Research Terms of Reference

Secondary Desk Review and Methodology Development for Estimating Mortality in Yemen

YEM2004

Yemen

October 2020
2

REACH Informing more effective humanitarian action

1. Executive Summary

Country of intervention	Yemen					
Type of Emergency	□	Natural disaster	X	Conflict		
Type of Crisis	□	Sudden onset	□	Slow onset	X	Protracted
Mandating Body/ Agency	*World Health Organization (WHO)*					
Project Code	*YEM2004*					
Overall Research Timeframe *(from research design to final outputs / M&E)*	15/05/2020 to 10/10/2020					
Research Timeframe *Add planned deadlines (for first cycle if more than 1)*	1. Start collect data: 17/05/2020		5. Preliminary presentation: N/A			
	2. Data collected: 18/06/2020		6. Outputs sent for validation: 28/09/2020			
	3. Data analysed: 02/07/2020		7. Outputs published: 15/10/2020			
	4. Data sent for validation: Not applicable (N/A) (see Methodology)		8. Final presentation: 15/10/2020			
Number of assessments	X	Single assessment (one cycle)				
	□	Multi assessment (more than one cycle)				
Humanitarian milestones *Specify **what** will the assessment inform and **when** e.g. The shelter cluster will use this data to draft its Revised Flash Appeal;*	**Milestone**		**Deadline**			
	□	Donor plan/strategy	_ _/_ _/_ _ _ _			
	X	Inter-cluster plan/strategy	ongoing			
	X	Cluster plan/strategy	ongoing			
	□	NGO platform plan/strategy	_ _/_ _/_ _ _ _			
	□	Other (Specify):	_ _/_ _/_ _ _ _			
Audience Type & Dissemination *Specify **who** will the assessment inform and **how** you will disseminate to inform the audience*	**Audience type**		**Dissemination**			
	X Strategic		□ General Product Mailing (e.g. mail to NGO consortium; HCT participants; Donors)			
	X Programmatic		□ Cluster Mailing (Education, Shelter and WASH) and presentation of findings at next cluster meeting			
	□ Operational		X Presentation of findings (e.g. at HCT meeting; Cluster meeting)			
			X Website Dissemination (Relief Web & REACH Resource Centre)			

Detailed dissemination plan required	□	Yes	X	No
General Objective	**The main objective of this project is to explore the potential development of a viable methodology for estimating mortality rates and factors affecting mortality in Yemen.**			
Specific Objective(s)	**1.** Outlining the different methodologies for measuring representative or proxy mortality rates as well as the factors affecting mortality in humanitarian contexts, and compiling a list of data required to inform key indicators outlined in these methodologies; **2.** Review of current data collection mechanisms and sources to identify which indicators are already collected through existing data collection infrastructure in Yemen and highlighting where evidence gaps exist; **3.** Identifying one or more methodologies that could be feasible for estimating mortality in Yemen, based on the level of existing evidence and the need to address evidence gaps; **4.** Consulting with WHO and other relevant humanitarian stakeholders in Yemen in order to reach a consensus on the most viable methodology to be utilized for future analysis.			
Research Questions	Which research methodology or methodologies would allow for the estimation of mortality rates in the context of Yemen? Sub-research questions: 1. Which mortality estimation methodologies are available that are specifically suitable for humanitarian settings? 2. What secondary data is available that would be needed for carrying out any of the mortality estimation methodologies identified which make use of secondary data? 3. What is the quality of the secondary data that is available? 4. What secondary data is not available that would be needed for carrying out those mortality estimation methodologies identified that make use of secondary data? 5. Which mortality estimation methodology/ies seem feasible for being implemented in the Yemeni context, taking into account both the Yemeni context, as well as the availability and quality of secondary data needed for carrying out those methodologies that make use of secondary data?			
Geographic Coverage	Yemen (nationwide)			
Secondary data sources	• Population estimates for Yemen • Health facility data (Ministry of Health, Line lists) • SMART survey data • Food security and livelihoods assessments (e.g. FSLA) • Disease surveillance data (e.g. eDEWS) • UN Inter-Agency Group for Child Mortality Estimation data • MCLA data • MICS data (if available) • Nutrition surveillance data • OTP and ITP information • Relevant data from sectoral / Cluster assessments			
Population(s)	X	IDPs in camp	X	IDPs in informal sites
	X	IDPs in host communities	□	IDPs [Other, Specify]
	X	Refugees in camp	X	Refugees in informal sites
	X	Refugees in host communities	□	Refugees [Other, Specify]

