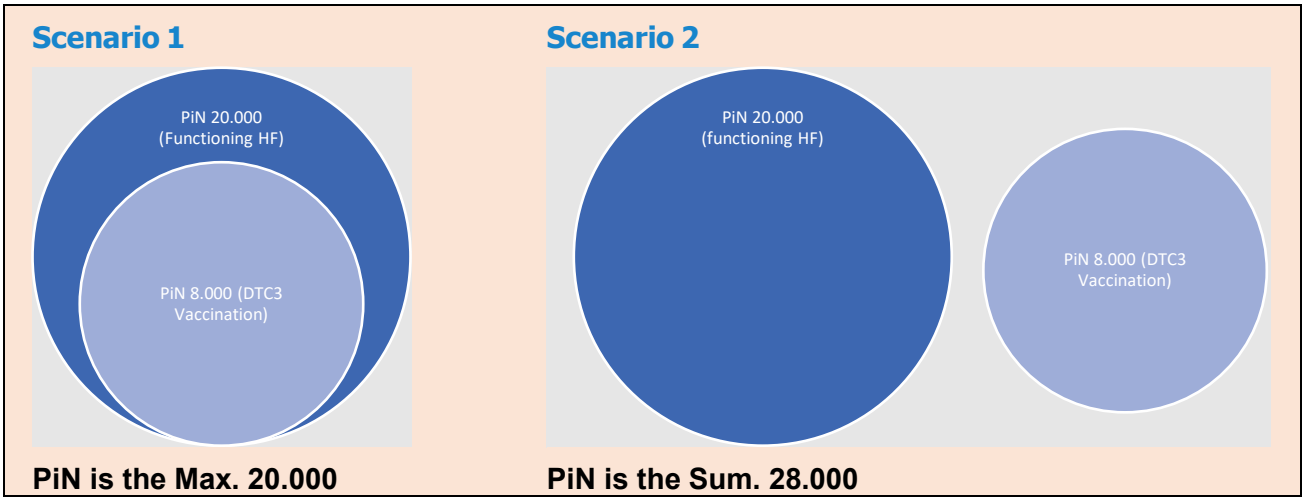
3.5.5 Combining the figures.

Determining specific needs and their linkages is challenging, leading Health Clusters to assume that needs often overlap. Consequently, it is advisable to adopt a conservative approach by choosing the highest estimation for each area from the available indicators. This method assumes that service deficiencies coincide with other pressing circumstances.

However, this approach may not fully capture the actual extent of need, possibly leading to an underestimation. Therefore, these initial calculations are just a starting point for assessing the PiN figures. Therefore, expert consultations are essential before finalizing these calculations. Further refinement through expert consultations is crucial. For instance, combining indicators for distinct groups or information domains can provide a more nuanced understanding of the needs. Figure 13 illustrates this concept.

Figure 13. Combining figures





Scenario 1: Overlapping Needs

Situation: 20.000 people exceed the Health Facility Capacity in the area and 8.000 people need vaccination and live in areas without functioning health facilities.

Assumption: Needs overlap in the same geographical area.

Decision: Take the maximum number as the final PiN due to the overlap in needs. Final PiN is 20.000 people.

Scenario 2: Non-Overlapping Needs

Situation: 20.000 people exceed the Health Facility Capacity in the area and there are 8.000 people in need of vaccination that live in different areas from those without functioning health facilities.

Assumption: Needs do not overlap geographically.

Decision: Sum both PiN numbers as there is no overlap in needs. Final PiN is 28.000 People.

Clusters frequently encounter a combination of these two situations. Adopting the 'maximum approach' is the most feasible assumption, indicating that at least 20,000 people are in need. However, this method may lead to an underestimation of the actual level of needs.

The task of the expert judgment group involves revising the figures when they determine that data is not accurate or there is or not overlap, suggesting a higher or lower number of people in need.

At this stage, health clusters should have an accurate estimation of the affected population, including the upper and lower limits for the People in Need (PiN). The next step is to agree on definitive criteria for establishing the PiN, acknowledging that the affected population may include individuals impacted by development issues who do not require urgent humanitarian assistance. Therefore, expert discussions and the participation of development actors are essential to this process.

3.5.6 Calculating the Final PiN

In determining the PiN, there's no one-size-fits-all approach. In sudden crises, the affected population might encompass the entire affected population, with the PiN being those not covered by health services. In protracted crises, the PiN could represent a segment of the population facing barriers to service access or those in particularly affected areas. It's recommended to rely on expert judgment and consult with the Global Health Cluster IMU to determine the most appropriate approach. The most common approaches are summarized in Table 6.

Table 2. Approaches to calculate the final PiN in 2023

PiN = Affected population in most impacted areas.

In Colombia, the Health Cluster developed a spatial analysis to categorize regions as being impacted by humanitarian crises or underdevelopment. They defined PiN as the entire affected population in areas affected by armed conflict, natural disasters, or health emergencies exceeding certain thresholds. Conversely, in less affected regions, PiN was determined based only on health status indicators, like vaccination rates and disease incidence. This approach

enabled a clear distinction between those affected people requiring humanitarian aid and those in need in areas mainly affected by underdevelopment. In this example, the cluster determined that the gap between the Affected Population and the People in Need (PiN) represents those who require development support. This assumption facilitated the implementation of the Nexus Approach, fostering better collaboration between cluster partners and development agencies.

More details can be found in ReliefWeb.

PiN = fixed percentage of the affected population

In Burkina Faso, Haiti, and Honduras, health clusters identified approximately 85% of the affected population as People in Need (PiN), based on Household Surveys and MSNA data analysis. For example, in Honduras, household surveys revealed that about 42% of the affected population suffers from diseases quarterly[17], 7% are children requiring growth monitoring and outpatient consultations, 3% struggle with chronic diseases, and 39% have various unmet health needs.

Due to lack of disaggregated data these countries used the same proportion for the whole country or sometimes they extrapolated the results at admin 1 to admin 2.

PiN = area-based proportion of the affected population

In Myanmar and Mozambique, the Multi-Sector Needs Assessment (MSNA) was employed to determine the People in Need (PiN) at the first administrative level. The derived proportions were then refined through expert judgment, supplementary evidence, and considerations of data gaps. Subsequently, these adjusted figures were applied to the second and third administrative levels.

In addition, Myanmar, and Haiti, focused on identifying the types of required services to estimate the target population. Key prioritized areas included trauma care, vaccination, gender-based violence (GBV) and mental health services, maternal and child healthcare, reproductive care, and health promotion and prevention activities.

