

POLICY AND PRACTICE

The International Health Regulations (2005) Monitoring and Evaluation framework and its implementation in the WHO European Region

Ute Enderlein¹, Tanja Schmidt¹, Vasily Esenamanov¹, Franziska Hommes²

¹ World Health Organization Regional Office for Europe, Copenhagen, Denmark

² RWTH Aachen, Aachen, Germany

Corresponding author: Ute Enderlein (email: enderleinu@who.int)

ABSTRACT

The International Health Regulations (IHR) is an international legal framework aimed at ensuring collective and coordinated action for global public health security. Last year, 2017, marked the 10-year anniversary of the revised IHR coming into force after being agreed upon by 196 countries, including all WHO Member States. The monitoring and evaluation framework for implementation of the IHR (2005) was revised in 2016, based on recommendations of the Review Committee on the Role of the IHR (2005) in the Ebola Outbreak and Response for improving the accuracy of assessment of the current IHR capacities at country level. The IHR framework has four components that together constitute a comprehensive qualitative and quantitative methodology

comprising three voluntary components (joint external evaluations, simulations exercises and after action reviews) and a mandatory component (States Parties annual reporting). The WHO Regional Office for Europe has supported its Member States in applying these tools to enhance their preparedness and response capacities to specific national and regional priority hazards. This paper describes the application of the revised IHR Monitoring and Evaluation Framework in the WHO European Region, its current implementation status and how the outcomes of the assessments can be translated into a national action plan for health security, providing a key mechanism for strengthening global public health security.

Keywords: CORE CAPACITIES, INTERNATIONAL HEALTH REGULATIONS (IHR) (2005), MONITORING AND EVALUATION FRAMEWORK

BACKGROUND

The revised International Health Regulations (IHR), an international legal framework aimed at ensuring collective and coordinated action for global public health security, came into force in 2007 after being agreed upon by 196 countries, including all WHO Member States in July 2005.¹ The revisions increase the scope of the initial 1969 IHR (which covered only six infectious diseases) by encompassing all public health hazards, irrespective of origin or source, that present or could present significant harm to humans and have the potential to become a public health emergency of international concern, according to defined criteria (1).

Enforcement of the revised IHR marked a new era of cooperation in managing international public health events and

emergencies. The IHR framework aims to ensure and improve the capacities of States Parties to prevent, detect, assess, notify, report and respond to public health threats. However, the global effectiveness of the framework depends on its full and sustained application by all countries. This requires coordination at the different levels of national health systems, coordination between ministries and sectors, and international cooperation.

While significant focus of IHR obligations is reporting and information sharing on public health risks and potential public health emergencies on a daily basis, all States Parties are required to develop, strengthen and maintain minimum national public health core capacities, and to develop a plan of action to ensure that these capacities are present and functioning throughout their territories.

In accordance with Article 54 of the IHR (2005) (1) and the related World Health Assembly Resolution WHA61.2 of 2008, States Parties and WHO are required to report annually to the

¹ These include the 194 WHO Member States, as well as Holy See and Liechtenstein, which are States Parties but not WHO Member States.

World Health Assembly on the IHR implementation. To assist countries in preparing the annual report and to ensure that information about progress of their core capacities is given in a standardized manner, the WHO IHR Secretariat developed a monitoring checklist containing a set of global indicators (2). It involves assessing the implementation of 13 core capacities (National legislation, policy and financing; Coordination and National Focal Point communications; Surveillance; Response; Preparedness; Risk communication; Human resources; Laboratory), including the development of routine and emergency capacities at points of entry and for IHR-related hazards, notably biological (food safety, zoonoses and other infectious hazards); chemical; and nuclear and radiological. The core capacities are required to detect, assess, notify and report events, and to respond to public health risks and emergencies of national and international concern.

The recent outbreaks of Ebola virus disease in West Africa in 2014–2016 demonstrate that the world remains vulnerable to emerging infectious diseases. Data derived from the annual questionnaire provide consistent information, but do not indicate the functionality of national systems or the actual country capacity to manage public health events.

The Review Committee on the Role of the International Health Regulations (2005) in the Ebola Outbreak and Response presented its recommendations on strengthening the implementation of IHR (2005) at the sixty-ninth World Health Assembly in May 2016. One recommendation was to “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” (3).