	X	Host communities		□	[Other, Specify]	
Stratification	□	Geographical #:_ _ _ Population size per strata is known? □ Yes □ No	□	Group #: _ _ _ Population size per strata is known? □ Yes □ No	□	*[Other Specify]* #: _ _ Population size per strata is known? □ Yes □ No
Data collection tool(s)	□	Structured (Quantitative)		**X**	Semi-structured (Qualitative)	
	Sampling method			**Data collection method**		
Semi-structured data collection tool (s) # 1	X Purposive X Snowballing			X Literature Review		
Semi-structured data collection tool (s) # 2	X Purposive X Snowballing			X Individually contacting partners for obtaining secondary data		
Target level of precision if probability sampling	N/A			N/A		
Data management platform(s)	X	IMPACT		□	UNHCR	
Expected output type(s)	□	Situation overview #: _ _	X	Report #: 1	□	Profile #: _ _
	□	Presentation (Preliminary findings) #: _ _	Z	Presentation (Final) #: 1	□	Factsheet #: _ _
	□	Interactive dashboard #:_	□	Webmap #: _ _	□	Map #: _ _
	X	Progress Report #: 3				
Access	□	Public (available on REACH resource centre and other humanitarian platforms)				
	X	Restricted (bilateral dissemination only upon agreed dissemination list, no publication on REACH or other platforms)				
Visibility *Specify which* ***logos*** *should be on outputs*	***REACH Initiative (REACH)***, ***World Health Organization (WHO)***					
	Donor: *N/A*					
	Coordination Framework: *N/A*					
	Partners: *N/A*					

2. Rationale

2.1. Rationale

The conflict in Yemen caused over 3.6 million Yemenis to be displaced since 2015, and lead to 24 million Yemenis in 2020 to be in need of humanitarian assistance.[1] Indeed, these high numbers of people in need of assistance are strongly driven by displacement and the loss of homes and livelihoods. However, humanitarian needs are also related to economic decline faced in the country since the start of the conflict in 2015.[2] The Yemeni Riyal lost significant value as compared to the US Dollar, which in turn lead to a decrease in people's purchasing power and inability to access basic commodities such as food. Indeed, it is estimated that over 20 million people in are in need of assistance for meeting their food-related needs. In addition, the closing of the sea ports and of the oil production stations lead to high fuel prices throughout the country, making access to particularly water and healthcare challenging for many. As of June 2020, it was estimated that nearly 20 million people were in need of healthcare; and nearly 18 million people were in need of assistance for Water, Sanitation, or Hygiene (WASH). For addressing those humanitarian needs, it is important to know which programmes to prioritize, especially in light

[1] OCHA, *Humanitarian Response Plan: Extension 2020*.
[2] ACAPS, *Volatility of the Yemeni Riyal: Drivers and Impact of Yemeni Riyal's Volatility Key Findings, 2020*.

of the recent cuts in funding for humanitarian operations.[3] For doing so, accurate insights in the causes and distribution of mortality, as well as trends in mortality rates, are needed.

However, no recent or accurate mortality data is available in Yemen.[4] In 2016, the World Food Programme (WFP) published findings on mortality including governorate based crude death rates and under-five death rates. Nevertheless, the reliability and validity of these findings are disputed among different research organizations operating in Yemen. Discussions are mostly centred around the low mortality estimates as reported by the WFP. A Demographic Health Survey (DHS) was conducted most recently in 2013.[5] This DHS did not contain any findings on cause-specific or crude mortality rates but merely on child and maternal mortality. The latest census was conducted in 2004, containing outdated and pre-crisis findings.

