

COUNTRY IMPLEMENTATION GUIDANCE

AFTER ACTION REVIEWS AND SIMULATION EXERCISES

UNDER THE INTERNATIONAL HEALTH REGULATIONS 2005
MONITORING & EVALUATION FRAMEWORK (IHR MEF)



World Health
Organization

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Cover photo. WHO / Eugene Kabambi (2018)- Simulation at the Kinkole preparation center, south-east of Kinshasa. Dedicated to Ebola by the Ministry of Health - WHO.

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List of abbreviations and acronyms

AAR	AFTER ACTION REVIEW
DR	DRILL
FSX	FIELD/FULL-SCALE EXERCISE
FX	FUNCTIONAL EXERCISE
IHR	INTERNATIONAL HEALTH REGULATIONS
IHR MEF	INTERNATIONAL HEALTH REGULATIONS MONITORING & EVALUATION FRAMEWORK
JEE	JOINT EXTERNAL EVALUATION
NAPHS	NATIONAL ACTION PLAN FOR HEALTH SECURITY
PHE	PUBLIC HEALTH EVENT
PHEIC	PUBLIC HEALTH EVENT OF INTERNATIONAL CONCERN
PHEOC	PUBLIC HEALTH EMERGENCY OPERATIONS CENTRE
POE	POINT OF ENTRY
SIMEX	SIMULATION EXERCISE
SPAR	STATE PARTIES ANNUAL REPORTING
SPH	STRATEGIC PARTNERSHIP FOR INTERNATIONAL HEALTH REGULATIONS AND HEALTH SECURITY
TTX	TABLETOP EXERCISE
WHO	WORLD HEALTH ORGANIZATION

1. INTRODUCTION

1.1 CONTEXT

The revised International Health Regulations (IHR) were adopted in 2005, and entered into force in 2007. Under the IHR, States Parties are obliged to develop and maintain minimum core capacities for surveillance and response, in order to detect, assess, notify, and respond to any potential public health event of international concern. In accordance with paragraph 1 of Article 54 of the IHR, countries must report on IHR implementation to the World Health Assembly and the WHO Executive Board.

At the sixty-eighth World Health Assembly in 2015, the IHR Review Committee on Second Extensions for Establishing National Public Health Capacities and on IHR (2005) Implementation¹ recommended that States Parties should:

“...move from exclusive self-evaluation to approaches that combine self-evaluation, peer review and voluntary external evaluations involving a combination of domestic and independent experts.”

In addition, the committee recommended that States Parties should urgently implement in-depth reviews of significant disease outbreaks and public health events.

These approaches should promote a more science- or evidence-based approach to assessing effective core capacities in “real-life” situations.

To address these recommendations the WHO secretariat proposed three additional and voluntary instruments as part of the IHR Monitoring and Evaluation Framework (IHR MEF), complementing the already-existing and mandatory State Parties Annual Reporting (SPAR). These instruments are voluntary external evaluations such as the Joint External Evaluation (JEE); after action reviews (AAR) and simulation exercises (SimEx). All three are included in a five-year draft global strategic plan to improve public health preparedness and response, which was welcomed with appreciation by the seventy-first World Health Assembly² in 2018.

1.2 PURPOSE OF THE GUIDE

This document provides strategic guidance to countries implementing AAR/SimEx under the IHR MEF, along with relevant information on the planning, executing and reporting criteria for both instruments.

This guidance should be used in conjunction with the other published AAR/SimEx guidance and tools that can be found on the WHO website³. Together, these documents help countries to:

- Determine if a planned AAR/SimEx should be considered for IHR monitoring and evaluation activities
- Plan and conduct an AAR and/or SimEx
- Provide guidance on how strengths, gaps and recommendations can be systematically captured and linked to other components of the IHR MEF
- Identify priority actions in order to address identified gaps and build on strengths.

The country implementation guide outlines the elements that help determine whether an AAR or SimEx should be considered as a part of IHR (2005) voluntary monitoring and evaluation and reporting. This is useful because many Member States conduct AAR and exercises as part of their continuous learning and emergency risk management programmes, regardless of whether they are doing so as part of the IHR MEF or not.

1.3 IHR MONITORING AND EVALUATION FRAMEWORK (IHR MEF)

The IHR MEF is made up of the SPAR; the voluntary external evaluation; the AAR; and SimEx. The evaluation findings of one or all components, considered alongside the results of other assessments (such as risk profiling), can serve as a basis for countries to develop and implement national action plans for health security (NAPHS).

