
Progress report on emergencies and the International Health Regulations (2005) in the Eastern Mediterranean Region

Introduction

1. This report provides an update on WHO's work in relation to health emergencies, pursuant to resolution EBSS3.R1 (2015) and decision WHA68(10) (2015).
2. This report also provides an update on progress in implementing the International Health Regulations (IHR) (2005) in the Eastern Mediterranean Region in the context of resolution EM/RC64/R.1 (2017), related to monitoring and evaluation of IHR implementation, and of resolution WHA61.2 (2008), related to annual reporting on the implementation of the Regulations by States Parties, pursuant to paragraph 1 of Article 54 of the IHR.
3. In addition, the report provides an update on the work of the IHR Regional Assessment Commission (IHR-RAC) and highlights key recommendations from the fourth meeting of the Commission for accelerating implementation of the Regulations and IHR capacities within the Region.¹

WHO's work in health emergencies

4. The Eastern Mediterranean Region is faced with a high health burden due to emergencies from all hazards – natural (geological, hydrometeorological), biological/outbreaks, societal (including conflict) and technological. WHO takes a comprehensive approach to the management of health emergencies, working across all phases of the emergency management cycle – prevention, preparedness, detection, response and recovery.

Preparing for health emergencies

5. In 2018, WHO worked closely with countries and partners to monitor and report on their emergency preparedness capacities for all hazards, and worked with countries to improve those capacities by developing guidance and tools, conducting country missions to enhance preparedness capacities and delivering training sessions.
6. WHO provided support to all countries in the Region for the following activities: monitoring and evaluation of IHR capacities; strengthening national capacities through the development and dissemination of technical guidance, materials and tools; and providing advice and technical support in relation to IHR capacities, disaster risk management, travel health, One Health, mass gatherings, migrants and refugees.²
7. WHO engaged with the United Nations Office for Disaster Risk Reduction (UNDRR) in developing the *Arab strategy for disaster risk reduction 2030* and its action plans, in collaboration with the Arab League and Sendai national focal points in Member States. Further, WHO was fully engaged with regional stakeholders to consolidate stakeholders' engagement for disaster risk reduction in the Region. In addition, WHO organized a regional workshop to operationalize the implementation of the *Sendai framework for disaster risk reduction 2015–2030* in the Eastern Mediterranean Region, and is currently developing operational guidance to be disseminated to countries.

¹ Resolution EM/RC62/R.3 on Assessment and monitoring of the implementation of the International Health Regulations (2005): meeting the 2016 target, September 2015.

² Details of the monitoring and evaluation of IHR capacities and the implementation of national capacities are included in the following section on progress in implementing IHR.

8. Support to establish and build the capacities of public health emergency operation centres using WHO's *Framework for a public health emergency operations centre* is ongoing through conducting assessments and developing tailored development plans in all countries. Study tours were also facilitated for some emergency operations centre (EOC) staff (Bahrain, Lebanon, Oman and Tunisia) in the Region to share intercountry experiences.

9. WHO is supporting countries in the Region to strengthen their emergency care systems through conducting assessments followed by road map development based on the identified gaps. Assessments have been completed for Egypt, Islamic Republic of Iran, Jordan, Libya, Pakistan, Qatar, Sudan and Tunisia using the WHO emergency care system assessment tool, and road maps have been developed for Libya, Qatar and Sudan. Support is being provided to the same countries to assess hospital safety using the Hospital Safety Index, and to assess emergency units to gain more focused insight into facility functionality. Training courses on hospital emergency preparedness and response were conducted in Bahrain, Libya and Sudan. Online training packages have been developed to address hospital preparedness and management of all-hazards. The packages have been rolled out in countries using a blended approach of online and face-to-face training.

10. Self-assessment for operational readiness of WHO country offices was conducted in 2018. This was followed by regional training to country offices on the minimum elements to enhance operational readiness in WHO. Given the Ebola outbreak in the Democratic Republic of the Congo, WHO scaled up Ebola preparedness and readiness measures in priority countries, including surveillance, laboratory testing, rapid response teams, and infection prevention and control. WHO developed regional plans to scale up preparedness and operational readiness for Ebola with a focus on three countries identified as high-risk: Egypt, Morocco and Sudan. Regional plans are also being developed to scale up preparedness and operational readiness for public health consequences in countries that face climatic change (such as drought and floods) and in countries that host mass gathering events.

11. WHO supported the development of a field guide on child and adolescent health during an emergency. The guide was introduced in Sudan and is planned to be introduced in Libya and the Syrian Arab Republic. Support was also given for the development of technical guidance on quality and safety during emergencies and adversity, which is planned to be introduced to countries in emergencies in 2019.

12. WHO continued to foster collaboration and coordination with regional partners including United Nations agencies, international organizations, technical institutions and academia to help countries to be better prepared to prevent, detect and respond to health emergencies, particularly in the areas of risk communication, points of entry, One Health and disaster risk reduction.