As such, accurate and up-to-date mortality rates are highly needed for the Yemeni context and the lack of a unified methodology for conducting mortality estimates in Yemen represents a clear evidence gap. REACH was commissioned by the WHO to develop an appropriate methodology for estimating mortality rates and predictors of mortality in Yemen, as REACH has expertise in both conducting research in Yemen as well as in conducting mortality estimates in general. The main objective of this project is to explore the potential development of a viable methodology for estimating mortality rates and factors affecting mortality in Yemen. This objective is composed of four sub-objectives which are listed below:

1. Outline different methodologies for mortality estimation in humanitarian settings;
2. Review of relevant data collection mechanisms in Yemen;
3. Identify one or more methodologies that could be feasible for estimating mortality in Yemen;
4. Consulting with the WHO and other stakeholders to reach consensus on the most viable methodologies to be utilized in Yemen.

3. Methodology

3.1. Methodology overview

Data will be collected and analysed between May and October of 2020. In broad, the project can be divided into four stages leading towards the development of a mortality estimation methodology that would estimate mortality for either a specific area in Yemen or the entire country, depending on what type of methodology is recommended. Each stage is linked to the four sub-objectives of the project. Below a brief description of these **four stages**:

1. **Outlining different methodologies for mortality estimation in humanitarian settings**

    a. A literature review will be conducted that consults different publicly available search engines to identify mortality estimation methodologies, with a focus on methodologies used in humanitarian settings.

2. **Review of relevant data collection mechanisms in Yemen**

    a. A list of secondary data will be compiled listing data that would be needed to inform those methodologies identified, and which make use of secondary data. Based on this list, data collection mechanisms will be identified which would possibly be collecting any of the secondary data listed as relevant for informing any of the mortality estimation methodologies. Relevant stakeholders will be contacted to verify the availability of this secondary data. In addition, where this data will be available, an assessment of the quality of the data will be conducted.

3. **Identifying one or more methodologies that could be feasible for estimating mortality in Yemen**

[3] United Nations, 'Amid Funding Shortfall, Life-Saving Aid Operations for 24 Million People in Yemen Risk Closing within Weeks, Secretary-General Warns at Pledging Conference | Meetings Coverage and Press Releases', 2020.
[4] Daniel Maxwell and others, 'Constraints and Complexities of Information and Analysis in Humanitarian Emergencies: Evidence from Yemen', May, 2018, 1–42.
[5] Minitry of Public Health and Population, *Yemen National Health and Demographic Survey 2013*.

a. For identifying methodologies that would be feasible for implementation in Yemen, an assessment will be made, taking into consideration the context in Yemen, as well as the availability and quality of secondary data for those methodologies that are based on secondary data sources.

4. **Consulting with the WHO and other stakeholders to reach consensus on the most viable methodologies to be utilized in Yemen**

    a. For identifying the methodology that would be most suited for the Yemeni context, and for improving further this methodology to provide accurate, reliable, and valid results, the final report will be shared with relevant stakeholders for their input and feedback. Following this feedback, one methodology will be selected to be implemented in Yemen.

3.2 Population of interest

As this project is a secondary desk review and methodology development, no primary data will be collected from research participants. However, for obtaining secondary data needed for the second stage of this project, key stakeholders will be identified and requested to submit relevant data. Stakeholders might include humanitarian clusters such as the health, nutrition and food security clusters. The aim of the project is to develop a methodology for estimating country-wide mortality, for all population groups, including host communities, refugees, migrants, returnees, and IDPs.

3.3 Secondary data review

Stages one and two of this project (i.e. **1. Outlining different methodologies for morality estimation in humanitarian settings** and **2. Review of relevant data collection mechanisms in Yemen**, as described under the section *Methodology Overview* above) involve the review of secondary data.