PiN = potential uncovered demand of healthcare services

In 2023, Sudan experienced a conflict between rival government factions, which hindered data collection and needs assessments. Consequently, OCHA and various clusters estimated the number of people affected. Utilizing this data, the Health Cluster assessed the potential unmet demand for healthcare services, informed by reports on the collapse of the health system in various regions.

It is recommended to calculate the Population in Need (PiN) by disaggregating it according to gender, age groups (women, men, girls, boys), displacement status (refugee, IDP, returnee), population groups, and people with disabilities. This can be done by estimating a general PiN and then applying percentages based on the population structure, or by estimating a PiN for each population group and then aggregating them. However, due to data limitations, the first approach is more commonly used, although it requires a thorough understanding of the needs and population structure to minimize inaccuracies and the risk of conveying misleading information.

[17] According to the Encuesta Permanente de Hogares de Propósitos Múltiples - INE

Figure 14. PiN Calculation in Haiti for 2024 – an applied example.

During the HPC 2024, the Global Health Cluster facilitated the PiN and Severity calculations in Haiti. The initial step involved gathering secondary data and MSNA databases to collate indicators across three domains: Health Resources, Health Status and System Performance, and Contextual Factors. Key indicators included:

Health Resources	Health Status	Contextual Factors
• Population exceeding health facility (HF) capacity. • Availability (Coverage) • Number of inpatient beds per 10,000 people	• Coverage of DTC3 (DPT3 / PENTA3) • Coverage of measles vaccination • Cholera cases	• Number of Internally Displaced People (IDPs) • Severe Acute Malnutrition (SAM) • Percentage of households having access to an improved water source • Global Acute Malnutrition (GAM)

These indicators were then quantified into the number of affected individuals, revealing that approximately 9.46 million people lacked coverage by the health system due to capacity constraints, nearly 3 million were impacted by vaccination shortfalls and cholera, and about 248 thousand by selected contextual factors.

	9.459.759	2.984.508	248.365	9.553.314		Threshold for 4.689.094	85%	Based on MSNA Data	40,02% 1.876.424
	AP - Max Health Resources	**AP - Max Health Status**	**AP - Max Contextual Factors**	**Affected Population**	**%Affected Population**	**Preliminar PiN**	**% Preliminar PiN**	**% Target**	**Preliminar Target**
FP_Admin_2	M_HR	M_HS	M_CF	AP	AP_per	PiN_ preliminar	PiN_preliminar_per	Target_per	Preliminar Target
Anse à Galets	75.686	17.776	236	75.686	96%	15694	20%	41,40%	6497
Arcahaie	168.279	60.996	765	168.279	93%	51846	29%	41,40%	21462
Cabaret	138.599	74.550	1.495	138.599	89%	64448	41%	41,40%	26679
Carrefour	208.677	116.196	13.006	208.677	52%	177375	44%	41,40%	73427

The cluster subsequently determined the highest number among these domains, leading to an estimate of 9.55 million affected individuals. The difference of 110 thousand between people not covered by the health system and the final affected population estimation corresponds to the Adjusted Service Capacity.

In the PiN calculation, the cluster chose to omit those affected by the lack of in-patient beds, considering it an overlap with development needs. Instead, it focused on the population exceeding health facility capacity, health status, and contextual factors. Following the methods used in Myanmar and Honduras, 85% of the total was taken as the PiN. This percentage was corroborated by MSNA data that indicates at least 83.6% of the affected population needs humanitarian assistance, including maternal, mental, and nutrition care, as well as sanitation and access to health facilities. This resulted in a PiN of 4.7 million.

The final step involved refining the target calculation percentages, prioritizing access to healthcare services, unmet needs, and mental health, targeting 43.6% of the PiN. However, after considering expert judgment and additional qualitative evidence the target was reduced to 40.02%. This resulted in a target of 1.87 million.

These findings have enriched the discourse surrounding the Nexus approach, as they indicate that out of the 9.55 million affected individuals, 4.7 million require humanitarian assistance, while the remaining 4.85 million necessitate development and peace-building interventions.

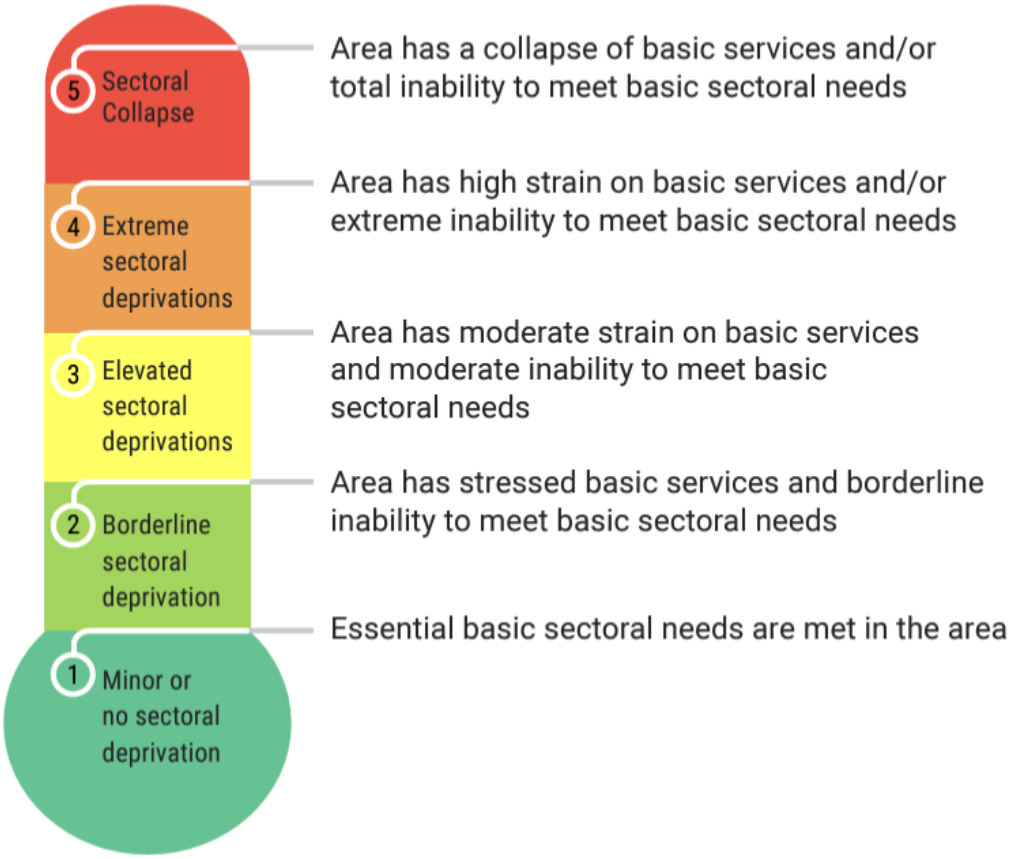
Alongside the PiN Calculation, clusters should assess the severity of the situation, primarily using health status indicators and contextual factors.