Detecting public health events

13. WHO continued to monitor and capture signals for the early detection of public health events. Between 1 July 2018 and 21 April 2019, 1372 signals were captured, out of which a total of 45 new public health events were recorded in WHO's event management system. Initial risk assessment was conducted for 10 events, including a rapid risk assessment for extensively drug-resistant typhoid fever in Pakistan, chikungunya in Sudan, suspect Rift Valley fever in Sudan, malaria in Djibouti, and measles in Tunisia. A public health situation analysis (PHSA) was conducted for the five other events: drought in Afghanistan, drought in Pakistan, civil unrest in Sudan, conflict in Libya and floods in the Islamic Republic of Iran. Furthermore, four of these events were graded according to the WHO *Emergency response framework*, indicating the need for an operational response by WHO: malaria in Djibouti (5 days), chikungunya in Sudan (1 day), drought in Pakistan (0 day: PHSA fed into the grading review) and floods in Islamic Republic of Iran (0 day: grading done shortly after the PHSA review).

14. WHO ensured that information on signals and events was communicated internally and to IHR national focal points. In this regard, a total of 209 daily bulletins and 43 weekly bulletins on signals and events, with highlights of acute events and emergencies in selected countries, have been developed and shared internally within WHO.

15. WHO also conducted a regional PHSA of drought. This document identifies countries with potential drought-related health consequences and outlines a plan to enhance preparedness and operational readiness to prevent and rapidly respond to the public health consequences of drought. The document focuses on the following elements: multisectoral coordination, climate vulnerability assessment, early detection, response, risk communication and partnership.

16. WHO developed a repository of all information available within the Organization on Ebola virus disease, and internet access was given to IHR national focal points.

Managing epidemics and pandemics

17. The complex humanitarian emergencies and protracted conflicts in many countries in the Region have gravely damaged already fragile health systems, making control and prevention of emerging infectious diseases extremely challenging. The frequency, duration and scale of emerging and re-emerging infectious disease outbreaks in the Region continue to threaten the health of millions of vulnerable people, especially as no specific treatments or vaccines are available yet for many of these diseases. The Regional Office supports countries strategically, operationally and technically to detect, investigate and respond to emerging and high-threat pathogens, and to prevent their international spread. Although national core capacities have improved significantly, many countries in the Region remain vulnerable to emerging infectious disease threats.

18. WHO and partners detected, investigated and rapidly responded to infectious disease outbreaks in 2018, including: cholera in Yemen (the largest cholera outbreak in history) and Somalia; Crimean-Congo haemorrhagic fever (CCHF) in Afghanistan, Iraq and Pakistan; Middle East respiratory syndrome coronavirus (MERS-CoV) in Kuwait, Oman, Saudi Arabia and United Arab Emirates; dengue in Oman, Pakistan, Sudan and Yemen; chikungunya in Pakistan and Sudan; chickenpox (varicella) in Pakistan; diphtheria in Yemen; extensively drug-resistant typhoid fever in Pakistan; travel-associated Legionnaires' disease in United Arab Emirates; and West Nile fever in Tunisia. The 19 confirmed outbreaks in 2018 affected 12 out of 22 countries in the Region, causing 435 625 cases of illness and 844 deaths.

19. Yemen faces one of the worst epidemics of cholera in recorded history with more than 1.5 million cases and 3500 associated deaths by the end of 2018. Although the overall trend of cholera cases and deaths recorded in 2018 was on the decline as compared to the same period in 2017, new cases continued to spike towards the end of 2018. WHO provided technical and material support to the response, which included: vaccinating 650 000 people in high-risk districts; establishing over 100 cholera treatment facilities; training thousands of health care workers in cholera outbreak management, including surveillance, laboratory diagnosis, case management, infection prevention and control; and other essential interventions. The Regional Office convened two consultations with partners in Amman, Jordan, to review progress in the response, document lessons learned and agree ways to scale up and improve the effectiveness of the response.

20. Kuwait, Oman, Saudi Arabia and the United Arab Emirates reported 145 laboratory-confirmed MERS-CoV cases and 41 associated deaths in 2018. WHO has helped to establish a pool of MERS experts in the Region who can be deployed rapidly during any outbreak of the disease.

21. Seasonal outbreaks of arboviral diseases persist in many countries of the Region, and 2018 witnessed explosive outbreaks of dengue fever and chikungunya in Oman, Pakistan, Sudan and Yemen. A cumulative total of 20 207 cases of chikungunya with no associated deaths and 27 932 cases of dengue fever with 46 associated deaths were reported by the above four countries in 2018. Timely and appropriate response interventions were implemented to minimize the health and economic impact of these outbreaks. Chikungunya and dengue outbreaks in Oman, Pakistan and Sudan were contained, while a dengue outbreak in Yemen remains active. Laboratory diagnostic capacity was enhanced in most countries for timely confirmation of cases and to identify the serotypes and strains circulating in each country. Efforts were made to train health care workers to properly identify and manage patients with dengue fever or chikungunya, and minimize the case fatality rates.

22. WHO continued to support and strengthen the capacities of Member States to prepare for the next influenza pandemic. Work focused on improving detection, surveillance and sharing of influenza viruses with pandemic potential, and increasing the availability of and access to vaccines and other important pandemic response products. By the end of 2018, 19 out of 22 countries in the Region had established functioning influenza sentinel surveillance sites, while 20 influenza laboratories developed capacities to detect and identify different subtypes of influenza. Seven countries (Afghanistan, Egypt, Jordan, Lebanon, Morocco, Sudan and Yemen) received funds from the Pandemic Influenza Preparedness Framework partnership to improve capacity for pandemic influenza preparedness and response.

