

Key Performance Indicators for response interventions to viral haemorrhagic fever disease epidemics (Marburg and Ebola)

This is a set of suggested key performance indicators (KPIs) for viral haemorrhagic disease response operations (Ebola Virus Disease (EVD) and Marburg Virus Disease (MVD)). This document may be best used when drafting Emergency Plans of Action. KPIs are aimed at supporting a more structured approach to monitoring, quality assurance and evaluation. Indicators should be selected depending on: the pillar that is supported in a given outbreak response; specific-context needs; and available capacity to conduct the corresponding monitoring activities.

Overall (these are not related to RCRC operations, but are the minimum epidemiological indicators to monitor throughout the EVD/MVD operation)

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
Understand the evolution of the epidemic	Number of probable and confirmed EVD/MVD cases	Age and Sex	Numerator: Number of probable and confirmed EVD/MVD Cases	0	Epi info	WHO EVD Performance Indicator ¹
	Number of new health areas affected	NA	Numerator: Number of new health areas affected	0	Epi info	WHO EVD Performance Indicator

¹ Extracted from the 2019 WHO Strategic Plan for DRC EVD outbreak in 2018-19: https://www.who.int/docs/default-source/documents/drc-srp4-9august2019.pdf?sfvrsn=679e4d26_2

Safe and Dignified Burials (SDB)

When analysing the KPI, refer to the SDB [Information Management Handbook](#) and in particular to the Analysis folder (analysis of alerts and activities, failures and resistance, and capacity planning).

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
<p>This indicator is to monitor the success rate for SDBs conducted. Separately, it is important to track the reasons for which SDBs are not conducted, to implement corrective actions. NB. When determining the indicator calculation, it is important to take into account what is the directive from the government in terms of which deaths receive an SDB (e.g. can be systematically all deaths; or can be suspect cases who then get a positive test (PCR or RDT) only. In this scenario, the numerator should include the number of deaths that tested negative and were released to the family for a traditional burial.</p>	<p>% of deceased for which safe burials were successfully carried out</p>	<p>Sex, ethnic group, and pregnancy status</p>	<p>Numerator: Number of cases who died and were safely buried within a given time period.</p> <p>Denominator: Number of suspect and probable cases who died within the same time period.</p>	100%	<p>Safe burials logs, epi info</p>	<p>WHO EVD Performance Indicator</p>
			<p>Depending on SDB strategy</p> <p><i>For “systematic” SDB:²</i></p> <p>Numerator: Number of successful SDBs within a given time period</p> <p>Denominator: Number of deaths expected in the population within the same time period.</p>	80%		
<p>The speed of response is key in SDB operations, as failure to respond on time may result in the family burying the body in an unsafe manner. This indicator is to measure the timeliness to ensure safe burials.</p>	<p>% of deceased suspect and confirmed cases that are buried within 24</p>	<p>NA</p>	<p>Numerator: Number of deceased safely buried within 24 hours of alert.</p> <p>Denominator: Total number of SDB alerts within 24 hours.</p>	100%	<p>Safe burials logs, epi info</p>	

² “Systematic” SDB is when all deceased people, regardless of their cause of death, are buried using SDB. This is in contrast to risk-based SDB, in which only those who have died with symptoms or other indicators of EVD (e.g. being listed as a contact) are given an SDB. MoH is responsible for establishing the criteria to indicate SDB.