The first stage (i.e. **Outlining different methodologies for morality estimation in humanitarian settings**) will review online open-access libraries for identifying methodologies. Libraries will include: Pubmed, ReliefWeb, Google Scholar, and Google. In addition, forward citation chaining and snowballing will be used to identify relevant documents. Searches in PubMed will be conducted openly, as well as with indexed medical subject headings (MeSH) so as to perform as comprehensive a search as possible. Search terms might include, but will not limited to: “mortality”; “child mortality”; “decline, mortality”; “declines, mortality”; “determinant, mortality”; “determinants, mortality”; “disaster”; and “disaster medicine”.

Also the second stage of this project (i.e. **Review of relevant data collection mechanisms in Yemen**) will involve the review of secondary data. A list of secondary data was compiled that would be needed to inform those methodologies identified. Based on this list, data collection mechanisms will be identified, that would possibly be collecting any of the secondary data listed as relevant for informing any of the mortality estimation methodologies.

The list of data collection mechanisms could include:

- Population estimates for Yemen
- Health facility data (Ministry of Health, Line lists)
- SMART survey data
- Food security and livelihoods assessments (e.g. FSLA)
- Disease surveillance data (e.g. eDEWS)
- UN Inter-Agency Group for Child Mortality Estimation data
- MCLA data
- MICS data (if available)
- Nutrition surveillance data
- OTP and ITP information
- Relevant data from sectoral / Cluster assessments

Relevant stakeholders will be contacted to verify the availability of this secondary data. In the cases where data is indeed received from contacted stakeholders, an assessment will be made of the quality of the data received.

3.4 Data Processing & Analysis

Data from the first three stages of this project (i.e. **1. Outlining different methodologies for morality estimation in humanitarian settings**; **2. Review of relevant data collection mechanisms in Yemen;** and .**3. Identifying one or more methodologies that could be feasible for estimating mortality in Yemen**, as described under the section **Methodology Overview** above) will have to be processed and analysed.

Data collected during **the first stage** of this project will consist of methodologies identified during the literature review. Methodologies identified will be extracted and entered into a data analysis matrix in Excel. Then, sources will be fully read, and methodologies will be categorized according to type of methodology. Categorization of methodologies will be an iterative process, meaning that the researcher will go back and forth between the included sources and the excel matrix, improving the categorization of methodologies during data analysis and extraction. Methodologies will be categorized according the amount of primary data collection required. For those methodologies using secondary data, a description will be added to the data-analysis matrix of the secondary data needed. In addition, a description will be added for each of the methodologies listed, indicating what type of mortality estimation the methodology would allow for. Then, identified methodologies will be analysed to determine the quality of data they would produce. This will be done by assessing the type of data that would be produced through the implementation of the methodologies (e.g. representativeness and validity of outcomes).

Data collected as part of **the second stage** of this project will consist of data obtained from humanitarian organizations operating in Yemen. This data would be needed to implement those methodologies that make use of secondary data. Data obtained will be stored for subsequent analysis to assess the quality of the data. Quality will be assessed according to six different dimensions: completeness; uniqueness; timeliness; validity; reliability; and geographical coverage[6].

In the **third stage**, a mapping will be conducted, comparing the methodologies identified through the literature and that make use of secondary data, against the data obtained from humanitarian organizations. This will be done to understand for which methodologies that make use of secondary data, implementation would be feasible. In addition, a feasibility assessment will be conducted, to understand to what extent implementation of each of the methodologies would be feasible given the operational context in Yemen. Based on both assessments, one or more methodologies will be identified that could be feasible for estimating mortality in Yemen.

4. Roles and responsibilities

Table 3: Description of roles and responsibilities

Task Description	*Responsible*	*Accountable*	*Consulted*	*Informed*
Research design	Assessment Officer	Assessment Officer	Research Manager; WHO; IMPACT Research Design and Data Unit	NA
Supervising data collection	Assessment Officer	Assessment Officer	Research Manager; WHO; IMPACT Research Design and Data Unit	NA
Data processing (checking, cleaning)	Assessment Officer	Assessment Officer	Research Manager; IMPACT Research Design and Data Unit	WHO
Data analysis	Assessment Officer	Assessment Officer	Research Manager; IMPACT Research Design and Data Unit	WHO
Output production	Assessment Officer	Research Manager	WHO; IMPACT Reporting Unit	NA
Dissemination	Assessment Officer	Research Manager; WHO	WHO; IMPACT Reporting Unit	NA

[6] World Health Organization, *Framework and Metrics - Data Quality Review*, 2017.