23. In 2018, WHO provided technical support to countries to investigate and minimize the impact of disease outbreaks, as well as to contain major epidemics with integrated public health interventions. Key capacity-building efforts included: missions to assess and enhance influenza and MERS-CoV surveillance and response capacities (Kuwait, Saudi Arabia, United Arab Emirates); regional and subregional trainings to estimate disease burden and calculate baseline and threshold values (Afghanistan, Bahrain, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Oman, Pakistan, Palestine, Qatar and Tunisia); rapid response team trainings to improve surveillance and response to influenza, MERS-CoV and other high-threat pathogens (Libya, Pakistan, Saudi Arabia); improving knowledge and skills in the health care workforce related to case management for common epidemic-prone diseases (Pakistan, Somalia, Sudan, Yemen); building regional and national capacities on advanced laboratory diagnostic techniques (detection, genotyping and biosafety) for emerging and high-threat pathogens (Afghanistan, Bahrain, Iraq, Kuwait, Lebanon, Libya, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates and Yemen); and updating national pandemic influenza preparedness plans (Afghanistan, Egypt, Morocco, Oman and Tunisia).

24. The Regional Office rolled out several global and regional strategic plans, including the global strategy to eliminate yellow fever epidemics (EYE) 2017–2026 (to eliminate yellow fever epidemics in Djibouti, Somalia and Sudan by 2026), the ending cholera global roadmap (to reduce cholera deaths by 90% in cholera-endemic countries by 2030) and Afghanistan's national CCHF action plan, as well as reviewing and testing several national influenza pandemic preparedness plans (Afghanistan, Egypt, Morocco, Oman, Tunisia). Further technical support will include additional pandemic influenza severity assessment training, support to national influenza centres, and enhancing national capacity for detection of and response to respiratory infections, as well as for risk communication.

25. To mitigate the risk of the emergence or re-emergence of high-threat infectious pathogens, recent achievements include improving and expanding the electronic Early Warning Alert and Response Network (eEWARN) in Somalia and planning for Djibouti and Sudan, and the development of a technical manual for Hajj early warning surveillance in Saudi Arabia. WHO also improved rapid and early diagnosis, identification and characterization of emerging dangerous pathogens by providing Member States with essential laboratory diagnostics and conducting external quality assurance for influenza and MERS-CoV laboratories.

26. In the areas of innovative and proven strategies, the Regional Office developed strategies, guidance documents and handbooks for the prevention and control of high-threat infectious hazards, including: a regional strategic framework for the prevention and control of emerging and epidemic-prone infectious diseases; a One Health framework for emerging zoonosis; a regional action plan for vector control; an epidemiological analysis handbook and an evaluation protocol for eEWARN; guidance on CCHF prevention and control; and surveillance strategies for Zika and other arboviral diseases.

27. WHO promoted and advanced operational research to address knowledge gaps in the areas of prevention, detection and response to emerging infectious diseases, including: studies on Zika virus vector competence in Lebanon, Morocco and Tunisia; the seroprevalence of MERS-CoV in Morocco; a survey on the burden of dengue fever in Saudi Arabia; studies on influenza disease burden estimation in Egypt, Islamic Republic of Iran, Jordan, Lebanon, Morocco, Oman and Tunisia; studies to define influenza baseline and threshold values in Afghanistan, Egypt, Islamic Republic of Iran, Lebanon, Morocco, Oman and Tunisia; surveys to estimate oral cholera vaccine coverage in Somalia and Yemen; and a study to evaluate the multisectoral acute watery diarrhoea outbreak response interventions in Sudan. The evidence and findings generated from the operational research were translated into policies and strategies for the prevention and control of emerging and epidemic-

prone infectious disease threats. The Regional Office maintained and coordinated two regional networks of experts – the Eastern Mediterranean Acute Respiratory Infection Surveillance (EMARIS) network and Emerging and Dangerous Pathogens Laboratory Network (EDPLN). In close collaboration with Member States, WHO coordinates the knowledge generation activities of these two networks, including exchanging and disseminating research findings and best practices, sharing and promoting the use of standardized tools, sharing expertise and supporting research activities.

Responding to health emergencies

28. The Eastern Mediterranean Region hosts the largest number of people in need of humanitarian assistance globally, is the source of the largest number of forcibly displaced persons, and hosts the largest number of forcibly displaced people. Of the 131.7 million people in need of aid globally in 2018, 70.2 million (53.3%) lived in the Region – at least 80% of that need is driven by conflict. The Region also faced increased population movement due to forced displacement and migration. By the end of 2018, 70.8 million people were forcibly displaced worldwide – including refugees and internally displaced persons. Of these, 32.1 million (45.3%) originate from the Region, while 25.4 million continue to reside in the Region.

29. During 2018–2019, WHO responded to 14 graded emergencies in the Region, including three at Grade 3, nine at Grade 2 and two at Grade 1. These included newly graded emergencies in Djibouti (malaria), the Islamic Republic of Iran (flood) and Pakistan (HIV), and the declaration of protracted emergencies in Iraq. Of the 14 graded emergencies, eight were due to conflict, four due to outbreaks and two due to natural disasters. In addition, several countries experienced multiple emergencies, including in the context of complex humanitarian crises (for example, the cholera outbreak complicating the ongoing conflict in Yemen).