	hours of the initial alert					
An algorithm for death (and live suspect cases) alerts is established by health authorities during an outbreak, and the RC is expected to ensure clear communication lines for SDB teams to receive alerts in real time and respond promptly. This indicator measures the effectiveness of communication of those alerts with the RC. If SDB teams are not responding, it is useful to measure whether the reason is internal (e.g. a failure to mobilize teams promptly); or external, such as alerts not shared with the RC. Separately, it is important to track the reasons for which alerts are not shared to address any blockages. E.g. it may be due to unclear communication channels; or it may be because bodies were already buried when surveillance teams identified and alerted the death (and therefore decided not to inform the RC)	% of deaths alerts shared with the RC in a timely manner	NA	<p>Numerator: Number of death alerts shared with the RC within a given time period</p> <p>Denominator: Number of death alerts within the same time period</p>	100%	Safe burials logs, epi info	
In some contexts, there may be resistance not only to SDBs, but also to testing prior to conducting an SDB. This indicator is to monitor the success rate of the swabbing/testing part of the SDB process.	% of swabs successfully done for deaths reported to the RC	NA	<p>Numerator: Number of swabs conducted by the RC</p> <p>Denominator: Number of death alerts received by the RC</p>	100%	Safe burials logs, epi info	
IN THE SCENARIO THAT ONLY POSITIVE PCR-TESTED DEATHS GET AN SDB (i.e. if indicated by health authorities): Getting back PCR results may take some time based on factors such as: distance to the laboratory; capacity of the laboratory to process samples in a day; speed of communication from the lab to the RC, among others. This indicator is to monitor a quality element of the SDB process, by making sure that the RC communicates	% of EVD/MVD test/ lab results shared with the family of the deceased (PCR test)	NA	<p>Numerator: Number of swab results (conducted by the RC) received from the lab, communicated to the families of the deceased</p> <p>Denominator: Number of swabs conducted by the RC</p>	100%	Safe burials logs, epi info	

results to the family to conduct an SDB when positive, or to allow the family to conduct traditional burial when negative. NB. This indicator assumes that there are no Rapid Diagnostic Tests available.						
This is to measure the output of the SDB pillar in terms of training of volunteers working on SDB	# of volunteers trained on SDB	Sex, Age and ethnicity and religion ³	Numerator: Number of volunteers trained	Based on context	Volunteers' training attendance sheets	
This is to measure the coverage of SDB activities. The analysis and interpretation of this indicator is context-based. For instance, few teams per health zone at risk may be sufficient to cover all needs in a large area with relatively easy access (in terms of distances and geographical considerations); however, several teams may be necessary in a small area where there is much resistance to external interventions and setting up several local teams may be necessary.	% of health zones 'at high risk' that are covered by RC SDB teams	NA	Numerator: Number of health zones determined at 'high risk' within a given time period with trained and active SDB teams	Based on context	Epi info; volunteers' training attendance sheets (per location)	
This is to measure coverage just as the indicator above, but in terms of preparedness in medium risk areas	% of health zones 'at medium risk' that are covered by RC SDB teams	NA	Numerator: Number of health zones determined at medium risk' within a given time period with trained SDB teams ready to be activated	Based on context	Epi info; volunteers' training attendance sheets (per location)	
RC volunteers who do SDBs are frontline workers who should be vaccinated. It is important to advocate for this from the outset of the outbreak with health authorities, and this indicator measures an important element of safety for the volunteers.	Proportion of RC volunteers working on SDB who are vaccinated	Sex and Age	Numerator: Number of volunteers working in SDB teams vaccinated within a given time period. Denominator: Number of volunteers in SDB teams within the same time period.	100%	Volunteer records (or vaccination logs, if available)	WHO EVD Performance Indicator

³ If working in communities with significant differences in cultural practices between ethnic groups or different common religions

Community-based health activities (e.g. CBHFA, ECV, RCCE)

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
This is to record that an IEC/BCC strategy was developed	IEC/BCC strategy developed		IEC/BCC strategy	1	IEC/BCC strategy	
This is to measure the coverage of community health activities among communities affected by EVD/MVD	# people reached with health/hygiene promotion/RCCE	Sex			Volunteer activity reports	
This is to measure the coverage of community health activities among communities affected by EVD/MVD	% of targeted community reached with health messages		Numerator: Number of individual persons in the target population reached with health messages Denominator: Total number of persons in the target population		Volunteer activity reports	
To measure number of volunteers trained	# of volunteers trained in and providing health/hygiene promotion in their communities	Sex			Training reports	
To measure retention of messages	% of target population who can recall 3 or more protective measures	Sex, age	Numerator: Number of persons in the target population who correctly identify 3 or more protective measures at the time of the survey. Denominator: Total number of persons in the target population at the time the survey was conducted.	80%	EVD/MVD KAP survey	OFDA PHE Indicator
To measure activities organised	# of community EVD/MVD awareness raising sessions held	Awareness raising modality	Numerator: Number of community EVD/MVD awareness raising sessions within a given time period, inclusive of varied awareness raising platforms (mass community outreach, focus	TBD	Project reports	

			group discussions, radio broadcasts, door-to-door campaigns)			
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Community Engagement and Accountability (CEA)