3.6 Health Severity Calculation

Severity calculation plays a crucial role in summarizing health needs and determining the necessary response. It helps inform strategic interventions and understand the urgency of addressing these needs. However, it is important to note that severity alone does not prioritize humanitarian needs, as all needs should be addressed. To effectively prioritize and plan the response, additional evidence such as Public Health Situation Analysis (PHSA), Needs Assessment, and emergency reports are essential.

For this purpose, JIAF 2.0 introduces a unified severity scale focusing on the levels of deprivation experienced in the field, as can be seen in Figure 12[18].

Figure 15. Common Interoperable Scale for Sectoral Severity



As the severity scale is common for all clusters, they operationalized the calculation by choosing a set of relevant indicators and establishing corresponding thresholds or rules to determine the severity of every area (districts, municipalities, etc.). For the Health Cluster, the severity calculation encompasses all relevant information domains, with a priority on the health status of the population.

For this analysis, clusters must convert their indicators to the severity scale shown in Figure 15, applying the thresholds from Table 3. For instance, in Haiti's Anse a Galets district, the availability coverage is 76%. Since this is above the 70% threshold, it is classified as severity level 3 for this

[18] The severity is defined by both the prevalence of needs and the ability of local actors to respond effectively. However, it does not encompass a quantitative measure of the depth or intensity of people's needs.

indicator. However, to determine the final severity, multiple indicators are examined, and a weighted average is computed following the method outlined in section 3.5.2 Calculating Severity. Most of these calculations are automated in the GHC calculator template.

However, data limitations can pose challenges for clusters in adhering to global standards. Therefore, the use of proxy indicators and additional evidence is allowed and recommended when possible. The goal is to ensure alignment with the phase's definitions to maintain coherence within the analysis framework and comparability between clusters and countries. In this sense, the indicators, and thresholds, available in Table 3, were agreed upon after long discussions.

Table 3. Health Cluster Severity Thresholds

Dimension	Variable	1 - Minimal	2 - Stressed	3 - Severe	4 - Extreme	5 - Catastrophic
General description		**Areas has essential basic services and ability to meet basic needs for survival, protection, and dignity**	**Area has:** **- Deterioration of physical or mental wellbeing** **- Sporadic threats to human rights and/or use of stress coping strategy** **- Stressed basic services and borderline inability to meet basic sectoral needs**	**Area has:** **- Elevated and increasing deterioration of physical or mental wellbeing and human rights, AND** **- Regular threats to human rights and/or accelerated erosion of strategies and/or assets, AND** **- Moderate strain on basic services and moderate inability to meet basic needs for survival, protection, and dignity.**	**Area has:** **- Elevated mortality or risk of death, AND** **- Widespread violations of human rights and/or unsustainable reliance on negative coping strategy, AND** **- High strain on basic services and/or extreme inability to meet basic needs for survival, protection, and dignity.**	**Area has:** **- Widespread mortality or risk of death, AND** **- Widespread and systemic violations of human rights and/or exhaustion of coping options and mechanisms, AND** **- Collapse of basic services and/or total inability to meet basic needs for survival, protection, and dignity.**
Health Resources	Definition	Health facilities can adequately meet the essential health needs of over 90% of the population.	Health facilities' service provision is under stress, impacting at least 10% of the population who are unable to access essential health services.	Health facilities are experiencing moderate strain in service provision, which is affecting at least 20% of the population who cannot access necessary health services.	Health facilities are facing high strain in service provision, resulting in at least 30% of the population being unable to access necessary health services.	There has been a collapse of health facilities or a significant gap in service provision, impacting at least 40% of the population who are unable to access necessary health services.
	Percent of population that can access primary healthcare within one hour's walk from dwellings	>=90%	>=80%	>=70%	>=60%	<60%
	Number of inpatient beds per 1.000 people	>= 18	>= 16	>= 12	>= 6	<6
	Number of health facilities with basic Emergency Obstetric Care per 500.000 people	>= 4	>= 4	>= 3	>= 2	<2
	Number of skilled birth attendant personnel per 10.000 people	>= 23	>= 22	>= 20	>= 17	>= 14
Health Status		There is low number of deaths and illnesses, as well as a maintenance in the population's overall health, which is evidenced by:	There is a borderline number of deaths and illnesses, as well as a deterioration in the population's overall health, which is evidenced by:	There is moderate number of deaths and illnesses, as well as a decline in the population's overall health, which is evidenced by:	There is high number of deaths and illnesses, as well as a decline in the population's overall health, which is evidenced by:	There is high number of deaths and illnesses, as well as a decline in the population's overall health, which is evidenced by:
	Inmunization Coverage (DPT3/PENTA3)	>=90% rural >=95% urban	>=90% rural >=95% urban	<90% rural <95% urban	<85% rural <90% urban	<75% rural <85% urban
	Percent of the population identified as having disabilities	All domains are no dificulties	No domain is a lot of difficulties or cannot do at all, 1, 2, or 3 domains are some difficulties	No domain is cannot do at all, 1, 2, or 3 domains are a lot of difficulties OR no domain is a lot of difficulties or cannot do at all; at least 4 domains are some difficulties	No domain is cannot do at all, 1, 2, or 3 domains are a lot of difficulties OR no domain is a lot of difficulties or cannot do at all; at least 4 domains are some difficulties	At least 4 domains are cannot do all
	Under 5 Mortality Rate	<1/10,000/day or	<1/10,000/day	<2/10,000/day	<4/10,000/day	>=4/10,000/day
	Incidence of Meningitis	No cases	**Area Population < 30 000** 1 suspected case in one week **Area Population > 30 000** less than 3 suspected cases / 100000 inhabitants / week (minimun of 2 cases in one week)	**Area Population < 30 000** 2 or more suspected cases in one week or an increased incidence compared to previous non-epidemic years **Area Population > 30 000** More than 3 suspected cases / 100000 inhabitants / week (minimun of 2 cases in one week)	**Area Population < 30 000** 5 or more suspected cases in one week or Doubling of the number of cases in a three-week period **Area Population > 30 000** More than 10 suspected cases / 100000 inhabitants / week	Agreed according to the context and severity phase definition
		Diseases				
	Epidemic-prone diseases	Normal level of epidemic-prone diseases or a confirmed outbreak that can be managed with existing healthcare service capacity.	Increased levels of epidemic-prone diseases that stress existing capacity	High level of epidemic-prone diseases straining response capacity and service provisions.	Extreme levels of epidemic-prone diseases highly exceeding response capacity and service provision.	Massive epidemic-prone diseases levels that restrict service provision.
		Influenza and SARI				
	Case Fatality Ratio	< 0.02	> 0.02	> 0.05	> 0.1	>= 0.5
	Case Hospitalization Ratio	< 0.05	> 0.05	> 0.8	> 1.5	>= 5
Contextual factors	Integrated Food Security Phase Classification	**IPC Phase 1**	**IPC Phase 2**	**IPC Phase 3**	**IPC Phase 4**	**IPC Phase 5**
		Protection severity				
		Nutrition severity				
		WASH severity				
		Housing conditions and risk factors				

