



Eastern Mediterranean Region

عربي Français

Donate

[Health topics](#) [Data and statistics](#) [Media centre](#) [Information resources](#)

[Epidemic and pandemic-prone diseases](#) | [Information resources](#) | Infectious disease outbreaks reported in the Eastern Mediterranean Region in 2022

[Countries](#) [Programmes](#) [About us](#)

Search

[Epidemic and pandemic-prone diseases](#)
[About the programme](#)
[Outbreaks](#)
[News](#)
[Related health topics](#)
[Information resources](#)
[Weekly situation updates](#)
[Weekly epidemiological monitor](#)
[Monthly situation updates](#)
[Resources by diseases](#)
[Yearly review](#)
[Annual disease outbreak reports](#)
[Meeting reports](#)
[Peer-reviewed articles](#)
[Applications](#)

Epidemic and pandemic-prone diseases

Infectious disease outbreaks reported in the Eastern Mediterranean Region in 2022

Summary

The WHO Eastern Mediterranean Region is considered one of the WHO regions most vulnerable to the grave impacts of complex emergencies, especially given its high frequency of natural disasters, armed conflicts, political and economic instability, and population displacement. This has contributed to the increased incidence and prevalence of infectious diseases in the Region.

In 2022, a total of 61 infectious outbreaks, excluding coronavirus disease 2019 (COVID-19), were reported from 20 countries/territories in the Region – a remarkable increase on the 31 outbreaks reported from 11 countries in 2021. Major outbreaks in 2022 included acute watery diarrhoea (AWD)/suspected cholera, Crimean-Congo haemorrhagic fever (CCHF), dengue, malaria, measles, Middle East respiratory syndrome (MERS), mpox (monkeypox) and poliomyelitis (polio).

This report summarizes the epidemiological distribution of the major outbreaks in the affected countries based on person, place and time. The outbreaks data are presented on a periodic basis using the epidemiological curve of cases and deaths. Where there is available information, the geographical distribution of cases and deaths is also presented, using maps.

Further, the report also includes a summary of the WHO outbreak response in the affected countries/territories, challenges faced by WHO and partners in reaching the most vulnerable populations, and recommendations for prevention, control and management of infectious disease outbreaks in the Region.

Responding to emergencies and disease outbreaks is a difficult challenge that requires multisectoral and well-coordinated efforts from all stakeholders, especially in fragile, conflict-affected and vulnerable (FCV) settings. Data-sharing issues between health ministries and WHO country offices and between country offices and the WHO Regional Office for the Eastern Mediterranean continue to be a major obstacle to these efforts.

WHO thus recommends the development of a unified platform for data sharing from the health ministries to the country offices and from those offices to the Regional Office.

The Global Outbreak
Alert and Response
Network in the
Eastern
Mediterranean Region

Pandemic Influenza
Preparedness
Framework

Emerging and
dangerous pathogens
laboratory network

Public health
laboratories

Timely and streamlined information sharing is indispensable to strengthen both the efficiency and effectiveness of outbreak response and significantly improve coordination.

Introduction: outbreaks situation in the WHO Eastern Mediterranean Region in 2022

In 2022, the WHO Eastern Mediterranean Region witnessed a substantial increase in the number of emergencies and infectious disease outbreaks due to multiple hazards. These included natural and climate change-associated disasters such as severe droughts, floods and earthquakes, in addition to human-made disasters such as conflicts and political unrest. The emergencies and outbreaks resulted in mass population displacements and, ultimately, limited access to basic needs such as shelter, food and safe drinking water.

A total of 61 outbreaks, excluding coronavirus disease 2019 (COVID-19), were reported in 2022 from 20 countries/territories in the Region – a rise on the 31 outbreaks reported from 11 countries in 2021.

The world is facing an upsurge in acute watery diarrhoea (AWD)/suspected cholera outbreaks, with a significant increase in the number of countries and populations affected, starting from mid-2021. Globally, 23 countries reported cholera outbreaks in 2021, while this number increased to 30 in 2022.

In 2022, AWD/suspected cholera outbreaks were reported from 8 countries of the Eastern Mediterranean Region: Afghanistan (suspected cases: 242 562; deaths: 87), Islamic Republic of Iran (confirmed cases: 367; deaths: 7), Iraq (suspected cases: 11 097; deaths: 24), Lebanon (suspected cases: 5422; deaths: 23), Pakistan (confirmed cases: 1002; deaths: 43), Somalia (suspected cases: 15 653; deaths: 88), Syria (suspected cases: 70 220; deaths 102) and Yemen (suspected cases: 21 178; deaths 21).