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
To measure feedback and suggestions	% of community suggestions and feedback addressed or otherwise acted upon	NA	<p>Numerator: Number of instances where suggestions or feedback were actioned (positively or negatively), with communication back to the community, including: adaptations to service delivery, referral of feedback to appropriate agency, explanation of IFRC action / lack of action, etc.</p> <p>Denominator: Total number of community suggestions or feedback received through community engagement and feedback mechanisms.</p>	80%	Community engagement activity reports, feedback mechanism databases	

Community-based surveillance (CBS)

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
This is to record that a CBS assessment was completed	CBS Assessment completed			1	Assessment report	
This is to record that a CBS Protocol/SOP was developed	CBS Protocol/SOP developed			1	CBS Protocol/SOP	

To measure number of volunteers trained	# of volunteers trained in CBS	Sex			Training reports	
To measure coverage of the CBS system	% of communities with coverage of active CBS Volunteers (1 Vol: <50HHs)		Numerator: Number of communities with a CBS volunteer Denominator: Total number of communities cover by the intervention		Volunteer register	
To monitor volunteer understanding of CCDs	% of CBS 'true' alerts (match CCD)	Alert type (disease)	Numerator: Number alerts submitted that are confirmed to match the CCD by supervisors Denominator: Total number of alerts submitted		CBS database	
To measure effectiveness of the CBS system with regards to the overall outbreak	% of outbreak cases detected via CBS system (dependent on active outbreak event)		Numerator: Number confirmed cases identified via CBS system Denominator: Total number of confirmed cases		IDSR records; CBS database	
To monitor the timeliness of the CBS alert system	% of CBS alerts acted upon by authorities within 48 hours		Numerator: Number alerts investigated by MoH within 48 hours of detection Denominator: Total number of alerts		IDSR records; CBS database	
To monitor program reporting	% pf CBS volunteers who are active ('zero' reporting, monthly average)	Health area	Numerator: Number volunteers who submitted a weekly 'zero' report Denominator: Total number of CBS volunteers		CBS database; volunteer register	

Indicators for Community Based Surveillance (in or outside an EVD/MVD operation) are in a separate document, [here](#).

Contact tracing (as a part of ongoing surveillance activities)

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
In a response there may be various actors involved in contact tracing, and it is useful to evaluate the role of the RC individually, and therefore better understand its impact on the overall response	Performance of RC vs performance of other actors doing contact tracing	NA	Numerator: Number of contacts followed by RC volunteers per day Denominator: Number of contacts assigned to RC for follow-up per day	100%	Contact tracing line lists, contact tracing report logs	
This is to measure the success rate of contact tracing activities	# and % of contacts (of confirmed + probable cases) for whom contact tracing has been completed (21 days)	Age and Sex	Numerator: Number of contacts completed 21 days of contact tracing within a given time period. Denominator: Total number of contacts within the same time period.	100%	Contact tracing line lists, contact tracing report logs	WHO EVD Performance Indicator
This is to measure the timeliness of contact tracing activities	% of line listed contacts successfully followed up during previous 24 hours	Age and Sex	Numerator: Number of contacts followed up in the last 24 hours. Denominator: Total number of contacts within the last 24 hours.	100%	Contact tracing line lists, contact tracing report logs	WHO EVD Performance Indicator
This is to measure the effectiveness of contact tracing activities	% of contacts lost to follow up	Age and Sex	Numerator: Number of contacts who do not complete 21 days of contact tracing follow-up within a time period. Denominator: Number of contacts completing 21 days of follow-up within the same time period.	0%	Contact tracing line lists, contact tracing report logs	WHO EVD Performance Indicator

Point of entry (PoE) and point of control (PoC) screening

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
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Screening (based on symptoms and/or temperature) at points of entry (e.g. international borders) and points of control (e.g. road stops between towns)	# of PoE/PoC screening sites supported by RC		Numerator: Number of contacts followed by RC volunteers per day Denominator: Number of contacts assigned to RC for follow-up per day	100%	Contact tracing line lists, contact tracing report logs	
	# of people screened at PoE / PoC	Location		NA		
	# of suspect cases detected, isolated and referred for testing, treatment or burial	Location		NA		