Note: this table is in high definition and can be zoomed. In addition, a copy is available in the GHC Indicators List and the JIAF 2.0 Resources.

Figure 16. Severity Calculation in Haiti for 2024 – an applied example.

During the HPC 2024, the Global Health Cluster facilitated the PiN and Severity calculations in Haiti. The first step was to convert the indicators into a severity scale. The main indicators used were:

Health Resources	Health Status	Contextual Factors
• Availability Coverage • Number of inpatient beds per 10.000 people	• Penta3 vaccination coverage • Incidence rate of cholera • Measles vaccination coverage	• Percentage of household having access to an improved water source • Global Acute Malnutrition (GAM)

Global thresholds were applied to translate these indicators into a severity scale. For instance, Anse a Galets, with 0.6 in-patient beds per 10,000 people, meets the threshold for a severity level 5, which is 6 beds or fewer per 10,000 people. Thus, this indicator was categorized as severity 5. An average severity level was then calculated for the entire domain based on availability coverage, resulting in an overall severity level of 4.

		Severity	Severity		Severity	Severity	Severity		Severity	Severity		
		Availability Coverage	Number of inpatient beds per 10,000 people	Av. Health Resources	Coverage of DTC3 (DPT3 / PENTA3) in < 1 year old, by administrative unit	Incidence rate of cholera	Percentage of children aged six months to 15 years who have received measles vaccination	AV. Health Status	Percentage of household having access to an improved water source	GAM	Av. Contextual factors	Average Severity
C_Admin1	C_Admin2		S_HR_06b	S_HR_av	S_HS_02		S_HS_06c	S_HS_av	S_CF_02	S_CF_04b	S_CF_av	Av_Severity
Ouest	Anse à Galets	3	5	4	5	3	5	5	3	2	3	4
Ouest	Arcahaie	4	5	5	5	3	5	5	3	2	3	4
Ouest	Cabaret	5	5	5	5	5	5	5	1	3	2	4
Ouest	Carrefour	5	4	5	5	5	5	5	3	2	3	4
Ouest	Cité Soleil	3	4	4	5	5	5	5	1	3	2	4
Ouest	Cornillon / Gran	5	4	5	5	2	1	3	5	3	4	4
Ouest	Croix-Des-Bouq	5	5	5	5	4	5	5	1	4	3	4
Ouest	Delmas	3	3	3	4	5	5	5	3	4	4	4

Similarly, an average severity for health status and contextual factors was also determined using global thresholds. Specifically for Cholera, a country-specific analysis was conducted that considered the incidence rate and trends across districts. The calculation by indicator can be seen in the following table.

Domain	Indicator	Result for Anse a Galets	Threshold	Result
Health Status	Penta 3 vaccination coverage	68%	<75%	5
Health Status	Measles vaccination coverage	73%	<75%	5
Contextual Factors	Households having access to improved water source	47%	<60%	3
Contextual Factors	Global Acute Malnutrition	9%	<10%	2

For determining dimension severity, all indicators are equally weighted, leading to the computation of a standard average. However, for the final severity assessment, specific weights are applied as detailed in 3.5.2 Calculating Severity.

Therefore, for Anse a Galets the final severity is 4 after considering the following weights: 25% Health Resources, 40% Health Status, and 35% for Contextual Factors. Hence:

$$Severity_{Anse\ a\ Galets} = 25\%(4) + 40\%(5) + 35\%(3) = 4$$

In situations with considerable information limitations, clusters may use proxy indicators, for which they must set severity thresholds. It's crucial that these thresholds align with the definitions of the severity scale to maintain consistent analysis. On the same line, there are no universally accepted thresholds for the incidence rates of epidemic-prone diseases, as epidemiological conditions vary by country. Therefore, it is recommended to seek advice and guidance from the GHC IMU or contact WHO focal points in these situations.

3.5.1 Severity Thresholds

The severity levels for health indicators are categorized into five scales, as shown in Figure 12. In the absence of specific thresholds for certain indicators, national and global experts should be consulted for guidance, and historical data should be considered[19] for determining appropriate and aligned thresholds. This is especially relevant for indicators that measure incident rates and/or case fatality ratios for key diseases relevant to the country.

Degree vs magnitude indicators
Severity thresholds for indicators typically fall into two categories: measuring the degree of an outcome or the magnitude of a situation. The degree of severity is often calculated at the individual or household level. For instance, disease symptoms can be ranked based on their prognosis. However, for health clusters, this method is less applicable since health needs aren't solely determined at the individual or household level. Instead, health cluster's analysis relies on severity based on magnitude or prevalence of the needs. This classification considers two factors: a binary distinction (e.g., vaccinated vs. not vaccinated) and the proportion of the population in each category (e.g., 70% vaccinated against measles). Severity thresholds are then set based on these proportions, with, for example, 95% or more vaccinated being considered in minimal level and thus falling below a in higher severity levels according with the agreed thresholds.

Considering this distinction JIAF 2.0 only considered an area-based or magnitude-based severity. The calculation of PiN by Severity is still under discussion. However, for targeting purposes, some clusters have utilized MSNA data to determine the required types of services. This approach helps in estimating the approximate PiN by Severity, acknowledging, for instance, that individuals requiring trauma care may have more acute needs compared to those needing health promotion and prevention services.