The recent cholera outbreaks in Lebanon and Syria are alarming as these 2 countries are not cholera-endemic and last experienced cholera outbreak 9 years and 20 years ago respectively. The current cholera outbreaks in the Region are disproportionately affecting children aged under 5 years: more than half of suspected cholera cases in Afghanistan (55%) and Somalia (65%) were children aged under 5 years. Meanwhile, children aged under 5 years accounted for about 26% and 24% of the suspected cholera cases in Lebanon and Yemen respectively.

The ongoing COVID-19 outbreak continued to be reported from all 22 countries and territories of the Eastern Mediterranean Region. By 31 December 2022, the global cumulative incidence of COVID-19 since the start of the pandemic had reached 651 922 986 confirmed cases, including 6 669 794 associated deaths, giving a case fatality ratio (CFR) of 1.02%. By the close of 2022, the Eastern Mediterranean Region had reported a total of 23 221 923 confirmed cases of COVID-19 – representing about 3.56% of the global magnitude – including 349 081 associated deaths (CFR: 1.5%).

In 2022, a total of 1759 suspected cases of Crimean-Congo haemorrhagic fever (CCHF), including 129 associated deaths (CFR: 7.40%), were reported from 2 countries of the

Region: Afghanistan (suspected cases: 389; deaths: 15) and Iraq (suspected cases: 1370; deaths: 114).

A total of 100 432 dengue cases, including 164 associated deaths (CFR: 0.16%), were reported in 2022 from 6 countries of the Region: Afghanistan (suspected cases: 1266; deaths: 2), Oman (suspected cases: 579; deaths: 0), Pakistan (confirmed cases: 62 995; deaths: 62), Somalia (suspected cases: 5350; deaths: 18), Sudan (suspected cases: 5264; deaths: 37) and Yemen (suspected cases 24 978; deaths: 45).

In 2022, a total of 3 606 981 suspected cases of malaria, including 262 associated deaths (CFR: 0.01%), were reported from 4 of the Region's countries: Djibouti (confirmed cases: 40 648; deaths: 0), Islamic Republic of Iran (confirmed cases: 4425; deaths: 0), Pakistan (suspected cases: 937 906; deaths: 0) and Sudan (suspected cases: 2 624 002; deaths: 262).

Globally, the number of suspected measles cases and the number of affected countries also significantly increased in 2022. There was a 79% year-on-year increase in the number of measles cases globally in the first 2 months of 2022, with children aged under 5 years the most affected age group.

In the Eastern Mediterranean Region, a total of 143 735 suspected measles cases, including 588 associated deaths (CFR: 0.41%), were reported from 8 countries: Afghanistan (suspected cases: 77 210; deaths: 388), Djibouti (suspected cases: 209; deaths: 0), Islamic Republic of Iran (suspected cases: 10 620; deaths: 0), Pakistan (suspected cases: 17 737; deaths: 117), Somalia (suspected cases: 17 361; deaths: 0), Sudan (suspected cases: 3310; deaths: 4), Syria (suspected cases: 6309; deaths: 2) and Yemen (suspected cases: 10 979; deaths: 77). This acute increase in the number of measles outbreaks in the Region is alarming and indicates an urgent need to strengthen routine immunization programmes in the affected countries.

Further, in 2022, a total of 9 cases of Middle East respiratory syndrome (MERS), including a single associated death (CFR: 11.11%), were reported from 3 of the Region's countries: Oman (confirmed cases: 2; deaths: 1), Qatar (confirmed cases: 2; deaths: 0) and Saudi Arabia (confirmed cases: 5; deaths: 0). During the period April 2012 to December 2022, a total of 2603 laboratory-confirmed MERS cases were reported globally, including 935 associated deaths (CFR: 36%). Saudi Arabia accounted for most of the confirmed cases (2194) and deaths (854) reported (CFR: 39%).

Globally in 2022, 110 countries cumulatively reported 84 000 confirmed cases of mpox (monkeypox), including 80 associated deaths (CFR: 0.10%). Most of the cases were reported by the United States of America (29 000), followed by Brazil (10 680), Spain (7514), France (4114), Colombia (4000), United Kingdom of Great Britain and Northern Ireland (3735), Peru (3711), Mexico (3696), Germany (3684) and Canada (1460).