30. In accordance with the principles of the *Emergency response framework*, WHO activated the incident management system to fulfil its six critical functions and scaled up operational and technical support to immediately address the health needs of, and risks facing, the affected population. Working with partners, WHO supports national response activities in emergency countries including increasing the quality and coverage of health services, strengthening primary and secondary health and hospital care by operating mobile teams and health facilities, improving surveillance and early warning systems, conducting vaccination campaigns, distributing medicines and supplies, and training health workers.

31. Since 2018, roughly 2.6 million people have been targeted for vaccination against cholera in 15 districts in Yemen. The initial campaign, together with other control efforts, played a major role in controlling the outbreak in 2018. However, due to complex and interrelated risk factors, an increase in cholera cases again occurred during the first quarter of 2019. A comprehensive response has been escalated by WHO, local health officials and partners, and includes strengthened surveillance, case management, risk communications/community engagement, water and sanitation, and oral cholera vaccination. During the second quarter of 2019, a progressive decline in cases was being documented.

32. To help Yemeni children suffering from medical complications due to malnutrition, WHO established 25 therapeutic feeding centres in 2018 (bringing the total number of functional centres to 54 in 19 governorates). In total in the period 2017–2019, WHO treated more than 12 000 children, increasing the cure rate from 75% (2017) to 87% (2018). To ensure the functionality of the health system and continued provision of health services, WHO supported more than 6000 health workers in Yemen with payment incentives in 2018–2019, allowing them to report to work while continuing to support their families.

33. The minimum service package covers a set of health services which are deemed to be absolutely necessary to guarantee the basic health of the population. In Yemen, the package has made it possible to ensure basic health services for over 6.5 million Yemenis, supporting an estimated 125 health facilities and more than 2600 health care workers across the country. As the minimum service package continues to expand, the hope is that more men, women and children will be treated.

34. In the Syrian Arab Republic, WHO responded to simultaneous health emergencies in eastern Ghouta, northern rural Homs, and the southwest, northeast and northwest regions of the country. WHO monitored the availability of health services in almost 1100 hospitals and primary health care centres throughout the country and delivered medicines and supplies to where they were needed most. Almost 100 hospitals received essential medical equipment in 2018. WHO responded to the health needs of affected Syrians by deploying mobile teams to provide critical health care services for displaced populations, conduct emergency vaccination campaigns, and deliver medicines and medical supplies to health facilities in newly accessible areas. WHO responded to outbreaks of acute diarrhoea and typhoid fever in the north and hepatitis A in the south.

35. In Palestine, WHO supported advocacy for increased access to health, including patient referrals, faster importation procedures for medical supplies, and the availability of electricity in medical facilities. Support for alternative energy sources (including solar) for health facilities was also provided. The Surveillance System for Attacks on Healthcare project was consolidated in Palestine, and support was provided through the health cluster for information management including the Health Resources and Services Availability Mapping System (HeRAMS) survey and the information management unit.

36. WHO continued to support partners in delivering critically needed medicines and medical equipment, upgrading the trauma pathway, building the capacity of health workers to respond to growing health needs and reinforce the quality of trauma care in Gaza. The WHO Emergency Medical Teams initiative and its specialist cells (including orthopaedics, plastics and vascular) was expanded in the Gaza Strip, including 10 trauma stabilization points. WHO supported the Ministry of Health and the Palestine Red Crescent Society in establishing trauma stabilization points where wounded patients receive life-saving care close to the point of injury. The trauma stabilization points have been proven to save lives and have removed a burden of 41% of the trauma caseload from the already overwhelmed hospitals. Overall, it is estimated that between 435 and 1227 lives were saved from 30 March 2018 to 30 March 2019 through the improved trauma referral pathways and trauma management system.

37. As violence escalated in Tripoli, Libya, in May 2019, WHO deployed emergency medical teams with surgical capacities to hospitals, and delivered medicines and medical supplies to nearly 40 hospitals and primary health centres throughout the country. The supplies, which included emergency medicines, trauma kits and medicine for chronic diseases, are sufficient to treat at least 600 000 patients for at least 3 months.

38. Increasing violence in Sudan since the beginning of 2019 resulted in greater numbers of injured civilians requiring life-saving care. Attacks on health care were also reported. WHO advocated for the safety of health workers and health facilities, and ensured trauma medicines and supplies were available at hospitals receiving injured patients. To ensure an effective response to the ongoing outbreak of chikungunya, WHO and partners implemented response activities within the four key response pillars of health promotion, vector control, disease surveillance and case management as part of an overall chikungunya virus preparedness and response plan.

39. Ahead of the International Conference for Reconstruction of Iraq, held in Kuwait in February 2018, WHO called on the international community to further invest in Iraq's devastated health sector. In areas hosting displaced populations, as well as in areas receiving returnees, WHO supported the health system through the deployment of mobile medical clinics, establishing static primary health care centres and health facilities, and establishing or providing incentives for prosthetics rehabilitation centres to enable amputees to access prosthetic services.

40. In Afghanistan, WHO is scaling up support to strengthen the capacity of blood bank services at the national and subnational levels. Plasma separation, which can be used to treat a wide range of diseases, is now available in 10 regional and provincial hospitals around the country. Other equipment is also provided so that gathering, testing, storing and preserving blood can become safer and more effective. Safe blood donation is ensured through training health care providers on blood transfusion and blood bank management, supporting the blood transfusion service surveillance system and developing national guidelines and standards for blood transfusion.