1 - http://www.who.int/ihr/B136_22Add1-en_IHR_RC_Second_extensions.pdf?ua=1

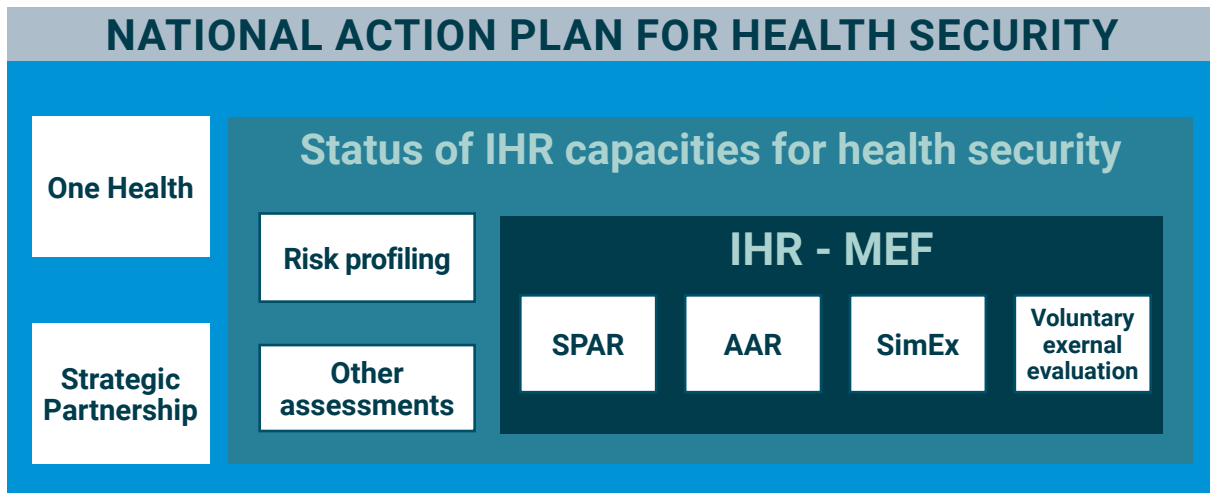
2 - http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_ACONF7-en.pdf

3 - <http://www.who.int/ihr/procedures/implementation/en/>

These plans ensure collaboration between multiple sectors, using a One Health approach and strong strategic partnerships, and translate the recommendations of the evaluation findings

into action. These actions strengthen the capacities of Member States and ensure they are operationally ready for public health risks and events.

Figure 1: IHR MEF components and their relationship to planning, strategic partnerships for resilient health systems



The combined voluntary instruments—voluntary external evaluations, AAR and SimEx—complement the mandatory SPAR, helping provide a more comprehensive picture of Member State capacity. Taken together, the results of the four instruments more accurately reflect the status of a country’s capacity to prevent, detect and respond to public health emergencies. The reports of SPAR and the voluntary external evaluations assess national capacities through specific indicators; AARs and simulation exercises assess the functionality of those capacities in response to real-life or simulated events—looking not only at the functionality of individual capacities, but also at how well they can work together.

Under the IHR (2005), transparency in sharing this data—including AAR/SimEx data—can reassure other countries’ stakeholders, citizens and the global public health community that Member State commitments to the IHR (2005) are strong, and that measures are being taken to address identified gaps. The combined results of the monitoring and evaluation instruments should be integrated into the relevant national action plans and/or health sector strategies, including the NAPHS.

1.4 AAR/SimEx

After action reviews and simulation exercises are voluntary instruments that help countries assess their operational capability for public health preparedness and response. They provide functional assessments, and play a key role in identifying strengths and gaps in the status and implementation of IHR capacities. They can be used to review, validate or “stress test” the capacities found/reported by other IHR MEF instruments—for example, by looking at how effective a programme or system is versus the extent to which relevant policies are in place.

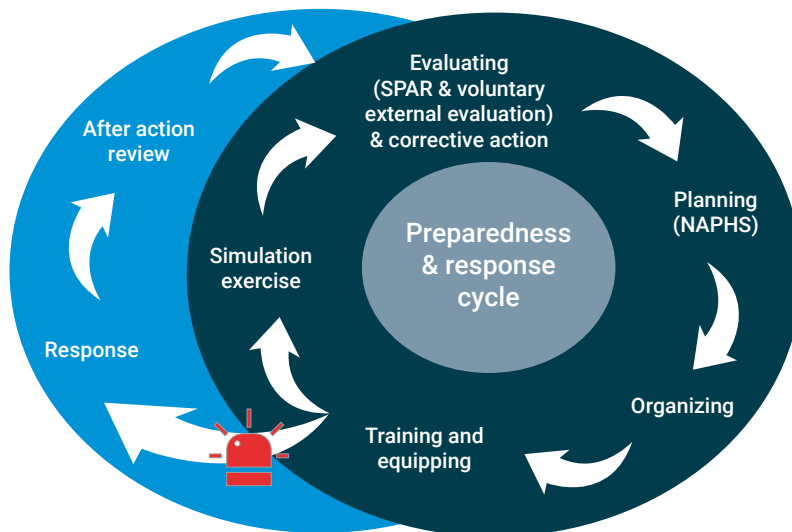
Used by many organizations and across sectors, AARs and simulation exercises are important learning tools and effective methods for informing stakeholders and identifying best practices, challenges and key lessons that can help improve response capability. Both tools can help identify the root causes of preparedness gaps that, if addressed, can improve future responses to health emergencies. In addition, both AARs and simulation exercises contribute to the implementation of the Sendai Framework for Disaster Risk Reduction, a framework that recognizes the importance of implementing the IHR (2005) and building resilient