THE REVISED IHR MONITORING AND EVALUATION FRAMEWORK: APPLICATION IN THE WHO EUROPEAN REGION

In response to these recommendations, the WHO Secretariat developed a revised framework for monitoring, assessing and reporting the status of the national IHR core capacities to be used after 2016 (4). The revised framework includes a combination of quantitative and qualitative methodologies, which provide a comprehensive overview of the current state of a country’s IHR capacities and a basis for evidence-based policy-making. The States Parties annual reporting (SPAR)

is the only mandatory reporting modality required by IHR (2005). It is complemented by three voluntary components: joint external evaluations (JEEs; conducted every five years), simulation exercises and after action reviews (AARs). Results of the four assessments provide a comprehensive picture of the functional status of a country’s capacity to prevent, detect and respond to public health emergencies. The systematic conduct of these activities also contributes to IHR capacity-building in the emergency preparedness cycle (Fig. 1). The SPAR and JEEs provide information on structural IHR capacities, and their recommendations provide input for the development or revision of a national action plan for health security. AARs of the emergency response to a real-life event provide a realistic assessment of a country’s response capacity. Simulation exercises aim to develop existing IHR capacities through simulation of a response to an evolving emergency. Both AARs and simulation exercises help to identify gaps and best practices to be incorporated into or addressed in the national action plan for health security.

This new approach reflects a paradigm shift – from viewing the attainment of core capacities as an end goal to a process of routine maintenance and continuous quality improvement of capacities (see Fig. 1). It aims to establish a system of mutual accountability for global public health security among Member States.

STATES PARTIES ANNUAL REPORTING

Global progress has been made since 2010 across the 13 core capacities, particularly in surveillance, response and zoonoses, but overall average scores suggest that further efforts are urgently needed in the areas of human resources, capacities at points of entry, chemical events and radiation emergencies (5).

Since the revised IHR (2005) came into force in 2007 in the WHO European Region, Member States have made significant efforts to build IHR capacities, particularly in laboratories, surveillance, legislation and policy, preparedness, and human resources (6). Information from the self-assessment questionnaires submitted by States Parties support these findings. Fig. 2 shows the 2016 implementation status of the 13 IHR core capacities in the WHO European Region. Further details of the 2016 SPAR are published on the WHO Global Health Observatory website (7).