Decontamination (WASH)

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
This is to ensure that the risk of fomite transmission in homes and health facilities is eliminated	# of homes, health facilities or other locations where a confirmed or presumed case had spent time decontaminated by trained RC teams	Type (home, health facility, public space, other), and location		NA		

<p>This is to ensure the decontamination response is timely</p>	<p>% of decontamination alerts that were successfully completed by RC teams within the same calendar day</p>	<p>Type (home, health facility, public space, other), and location</p>	<p>Numerator: Number of same-day decontaminations carried out by RC teams Denominator: Number of decontamination alerts received</p>	<p>100%</p>	<p>Decontamination completion database, decontamination alerts database</p>	
<p>This is to ensure at-risk areas have a team that can respond appropriately and quickly</p>	<p>% of high-risk health areas with a trained and equipped decontamination team</p>	<p>NA</p>	<p>Numerator: # of high-risk health areas with a trained and equipped decontamination team Denominator: # of high-risk health areas identified in the epidemic response plan</p>	<p>100%</p>		

Mental Health and Psychosocial Support (MHPSS)

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
This is to measure the coverage of MHPSS activities among affected families	% of families of individuals confirmed or suspected of having been affected by EVD/MVD receiving mental health and psychosocial support (may include a 'support kit')	Age, Sex and Disability	<p>Numerator: Number of families of individuals confirmed or suspected of having been affected by EVD/MVD receiving MHPSS within a specific time period.</p> <p>Denominator: Number of families of individuals confirmed or suspected of having been affected by EVD /MVD within the same specified time period.</p>	100%	MHPSS activity reports	
This is to measure the coverage of MHPSS activities among communities affected by EVD/MVD	% of individuals of communities affected by EVD/MVD receiving basic mental health and psychosocial support (including awareness raising and psychological first aid)	Age, Sex and Disability	<p>Numerator: Number of individuals engaged on basic mental health and psychosocial support activities.</p> <p>Denominator: Number of individuals in affected communities.</p>	TBD	MHPSS activity reports	
This is to measure the MHPSS intervention outputs. When selecting this indicator, it is important to specify which topics the training will cover, and ensure that they match the MHPSS intervention strategy for the response	# of staff and volunteers trained in quality, targeted MHPSS skills and interventions	Age, Sex and Disability	<p>Numerator: Number of staff and volunteers trained in quality, targeted MHPSS skills and interventions</p>	TBD	Volunteer and staff training attendance records	IFRC PS Centre Indicator Guide for MHPSS Programmes

<p>This is to measure the MHPSS intervention outputs. When selecting this indicator, it is important to delineate what the MHPSS services will concretely entail</p>	<p># of men, women, girls and boys who receive focused psychosocial and psychological care</p>	<p>Age, Sex and Disability</p>	<p>Numerator: Number of individuals affected by EVD/MVD, who receive focused psychological and psychosocial care, which includes: psychological first aid, linking people with psychological problems or resources and services, case management, psychological counselling, psychotherapy or other psychological interventions)</p>	<p>TBD</p>	<p>MHPSS activity reports</p>	<p>IASC RG Common M&E Framework for MHPSS Programmes in Emergency Settings</p>
<p>This is to measure clear efforts to enhance staff and volunteer care (Help the Helpers)</p>	<p># of peer support initiatives</p>	<p>Age, Sex and Disability</p>	<p>Numerator: Number of peer support initiatives, which include: self-care briefings, team well-being meetings, social media groups, shift rotations, team telephone support lines and buddy systems)</p>	<p>TBD</p>	<p>MHPSS Activity reports HR and Volunteer management department reports</p>	<p>Belgian Red Cross-Flanders; IFRC PS Centre M&E for MHPSS in COVID-19.</p>
<p>This is to measure the level of support received, as perceived by staff and volunteers</p>	<p>% of staff and volunteers who feel supported to do their work.</p>	<p>Age, Sex and Disability</p>	<p>Numerator: Number of staff and volunteers who answer “Yes” to the following 3 survey questions:</p> <ol style="list-style-type: none"> During the last two weeks, how often did you feel upset about the emergency that you tried to avoid places, people, conversations or activities that reminded you of it (response scale: all of the time, most of the time, some of the time, a little of the time, none of the time) During the last two weeks, how often were you unable to carry out essential activities for daily living because of these feelings? (response scale: all of the time, most of the time, 	<p>100%</p>	<p>Survey</p>	<p>Belgian Red Cross-Flanders; IFRC PS Centre M&E Toolbox for COVID-19 pandemic; WHO; UNHCR</p>