Despite their many similarities, it is important to acknowledge that AARs differ considerably from simulation exercises. An AAR is an in-depth review of the response actions taken during an actual public health event, done subsequently in order to identify gaps, lessons and best practices. An AAR offers a structured approach for individuals and organizations involved in preparedness and response to the event to reflect on their experiences and their perceptions of the response. It helps to identify, in a systematic, collective fashion, what worked and what did not, and why and how to improve.

A SimEx is a form of practice, training, monitoring or evaluation of capabilities, and involves the description or simulation of an emergency to which a described or simulated response is made. Simulation exercises can provide evidence-based assessments of functional capacity to respond to emergencies and strengthen preparedness and response.

The respective roles of AARs and simulation exercises are illustrated in the figure below, which shows the individual IHR monitoring and evaluation instruments in the context of the emergency preparedness and response cycle.

Figure 2: AAR/SimEx in the emergency preparedness and response cycle



2. INITIATING AN AAR AND/OR SIMEX

The initiation process for an AAR or SimEx usually commences with the identification of need or interest. This is followed by a request from the Member State, the relevant WHO regional or country office, or a partner agency. Using the guidance and criteria set out in this

document, after action reviews and simulation exercises should be advocated for on the basis that they strengthen IHR compliance.

The steps of the AAR/SimEx process are outlined in Figure 3.

Figure 3: Process of the voluntary IHR AAR/SimEx instruments



3. CRITERIA FOR INCLUSION OF A COUNTRY AAR OR SIMEX IN THE IHR MEF

In order for an AAR or SimEx to be considered as part of the IHR (2005) monitoring and evaluation process, a minimum set of information must be shared with WHO (for the minimum reporting template, see Annex 2). This information is made publicly available in order to enhance trust, mutual accountability and transparency between Member States, WHO and partners.

Reporting on 13 core capacity areas, as defined under the SPAR, is the basis for including the report in the framework. Additional capacities as defined under voluntary external evaluations such as the joint external evaluation (JEE) tool, and/or any other technical areas that allow prevention, detection and response to public health emergencies, can also be included.

Table 1: Thirteen core capacities⁴

1.	Legislation and financing	8.	National health emergency framework
2.	IHR coordination and national IHR focal point functions	9.	Health service provision
3.	Zoonotic events and the human-animal interface	10.	Risk communication
4.	Food safety	11.	Points of entry (POE)
5.	Laboratory	12.	Chemical events
6.	Surveillance	13.	Radiation emergencies
7.	Human resources		

3.1. After action reviews (AAR)

AARs should be considered following any response to an event with public health significance. The ideal timing for an AAR is within three months of the end of the event and/or the response, when response stakeholders are still present and have clear memories of what happened. In order for an AAR to be considered as part of the IHR voluntary monitoring and evaluation, one or more of the following inclusion criteria should be met:

- At least one of the 13 core capacities is reviewed, validated or tested (see Table 1).
- The event was declared a public health event of international concern (PHEIC), or was notified to WHO under the IHR (2005) decision instrument Annex 2, or was a graded emergency under the WHO Emergency Response Framework (level 2 or 3).
- The public health emergency operations centre (PHEOC) was activated following the occurrence of a public health event, or due to an increased risk of occurrence.
- The event involved coordination and collaboration with sectors that do not routinely collaborate (as is the case in, for example, chemical or radiological events, food safety events and natural disasters).
- The AAR was recommended by WHO following an event that constituted an opportunity for learning and performance improvement.

3.2 Simulation exercises (SimEx)

Member States have varying capacities and capabilities for emergency preparedness, planning and response, and are at different stages of preparedness for public health emergencies. Exercises are useful tools for identifying and assessing levels of preparedness, and may be used at each stage of emergency preparedness development to test the practicality, adequacy, sufficiency and efficiency of proposed plans and procedures.