FIG. 1. IHR CAPACITY-BUILDING IN THE EMERGENCY PREPAREDNESS CYCLE

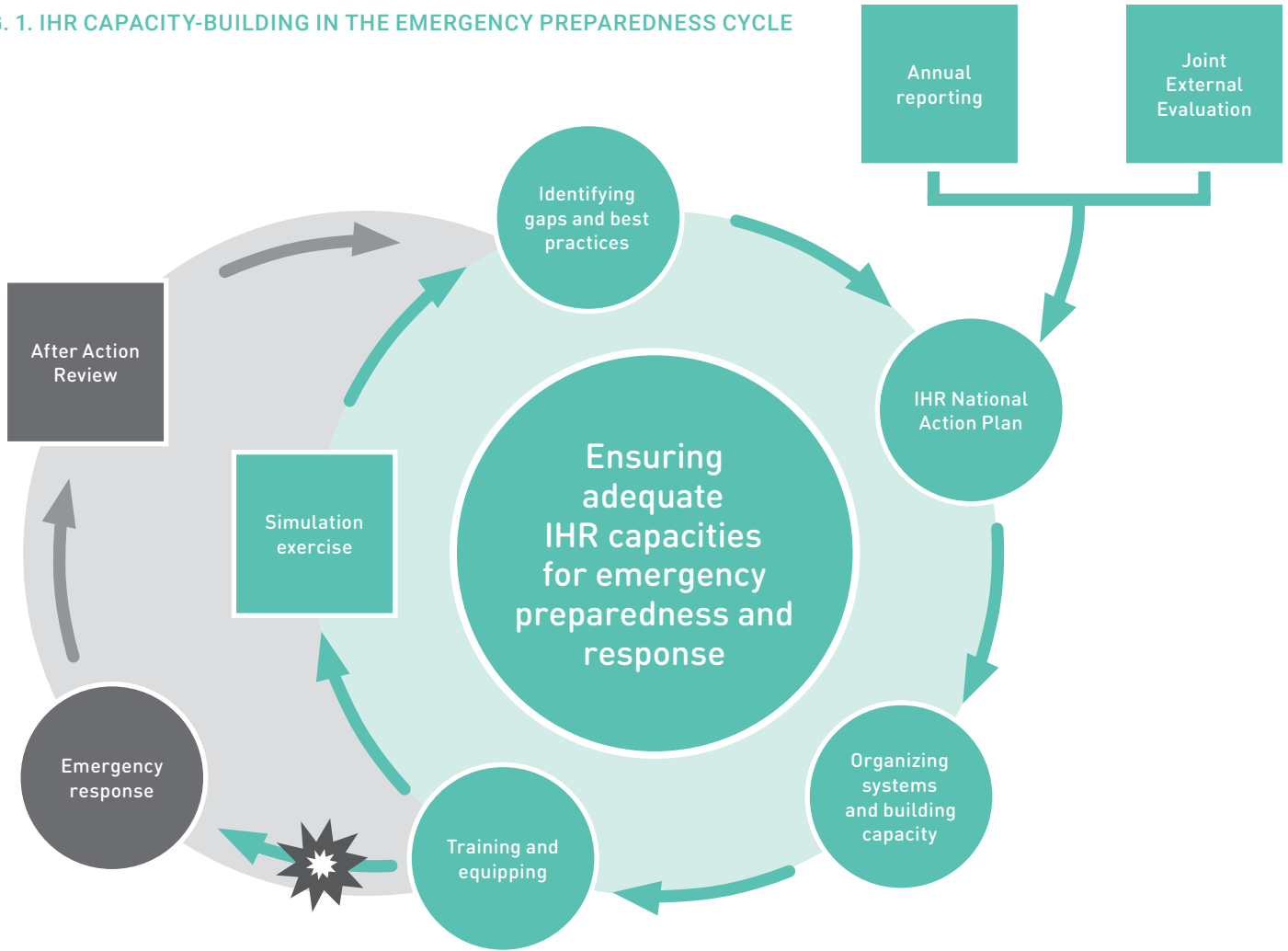
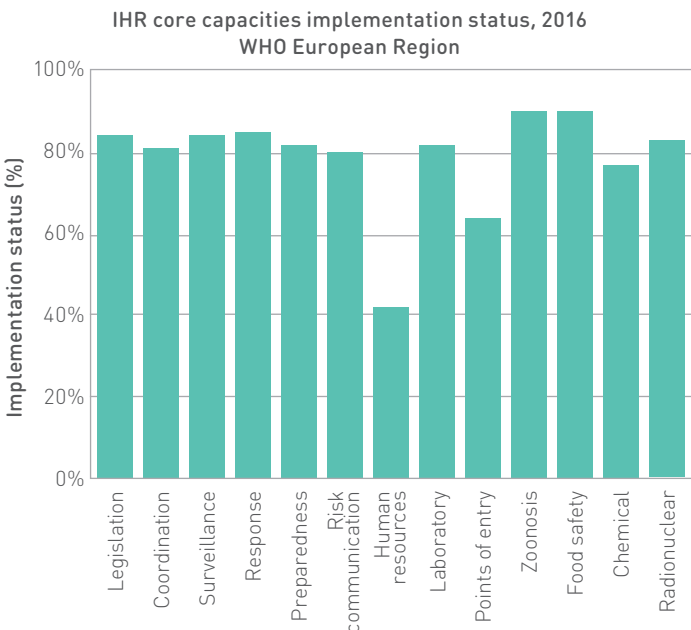


FIG. 2. IMPLEMENTATION STATUS OF IHR CORE CAPACITIES, WHO EUROPEAN REGION, 2016



Source: World Health Organization (7).

JOINT EXTERNAL EVALUATION

The JEE aims to provide an independent, impartial and transparent assessment of the current status of a country’s ability to detect, assess, report and respond in a timely and effective manner to an event that may constitute a public health emergency of international concern (8). Conducting a JEE, which consists of 19 technical areas intended to cover a country’s health security system, enables countries to identify their strengths, along with gaps and challenges to identify and prioritize actions for improving their preparedness and response capacities. The JEE process consists of two main parts:

1. an initial country self-assessment in which national counterparts across sectors evaluate their own national capacities using the JEE tool; and
2. a five-day evaluation mission carried out by a team of independent international experts who, together with national counterparts, review the self-assessment results,

identify existing strengths and the most urgent needs within a country's health security system, and recommend actions for improving the national health security system.