Monitoring & Evaluation	Assessment Officer	Assessment Officer	Research Manager; IMPACT Research Design and Data Unit	Reporting/Comms
Lessons learned	Assessment Officer	Assessment Officer	Research Manager; IMPACT Research Design and Data Unit	Reporting/Comms

Responsible: *the person(s) who executes the task*

Accountable: *the person who validates the completion of the task and is accountable of the final output or milestone*

Consulted: *the person(s) who must be consulted when the task is implemented*

Informed: *the person(s) who need to be informed when the task is completed*

5. Data Analysis Plan

Research questions	SUBQ#	Sub-question	Data collection method
1. What would be a viable methodology for estimating mortality rates in Yemen?	1.1	What are methodologies that measure mortality rates in humanitarian settings?	Literature review
	1.2	What secondary data is needed for carrying out those methodologies as identified through the literature review, and that make use of secondary data?	Literature review
	1.3	What data that would be needed for carrying out those methodologies as identified through the literature review that make use of secondary data, is readily available?	Secondary data review
	1.4	What is the quality of the secondary data that is needed and available?	Secondary data review
	1.5	Based on the secondary data review and the Yemeni context, what methodology/ies would be feasible for estimating mortality in Yemen?	NA

6. Monitoring & Evaluation Plan

IMPACT Objective	External M&E Indicator	Internal M&E Indicator	Focal point	Tool	Will indicator be tracked?
Humanitarian stakeholders are accessing IMPACT products	Number of humanitarian organisations accessing IMPACT services/products Number of individuals accessing IMPACT services/products	# of downloads of x product from Resource Center	Country request to HQ	User_log	X Yes
		# of downloads of x product from Relief Web	Country request to HQ		X Yes
		# of downloads of x product from Country level platforms	Country team		□ Yes
		# of page clicks on x product from REACH global newsletter	Country request to HQ		X Yes
		# of page clicks on x product from country newsletter, sendingBlue, bit.ly	Country team		□ Yes
		# of visits to x webmap/x dashboard	Country request to HQ		□ Yes
IMPACT activities contribute to better program implementation and coordination of the humanitarian response	Number of humanitarian organisations utilizing IMPACT services/products	# references in HPC documents (HNO, SRP, Flash appeals, Cluster/sector strategies)	Country team	Reference_log	NA
		# references in single agency documents			WHO Response Strategy
Humanitarian stakeholders are using IMPACT products	Humanitarian actors use IMPACT evidence/products as a basis for decision making, aid planning and delivery Number of humanitarian documents (HNO, HRP, cluster/agency strategic	Perceived relevance of IMPACT country-programs	Country team	Usage_Feedback *and* Usage_Survey template	Usage survey to be conducted in December 2020, following the release of 1 output targeting at least 1 partner
		Perceived usefulness and influence of IMPACT outputs			
		Recommendations to strengthen IMPACT programs			
		Perceived capacity of IMPACT staff			

	plans, etc.) directly informed by IMPACT products	Perceived quality of outputs/programs			Informal request for feedback from Cluster partner
		Recommendations to strengthen IMPACT programs			
Humanitarian stakeholders are engaged in IMPACT programs throughout the research cycle	Number and/or percentage of humanitarian organizations directly contributing to IMPACT programs *(providing resources, participating to presentations, etc.)*	# of organisations providing resources (i.e. staff, vehicles, meeting space, budget, etc.) for activity implementation	Country team	Engagement _log	x Yes
		# of organisations/clusters inputting in research design and joint analysis			x Yes
		# of organisations/clusters attending briefings on findings;			x Yes