

In 2019, WHO continued to support its Member States in the Eastern Mediterranean Region to contain outbreaks and build country capacities to prevent, prepare for, detect and respond to health threats posed by emerging and pandemic-prone diseases.

In 2019, WHO worked closely with Member States in the Region to:

build national capacities to better manage disease outbreaks;

develop regional strategies, standards, guidelines and protocols based on technical areas (such as epidemiology, laboratory, human-animal interface and others) for generic preparedness and response measures to emerging and epidemic-prone diseases;

support outbreak management to 12 countries in the Region that have experienced one or more disease outbreaks, including cholera, chikungunya, chicken pox, Crimean-Congo haemorrhagic fever, dengue, diphtheria, hepatitis A, HIV, malaria, measles, Middle East respiratory syndrome (MERS), Rift Valley fever and extensively drug-resistant typhoid fever;

build and strengthen influenza surveillance systems across the Region to improve preparedness and response for seasonal, zoonotic and pandemic influenza threats;

provide guidance for preparedness and response during the influenza season;

ensure public health preparedness in Saudi Arabia to prevent any potential disease outbreaks during the Hajj season;

build the capacity of rapid response teams across the Region to enhance timely outbreak investigation and response for emerging infectious diseases;

strengthen laboratory diagnostic capacities in Member States, especially those facing multiple emergencies such as Sudan, Syrian Arab Republic and Yemen;

develop risk communication and communication engagement plans to combat influenza in priority countries;

upgrade electronic solutions for Early Warning Alert and Response Network (EWARN) systems in countries with complex emergencies such as Djibouti;

evaluate the implementation of the EWARN system using standard protocols;

introduce EWARN in countries with underperforming surveillance systems, such as Djibouti;

enhance public health emergencies response capacities through the expansion of partnerships with global and regional networks such as the Global Outbreak Alert and Response Network (GOARN), the Eastern Mediterranean Acute Respiratory Infection Surveillance Network (EMARIS) and other expert networks; and

address knowledge gaps, produce knowledge products and gather evidence and best practices and share those to help front-line health workers prevent and control emerging diseases.

The following photo essay covers some of the major activities in these areas undertaken by WHO staff in 2019 in support of ministries of health and in coordination with regional and global health partners.



WHO experts advise disease control ministry (Photo: WHO)
Cholera in Yemen

WHO has increased technical support to Yemen, which has been facing the worst cholera outbreak in history. The outbreak has affected more than 2.2 million people and cost almost 4,000 lives since it started in 2016. In 2019, WHO deployed experts in areas ranging from oral cholera vaccination to epidemiology, laboratory, water and sanitation, and community engagement and health promotion, to contain the outbreak.

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[WHO experts sustain decrease in new cholera cases and deaths in Yemen](#)

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2 / 17



A woman washes her hands outside the cholera treatment centre at Banadir hospital in Mogadishu, Somalia. (Photo: Karel Prinsloo/Arete/Gavi)

Cholera in Somalia

Since the current outbreak started in December 2017, Somalia has reported 9,258 suspected cholera cases and 48 associated deaths. Although the outbreak is dwarfed by that in nearby Yemen, it is nevertheless a pressing concern for WHO and the health authorities, given the vulnerable state of Somalia's health system and population.

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[Somalia: ending the spectre of cholera](#)

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3 / 17



WHO and experts from the Ministry of Health speaking with the mother of a child with measles. (Photo: WHO/Sherein Elnossery)

Measles in Tunisia

As part of a regional effort to reduce measles infections and deaths, the WHO Regional Office supported Tunisia's Ministry of Health to investigate the measles outbreaks and implemented a massive immunization campaign to reach all unvaccinated people, including those in hard-to-reach communities.

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[Measles in Tunisia: filling gaps in an already strong national immunity](#)

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4 / 17



Trainers demonstrating the wearing of personal protective equipment

Building rapid response team capacities

Rapid response teams are a crucial part of the preparedness and response for emerging and re-emerging infectious disease outbreaks in WHO's Eastern Mediterranean Region. For this reason, WHO organized a workshop in Cairo for over 50 experts in surveillance, field epidemiology, infection control and laboratory work. The workshop helped build their capacities in investigation and response against MERS and other respiratory disease outbreaks as part of their countries' rapid response teams.

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[WHO builds rapid response team capacity in Eastern Mediterranean Region with Japan's support](#)
[More about MERS](#)

5 / 17



Working groups identify steps related to the emergency risk communication lifecycle during the Jordan workshop. (Photo: WHO)

Risk communication in Jordan

Jordan became the first country in the Region to implement three components of the [emergency risk communications \(ERC\) 5-step capacity-building package](#), which include training, capacity-mapping and plan writing. This training was part of national efforts to strengthen ERC capacity under the International Health Regulations (2005) and contribute to the implementation of Pandemic Influenza Preparedness Framework with the support of WHO. Later in the year, Morocco became the second country to hold the workshop, and more countries are to follow.