The JEE process also provides a unique opportunity to engage with partners and donors to effectively address the identified gaps in a coordinated and collaborative way. Countries that have undergone this assessment note that the JEE is an effective means of bringing national sectors together to jointly discuss existing strengths and weaknesses, and of bringing the issue of IHR and health emergency preparedness to the attention of the senior decision-makers.

Table 1 displays the status of JEEs in the WHO European Region in December 2017. Nine out of 53 Member States in the European Region have already completed a JEE, and two JEEs are planned for 2018–2019. The JEE reports are publically available on the WHO Strategic Partnership Portal (9).

TABLE 1. IMPLEMENTATION STATUS OF JEEs IN THE WHO EUROPEAN REGION, DECEMBER 2017^a

Country	JEE conducted (year)	JEE planned for 2018–2019
Albania	2016	–
Armenia	2016	–
Belgium	2017	–
Finland	2017	–
Kyrgyzstan	2016	–
Latvia	2017	–
Lithuania	–	x
Serbia	–	x
Slovenia	2017	–
Switzerland/Liechtenstein	2017	–
Turkmenistan	2016	–

^a Countries that have undergone or have officially requested a JEE.

SIMULATION EXERCISES

Simulation exercises serve as an effective capacity-building and quality assurance tool: they provide evidence-based real-time information on the functional capacity to respond to outbreaks and public health emergencies. Exercises test and evaluate existing emergency systems, legislation, plans and procedures in a safe environment. Simulation exercises are used to identify and address critical issues before an actual emergency occurs and therefore play a key role in the development and implementation

of preparedness and response capacities at all levels (international, national, provincial and community). WHO recommends conducting a range of exercises, including table-top exercises, drills and functional exercises, as well as field/full scale exercises, as described in detail in the WHO simulation exercise manual (10). Table-top exercises use a progressive simulated scenario to give participants the opportunity to examine the functionality of existing plans, policies and procedures during a potential health emergency. Drills contain coordinated and supervised exercise activities which are used to test and improve a specific operation, function, procedure or skill through repetition. Functional exercises are fully simulated interactive exercises that test or validate the capability of one or more organizations or the country to respond to a simulated event. Functional exercises test coordination and communication between the different actors involved in the response in a time-pressured, realistic manner. Finally, field exercises simulate real events as closely as possible by evaluating the operational capability of emergency management systems in a highly stressful environment resembling actual response conditions.

Simulation exercises should be tailored to the priority hazards faced by individual countries and regions. For the WHO European Region, earthquakes, extreme weather events and floods, and infectious disease outbreaks are the priority hazards, and thus need to be priorities for country preparedness and cross-country collaboration.

The WHO simulation exercise manual (2017) was recently developed for WHO staff and partners, with the particularly aim of supporting Ministry of Health staff of Member States in their role as exercise facilitators (10). In recent years, the WHO Regional Office for Europe supported its Member States by addressing and preparing for their priority hazards through the application of a variety of simulation exercises. Examples include table-top exercises on flood emergency response management in Bosnia and Herzegovina and Moldova (both in 2016); table-top exercises and a series of functional exercises in preparation of an international mass gathering event in Turkmenistan (December 2016 to March 2017); a functional exercise on armed conflict for Armenia, Azerbaijan and Georgia (August 2017); and a table-top exercise on emergency risk communication in Armenia (October 2017).

AFTER ACTION REVIEWS

Public health events are unique and important opportunities to review the actual functionality of an existing national public health emergency response system. They provide an opportunity

to reflect on and learn from what worked well and what could be further improved, as well as which provisions have proven effective and up to date and which require revision.

An AAR comprises a qualitative, structured review of the actions taken in response to an actual public health event, and aims to facilitate critical reflection and provide insight into the processes of responding, identifying and documenting challenges and best practices and identify immediate and longer-term corrective actions for future responses within an open and transparent environment. To assist in this process, WHO has developed a dedicated methodology consisting of a guide and toolkit to support countries in conducting an AAR (11).