In the Eastern Mediterranean Region, 10 countries reported 80 confirmed mpox cases, including a single associated death (CFR: 1.25%), which occurred in Sudan. Most cases were in Lebanon (24 cases), followed by Sudan (18), United Arab Emirates (16), Saudi Arabia (8), Qatar (5), Morocco (3), Egypt (3), Bahrain (1), Islamic Republic of Iran (1) and Jordan (1).

Additionally, a total of 22 confirmed cases of wild poliovirus type 1, including zero associated deaths, were reported from Afghanistan (2) and Pakistan (20) in 2022. This indicates a significant year-on-year increase in the number of wild poliovirus type 1 cases, as only 5 cases were reported from Afghanistan (4) and Pakistan (1) in 2021, again with zero associated deaths.

Three countries reported a total of 164 cases of circulating vaccine-derived poliovirus type 2 (cVDPV2) during 2022: Somalia (1), Sudan (1) and Yemen (159). This also indicates an increase compared with 2021, when 118 cVDPV2 cases were reported from 4 countries: Afghanistan (43), Pakistan (8), Somalia (1) and Yemen (66). No cases of circulating vaccine-derived poliovirus type 1 (cVDPV1) were reported in the Region in 2022; just 3 cVDPV1 cases were reported from Yemen in 2021.

Outbreaks response in 2022

Throughout 2022, the WHO Regional Office for the Eastern Mediterranean continually supported the health ministries in the affected countries/territories with the prevention, control and management of the outbreaks and worked closely with the health authorities and partners to reduce morbidities and mortalities resulting from these outbreaks.

The Infectious Hazard Prevention and Preparedness (IHP) unit of the Regional Office supported the affected countries/territories to develop and implement outbreak preparedness and response plans and improve coordination for all outbreak response pillars :

- coordination and leadership
- surveillance and outbreak detection
- laboratory confirmation and diagnostics
- case management
- water, sanitation and hygiene (WASH)
- risk communication and community engagement (RCCE).

WHO supported the establishment/enhancement of molecular diagnostic laboratory capacity in the Eastern Mediterranean Region, and trained laboratory technicians on standard and updated sample collection, transportation, and testing techniques. WHO also supported oral cholera vaccine (OCV) campaigns in 2022 in 5 countries of the Region: Lebanon (55% coverage), Pakistan (96% coverage), Somalia (95% coverage), Syria (93% coverage) and Yemen (88% coverage). Cumulatively, more than 8.3 million people (95.4% coverage) aged 1 year and over were vaccinated against cholera in these countries in 2022.

In addition, the countries and territories of the Region conducted regular COVID-19 tests, and vaccination against COVID-19 continued in 2022 with WHO support. By 31 December 2022, a total of 442 303 054 laboratory tests had been conducted across the Region since the start of the COVID-19 outbreak. The highest number of polymerase chain reaction (PCR) tests were reported from the United Arab Emirates (197 950 426), followed by the Islamic Republic of Iran (54 738 231) and Saudi Arabia (44 940 564).

In total, 844 957 683 doses of COVID-19 vaccine had been administered across the Region's 22 countries and territories by the end of 2022. Pakistan administered the highest number of doses (317 080 887), followed by the Islamic Republic of Iran (154 773 070) and Egypt (100 993 230). At the other end of the scale, the smallest number of doses of COVID-19 vaccine in the Region were administered by Djibouti (338 051), followed by Yemen (1 238 962) and Bahrain (3 476 633).

WHO provided diagnostic and case management kits in their tonnes to the health ministries in the affected countries and territories.

WHO also worked closely during 2022 with the United Nations Children's Fund (UNICEF) and other partners to improve the WASH situation in the outbreak-affected countries.

Challenges

Responding to emergencies and disease outbreaks – especially in fragile, conflict-affected and vulnerable (FCV) countries – is a challenging task and requires multisectoral and coordinated efforts from all stakeholders. While addressing emergencies and responding to the outbreaks, WHO and partners faced multiple challenges, including fragile health systems in some countries and lack of access to affected areas owing to insecurity.

Most of the time, these bottlenecks caused delays to the planned activities, including outbreak response, increasing the risk of high-threat pathogens spreading to non-endemic areas. Among the main challenges faced in 2022 were multiple outbreaks in countries already affected by acute and protracted emergencies and with fragile and disrupted health systems, such as Somalia, Sudan, Syria and Yemen.