41. To support people affected by drought in Afghanistan, WHO is supporting the basic package of health services for implementers to begin rapid response to areas at greatest threat. WHO also sends medicines and medical supplies to health facilities in prioritized drought-affected areas.

42. WHO works to ensure that appropriate response is provided to maintain and strengthen essential health services and systems in fragile, conflict and vulnerable settings. The new HeRAMS platform was deployed in Pakistan and Sudan, and users were trained to track the functionality of health system services in fragile settings. A three-day regional geographic information system (GIS) training-of-trainers course was conducted to initiate building of regional GIS capacity; national health data repositories gathering all public health event-related information have been initiated in Jordan; support was provided for the information management function of health clusters; tools and products to support the function were developed; and support was provided for the reorganization of the information management function in Yemen.

43. The EOC is a forum, both physical and virtual, to coordinate effective and efficient interventions across the emergency management cycle through the implementation of standard operating procedures. The regional EOC was established in January 2018, with support from the Centers for Disease Control and Prevention (CDC), with concept of operations developed for three modes of operation (watch, alert and response). An associated EOC handbook, emergency operations plan and hazard-specific annexes were developed in March 2018, including responsibilities for functions of the incident management system. A table-top simulation exercise was conducted with the support of CDC, and after-action review recommendations were produced. WHO and six Member States participated in a global EOC simulation exercise in December 2018 to simulate responding jointly and effectively to a global public health emergency.

44. A central component of the WHO Health Emergencies Programme is to build efficient partnerships for emergency management and to ensure that they are properly coordinated. WHO's main operational partnerships are the Global Health Cluster, Global Outbreak Alert and Response Network and Emergency Medical Teams initiative. Each has comparative advantages, with expertise, capacities and field presence across different types of emergencies.

45. The Global Health Cluster (GHC) is the largest operational partnership working in humanitarian settings. There are 10 active health clusters at country level in the Eastern Mediterranean Region providing essential coordination, operating out of 30 national and sub-national hubs. These clusters include networks of hundreds of health partners, serving the health needs of 57.1 million people. At country level, clusters represent the most important coordination mechanism within the health sector and with other sectors, such as nutrition and water and sanitation. The Regional Office and countries in the Region are active participants in the two annual meetings conducted by GHC for partners and health cluster coordinators. The Regional Office organized the first regional health cluster coordination meeting in November 2018.

46. Emergency medical team are self-sufficient teams that can augment clinical capacities during the response to emergencies from all hazards – natural disasters, conflict and outbreaks. The EMT initiative is expanding across the Region. Several countries have already established EMTs, with awareness workshops being conducted in nine countries, and initial contact was established with 17 countries. Training for emergency medical team mentors was provided to support Member States to develop emergency medical teams. A regional concept note for trauma care was developed, and a draft support structure and terms of reference for trauma care in the form of a regional cell were developed.

47. The Regional Office manages the regional network of expert institutions, which consists of experts and technical institutions to support international outbreak response. Two experts on clinical case management and infection prevention and control, from a Global Outbreak Alert and Response Network (GOARN) partner institution in Thailand, were deployed to support the response to the dengue fever outbreak in Pakistan in 2018. There are 12 GOARN partner institutions in the Region that play an important role in supporting global efforts to respond to outbreaks and other public health emergencies.

48. In 2018–2019, a number of countries started implementation of the Attacks on Health Care (AHC) initiative, including Afghanistan, Libya, Palestine, Syrian Arab Republic and Yemen. Some other countries

in the Region have initiated their own systems for monitoring health attacks, notably Iraq. The AHC initiative, a priority of WHO's Health Emergencies Programme, was established in 2015 and is grounded in resolution WHA65.20 which calls on WHO to provide leadership at the global level in developing methods for the systematic collection and dissemination of data on attacks on health facilities, health workers, health transports and patients in complex humanitarian emergencies. The vision of the initiative is that essential life-saving health services must be provided to emergency-affected populations unhindered by any form of violence or obstruction. During 2018, WHO's Surveillance System on Attacks on Health Care documented 725 attacks in the Region resulting in 137 deaths. At country level, steps were taken to prevent and mitigate such attacks by increasing awareness of international humanitarian law and the right to health, as well as various physical measures to limit the impact of attacks on health infrastructure.

Progress of States Parties in implementing the IHR (2005), including Report of the Regional Assessment Commission

IHR monitoring and evaluation framework

49. In accordance with Article 54 of the IHR (2005), States Parties within the Eastern Mediterranean Region have continued to produce annual reports to WHO on the achievement of IHR-related core capacities. In 2018, the annual reporting tool was modified to improve its alignment with the joint external evaluation (JEE) tool following a global consultative process with IHR national focal points. The revised annual reporting tool was introduced to States Parties in March 2018. In 2018, 22 countries submitted timely and complete annual reports. Reported data for 2018 are available via the Global Health Observatory. Analysis of IHR implementation across the Region shows that the highest average implementation scores were for capacities related to surveillance (75%) and zoonoses (72%), followed closely by IHR coordination (71%). Less well-performing areas included capacities related to managing chemical events (51%) and points of entry (52%), followed by managing radiation events (57%). Scores of the 13 IHR capacities for each country are presented in Annex 1.