NATIONAL ACTION PLAN FOR HEALTH SECURITY: THE WAY FORWARD

Assessment activities should always translate into a concrete set of actions needed to reinforce existing strengths and improve identified weaknesses. The results of such assessment activities should be reflected in a plan of action to guide the country in systematically addressing the identified weaknesses and gaps. Results of the JEE are used to develop the five-year national action plan for health security which addresses the key areas that require strengthening to accelerate implementation of the IHR. The action plan is key to ensuring that actions are directed to areas of actual need, the available resources are used rationally and progress is monitored.

Development of the action plan has three principal stages:

1. national partners review the findings of the JEE, AAR and simulation exercise reports, focusing on the weakest areas, and identify the activities recommended by the JEE; the proposed areas are then prioritized with a timeline of five years;
3. the WHO Regional Office, together with relevant technical units, reviews the proposed activities and develops a set of recommendations; and
4. a national workshop is held in the country to finalize the action plan, which can include costing and support with alignment to existing national plans, strategies and programmes.

Findings of the simulation exercises and AARs should also feed into a set of actions to address the identified weaknesses and gaps. These could either be incorporated into the national

action plan for health security or included in separate subplans or subsets of actions needed to address weaknesses in specific functions, procedures or mechanisms. Development and implementation of a multisectoral national action plan for health security by Member States of the European Region based on the four components of the revised IHR Monitoring and Evaluation Framework will strengthen national and regional preparedness and response capacities, thus contributing to global public health security.

Acknowledgements: None.

Sources of funding: Franziska Hommes received a stipend from the Carlo-Schmid programme, “DAAD”, “Studienstiftung des deutschen Volkes” and “Stiftung Mercator” for subsistence during her internship with the WHO Regional Office for Europe.

Conflicts of interest: None declared.

Disclaimer: The authors alone are responsible for the views expressed in this publication and they do not necessarily represent the decisions or policies of the World Health Organization.

REFERENCES

1. International health regulations (2005), third edition. Geneva: World Health Organization; 2016 (<http://www.who.int/ihr/publications/9789241580496/en/>, accessed 21 February 2018).
2. International Health Regulations. Checklist and indicators for monitoring progress in the development of IHR core capacities in States Parties. Geneva: World Health Organization; 2013 (<http://www.who.int/ihr/checklist/en/>, accessed 21 February 2018).
3. Implementation of the International Health Regulations (2005): Report of the review committee on second extensions for establishing national public health capacities and on ihr implementation. Recommendation 7: (Para. 43). Geneva: World Health Organization; (http://www.who.int/ihr/B136_22Add1-en_IHR_RC_Second_extensions.pdf?ua=1, accessed 6 December 2017).
4. Monitoring and evaluation. Copenhagen: World Health Organization Regional Office for Europe; 2018 (<http://www.euro.who.int/en/health-topics/emergencies/international-health-regulations/monitoring-and-evaluation>, accessed 21 February 2018).

5. Implementation of the International Health Regulations (2005): annual report on the implementation of the International Health Regulations (2005): report by the Director-General. Geneva: World Health Organization; (http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_15-en.pdf, accessed 21 February 2018).
6. Accelerating implementation of the International Health Regulations (2005) and strengthening laboratory capacities for better health in the WHO European Region. Geneva: World Health Organization; 2017 (http://www.euro.who.int/__data/assets/pdf_file/0005/343949/67wd13e_IHRandLaboratories_170706.pdf?ua=1, accessed 21 February 2018).
7. IHR core capacities implementation status: WHO European Region. In: Global Health Observatory (GHO) data [website]. Geneva: World Health Organization; 2018 (http://www.who.int/gho/ihr/monitoring/region_europe/en/, accessed 21 February 2018).
8. Joint external evaluation tool: International Health Regulations (2005). Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/204368/1/9789241510172_eng.pdf, accessed 6 December 2017).
9. JEE dashboard [website]. In: Strategic partnership portal. Geneva: World Health Organization; 2018 (<https://extranet.who.int/spp/jee-dashboard>, accessed 21 February 2018).
10. WHO simulation exercise manual. Geneva: World Health Organization; 2017 (<http://www.who.int/ihr/publications/WHO-WHE-CPI-2017.10/en/>, accessed 21 February 2018).
11. After Action Review. Copenhagen: World Health Organization Regional Office for Europe; 2018 (<http://www.euro.who.int/en/health-topics/emergencies/international-health-regulations/monitoring-and-evaluation/after-action-review>, accessed 21 February 2018). ■