A SimEx can be planned when there is a need to assess particular capacities and capabilities, as might be identified in a recent voluntary external evaluation using the JEE tool or other evaluations, AAR or SPAR. In order for a SimEx to be considered as part of the IHR voluntary monitoring and evaluation, one or more of the following inclusion criteria should be met:

- At least one of the 13 capacities is reviewed, validated or tested (see Table 1).
- The simulated event (scenario) could be notified as an event that might constitute a PHEIC under the IHR decision instrument Annex 2.
- The scope of the SimEx includes multiple sectors and/or countries.
- Conducting the SimEx was recommended by one of the other IHR MEF instruments (SPAR, voluntary external evaluations or AAR).

4 - For consistency reasons, the 13 capacities are the same as those in the State Party self assessment annual reporting tool.

4. PROCESS, TOOLS AND RESOURCES AVAILABLE

Provided that an AAR and/or SimEx is of adequate quality, its results should be considered under the IHR MEF even if the review or exercise was not undertaken specifically for this purpose. In order to ensure consistency of results, the collection and sharing of key findings must be standardized through the use of a minimum reporting template (see Annex 2).

The WHO secretariat has developed corresponding technical tools and will continue to revise and adapt them in the light of experience. As well as WHO tools, a significant amount of technical tools and material is available from other sources, particularly in relation to SimEx.

It is recognised that different Member States use different processes, tools and resources when undertaking AARs or simulation exercises as part of ongoing preparedness and learning.

As these activities need to be planned and implemented according to local context and country background, countries can use any AAR/SimEx process, tool or resource available; but for the purposes of quality assurance, consistency and standardization, WHO recommends using the WHO SimEx/AAR manual and toolkit published on the WHO website. These can be found via this link: <http://www.who.int/ihr/procedures/implementation/en/>

Annex 1 outlines some of the other toolkits that are available elsewhere.

Recognizing that Member States have differing levels of experience in planning, conducting and evaluating AARs and simulation exercises, WHO and partners can also provide technical experts (facilitators, evaluators, etc.) if required. In such cases, a request for support is submitted to WHO through the relevant WHO regional office.

5. RECOMMENDATIONS FOLLOWING AN AAR/SIMEX, AND REPORTING

5.1 RECOMMENDATIONS

The primary purpose of any AAR or SimEx is to identify strengths, best practices, gaps and lessons, so that procedures for improvement can then be implemented. These outcomes must be captured and reviewed in a structured, timely manner in order to ensure that all those affected can benefit, and that improvements are made.

Since effective public health emergency responses require a “whole of society” approach⁵, representatives of all the key organizations involved in the SimEx or the actual event should participate in analysing the results.

Outcomes and key findings should be recorded and written down, capturing the main recommendations. As with the voluntary external evaluation and similar assessments, recommendations from AARs and simulation exercises should lead to implemented activities, incorporated into appropriate planning cycles (such as the NAPHS). Recommendations therefore need to be specific, feasible, time bound, measurable and adequately translated into an action plan. An example of an action plan following an AAR/SimEx can be found in Annex 3.

AAR/SimEx recommendations can be split into three general categories:

1. Priority recommendations (urgent fixes)
2. Quick wins (low complexity recommendations)
3. Longer-term recommendations (strategic and more complex process changes).

Priority recommendations for imminent risks refer to those critical capacity gaps that hamper response. These recommendations take top priority for implementation and imply an urgent need to advocate for resources.

Quick wins are those operational solutions that are easy and quick to implement without identifying additional resources or political commitment. The country can implement these recommendations directly after the AAR or SimEx, ideally within one month of the activity.

Longer term recommendations address those underlying root causes identified in the AAR or SimEx that may not be included in the priority recommendations. They typically require additio-

nal resources or political commitment to implement, and are therefore more strategic in nature. As these longer-term recommendations require more time to be implemented, it is necessary to integrate them within the relevant national plans/health sector strategies, including NAPHS. In this way recommendations can be actively resourced, followed up and—where applicable—integrated into national priorities.

In order to capture the key findings and recommendations, it is critical to have rapporteurs in place during AARs and simulation exercises who are in charge of taking a comprehensive record of proceedings, using standard report templates that can be found online in the WHO AAR/SimEx toolbox⁶. Once the report of the review or exercise is completed, it should be shared with all relevant stakeholders for input before it is put forward for endorsement by the national target group (for example, the ministry of health).

AARs and simulation exercises should be oriented towards identifying and addressing systematic problems rather than placing blame. This approach requires a country’s political leadership to support this goal, and not to attempt to use AARs or simulation exercises for accountability purposes. Experience from other sectors, has shown that focusing the analysis on systems rather than individuals’ performances helps reinforce the learning and performance improvement culture.