			<p>some of the time, a little of the time, none of the time).</p> <p>3. During the past two weeks have you considered stopping being a Red Cross Red Crescent volunteer (response options: Yes/ No)</p> <p>Denominator: Total number of staff and volunteers working in the EVD/MVD response who answered to the survey</p>			
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Patient transfer (in NS with ambulance capacity)

Rationale	Indicator	Disaggregated by	Indicator Calculation/Data Elements	Target	Source of information	Reference
This is to measure the scale and geographic scope of patient transfer services	# of safe patient transfer teams trained and equipped (including transportation)	Location		NA		
This is to measure the performance of the patient transfer programming	# and % of patient transfer requests successfully completed	Location	<p>Numerator: # of patient transfers completed</p> <p>Denominator: # of patient transfer alerts / requests received</p>	100%		

Infection Prevention and Control (support services for the continuation of routine health services in health structures, excluding any clinical care)

Rationale	Indicator	Disaggregated by	Indicator Calculation/ Data Elements	Target	Source of information	Reference
Volunteer activities (screening and patient education)						
This is to ensure that visitors and patients are aware of cough etiquette and hand hygiene	# of awareness raising session held at waiting area of the health facility	Age and sex	Numerator: Number of awareness raising sessions within a given time period	Based on context	Project reports	International Society of Chemotherapy (ISC) Infection Control Working Group ⁴
Volunteers may be able to provide some initial screening support to the health facility. This should be in line with triaging protocols established by the health structure and from which the RC should define volunteers' roles and limits thereof. Specifically, volunteers can watch the flow of people in line with the triage protocols	# of volunteers available per given shift, to ensure that patients follow the established patient flow from entrance to the triaging area	NA	Numerator: Number of volunteers	At least 1 at every shift	Health structure records	JHPIEGO ⁵
To monitor safety of activities, all volunteers working at the health structure must be made aware of procedures to be followed if exposure occurs by accident	% of volunteers appropriately briefed on procedures to be followed in case of accidental exposure	NA	Numerator: Number of volunteers who are briefed, working at the health structure Denominator: Number of volunteers working at the health structure	100%	Health facility records	WHO EVD Manual ⁶

⁴ <https://aricjournal.biomedcentral.com/articles/10.1186/s13756-015-0061-8>

⁵ https://resources.jhpiego.org/system/files/resources/Ebola_Reference%20Manual_2015.pdf

⁶ https://apps.who.int/iris/bitstream/handle/10665/149781/WHO_EVD_Manual_ECU_15.1_eng.pdf

	# of patients and visitors pre-screened for fever prior to entering health facility	NA		Based on context		
	# of people referred to EVD testing or treatment by pre-screening volunteers	NA		Based on context		
	# positive cases detected	NA		NA		
WASH in health facilities						
This is to ensure that health professionals, cleaning staff, and others in the health facility have access to water and waste management.	# of health facilities supported with installations of WASH facilities (including latrines, water points, medical incinerators, and placenta pits)	Health facility type		Based on context		
	% of supported health facilities having all WASH components of IPC intervention (water points, latrines, medical waste disposal)	Health facility type	Numerator: Number of supported health facilities with ALL OF: water points, latrines, medical waste management facility Denominator: Number of health facilities supported by the RC	100%		
Clinical education and clinical performance						
RC clinical educators carry out training for healthcare workers, support staff, and cleaners in health facilities on IPC	# health facility staff having received clinical IPC training from RC	Professional role, age	Numerator:	Based on context	Training records	
	% of health facilities achieving at least an 80% score on the WHO or MOH-issued IPC scorecard	Health facility type	Numerator: Number of supported health facilities whose score on the IPC scorecard is equal to or greater than 80%	100%	IPC scorecard	



			Denominator: Number of health facilities supported by the RC			
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Last updated on: February 2022