50. WHO has continued to support countries in conducting joint external evaluation (JEE). As of March 2019, 18 countries have conducted the JEE: Afghanistan, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Tunisia and United Arab Emirates. The overall mean JEE score across the 19 technical areas is 3 ("developed capacity"). Scores for each of the technical capacities range between 1 and 5 across countries. Mean and range of score for the 19 technical capacities in the 18 countries are presented in Table 1.

51. Analysis of scores across the 18 countries shows a mean score of 4 ("demonstrated capacity") in the following areas: surveillance systems in place for priority zoonotic diseases/pathogens; vaccine coverage (measles) as part of national programme and vaccine access and delivery; diagnostics for priority pathogens; laboratory testing for priority diseases, referral of laboratory samples; analysis of surveillance data; capacity to summon support from multiple sectors to respond to public health emergencies and send and receive medical countermeasures and personnel. A mean score of 3 ("developed capacity") was detected in the following areas: legislation, multisectoral coordination and reporting of public health events using IHR systems; event-based surveillance; electronic real-time reporting system; real-time management of zoonotic disease, foodborne disease and food contaminants; health care-associated infection, prevention and control programmes; effective modern point-of-care and laboratory-based diagnostics; workforce development and particularly the uneven distribution of sufficiently skilled human resources at all levels of the health system; partner and public communications, community engagement and rumour management; public health preparedness and response plans for all hazards; emergency operations centres managed by the health ministry with defined incident management systems to coordinate the public health response to different emergencies; establishing requirements at points of entry to respond to public health emergencies; and public health management of chemical and radiation emergencies. A mean score of 2 ("limited capacity") was detected for surveillance of infections caused by drug-resistant pathogens, coordination for antimicrobial resistance and antimicrobial stewardship; whole-of-government systems for biosafety and biosecurity including training; laboratory quality system; workforce strategy for IHR implementation and risk communication system.

Table 1. Average and range of IHR technical capacities for 18 countries in the Region, based on JEE

Technical areas	Mean	Minimum	Maximum
Legislation	3	1	5
Coordination/reporting	3	1	5
Antimicrobial resistance	2	1	5
Zoonoses	3	1	5
Food safety	3	1	5
Immunization	4	1	5
Laboratory	3	1	5
Biosafety and biosecurity	2	1	4
Surveillance	3	1	5
Reporting	3	1	5
Workforce development	3	1	5
Preparedness	3	1	5
Response	3	1	5
Medical countermeasures	4	1	5
Linking public health and security	4	1	5
Risk communications	3	1	5
Points of entry	3	1	5
Chemical	3	1	4
Radiation	3	1	5

52. The Regional Office supported a Region-wide simulation exercise concerning the potential importation of Ebola virus disease. Several elements of the regional EOC were tested including incident management systems, rapid deployment to support affected countries, capacity to scale up preparedness, and operational readiness capacity in other countries. Some recommendations were made to enhance regional capacity, particularly in the areas of internal coordination and communications, operational incident management systems, and producing written standard operating procedures. The Regional office also provided training in conducting national simulation exercises for all countries in the Region. As an initial and key part of national exercises, participants were instructed in how to design and implement table-top exercises to test plans and procedures outlining their IHR capacities. WHO also supported simulation exercise in Iraq, Jordan, Palestine, Pakistan and Tunisia to test national responses to acute public health events. The 2017 *WHO simulation exercise manual* has been translated into Arabic and French. An after-action review was conducted for the Islamic Republic of Iran to evaluate the earthquake response, for Morocco to evaluate the response to Brucellosis outbreak and for Pakistan to evaluate the response to dengue fever outbreak, with similar activities planned in Tunisia (measles outbreak) and Oman (dengue fever outbreak).

National action plans for health security

53. WHO has continued to provide support in developing national action plans for health security following the JEE missions, and matching them with domestic resources and implementation partners. National-level workshops were conducted for relevant sectors to prioritize and address gaps in their IHR implementation, including those highlighted within JEE reports and other IHR-related assessments. Thus far, 17 countries in the Region have completed and costed their national action plans for health security: Afghanistan, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Tunisia and United Arab Emirates. These plans are in different phases for endorsement.

54. The Regional Office has developed and revised a user-friendly costing tool and guidance for the effective costing of activities across the 19 JEE technical areas. Furthermore, the Regional Office is working with partners (technical and financial) to map and cross-walk national health security needs with available support via a regional network.

Procedures under the Regulations

Event-related information

55. Within the Region, a total of 1372 signals were captured, out of which a total of 45 new public health events were recorded in WHO's event management system between 1 July 2018 and 21 April 2019 – the majority being biological events (30), followed by hydro-meteorological (8), societal (6) and geological (1). Fifteen updates were posted on the event information site (EIS), the electronic platform that WHO utilizes to communicate with IHR national focal points to convey updates on event management of public health threats globally.

Additional health measures

56. The Regional Office is monitoring States Parties' compliance regarding additional health measures, in accordance with Article 43 of the Regulations. The Regional Office held dialogues with six States Parties concerning the implementation of additional health measures and has been providing them with the necessary advice to avoid interference with international traffic and movement of people and goods. Advice has also been given to three States Parties concerning entry screening in the context of MERS-CoV, cholera and Ebola.

National IHR focal points

57. Continuous support has been maintained with IHR national focal points to enhance their capacities and provide them with requested information related to their functions, public health events, travel-related measures and points of entry, IHR capacities, and creating related national plans. A series of meetings was conducted with IHR national focal points to strengthen their capacity and scale up preparedness and operational readiness capacities for specific events.