5.2 MINIMUM REPORTING BY MEMBER STATES

Data is the basis for all sound public health actions. The benefits of data-sharing—including the scientific and public health benefits—are widely recognized. Whenever possible, therefore, WHO promotes the sharing of IHR MEF data, in order to enhance transparency, trust and mutual accountability.

In the past, some Member States have sometimes shown reluctance to openly share results of AARs and SimEx for various reasons. All Member States can learn from one another, because the fundamentals of emergency management are usually consistent.

5 - http://www.who.int/influenza/preparedness/pandemic/influenza_risk_management/en/

6 - <http://www.who.int/ihr/publications/exercise-toolbox/en/>

As voluntary instruments of the IHR MEF the sharing of AAR/SimEx reports is not mandatory but incentives for sharing should, therefore, be underlined.

These incentives can include: showing improvement and progress in key areas; highlighting areas where further support is required; and attracting funding and support from donors and partners.

Recognizing the importance of sharing results—while understanding that sensitivities may exist—a standardized reporting template for sharing the minimum set of information is provided in Annex 2 of this document. This standardized reporting template includes explicit linkages to existing IHR MEF instruments, and emphasizes voluntary evaluation of functional capacity, as demonstrated by real or simulated events.

In order for an AAR or SimEx to be considered part of the IHR (2005) monitoring and evaluation process, Member States are required to report on the minimum set of information within four weeks of the activity (as per the minimum reporting template). This information is then published on an online platform of the Strategic Partnership for International Health Regulations and Health Security (SPH) website portal⁷.

As presented in Annex 2, the minimum reporting for AAR/SimEx should include the following information:

- Country name
- Date of AAR/exercise
- Activity type: AAR, tabletop exercise (TTX), drill (DR), functional exercise (FX) or field/full-scale exercise (FSX)
- Purpose
- Public health event (PHE) under review/ scenario used
- Whether the report should be made publicly available on the WHO SPH website (yes/no)
- The list of IHR core capacities reviewed/ exercised
- Specific AAR/SimEx objectives (related to IHR capacities)
- Objective-based evaluation rating* (see below and Table 2)
- Key recommendations.

In addition, the following key timeline indicators should also be reported for an AAR:

- Date of outbreak/event start
- Date of outbreak/event detection
- Date of outbreak/event notification
- Date of outbreak/event verification
- Date of laboratory confirmation
- Date of outbreak/event intervention
- Date of public communication
- Date of outbreak/event end

For disease outbreaks, specific definitions can help participants identify the key milestone dates:

Outbreak Milestones	Definition
Date of outbreak start	Date of the symptom onset in the primary case or earliest epidemiologically-linked case.
Date of outbreak detection	Date that the outbreak or disease-related event is first recorded by any source or in any system
Date of Outbreak notification	Date the outbreak is first reported to a public health authority
Date of Outbreak verification	Earliest date of outbreak verification through a reliable verification mechanism
Date of laboratory confirmation	Earliest date of laboratory confirmation in an epidemiologically-linked case
Date of Outbreak intervention	Earliest date of any public health intervention to control the outbreak
Date of Public communication	Date of first official release of information to the public from the responsible authority
Date of Outbreak end	Date that outbreak is declared over by responsible authorities.

7 - <https://extranet.who.int/sph/>

*The response, or the simulated response in the case of a SimEx, should be evaluated using an objective-based evaluation, which measures the extent to which IHR core capacities have performed, and which is largely concerned with the projected benefits and results of an AAR/SimEx. An evaluation template is provided in Annex 4 of this document for this purpose. The evaluation measures the attainment of IHR core capacities, with specific qualitative ratings that assess the extent to which a given capacity performed⁸. Different definitions of rating levels

are provided to guide countries on how to identify areas that require improvement, and how to acknowledge areas that are strengths (Table 2).

The evaluation template (Annex 4) should be filled in by all participants immediately after the session of an AAR in which participants work to identify the challenges and best practices identified in the response to the event under review; or at the end of the debrief session for a SimEx. The cumulative analysis of the results (evaluation rating %) is reported in the minimum reporting template (Annex 2).

Table 2: WHO evaluation ratings definitions

Evaluation rating	Definition
Performed without challenges (P)	The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and which did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
Performed with some challenges (S)	The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and which did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
Performed with major challenges (M)	The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; performance contributed to additional health and/or safety risks for the public or for emergency workers; and/or performance was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
Unable to be performed (U)	The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s).