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[Jordan: First country in the Region to start implementing WHO's emergency risk communication package](#)

[More about the Pandemic Influenza Preparedness Framework](#)

[More about International Health Regulations \(2005\)](#)

[More about Jordan](#)

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6 / 17



WHO experts monitoring HIV screening services in Ratodero, Larkana District, Pakistan.
(Photo: WHO)

HIV in Pakistan

The HIV outbreak in Pakistan, which infected 1,204 people in the Larkana district of Sindh province (956 of them young children) as of 9 December 2019, was most likely due to unsafe injection practices and poor infection control in health facilities. WHO deployed experts to Larkana district after the Ministry of National Health Services, Regulation and Coordination of Pakistan requested support for an investigation into the situation to establish the extent of the outbreak, identify its causes, propose immediate response measures and recommend programmatic improvements.

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[WHO and partners mobilize antiretroviral drugs for HIV-positive children in Pakistan](#)

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7 / 17



Dr Ahmed Al-Mandhari, WHO Regional Director for the Eastern Mediterranean, with

government officials and ambassadors from GCC member countries (Photo: Hassan Al Bushra)

Regional Director and Director of Health Emergencies in Sudan

Dr Ahmed Al-Mandhari, WHO Regional Director for the Eastern Mediterranean, and Dr Richard Brennan, Director of Health Emergencies, visited Sudan in the last week of October 2019 to support the country's efforts to prepare and respond to multiple disease outbreaks and discuss with UN agencies and donors how best to support the Ministry of Health in containing the ongoing outbreaks. Since 8 September 2019, Sudan's Ministry of Health had declared six disease outbreaks of cholera, chikungunya, dengue, diphtheria, malaria and Rift Valley fever.

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8 / 17



Dr Ibrahim El-Ziq, WHO Representative in Saudi Arabia and other WHO experts monitoring the level of preparedness during the Hajj in one of referral hospitals in Arafat, Mecca, Saudi Arabia. (Photo: WHO)

Ensuring public health preparedness during Hajj

Hajj 1440/2019 came at a time of numerous threats to global public health. WHO deployed a team of experts to support the Ministry of Health in Saudi Arabia in ensuring that public health preparedness measures were in place to prevent any potential disease outbreaks. The Health Early Warning System (HEWS) tool, which was developed by the Saudi Ministry of Health in collaboration with WHO, was piloted in health facilities serving the pilgrims to facilitate timely detection and response of disease outbreaks. During the course of its mission, the WHO team

visited health care centres and hospitals in Mena, Muzdalefa and Arafat to see first-hand the work done on the ground. The field visits showed that the HEWS system was in place and functioning well.

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[Hajj health and safety boosted by new Health Early Warning System](#)

[WHO statement on successful conclusion of hajj 1440/2019](#)

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9 / 17



WHO experts visited the central public health laboratory in Damascus, Syrian Arab Republic, together with Ministry of Health officials. (Photo: WHO)

Laboratory support in the Syrian Arab Republic

As part of ongoing efforts to strengthen laboratory services in the Syrian Arab Republic, WHO conducted an in-country mission to review the condition of public health laboratory services and identify priority areas for improvement. The mission also provided support to national stakeholders on the self-assessment process of joint external evaluation as defined by the International Health Regulations (2005). The assessment covers technical laboratory areas as well as planning with national counterparts for future activities to enhance laboratory services in the country.

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[Joint external evaluation tool](#)

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10 / 17



Djibouti (Photo: WHO) Demonstrating the electronic EWARN application to surveillance officers in
EWARN launched in Djibouti

The Early Warning Alert and Response Network (EWARN) was launched in Djibouti with the support of WHO to strengthen the country's surveillance system for priority and epidemic-prone diseases. The electronic system will allow health authorities to receive high quality and timely epidemiological data that is accurate, complete and available on a real-time basis.

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[Early Warning Alert and Response Network launched in Djibouti to detect epidemic-prone diseases](#)

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11 / 17



Participants from the Ministry of Public Health in Yemen and WHO at a preparatory eDEWS evaluation workshop in Amman, Jordan. (Photo: WHO)

Disease surveillance in Yemen

WHO in collaboration with the Yemeni Ministry of Public Health organized a workshop to develop a methodology and action plan for the evaluation of the country's surveillance system which is based on the Early Warning Alert and Response Network (EWARN). The workshop aimed to train participants on how the EWARN system functions, assess its effectiveness and usefulness to detect, confirm and respond to priority diseases, and provide recommendations and practical measures to improve system performance.