How the Thresholds Have Been Designed
When defining severity thresholds, it's essential to ensure alignment with the global severity definitions, described in Figure 15 and Table 3. For instance, a level 5 (catastrophic) situation signifies extremely high mortality rates or immediate risk of death, extensive human rights violations, depleted coping mechanisms, collapse of services, and total failure to meet basic needs. It is inappropriate to simply split an indicator into quintiles to assign severity levels; a more nuanced approach is necessary to accurately reflect the gravity of the situation.

For this reason, expert judgement is needed and the support from the GHC is essential when developing new thresholds or using proxy indicators.

3.5.2 Calculating Severity

After establishing and agreeing on the thresholds, severity levels for each health information domain can be determined. First, calculate a standard average for each domain. Then, to compute the final severity, apply weights to these averages to obtain another weighted average. The GHC suggests weighting them as 25% for Health Resources, 40% for Health Status, and 35% for Contextual Factors[20]. More detail can be found in the example in Figure 16.

The Health Resources category has a lower weight because it often reflects long-term development needs rather than immediate humanitarian crises. In contrast, Health Status and Contextual Factors are weighted more heavily as their indicators are crucial for assessing the severity of a humanitarian crisis. Recognizing that some situations may lack complete data

[19] Poisson test of difference is helpful for confirming if variations in the number of disease cases are significant or not.
[20] These percentages can be adjusted if there is a lack of indicators or according to expert judgment.

across all categories, the calculator is designed to accommodate this by allowing adjustments to the weightings.

Table 4. Example of severity calculation

Indicator	Severity	Weight	Calculation	Score
Average Health Resources Severity	4	0.25	1	3.6 ≈ 4
Average Health Status Severity	3	0.40	1.2	
Average ContextualFactors Severity	4	0.35	1.4	
IPC (Critical)	2			3
Plague Severity (Critical)	3			
Final Severity				4

Additionally, the GHC identified critical indicators that can override the final weighted severity score because they indicate acute emergencies on their own. For instance, the attack rate of diseases prone to epidemics, the IPC level or the official declaration of an epidemic, pandemic or famine takes precedence in determining the severity level.

3.5.3 Critical Indicators

Indicators that signify the most severe conditions are deemed critical, and their severity levels can override others. For example, a community facing a critically severe malnutrition crisis, with imminent risk of widespread death, should be classified at severity level 5, regardless of more positive readings in other indicators.

The critical indicators globally recognized include IPC level, Crude Death Rate, and Under 5 Mortality Rate. In areas with particular epidemiological challenges, case numbers or incidence rates for locally significant diseases may also be critical, especially in extreme or catastrophic situations.

When critical indicators are present, they take precedence in determining the overall severity. However, this override mechanism only applies to increase the severity score. Therefore, while the weighted severity score remains unchanged if the critical indicators suggest a lower severity, it will be adjusted upward if they indicate a higher severity level.

At this point, if the cluster has completed all the steps, it will have preliminary estimates for both People in Need (PiN) and Severity. These should then be reviewed with a panel of experts, as outlined in Section 4, before participating in the JIAF 2.0 Intersectoral workshops detailed in Chapter 5.

4. Health Expert Discussion

For calculating PiN and Severity, it is crucial to engage a panel of experts for preliminary discussions and further evaluation of the results. However, finding suitable experts in humanitarian settings can be challenging. To effectively address this issue, the panel should consist of individuals who possess:

- A solid understanding of the analysis process, including a thorough knowledge of the Health PiN and Severity and the underlying formulas,
- Local expertise in the areas being evaluated, which could include individuals who have extensive field experience, have conducted research, or are originally from those areas,
- Familiarity with the datasets used in the analysis, especially those who have directly contributed to the assessments in question.

They would be field staff who are well informed about the relevant areas[21]. The objective is to form a panel comprising individuals recognized by the cluster for their expertise in the subject matter. For effective discussions, it is advisable to keep the group size manageable, ideally between 8 to 10 participants.

Once the panel is identified, a workshop should be organized to allow them to review and discuss the various indicators and information available for each area. It is important to also consider results in conjunction with additional indicators that may lack specific thresholds.

4.1: Identify Health Affected Population

In some cases, identifying the health affected population can be more complex than in others. It is essential to thoroughly document and clearly explain all decisions made during this process to maintain transparency. This allows partner organizations to fully understand the methods used. It's important to note that the "health affected" population does not necessarily encompass the entire "crisis-affected population," but rather a specific subset of it.

The count of health-affected individuals should not surpass the total number of people impacted by the crisis. Additionally, it should exclude any groups that are specifically not considered part of the broader "affected population" category.

This discussion should occur during the dialogues on defining the analysis's scope and estimating sectoral outcomes, ideally before August.

4.2: Reliability

In humanitarian situations, ensuring data reliability is crucial. It is essential to rely on data that is current, representative, and collected through transparent methods. Given the lack of a standardized methodology for measuring reliability, it is recommended to assign a reliability score ranging from 1 to 5 to each data source. This score should be determined based on specific criteria and thoroughly explained during expert assessments. This approach helps to address potential shortcomings related to sample size, non-response rates, or outdated data.

Where datasets are scored below 5, their results should be considered by the expert judgement group and the following questions should be asked:

- Should data be excluded due to its unreliability?
- Are the results lower than expected?
- Are the results higher than expected?

This step should be undertaken while updating the baseline indicators and prior to initiating the data collection process. This timing ensures that any critical data gaps can be addressed through standard intersectoral and health-specific needs assessments.

If necessary, results may be adjusted based on expert judgment when data are deemed unreliable. It is essential to thoroughly document the rationale for these adjustments and the information relied upon to make these decisions.

4.3: Review Thresholds

The thresholds used in the calculations are primarily based on minimum standards, some of which are derived from Sphere guidelines. However, it is important to note that these thresholds may not always be the most appropriate for every situation. Therefore, thresholds can be adapted but they must be aligned to the global severity phases definitions to ensure transparency and comparability.

[21] For example: Information Management Officer (IMO), Analysis and Assessment Officer (A&A), Monitoring and Evaluation Officer (M&E), analysts, epidemiologists, etc.

When reviewing thresholds for assessing severity, the expert judgment group must identify any indicators classified as "critical." These critical indicators must align with the definition where a severity level 5 indicates widespread mortality and the collapse of basic services.