58. All IHR national focal points in the Region accessed the Event Information Site (EIS) at least once in 2018, with the focal points of Bahrain, Egypt, Islamic Republic of Iran, Oman, Qatar and United Arab Emirates being the most prolific users of the site. The EIS was most frequently visited in the months of January, March, May and October.

59. Under Article 10, concerning verification, the IHR (2005) stipulate that Member States provide information requested regarding potential public health events in a timely fashion. During the period from June 2018 to May 2019, verification requests for 209 signals for potential public health threats were sent to WHO national focal points who sought verification from Member States; these were all diligently addressed, albeit not comprehensively, in the timely fashion required by the Regulations.

60. The Regional Office is planning to conduct a simulation exercise to test communication between the regional WHO IHR contact point and the national IHR focal points in countries.

IHR roster of experts

61. Established by the Director-General under Article 47 of the Regulations, the IHR expert roster currently includes 443 active members globally. As of May 2019, 38 (8%) of these experts are from the Region. Nomination of more experts from the Region in the different IHR fields of expertise is encouraged.

Points of entry

62. Under Article 20 of the IHR, States Parties are required to provide WHO with a list of all national ports, specifically noting those which are authorized for the issuance of Ship Sanitation Control Certificates and Ship Sanitation Control Exemption Certificates, including their extensions. Of the 103 reported ship ports, 76 (74%) are authorized to issue Ship Sanitation Control Certificates.

Yellow fever

63. As at 6 February 2019, 13 countries (Afghanistan, Bahrain, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Pakistan, Saudi Arabia, Somalia and Tunisia) had responded to the annual questionnaire on requirements for yellow fever vaccination for international travellers. Currently, 13 countries request a vaccination certificate against yellow fever for incoming travellers. Of these, only eight countries have confirmed that the international certificates of vaccination against yellow fever, using WHO-approved vaccines, are now accepted as valid for the life of the person vaccinated, as they should be in accordance with Annex 7 of the Regulations, as amended by resolution WHA67.13 (2014).

Strengthening national public health preparedness capacities

64. The Regional Office convened its seventh meeting of IHR stakeholders, a platform bringing together diverse national sectors and technical partners to discuss regional IHR implementation. Strengths and gaps that need regional and global support were highlighted at the meeting.

65. Mapping of hazards and the development of national all-hazards public health preparedness and response plans were supported in Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Pakistan, Qatar, Somalia, Sudan and Tunisia.

66. A regional plan of action is being developed to promote the health of refugees and migrants and ensure their inclusion in national public health preparedness and response plans.

67. Significant progress has been achieved in advancing One Health activities within the Region, and a collaborative strategy, the One Health operational framework for action for the WHO Eastern Mediterranean Region with focus on zoonotic diseases, has been developed based on JEE results. The joint risk assessment operational tool, utilizing expertise from animal, human and agriculture sectors, has been piloted in Pakistan, with further pilots planned in Egypt and Sudan. Furthermore, a multisectoral coordination mechanism tool, part of the tripartite zoonoses guide operational toolkit, was developed and piloted in the Region in 2019.

68. A subregional meeting to support preparedness for mass gatherings was held with a focus on Iraq and neighbouring countries. Seven countries with common mass gatherings discussed issues of concern including: improving coordination; conducting risk assessment; security and chemical, biological, radiological and nuclear response; mass casualty management; surveillance; and risk communication. Input generated from this meeting will be translated into a roadmap for improving mass gathering preparedness and response. Furthermore, a regional strategy for strengthening preparedness and response for mass gatherings is currently under development to bolster national-level preparedness activities, including support for mass gathering preparedness assessments and direct capacity-building and technical assistance.

69. A regional strategic framework for risk communication, along with an operational action plan, has been developed based on the JEE results. In addition, four diverse training packages on risk communication were developed to address specific country capacities and priority risks for the Region, such as Ebola. The Regional Office has also supported national-level efforts to strengthen risk communication including the development of national risk communication plans and capacity-building trainings, as well as supporting outbreaks with personnel deployment.

70. Support is being provided for building the IHR (2005) requirements at points of entry into Member States. Activities include the development of all-hazards public health emergency preparedness and response plans, providing public health advice in the context of travel and trade, and enhancing cross-border collaboration. The exemplar is Sudan and neighbouring countries concerning an agreed joint surveillance and response to common public health concerns. A bi-regional meeting was held in Khartoum where stakeholders agreed on new collaborative modalities to work synergistically, and support was provided for the development of memoranda of understanding and standard operating procedures. Additional cross-regional efforts are planned to support collaboration and coordination of seaports in the western

Mediterranean with Morocco. The Regional Office also supported ship sanitation certificate training and IHR assessments at specific points of entry in the Region in 2018.

71. Multisectoral coordination among relevant sectors is in place, but needs further strengthening and operationalization. The Regional Office has developed and revised guidance on the IHR multisectoral committee and the linkages such a committee should have with the other coordination structures in a countries.

72. During 2018, support was given to eight countries (Kuwait, Lebanon, Islamic Republic of Iran, Morocco, Qatar, Sudan, Somalia and Tunisia) to develop their risk profile using the WHO Strategic Tool for Assessing Risk (STAR). WHO also developed a planning package for all-hazards emergency preparedness and response planning for the health sector. Support was given to the same eight countries to develop their preparedness and response plan using the WHO template.