As previously stated, the sharing of findings from AARs and simulation exercises through the standardized minimum reporting template builds trust and mutual accountability for the collective management of public health events. Moreover, the sharing of results can contribute to learning from other countries facing similar risks and challenges, and can facilitate intercountry collaboration in addressing identified challenges. The full report developed after each AAR or SimEx provides a more in-depth analysis of the PHE res-

ponse under review or the key functional areas exercised. The outcomes and recommendations of these reports should also feed into to relevant planning processes (e.g. informing/ updating NAPHS). As well as the minimum reporting template (Annex 2), countries are also encouraged to share and publish full reports on the WHO SPH website⁹. It is essential that these reports are shared with other IHR MEF teams, and NAPHS teams, in order to generate a better evaluation of a country's strengths and needs.

8 - FEMA (2017). Exercise Evaluation Guides (EEGs). Available at: <https://pretoolkit.fema.gov/web/hseep-resources/eegs>.

9 - <https://extranet.who.int/sph/>

Annex 1: AAR/SimEx tools available from other organizations

Simulation exercises

WHO simulation exercise manual, guidance & tools	http://www.who.int/ihr/publications/WHO-WHE-CPI-2017.10/en/
UNOCHA (sample material)	http://www.unocha.org/cerf/sites/default/files/CERF/2.11%20Simulation.pdf
ECDC exercise manual	https://ecdc.europa.eu/sites/portal/files/media/en/publications/Publications/Simulation-exercise-manual.pdf
UN WFP	http://www.logcluster.org/sites/default/files/training_files/1b_simex_-_desktop_simulation_guidebook.docx.pdf
US CDC & FEMA	https://training.fema.gov/iemc/exercisesimulationdocument.aspx https://www.fema.gov/media-library-data/20130726-1917-25045-7806/cert_tabletops_combined.pdf
Emergency Management Australia	https://knowledge.aidr.org.au/media/3547/handbook-3-managing-exercises.pdf
UK Materials (Cabinet Office + PHE)	https://www.gov.uk/guidance/emergency-planning-and-preparedness-exercises-and-training
Harvard T.H. Chan School of Public Health	https://www.hsph.harvard.edu/preparedness/toolkits/exercise-evaluation-toolkit/ https://www.hsph.harvard.edu/preparedness/research_evaluation/exercises-and-drills/

After action reviews

WHO	https://extranet.who.int/spp/after-action-review
UNICEF	https://www.unicef.org/knowledge-exchange/files/After_Action_Review_production.pdf
KS Toolkit (open source)	http://www.kstoolkit.org/After+Action+Review
USAID	https://usaidlearninglab.org/library/after-action-review-aar-guidance-0
UK NHS	https://library.medschl.cam.ac.uk/nhs/knowledge-management/action-reviews-aar/ http://kfh.libraryservices.nhs.uk/wp-content/uploads/2016/11/Learning-from-After-Action-Reviews.pdf
ECDC	Davies R, Vaughn E, Fraser G, Cook R, Ciotti M, Suk JE: Enhancing reporting of after action reviews of public health emergencies to strengthen preparedness: a literature review and methodology appraisal. <i>Disaster Medicine and Public Health Preparedness</i> (in press) <i>Best practice recommendations for conducting after action reviews to enhance public health preparedness</i> . Stockholm: ECDC
Harvard T.H. Chan School of Public Health	https://www.hsph.harvard.edu/preparedness/toolkits/critical-incidents/ https://www.hsph.harvard.edu/preparedness/preparedness-evaluation/

Annex 2: IHR AAR/SimEx minimum reporting template (to be completed and submitted by ministry of health within four weeks of the AAR/SimEx)

Introduction

This template is used to report to WHO within four weeks of conducting the AAR/SimEx. Use the participant objective based evaluation template (Annex 4) to fill in the cumulative evaluation ratings in the table below. As per the inclusion criteria (chapter 3), Member States are required to review, validate or test on at least one of the 13 core capacities. Member States therefore need to report on one or more of the 13 IHR capacities in the table.

Country:	Date of AAR/exercise:	Activity type (AAR format, TTX, DR, FX, FSX):	Purpose:	PHE under review or scenario used:	Report publicly available on WHO SPH website: Yes No
Key timeline indicators for AARs to be reported:					
Date of outbreak/event start:	Date of outbreak/event intervention:				
Date of outbreak/event detection:	Date of public communication:				
Date of outbreak/event notification:	Date of outbreak/event end (declared over):				
Date of outbreak/event verification:	Period that the AAR covered:				
Date of laboratory confirmation (if relevant to the outbreak/event):	AAR period start date (often beginning of response):	AAR period end date (often end of response):			