4.4: Review the population groups being used for calculations

As previously noted, some groups may need distinct consideration, such as displaced populations that depend entirely on partners for their health needs. If these groups are determined to be 100% in need, it is crucial to assess whether they should be included in the overall analysis or excluded, allowing their specific needs to be addressed separately in the analysis. The following example illustrates this issue better:

Figure 17. Special considerations for vulnerable groups – an example

Consider a scenario with a total population of 100,000, which includes 25,000 internally displaced persons (IDPs). If analysis shows that 30% of the population is affected, it might initially seem that the needs are predominantly within the IDP group.

However, it's important to note for this example that IDPs depend entirely on humanitarian partners for healthcare services, making them considered as uncovered. Therefore, if there are additional needs identified among the non-displaced population, a more precise approach would be to exclude the IDPs from the initial calculation. This leaves 75,000 people in the non-displaced population. If 30% of this group is assessed as being affected, the figure would be 22.500. By adding the number of IDPs, the total PiN adjusts to 47,500 (22,500 from the non-displaced plus 25,000 IDPs). This recalculated approach ensures a more accurate assessment, especially when dealing with significantly different population groups and when data is available for each segment.

4.5: Review the results and finalize Health PiN

Using the data from the Health PiN and Severity Calculator, the expert group must achieve consensus on the final Health PiN figures. This process requires considering additional factors, such as data reliability, updates, recent reports, or emergencies. To integrate these additional considerations, the expert group should discuss and address the following questions:

- Does this information suggest that the number of people in need is greater or less than the maximum Health PiN calculated?
- If so, how should the Health PiN be adjusted?
- Does the calculated PiN encompass structural and development needs as well?
- Do the health results align or correlate with the figures from other clusters?

This discussion should take place both before and after the second intersectoral JIAF 2.0 workshop. If some health results are flagged, they are inconsistent with other cluster's results. In that case, the panel of experts should reach consensus on whether to adjust the results or provide more evidence that sustains them. This step is crucial for reaching consensus on the definitive intersectoral results during the third JIAF 2.0 Workshop.

4.6: Severity

The calculated severity should be carefully assessed by examining the individual breakdown of indicators. To guide the discussion, the following questions can be considered:

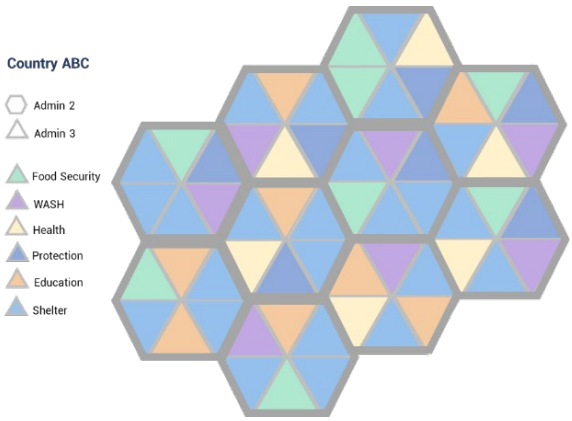
- Are there outliers[22] indicators?
- Does the severity level make sense considering the final PiN[23]?
- Are there any additional data sources that suggest a different severity level for this area?
- Is this data sufficiently reliable or is there more recent anecdotal or qualitative information available that should be factored in?

Following these discussions, the next step is to participate in the final JIAF 2.0 Workshop to finalize and agree on the Overall People in Need (PiN) and the Intersectoral Severity.

5. Joint and Intersectoral Analysis

5.1 Overall People in Need and the mosaic method

Figure 18. Mosaic Method



The mosaic method recognizes overlapping needs, using the highest PiN estimate from smaller units of analysis (such as Triangles or Admin 3), as the PiN for the entire district. In larger geographical units (like Hexagons or Admin 2), the PiN is calculated by synthesizing results from various clusters. This approach is visually represented in the images with distinct color patterns resembling a mosaic. This method enhances transparency and facilitates a more precise spatial analysis, enabling identification of the most critical needs and their linkages.

JIAF 2.0 acknowledges the challenges in estimating intersectoral people in need caused by limited data availability and variations in data sources and methodologies. To address this challenge, the new methodology introduces the concept of Overall PiN. This approach adopts the mosaic method, as shown in Figure 18. This method aggregates the highest PiN values from the most detailed level of analysis, such as by districts, under the assumption that needs are correlated and overlap.

The mosaic method is complemented by a validation process that includes an adaptable[24] and automated flagging system. This system helps identify areas with inconsistencies when comparing sectoral PiNs. This facilitates the discussion as suggests where the discussions should be focused.

The flagging system, outlined in Table 5, uses a set of criteria to identify potential inconsistencies. However, a flagged result is not necessarily invalid; it simply draws attention to possible discrepancies. Clusters should then deliberate whether to keep or modify these results based on the evidence.

The flagging system also enables the manual flagging of areas, facilitating the inclusion of qualitative insights and expert judgments.

[22] Indicators that are particularly high that may suggest the situation is more severe than the calculated severity suggests.
[23] The following thresholds can be used as reference: Severity 1 approx. 15% in need, Severity 2 approx. 35% in need, Severity 3 approx. 55% in need, Severity 4 approx. 70% in need, Severity 5 approx. 90% in need.
[24] Countries can adapt the thresholds to the context in coordination with the GHC IMU.