IHR Regional Assessment Commission

73. The IHR Regional Assessment Commission (IHR-RAC) was established at the request of the 62nd session of the Regional Committee in 2015, which issued resolution EM/RC62/R.3, in which it urged WHO to establish an independent commission to assess the implementation of the Regulations and the required core capacities. The commission would also advise Member States on issues relating to IHR implementation.

74. The IHR-RAC held its fourth meeting in parallel with the seventh annual IHR stakeholders' meeting in December 2018. At the meeting, IHR-RAC members discussed the progress in regional IHR implementation and strategic steps necessary for both WHO and Member States to accelerate progress. The Commission noted the dynamic in Member States regarding health security, particularly concerning the implementation of IHR, including in countries with difficult internal situations. The Commission acknowledged the support provided by WHO to Member States to accelerate implementation through: provision and explanation of assessment tools; support for planning; technical expertise; risk communication; and opening perspectives. The Commission noted progress of the JEE in the Region, with 17³ out of 22 countries completing their assessment, and the emphasis on national action planning after JEE. The key recommendations made to WHO and countries are outlined in the two paragraphs below.

75. The IHR-RAC recommended WHO to continue to support countries in developing their all-hazards preparedness and response plans as an integral part of overall health system preparedness. WHO should focus on methodology, tools and guiding documents for simulation exercises and facilitate the organizing of exercises in countries, based on the prioritization of risks for each country, to identify gaps in their preparedness. Technical support should be continued to incorporate risk communication into strategic planning and further the development of risk communication tools.

76. The IHR-RAC urged countries to prioritize border control and population movement, given the instability in the Region, and to focus on cross-collaborative solutions with neighbouring countries. In addition, countries should: ensure that public health emergency preparedness and response plans for all hazards are updated and functional; expand efforts to enhance One Health; continue mutual assistance to countries in implementing their national plans for health security; and work together towards achieving universal health coverage, as envisioned by the regional five-year strategic plan for public health preparedness and response.

³ At the time of the IHR-RAC meeting in December 2018.

Five-year regional strategic plan to improve public health preparedness and response

77. In response to decision WHA71(15), the Regional Office is developing a five-year regional strategic plan to improve public health preparedness and response, 2019–2023. The plan builds on the guiding principles of the global plan: consultation; country ownership and leadership; WHO’s leadership and governance; broad partnerships; an intersectoral approach; integration with the health system; community involvement; a focus on countries at greatest risk of emergencies and outbreaks; regional integration; domestic financing; linking with requirements under the IHR (2005); and a focus on results, including monitoring and accountability.

78. A draft regional plan was discussed at the sixth annual IHR stakeholders meeting in 2017. The modified draft was shared with IHR national focal points for feedback, and further discussed in the seventh stakeholders meeting and the fourth meeting of the IHR-RAC.

79. The regional plan takes into account the components of the IHR monitoring and evaluation framework – mandatory annual reporting, JEE, simulation exercises, and after-action reviews. The strategy also draws upon numerous departments outside the WHO Health Emergencies Programme to inform priority activities, thus collectively providing a wealth of experience and knowledge as well as a comprehensive understanding of collective regional needs to inform strategic technical assistance on improving and preparedness and response under the IHR.

Annex 1

International Health Regulations (2005): national capacity monitoring. Capacity scores (%) for all reporting States Parties for 2018

Member States	Legislation	Coordination	zoonoses	food safety	laboratory	surveillance	HR	National Health Emergency Framework	Health service Provision	risk communication	PoE	Chemical	Radiation
Afghanistan	13	60	80	20	40	80	40	27	40	20	10	0	20
Bahrain	87	100	100	100	67	60	100	87	87	100	100	80	80
Djibouti	27	50	40	80	33	100	60	20	27	20	30	0	0
Egypt	93	90	80	80	87	90	80	100	73	60	90	60	80
Iran, Islamic Republic of	100	80	60	80	100	80	80	100	100	80	60	100	80
Iraq	53	90	100	60	73	100	100	87	80	100	80	40	100
Jordan	20	30	60	40	47	80	80	80	47	40	40	40	20
Kuwait	33	80	40	80	80	50	60	47	53	20	60	40	80
Lebanon	87	100	80	40	80	60	40	60	60	40	30	40	40
Libya	33	40	60	20	60	80	80	27	27	20	0	40	40
Morocco	87	50	80	80	80	80	80	80	67	80	70	80	60
Oman	100	100	100	100	100	100	100	100	100	100	100	100	100
Pakistan	27	80	60	40	60	60	60	47	33	20	40	40	100
Palestine	20	20	20	0	60	40	40	27	7	0	0	0	0
Qatar	87	80	100	100	100	100	100	100	100	80	50	60	80
Saudi Arabia	73	70	40	80	60	40	80	80	60	80	70	80	80
Somalia	20	50	60	20	27	50	20	20	53	20	20	20	20
Sudan	60	90	80	80	67	70	60	93	53	80	30	40	40
Syrian Arab Republic	80	90	80	40	67	80	80	53	80	80	80	80	80
Tunisia	60	70	80	60	93	80	60	67	67	60	60	60	40
United Arab Emirates	100	100	100	100	100	90	60	100	100	100	80	100	100
Yemen	47	40	80	40	67	80	80	60	47	60	40	20	20