IHR capacity and indicator	Specific AAR/SimEx objective	Evaluation rating (%)				Key recommendations
		P	S	M	U	
C1: Legislation and financing						
Legislation, laws, regulations, policy, administrative requirements or other government instruments to implement the IHR						
Financing for the implementation of IHR capacities						
Financing mechanism and funds for timely response to public health emergencies						
C2: IHR coordination and national IHR focal point functions						
National IHR Focal Point functions under IHR						
Multisectoral IHR coordination mechanisms						
C3: Zoonotic events and the human-animal interface						
Collaborative effort on activities to address zoonoses						
C4: Food safety						
Multisectoral collaboration mechanism for food safety events						
C5: Laboratory						
Specimen referral and transport system						
Implementation of a laboratory biosafety and biosecurity regime						
Access to laboratory testing capacity for priority diseases						

IHR capacity and indicator	Specific AAR/SimEx objective	Evaluation rating (%)				Key recommendations
		P	S	M	U	
C6: Surveillance						
Early warning function: indicator- and event-based surveillance						
Mechanism for event management (verification, risk assessment, analysis investigation)						
C7: Human resources						
Human resources for the implementation of IHR capacities						
C8: National health emergency framework						
Planning for emergency preparedness and response mechanism						
Management of health emergency response operations						
Emergency resource mobilization						
C9: Health service provision						
Case management capacity for IHR relevant hazards						
Capacity for infection prevention and control and radiation decontamination						
Access to essential health services						

IHR capacity and indicator	Specific AAR/SimEx objective	Evaluation rating (%)				Key recommendations
		P	S	M	U	
C10: Risk communications						
Capacity for emergency risk communications						
C11: Points of entry						
Core capacity requirements at all times for designated airports, ports and ground crossings						
Effective public health response at points of entry						
C12: Chemical events						
Resources for detection and alert						
C13: Radiation emergencies						
Capacity and resources						
C14: Other capacity tested						
Effective public health response at points of entry						

Annex3: Action plan

Recommendations ¹⁰	Specific activities for implementation:	Implementation type ¹¹	Responsible person/unit ¹²	Timeline	Remarks

10 - All recommendations (short & longer term) should be included in this action plan, although only the longer term recommendations would be included within the relevant national plans/health sector strategies (including NAPHS).
 11 - specify whether the recommendation and its specific activities can be implemented directly, or if it/they should be included within relevant plans and strategies (including NAPHS). If the latter, please name the relevant plan/strategy.

12 - This would primarily relate to the responsible person/unit at national level (e.g. the ministry of health) but could potentially include UN bodies and other external stakeholders.

Annex 4: Participant objective based evaluation templates

Introduction

This template is used to measure the extent to which IHR core capacities have been performed, and is largely concerned with the projected benefits and results of an AAR/SimEx.

The evaluation template should be filled in by all participants immediately after the session of an AAR in which participants work to identify the challenges and best practices identified in the response to the public health event under review; or at the end of the debrief session for a SimEx.

The evaluation template measures attainment of IHR core capacities, with specific qualitative ratings that assess the extent to which the capacity performed¹³.

Different definitions of rating levels are provided to guide countries on how to identify areas that require improvement, and how to acknowledge areas that are strengths. The specific objectives column in this template contains illustrative examples that need to be adjusted according to the specific objectives of each AAR/SimEx.

The analysis of the results (evaluation rating %) is reported in the minimum reporting template (Annex 2).

Template

<p><i>Country name:</i></p> <p><i>Date of the AAR/exercise:</i> ____ / ____ / ____</p>	<p><i>Your role in the exercise:</i></p> <p><input type="checkbox"/> <i>Participant</i></p> <p><input type="checkbox"/> <i>Facilitator</i></p> <p><input type="checkbox"/> <i>Evaluator</i></p> <p><input type="checkbox"/> <i>Observer</i></p> <p><i>Other:</i> _____</p>
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The AAR/SimEx planners define in advance the specific objectives that are reviewed, validated and/or tested by the AAR or SimEx. Participants provide assessments of the performance of those objectives, based on the scale below (P, S, M, U). Capacities related to outbreak responses that might be more relevant for AARs are highlighted in orange.

13 - FEMA (2017). Exercise Evaluation Guides (EEGs). Available at: <https://preptoolkit.fema.gov/web/hseep-resources/eegs>.

