

Current major event

Dengue situation in Pakistan

The Ministry of National Health Services, Regulations and Coordination of Pakistan reported a total of 54 386 confirmed cases of dengue fever with 95 associated deaths (CFR 0.17%) from all the provinces except the Gilgit Baltistan region.

Editorial note

Dengue fever is a mosquito-borne disease and the causative agents are the most prevalent emerging arboviruses. It is transmitted to humans through the bites of infected female mosquitoes, *Aedes aegypti* and *Aedes albopictus*. These mosquitoes also transmit chikungunya, yellow fever and zika virus. Four distinct, but closely related serotypes of the virus (DEN-V) cause dengue fever and recovery from the infection provides lifelong immunity against that particular serotype. Cross-immunity to the other serotypes is only partial and temporary, however, and subsequent simultaneous infections by other serotypes increase the risk of developing severe disease.

Data reported by the ministry shows that dengue fever remained endemic in most of Pakistan but careful observation of the data indicates that the most affected regions were Sindh, the federal territory and Punjab with 31%, 24% and 18% of total cases respectively. Although this outbreak started in Punjab yet the major casualties were seen in Sindh totalling 46 deaths in 2019 (CFR 0.27%) followed by Islamabad with 22 deaths (CFR 0.17%) and Punjab with 23 deaths (CFR 0.23%) (*See above*). The districts reporting most of the dengue cases include Islamabad Capital Territory (ICT), Karachi, Peshawar, Rawalpindi, Lasbela and Muzaffarabad.

The past eight epidemiologic weeks (45–52 of 2019) show a declining trend in the number of new dengue cases with each passing week. While the change of season has contributed to the reduction of dengue cases, this reduction connotes that outbreak surveillance, prevention and control measures are bringing positive results. These measures taken by the federal ministry and provincial health departments were taken with the support of WHO and other partners and have helped limit this outbreak, which had spread rapidly across the country.

At the federal level, an Emergency Operations Center (EOC) at the National Institute of Health (NIH) is monitoring the disease situation on a daily basis. Standard guidelines for case management have been

Dengue fever cases reported | Jan 2019 to 19 Jan 2020, Pakistan

Province/region	# of cases	# of deaths	CFR%
Islamabad	13 295	22	0.17
Punjab	10 123	23	0.23
Sindh	17 105	46	0.27
Khyber Pakhtunkhwa	782	0	0
KP Tribal Districts	794	0	0
Baluchistan	392	3	0.08
AJK	190	1	0.06
Gilgit Baltistan	-	0	0
Others	702	0	0
Total	54 386	95	0.17

Dengue fever cases reported | Jan 2019 to 19 Jan 2020, Pakistan

Year	Suspected cases	Confirmed cases
1994	145	NA
1995	77	57
2003	1000	NA
2006	4961	1931
2011	554 663	23 019
2013	33 366	3668
2017	125 316	25 872
2018	-	3204
2019	-	24 547

shared with all health care providers and training exercises are being conducted. Extensive social mobilization, community engagement and vector control activities are being undertaken in all of the affected and neighbouring areas with the involvement of relevant line departments and stakeholders. Similarly, at the provincial level, health departments have deployed multi-sectoral response teams who have implemented various measures including vector control activities, surveillance and the use of insecticide to contain further spread of the disease. Furthermore, WHO provided leadership and technical support to health authorities and works in close collaboration with the ministry to mitigate the dengue outbreak and monitor outbreak trends in various regions to promptly investigate and respond to any alert and sustain the control of the disease.

To conclude, there is a pressing need for the strengthening of surveillance, prevention and control measures such as extensive community engagement, health education and the increase in multi-sectoral response measures. Data obtained through surveillance should be used to monitor the progress of the outbreak and to map out cases to identify hotspots. This will result in the early detection of the outbreak and help in prioritizing targeted interventions.

Update on outbreaks

in the Eastern Mediterranean Region

MERS in Saudi Arabia, UAE; **cholera** in Somalia; **cholera** in Yemen; **multidrug-resistant typhoid fever** in Pakistan.

Current public health events of concern

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

Avian influenza: 2006-2017

Egypt (A/H5N1) [359 (122), 33.98%]
Egypt (A/H9N2) [4 (0)]

Ebola virus disease (EVD): 2018-2020

Democratic Republic of Congo [3412 (2237), 65.56%]
(DRC)

Cholera: 2017-2020

Somalia [10 113 (51), 0.5%]
Yemen [2 222 416 (3 761), 0.17%]
Sudan [346 (11), 3.18%]

Diphtheria: 2017-2020

Yemen [4788 (281), 5.87%]
Bangladesh [8987 (46), 0.51%]
Sudan 85 (12), 14.12%

MERS: 2012-2020

Saudi Arabia [2108 (784), 37.2%]
United Arab Emirates [3 (0)]

Multidrug-resistant typhoid fever: 2016-2020

Pakistan [15 480 (0)]