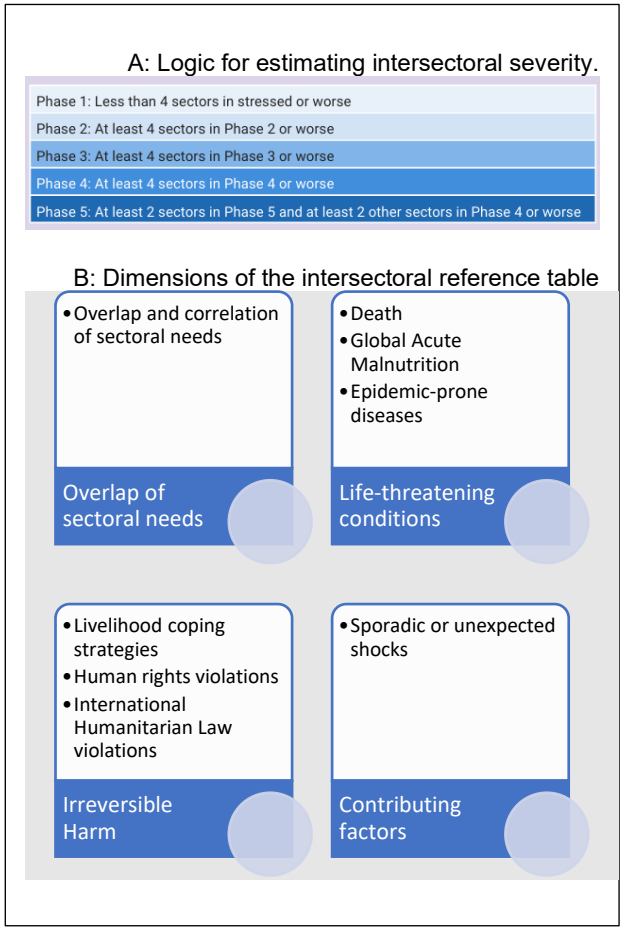
Table 5. Recommended flagging criteria

	PIN Flags	Recommended Threshold
1	# Sectors with missing or zero PiN	1 or 2
2	% difference between 1st and 2nd highest PiN	30%
3	% difference between 1st and 3rd highest PiN	50%
4	Highest sector PIN targets sub-population group(s)	50%
5	PiN greater than 90% of total affected population	90%
6	Change from last year	100%
7	Manual Flag	*Explain*

	Severity Flags
1	Any sector is in Severity Phase 5
2	One outcome indicator is +2 / -2 compared to preliminary classification*
3	Two or more outcome indicators are +1 / -1 compared to preliminary classification
4	More than 4 sectors are in Phase 4 and preliminary intersectoral severity is Phase 4
5	Manual Flag (description to be provided at country level)
* Alignment between preliminary severity and outcomes indicators occurs when the more severe indicator of life threatening, and the more severe indicator of irreversible harm are both at least one Phase different than preliminary classification	

5.2 Intersectoral Severity

Figure 19. Intersectoral Severity Considerations



To calculate intersectoral severity, all clusters must submit their results. OCHA then applies a set of rules defined by JIAF 2.0 to estimate a preliminary severity score, as shown in Figure 19 A. These rules determine how many clusters at each severity level are needed to establish the intersectoral severity. This logic is encoded in an intersectoral analysis matrix, which may be subject to updates. Consequently, it is essential to consult the most recent version of the JIAF manual for the latest guidelines.

If no flags are raised, the preliminary intersectoral severity is accepted by consensus among all clusters. However, if flags are present, JIAF 2.0 offers a reference table to verify and confirm the intersectoral severity. This reference table, detailed in the JIAF Manual, includes pre-established indicators, thresholds, and conditions for determining each severity level. These criteria consider the intersection of sectoral needs, life-threatening conditions, irreversible harm, and factors contributing to the crisis, as illustrated in Figure 19 B and the JIAF Manual.

JIAF 2.0 sets standardized severity phases and thresholds to standardize estimates and maintain consistency across countries. It's crucial to note that a severity level of 5, deemed catastrophic, should prompt an immediate response. Consequently, areas classified as catastrophic must be flagged to confirm the accuracy of the results and to advocate for the urgent mobilization of resources.

This approach enhances the communication of humanitarian messages and promotes greater clarity regarding the extent of needs through an area-based perspective. While severity is important, it is not the sole basis for response prioritization. More evidence, such as the Public Health Situation Analysis and additional assessments, is necessary for comprehensive planning.

It is crucial to highlight that both intersectoral and sectoral severity assessments are conducted at the area level and offer a broad understanding of the overall magnitude of the situation based on the prevalence of needs. Therefore, these severity measures do not account for the individual level of needs. It is possible that certain families or households in areas classified as having minimal severity may experience similar needs as those in areas facing a catastrophic situation.

In addition, the relationship between People in Need (PiN) and Severity should be analyzed with an understanding of their limitations and scope. It is important to recognize that PiN and Severity do not always align perfectly. For instance, areas with minimal severity may still have significant PiN, requiring similar services as areas in catastrophic situations. However, the response strategies may differ based on existing capacity and specific challenges.

For instance, consider the scenario of internally displaced persons (IDPs) in a capital city where there are functioning health facilities and reasonable accessibility. Despite the relatively functional infrastructure, these IDPs may face barriers such as lack of documentation or financial constraints that prevent them from accessing services. In this case, the response could involve cash-based assistance or efforts to address the barriers to access, such as legal or financial support. On the other hand, IDPs in a catastrophic area may require the establishment of a camp hospital due to the collapse of existing infrastructure and limited access to healthcare facilities.

6. Annexes

6.1 GHC List of Thresholds

Health Resources	
Indicator	**Threshold (PiN)**
Average population per functioning health facility (HF), by type of HF and by administrative unit	1 per 10,000
% of health facilities providing clinical management of rape (EC, PEP and STI treatment disaggregate by which of the three services are being provided)	1 per 250,000
Proportion of facilities providing GBV survivors with basic psychosocial support (i.e. first line support or psychological first aid and referrals)	>= 18
Proportion of health facilities that report capacity to provide Bellwether procedures (caesarian delivery, laparotomy, and treatment of open fracture)	Locally determined
Number of days essential medicines are not available in a one-month period	>= 80%
Number of inpatient beds per 10,000 people	>= 80%
Number of community health workers per 500 people inrural and hard-to-reach locations	100%
Percentage of population that can access primary healthcare within one hour's walk from dwellings	100%
Percentage of healthcare facilities that deliver essential package of health services	>= 4 BEmOC

Proportion of healthcare facilities with a trained IPC health worker	>= 1 CEmOC
Proportion of health care facilities where the main source of water is an improved source, located on premises, from which water is available	>= 23
Number of HF with Basic Emergency Obstetric Care/ 500,000 population, by administrative unit	> 3
Number of HF with Comprehensive Emergency Obstetric Care/500,000 population, by administrative unit	>= 1
Number of skilled birth attendant personnel (doctors,nurses, certified midwives) per 10,000 people	23
Percentages of medical facilities, social services facilities and community programs who have staff trained to identify mental disorders and to support people with mental health and psychosocial problems	Threshold not identified – must be set locally
Number of healthcare workers trained on recognized MHPSS topics (such as mhGAP, PM+ and PFA) by community	Threshold not identified – must be set locally
Number of health facilities with an inpatient wasting treatment center	Threshold not identified – must be set locally
% of people reporting they are unable to access health services when required	Threshold not identified – must be set locally
Cost of medical services	Threshold not identified – must be set locally
Barriers to Health Care	Threshold not identified – must be set locally