Prolonged insecurity in some countries – such as Iraq, Somalia, Syria and Yemen – meant that most areas of the country affected by the outbreak/emergency were inaccessible or hard to reach. Multiple natural disasters (floods in Pakistan, drought and floods in Somalia, and earthquake and floods in Afghanistan), conflict, political instabilities and population displacement also increased the spread of diseases. Further, these factors also jeopardized public awareness and the implementation of preventive measures against common infectious diseases (cholera, and vector-borne diseases), resulting in the spread of the infectious disease outbreaks. Underfinanced health systems, and those with inadequate capacity (Afghanistan and Pakistan) made the outbreak response even more challenging.

Responding to the huge number of outbreaks and emergencies requires more financial, human and technical resources. Securing the required financial resources has not been the only challenge, however. The high number of outbreaks means that WHO and partners faced shortages of diagnostics and case management kits as well as oral cholera vaccine (OCV) in 2022. Due to the global shortage of OCV, the International Coordinating Group (ICG) on Vaccine Provision had to reduce the OCV 2-dose regimen to a single dose.

While the negative impact of COVID-19 on health systems in every country and territory of the Region cannot be overestimated, the pandemic did also surface health system gaps that were subsequently addressed. In many countries/territories, WHO, the ministry of health and partners were able to identify such gaps in good time and improve the

health system, most often by supporting the establishment of molecular testing capacity and oxygen plants and improving vaccine supply and cold chain management.

For almost all of the 61 reported outbreaks (excluding COVID-19), lack of integrated response plans in some of the affected countries and low coordination between the partners, especially on the outbreak response, led to fragmented response efforts and undermined the effectiveness of outbreak and emergency responses. This issue also resulted in reactive outbreak and emergency responses, and low cross-border collaboration between neighbouring countries in the Eastern Mediterranean Region. The sharing of health ministry information and outbreak data with partners remained suboptimal, which affected preparedness and timely interventions.

Recommendations

The work of WHO and its partners is based on humanitarian principles, which include humanity, impartiality, neutrality and independence. Together, WHO and its partners fight disease and hunger and reach the people most in need in all countries and territories around the world. It is thus necessary for governments and other stakeholders to grant us access to emergency-affected areas to support provision of essential health services.

The political leadership in the countries/territories, especially in fragile, conflict-affected and vulnerable (FCV) countries, needs to reaffirm its political support for improving the health of the population through close cooperation with donors and partners. Further, there is also an urgent need to improve coordination and communication among the United Nations sister agencies – especially WHO, the United Nations Children’s Fund (UNICEF) and the Food and Agriculture Organization of the United Nations (FAO) – by ensuring continuous engagement with external partners and donors, governments and communities. This could lead to trust-building, which may encourage the pooling of resources and bring about consensus on the division of responsibilities among stakeholders. Ultimately, this could result in timely and effective emergency responses.

The ministries of health and partners need to develop comprehensive preparedness and response strategies based on evidence and the on-the-ground realities. Having comprehensive preparedness and response strategies improves the effectiveness of the outbreak response and the efficient use of resources on the ground. There is also an urgent need to connect and improve the surveillance and laboratory systems and enhance coordination between these 2 vital pillars of the outbreak response. Neighbouring countries should improve cross-border collaboration and coordinate information sharing as well as outbreak investigation and response.

The ministries of health should work on a joint mechanism/platform (such as an early warning, alert and response network) to share the outbreak information on time with partners. The WHO country office should also facilitate information sharing with the WHO Regional Office for the Eastern Mediterranean and WHO headquarters via this platform.

Epidemiological situation and WHO response to outbreaks in the Eastern Mediterranean Region in 2022

1. Acute watery diarrhoea	+
2. Cholera	+
3. Crimean-Congo haemorrhagic fever	+
4. Dengue fever	+
5. Diphtheria	+
6. Malaria	+
7. Measles	+
8. Middle East respiratory syndrome (MERS)	+
9. Mpox (monkeypox)	+
10. Poliomyelitis (polio)	+
11. Coronavirus disease 2019 (COVID-19)	+

Site map

[Home](#)
[Health topics](#)
[Data and statistics](#)
[Media centre](#)
[Information resources](#)
[Countries](#)
[Programmes](#)
[About us](#)

Help and services

[Careers](#)
[Copyright](#)
[Privacy](#)
[Contact us](#)
[Cyber security](#)

WHO Offices

[WHO headquarters](#)
[WHO African Region](#)
[WHO Region of the Americas](#)
[WHO South-East Asia Region](#)
[WHO European Region](#)
[WHO Western Pacific Region](#)