IHR capacity and indicator	Specific objectives (examples, adjust accordingly)	Select evaluation rating*			
		P	S	M	U
C1: Legislation and financing					
Legislation, laws, regulations, policy, administrative requirements or other government instruments to implement the IHR	<i>E.g. Appropriate legislation, laws, and policies were in place and could be effectively used.</i>				
Financing for the implementation of IHR capacities	<i>E.g. A budget was available for the implementation of IHR capacities.</i>				
Financing mechanism and funds for timely response to public health emergencies	<i>E.g. A financing mechanism was in place that allowed for the timely flow of funds at all necessary levels.</i>				
C2: IHR coordination and national IHR focal point functions					
National IHR focal point functions under IHR	<i>E.g. The IHR national focal point was accessible when needed and could effectively carry out IHR functions.</i>				
Multisectoral IHR coordination mechanisms	<i>E.g. A multisectoral IHR coordination mechanism was in place and effective.</i>				
C3: Zoonotic events and the human-animal interface					
Collaborative effort on activities to address zoonoses	<i>E.g. Animal and public health sectors were able to work effectively together at all necessary levels.</i>				
C4: Food safety					
Multisectoral collaboration mechanism for food safety events	<i>E.g. A coordination mechanism between the INFOSAN food safety focal point and the IHR focal point was in place and effective for multi-sectoral coordination.</i>				
C5: Laboratory					
Specimen referral and transport system	<i>E.g. Specimens collected from any level of the health system (health facilities, hospitals, etc.) reached the appropriate testing laboratory in a timely fashion.</i>				
Implementation of a laboratory biosafety and biosecurity regime	<i>E.g. Capacity was in place to identify, hold, secure and monitor dangerous pathogens in appropriate facilities.</i>				
Access to laboratory testing capacity for priority diseases	<i>E.g. Specimens from all levels were tested appropriately and results were available in a timely fashion.</i>				

IHR capacity and indicator	Specific objectives (examples, adjust accordingly)	Select evaluation rating*			
		P	S	M	U
C6: Surveillance					
Early warning function: indicator- and event-based surveillance	<i>E.g. Surveillance data were collected at all levels and were compiled, analysed, and interpreted to guide the response.</i>				
Mechanism for event management (verification, risk assessment, analysis investigation)	<i>E.g. An effective system was in place to verify, assess, and investigate events.</i>				
C7: Human resources					
Human resources for the implementation of IHR capacities	<i>E.g. An effective workforce was in place to prepare for, prevent, detect, and respond to the IHR hazard at all needed levels.</i>				
C8: National health emergency framework					
Planning for emergency preparedness and response mechanism	<i>E.g. The multi-hazard preparedness plan was tested and effective during the response or exercise.</i>				
Management of health emergency response operations	<i>E.g. The emergency operations centre was activated quickly, using effective protocols.</i>				
Emergency resource mobilization	<i>E.g. Necessary supplies, including personal protective equipment, medications, vaccines, etc., could be mobilized to the levels at which they were needed in a timely fashion.</i>				
C9: Health service provision					
Case management capacity for IHR relevant hazards	<i>E.g. Sufficient numbers of trained healthcare workers and adequate medical supplies were in place to manage patients safely.</i>				
Capacity for infection prevention and control and radiation decontamination	<i>E.g. Healthcare workers were trained in infection prevention and control at the necessary levels and had the necessary protective equipment.</i>				
Access to essential health services	<i>E.g. Suspected case patients at all levels could access and utilize the required outpatient and inpatient services.</i>				

IHR capacity and indicator	Specific objectives (examples, adjust accordingly)	Select evaluation rating*			
		P	S	M	U
C10: Risk communications					
Capacity for emergency risk communications	<i>E.g. Information to address community concerns, rumours, and appropriate public health practices was effectively communicated to the public, and a feedback mechanism was in place to understand and address rumours, perceptions, and misconceptions.</i>				
C11: Points of entry					
Core capacity requirements at all times for designated airports, ports and ground crossings	<i>E.g. Points of entry were appropriately designated and had the capacity to provide medical services and diagnostics, with adequate staff and resources.</i>				
Effective public health response at points of entry	<i>E.g. Existing contingency plans for emergencies at points of entry were effectively used to respond to the event.</i>				
C12: Chemical events					
Resources for detection and alert	<i>E.g. The poison information service effectively detected the event and laboratory capacity was in place to confirm it.</i>				
C13: Radiation emergencies					
Capacity and resources	<i>E.g. Surveillance to detect potential radiation emergencies was in place, as were the coordination mechanisms and resources (including human resources) needed to respond.</i>				
C14: Other capacity tested					

Based on the AAR/exercise, what are the main strengths and areas for improvement?

<i>Strengths</i>	
<i>Areas for improvement</i>	

Please share any other recommendations you have to improve national capacities in the future.

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Thank you!



CONTACT DETAILS

COUNTRYCAPACITYMONITORINGANDEVALUATIONUNIT

Country Health Emergency Preparedness and IHR

World Health Organization

20 Avenue Appia

CH-1211 Geneva

Switzerland

E-MAIL

ihrmonitoring@who.int