Health Status	
Indicator	**Threshold (PiN)**
% of the population identified as having disabilities (in line with the Washington Group Questions)	> 90%
Coverage of DTC3 (DPT3 / PENTA3) in < 1 year old, by administrative unit	<= 2 per 10,000 per day
Under 5 Mortality (deaths per 10,000 per day)	<= 1 per 10,000 per day
Number of cases or incidence rates for selected diseases relevant to the local context (cholera, measles, acute meningitis, others)	Locally determined
Case Fatality Ratio (CFR) for most common diseases	> 95% in high densitylocations and > 90% in rural areas
Percentage of children aged six months to 15 years who have received measles vaccination	
Severe acute malnutrition (SAM) in children 6 to 59 months	Taken as a whole figure

Contextual Factors

Indicator	Threshold (PiN)
Global acute malnutrition (GAM) in children 6 to 59 months	(Only used for Severity)
Percent of Households having access to an improved water source	All without access considered at risk of requiring medical support
Pregnant and lactating women as a percentage of total population	All considered in need of medical support
Displaced population	Need to clarify if partners are providing primary healthcare. If so, total population is taken
(Where Integrated Phase Classification is in place) Proportion of the population identified as IPC Phase 5 and Phase 4	Total population

6.2 Health PiN & Severity Calculation Process: Checklist

1) Create Expert Judgement Group

- ☑ Put together a small working group for the HNO Health PiN calculations comprised of representatives from partners with experience in analysis and/or extensive local knowledge for the geographic region covered by the HNO.

2) Identify Indicators

- ☑ Go through the list of indicators and determine which you will include. Please be sure to factor in which indicators you will have information for and how recent that information is.
- ☑ Add indicators that you feel are relevant to your specificcontext.
- ☑ Ensure all indicators listed in Health Resources, Health Status and Contextual Factors have thresholds applied.If they are identified for use in calculating PiN, ensure there are Severity thresholds recorded.
- ☑ If major changes are required reach out to the GHC sothe calculator can be adjusted to your specific requirements

3) Determine Which Population Groups to run Calculations on

- ☑ Consider if there might be universal rules that apply to specific population groups (e.g., all displaced peopleare considered 'in need'.
- ☑ If there are likely to be such rules, consider separating them from the initial calculations and adding their needs after.
- ☑ Consider duplicating the calculator so you

have one version where those groups are included in the analysis and one where they are added separately. These two versions can then be compared during Expert Judgement.

4) Run the Calculator

- ☑ Input available data at the smallest administrative level required for reporting.
- ☑ Run the calculator and share the results with the Expert Judgement Group

5) Run Workshop

- ☑ Recommend planning a workshop for the Expert Judgement Group to go through the results of the calculator and consider the various indicators listed under 'Expert Judgement'. This group must agree on a final Health PiN figure for each required administrative area, factoring in reliability of data, and any additional information they may have that is relevant to the analysis.
- ☑ The expert judgement group must also agree on severityfor each required administrative area.
- ☑ It is the responsibility of cluster coordination to ensure all rationalizations for each decision taken are recorded. A comments space is provided for each indicator and beside each administrative area for these decisions to be documented. Once completed the workbook should be saved to provide a record of the methodology used.

6) Document the Analysis Process

- ☑ Ensure all rationalizations noted during the Expert Judgement Workshop are recorded.
- ☑ If there have been any adjustments to the default thresholds, be sure to note why these adjustments were made.
- ☑ If any indicators have been removed from the analysis, please be sure to mention why it was decided to remove them.

Note that one of the key reasons for the documentation requests above are to ensure we have a track record of any pressure being exerted to keep PiN at a pre- specified level. Because this is something that is a growing concern at the global level, it is important to record all rationalizations so if it is suggested that PiN was limited for political reasons, we are able to determine why any changes were made.

6.3 Key definitions

- **Affected Population (AP)** is a sub-set of the Total Population whose lives have been impacted as a direct result of the crisis. Find more details on ReliefWeb.

- **Baseline Indicators** serve as fundamental reference points or starting measurements against which progress, or changes are assessed. They provide a benchmark for

evaluating the effectiveness of interventions, and responses. Find more details in the GHC Core List of Indicators.

- **Global Health Cluster (GHC)** exists to support Health Clusters/Sectors in countries. They exist to relieve suffering and save lives in humanitarian emergencies, while advancing the well-being and dignity of affected populations.

- **Joint and Intersectoral Analysis Framework (JIAF)** in its second version is a global standard for analyzing and estimating the intersectoral humanitarian needs and protection risks faced by populations in crises. It is used to guide the development of the Humanitarian Needs Overview (HNO).

- **Humanitarian Programme Cycle (HPC)** is a coordinated series of actions undertaken to help prepare for, manage and deliver humanitarian response. It consists of five elements coordinated in a seamless manner, with one step logically building on the previous and leading to the next. Successful implementation of the humanitarian programme cycle is dependent on effective emergency preparedness, effective coordination with national/local authorities and humanitarian actors, and information management. Find more details on IASC.

- **Internally Displaced Persons (IDPs)** persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized border.

- **People in Need (PiN)** is a sub-set of the Population Affected 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 reestablish normal living conditions with their accustomed means in a timely manner without additional assistance. Find more details on ReliefWeb.

- **Protracted crises** persist over an extended period, often involving complex emergencies and ongoing humanitarian needs. These crises can last for years or decades leading to a continuous need for assistance and an overlap of humanitarian and development needs.

- **Severity** measures provide an assessment of the magnitude of unmet needs, offering insights of the situation of different geographic areas. They condense the information into a single number or verbal scale, facilitating judgments on priority and highlighting the urgency of response efforts.

- **Sudden crises** arise abruptly and demand immediate response to save lives and alleviate suffering. These crises include disasters, conflict, civil unrest, terrorist attacks, that result in mass displacement or a severe deterioration of living standards.

- **Tanahashi Model** is a framework used to assess health system performance and identify gaps and barriers. It has been adapted in several countries to enhance understanding and address challenges related to health services.

- **Target Population** is a sub-set of People in Need and represents the number of people humanitarian actors aim or plan to assist. Find more details on ReliefWeb.

Global Health Cluster (GHC) Guidance Note on Health People in Need (PiN) and Severity Calculation Version 3.0