

Current major event

Surge of Hepatitis E cases in Sudan, 2021

The Federal Ministry of Health (FMOH) in Sudan, recently, reported to WHO a high number of cases of acute jaundice syndrome caused by Hepatitis E Virus (HEV) infection. A total of 790 cases including one related death (CFR 0.13%) was reported from camp settings of three states between the epidemiological weeks 25–32 of 2021.

Editorial note

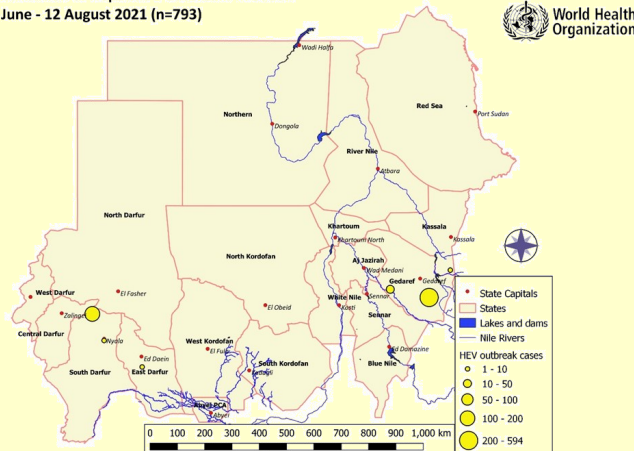
Hepatitis E is inflammation of the liver caused by the Hepatitis E virus (HEV). The virus has at least 4 different types: genotypes 1, 2, 3 and 4. Genotypes 1 and 2 have been found only in humans. Genotypes 3 and 4 circulate in several animals including pigs, wild boars and deer without causing any disease, and occasionally infect humans.

The virus is shed in the stools of infected persons, and then transmitted via the fecal-oral route, and enters the human body through the intestine. Transmission is mainly through contaminated drinking water. The infection is usually self-limiting and resolves within 2–6 weeks. The clinical features of hepatitis E (all genotypes) are similar to those of acute viral hepatitis caused by other hepatotropic viruses. Pregnant women with hepatitis E, particularly those in the second or third trimester, are at increased risk of acute liver failure, fetal loss and mortality. Up to 20–25% of pregnant women can die if they get hepatitis E in third trimester.

The first confirmed outbreak of HEV infection in Sudan was reported from Darfur region in 2004, an area severely affected by the civil conflict in the country. The conflict in early 2003 resulted in the displacement of thousands of civilians and the establishment of internally displaced people (IDP) camps with severely compromised water, sanitation and hygiene situation. The IDP camps in Darfur have experienced recurring outbreaks of HEV infection with high case fatality observed amongst the pregnant women.

This current surge of HEV cases was initially reported from East Jabal Marra, South Darfur in June 2021. Other than that, the other cases were reported in two states with Ethiopian refugee camp settings. The affected camps are: North Nyala-Otash camp (IDP) in South Darfur, Algalabat West-Om Rakouba and Al-Mafaza-Tunaidba camps in Gedarif and Wad Al-Helaiow-Hamdayet camp in Kassala (*refer the above map*). The highest number of cases were reported from Rakouba camp in Gedarif accounting for 75% of the total reported cases followed by East Jabal Marra in South Darfur report 20% cases (*see table*). There was only one reported death from Rakouba camp

Distribution of Hepatitis E outbreaks in Sudan
3 June - 12 August 2021 (n=793)



Distribution of suspected HEV cases by localities until 12 August 2021

State	Locality	Suspected Cases	Deaths	CFR%
South Darfur	East Jabal Marra	160	0	
	North Nyala-Otash Camp	5	0	
Gedarif	Al-Galabat East-Om Rakouba Camp	594	1	0.2
	Al-Mafaza - Tunaidba Camp	26	0	
Kassala	Wad Al-Helaiow-Hamdayet Camp	5	0	
Total		790	1	0.13

leading to 0.13% overall case-fatality ratio. 17 RDT positive cases were reported and later another 51 samples were collected and sent to NPHL for confirmatory test through rt-PCR. Out of which, 26 specimens tested positive for HEV. The reported cases shows that males are more affected (M:F 1.8) and the most affected age group is 15-30 years followed by 5-14 years. The highest number of the cases were reported on 13th July.

There is no specific treatment for hepatitis E, rather only generally supportive treatment for acute hepatitis E. Prevention is the most effective approach against this disease by maintaining quality standards for public water supplies and putting in place adequate disposal systems for stool, general personal hygiene measures and measures taken, when preparing food or eating it. In some situations, especially in an outbreak, the risks of morbidity and mortality from hepatitis E or its complications are particularly high, especial pregnant women.

WHO's current position on the inclusion of the vaccine in routine immunization programs should not preclude its use in these specific situations. In particular, its use should be considered to combat or prevent an outbreak of hepatitis E, as well as to mitigate its effects in people at high risk, such as pregnant women and people living in camps.

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): 2019-2021

Afghanistan	[152 142 (7025), 4.6%]
Bahrain	[270 816 (1384), 0.5%]
Djibouti	[11 678 (156), 1.3%]
Egypt	[285 257 (16 615), 5.8%]
Iran (Islamic Republic of)	[4 389 085 (97 208), 2.2%]
Iraq	[1 768 753 (19606), 1.1%]
Jordan	[782 210 (10203), 1.3%]
Kuwait	[406 234 (2386), 0.6%]
Lebanon	[581 497 (7938), 1.4%]
Libya	[281 930 (3904), 1.4%]
Morocco	[752 076 (10933), 1.5%]
occupied Palestinian territory (oPt)	[349 108 (3891), 1.1%]
Oman	[299 967 (3988), 1.3%]
Pakistan	[1 098 410 (24 406), 2.2%]
Qatar	[228 981 (601), 0.3%]
Saudi Arabia	[537 983 (8399), 1.6%]
Somalia	[16 265 (878), 5.4%]
Sudan	[37 556 (2780), 7.4%]
Syrian Arab Republic	[26 292 (1935), 7.4%]
Tunisia	[625 688 (21 905), 3.5%]
United Arab Emirates	[700 587 (1997), 0.3%]
Yemen	[7273 (1401), 19.3%]