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[Evaluating Yemen's disease surveillance and early warning system](#)

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12 / 17



Rapid response team member in Sudan's Sennar State being trained on the use of rapid diagnostic tests for cholera. (Photo: WHO)

Enhancing cholera diagnosis in Sudan

As part of its efforts to support the Government of Sudan to address the cholera outbreak declared by the Federal Ministry of Health on 8 September 2019, WHO conducted a technical mission to review the readiness of central and state-level laboratories for the detection and confirmation of cholera. The assessment identified short-term and long-term priorities covering the areas of laboratory diagnostic capacity, quality assurance, the cholera referral system and rapid diagnostic tests.

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[WHO supports Sudan to enhance cholera diagnosis at its laboratories](#)

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13 / 17



EWARN evaluation protocol (Photo: WHO)
EWARN evaluation for the Region

A process has begun to strengthen the Early Warning Alert and Response Network (EWARN) by reviewing and updating its evaluation protocol. As part of the process, WHO held a workshop in Amman, Jordan, to share and discuss the experiences of countries in using the EWARN evaluation protocol, including in Afghanistan, Bangladesh, Chad, Niger, Pakistan, Somalia and the Syrian Arab Republic.

Related links

[Updating the EWARN evaluation protocol for the Region](#)

[More about EWARN](#)

[New EWARN handbook to enhance quality of epidemiological surveillance in humanitarian emergencies](#)

14 / 17



WHO experts assessing influenza laboratory capacities in Iraq. (Photo: WHO)

Strengthening the influenza surveillance system in Iraq

To improve the influenza surveillance system and overall national influenza pandemic preparedness in Iraq, WHO conducted a mission to assess the surveillance system and laboratory capacity, and identify potential sentinel surveillance sites. As a result of the mission, the Ministry of Health agreed to establish two model surveillance sites for severe acute respiratory infections (SARI) at Kadhmiya and Nu'man hospitals that will implement WHO influenza surveillance protocols with technical support from WHO.

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[Strengthening Iraq's influenza surveillance system](#)

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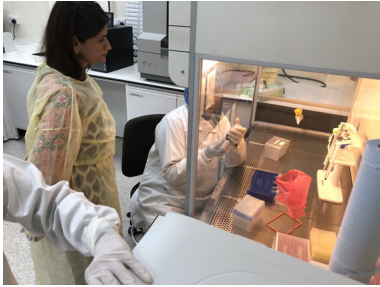
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[FluNet – a tool for global influenza virological surveillance](#)

15 / 17



Laboratory technicians from 11 countries were trained on influenza sequencing and molecular phylogenetic analysis in Muscat, Oman. (Photo: WHO/A. Barakat)

Improving influenza sequencing capacity in the Region

Ensuring the availability of adequate regional and national capacities to perform genetic sequencing analysis of influenza viruses is one of the priorities for WHO's Eastern Mediterranean Region. For this reason, laboratory technicians from 11 national influenza centres across the Region attended an eight-day training workshop to improve their knowledge and skills in influenza sequencing and molecular phylogenetic analysis for the timely identification of genetic changes in emerging influenza viruses. The workshop also provided participants with training tips to help them share their newly-gained knowledge and materials with their laboratory colleagues back home.

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[WHO supports improvement of regional influenza sequencing and molecular phylogenetic capacity](#)

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16 / 17



Panellist discussing global and regional influenza pandemic influenza preparedness during the biennial EMARIS meeting. (Photo: WHO)

Reviewing regional preparedness for pandemic influenza

The fifth meeting of the Eastern Mediterranean Acute Respiratory Infection Surveillance Network (EMARIS), organized by WHO and hosted by the Moroccan Ministry of Health, took place in Casablanca, Morocco, to discuss progress and challenges in strengthening surveillance and response capacities for seasonal and pandemic influenza and other acute respiratory infections. EMARIS constitutes a group of countries working together in the Region to strengthen and enhance influenza surveillance, improve the use of surveillance data to strengthen disease control programmes and conduct research related to influenza and other respiratory viruses.

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[Experts and researchers review regional preparedness for pandemic influenza and other respiratory diseases](#)

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17 / 17



Directors of national influenza laboratories at the two-day meeting in Casablanca, Morocco. (Photo: WHO)

National influenza centres meet in Morocco

Directors of national influenza laboratories in the WHO Eastern Mediterranean Region met for two days to discuss challenges and solutions in laboratory surveillance for seasonal, avian and other pandemic influenza viruses. The meeting, held in Casablanca, Morocco, also included representatives of WHO Collaborating Centres and other experts from across the Region. Participants from the Region's 22 countries reviewed the current functioning of national influenza centres and the support needed to strengthen their technical capacities for influenza surveillance, collaboration and information.

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