

Current major event

Emerging vector-borne and zoonotic diseases in EMR

Emerging vector-borne and zoonotic disease outbreaks with epidemic or pandemic potential are becoming increasingly more frequent. Zoonotic diseases are responsible for an estimated 2.5 billion cases of illness and 2.7 million deaths. Meanwhile, vector-borne diseases account for more than 17% of all infectious diseases, causing more than 700 000 annual deaths globally.

Editorial note

Zoonotic diseases are infectious diseases that can spread between animals and people and vector-borne diseases are human illnesses caused by parasites, viruses and bacteria that are transmitted to humans by vectors.

The Eastern Mediterranean Region (EMR), given its geographic location, economic and cultural factors and variant levels of health systems, have faced the threats of emerging zoonotic and vector-borne pathogens. The Region was affected by COVID-19 and the 2009 H1N1 pandemics, but some countries in the Region were severely affected by avian influenza and MERS-CoV, whose origins are from animals.

The review of available data indicates that EMR has reported several outbreaks of arboviral and zoonotic diseases in recent years (see table). The most well-documented are: Crimean Congo Haemorrhagic Fever (CCHF) in Afghanistan and Iraq, Chikungunya in Pakistan, Dengue in Pakistan, Zoonotic influenza, Leishmaniasis and Leptospirosis in Iran, MERS in Saudi Arabia, Rabies in Pakistan and Tunisia, Rift Valley Fever in Saudi Arabia and Sudan, West Nile Fever in Tunisia, and Yellow Fever in Sudan.

Trends in epidemics in the Region between 2009 and 2019 show that the most frequently reported diseases are dengue (793 363), cutaneous leishmaniasis (379 414) and chikungunya (59 335), while MERS, avian influenza, CCHF and yellow fever have a high case-fatality rate. The ongoing outbreak of monkeypox shows that there are other emerging zoonoses in the Region, which rarely occur, but can cause significant morbidity.

Emerging vector-borne and zoonotic diseases affect all countries in the Region, and cross-border epidemics are common. However, the countries of the Region, which often face complex emergencies and are often characterized by an inability or lack of effectiveness in controlling the emergence of new diseases or the re-emergence of endemic diseases, are probably the most at risk. In addition, the lack of effective vector-borne and zoonotic disease control programs, limited intersectoral collaboration between the human and animal health sectors with little consensus on the roles and responsibilities of each sector, and the low priority given to vector-borne and zoonotic diseases, are attributed as significant

List of Vector-borne/Zoonotic diseases relevant to EMR

Vector	Disease caused	Type of pathogen	
Mosquito	Aedes	Chikungunya	Virus
		Dengue	Virus
		Lymphatic filariasis	Parasite
		Rift Valley fever	Virus
		Yellow Fever	Virus
	Zika	Virus	
	Anopheles	Malaria	Parasite
Culex	West Nile fever	Virus	
Fleas	Plague (transmitted from rats to humans)	Bacteria	
	Tungiasis	Ectoparasite	
Sandflies	Leishmaniasis	Parasite	
	Sandfly fever (phlebotomus fever)	Virus	
Ticks	Crimean-Congo haemorrhagic fever	Virus	
	Relapsing fever (borreliosis)	Bacteria	
	Rickettsial diseases (eg: spotted fever and Q fever)	Bacteria	
	Tick-borne encephalitis	Virus	

Key approached for the development of the regional strategic framework:

- Effective collaboration between animal and human health sectors
- Improving surveillance for early detection of disease threats in humans
- Strengthening laboratory diagnostic capacities for novel pathogens
- Improving case management and infection control
- Integrating vector control management
- Reducing transmission through social and behavioral interventions
- Developing epidemic preparedness and response capacities for emerging zoonoses
- Enhancing political commitment, national planning, and coordination mechanisms
- Strengthening the preparedness, surveillance, and response mechanisms
- Building national capacity and promoting research
- Enhancing regional and international cooperation and collaboration
- Health education, risk communication and social mobilization

factors in the high burden and emergence of repeated vector-borne and zoonotic infections in the Region, often with explosive outbreaks. Disease amplification factors such as population movements, fragmentation of health systems, weak laboratory diagnostic, and intervention capacities and disruption of routine public health services in complex emergency settings have also contributed significantly to the increase in emerging vector-borne and zoonotic diseases in the Region.

Building on the guidance of the WHO sixty-first session of the Regional Committee, the key points shared will be considered in developing and implementing the regional strategic framework for vector-borne and zoonotic infectious diseases. (see above)

WHO is closely working with partners such as the Food and Agricultural Organization (FAO) and the World Organisation for Animal Health (WOAH) to strengthen collaboration between animal and human sectors and to implement cross-border and cross-sectoral preparedness and response measures.

While some countries in the EMR have made great progress prioritizing and integrating aspects of human and animal health surveillance and response, more enhanced capacities need to be built in preparedness and response to the increasing number of vector-borne and zoonotic diseases in the Region.

Update on outbreaks

in the Eastern Mediterranean Region

COVID-19 in 22 EMR countries

Current public health events of concern

[cumulative N° of cases (deaths), CFR %]

Coronavirus disease 2019 (COVID-19): 2019-2022

Afghanistan	[199 344 (7800), 3.9%]
Bahrain	[680 805 (1520), 0.2%]
Djibouti	[15 690 (189), 1.2%]
Egypt	[515 381 (24 797), 4.8%]
Iran (Islamic Republic of)	[7 549 186 (144 429) 1.9%]
Iraq	[2 460 318 (25 356), 1%]
Jordan	[1 746 997 (14 122), 0.8%]
Kuwait	[659 923 (2564), 0.4%]
Lebanon	[1 215 925 (10 677), 0.9%]
Libya	[507 004 (6437), 1.3%]
Morocco	[1 264 961 (16 278), 1.3%]
occupied Palestinian territory (oPt)	[702 940 (5708), 0.8%]
Oman	[398 520 (4628), 1.2%]
Pakistan	[1 572 762 (30 616), 1.9%]
Qatar	[451 675 (682), 0.2%]
Saudi Arabia	[816 575 (9353) 1.1%]
Somalia	[27 223 (1361), 5%]
Sudan	[63 339 (4962), 7.8%]
Syrian Arab Republic	[57 307 (3163), 5.5%]
Tunisia	[1 145 829 (29 254), 2.6%]
United Arab Emirates	[1 027 933 (2345), 0.2%]
Yemen	[11 935 (2157), 18.1%]