

Current major event

Hepatitis E in Maban refugee camps, South Sudan

The Ministry of Health, Republic of South Sudan announced an outbreak of Hepatitis E in four refugee camps of Maban county of Upper Nile state. A total of 384 suspected cases including 16 deaths (CFR:4.2%) were reported from these camps, initially, as cases of acute jaundice syndrome (AJS). Later on, laboratory test result confirmed Hepatitis E virus (HEV) as the cause of this outbreak..

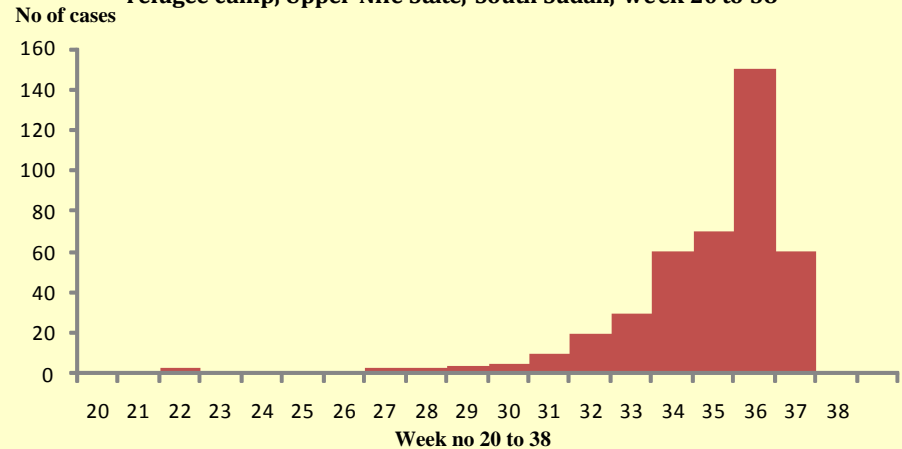
Editorial note

As reported in one of the past issues of the Weekly Epidemiological Monitor (*Issue no 30; Vol-5*), the Upper Nile state in South Sudan is currently hosting over 108,000 refugees who have crossed over from the neighbouring Sudan as a result of on-going conflicts and security threats in the bordering areas. These displaced people have taken temporary shelters in four refugee camps in Maban county. The environmental health, particularly the water, sanitation and hygiene situation in these camps remain very basic and rudimentary.

Since July this year, cases of acute jaundice syndrome were reported from these refugee camps which were later confirmed to be caused by Hepatitis-E virus (HEV).

Hepatitis E is a waterborne disease, and poor environmental health conditions like contaminated water and poor sanitation have, often, been implicated in major outbreaks in refugee and displaced population settings. The hepatitis E virus is transmitted mainly through contaminated drinking water. It is usually a self-limiting infection and resolves within 4–6 weeks. Occasionally, a fulminant form of hepatitis develops (acute liver failure), which can lead to death. The overall population mortality rates from HEV range from 0.5% to 4.0%. Pregnant women are at greater risk of obstetrical complications and hepatitis E can induce a mortality rate of 20%

Epi-curve of acute jaundice syndrome reported from Maban refugee camp, Upper Nile State, South Sudan, week 20 to 38



Public health measures for control of HEV in refugee camps

- Determining the mode of transmission and identifying the populations exposed to increased risk of infection;
- Eliminating common source of infection through appropriate interventions;
- Maintaining safe water supplies for drinking, washing and other purposes;
- Establishing safe sanitation system for proper disposal of sanitary waste.
- Improving household hygienic practices such as hand washing with soap and water, particularly before handling food and after defecation;
- Conducting active surveillance for detection of all symptomatic and asymptomatic cases for proper management of cases;

among pregnant women in their third trimester.

As the health systems in South Sudan is still recovering from the conflict, this outbreak has put additional stress on the available health services and resources in the country. Many of the areas in Upper Nile state have poor environmental health conditions. As such, the outbreak needs to be controlled and the transmission stopped within the camps through appropriate public health measures. Else the virus may spread amongst the host populations with devastating public health consequences. The immediate step would be to improve the water, sanitation and hygiene situation in all the refugee camps that will have profound impact in limiting all water-borne diseases and not only the AJS. .

Update on outbreaks

in the Eastern Mediterranean Region

Hepatitis E: in South Sudan; **Acute Gastro-enteritis:** in Egypt; **CCHF** in Pakistan; **Measles** in Pakistan;

Current public health events of international concern

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

Avian influenza

China	[43(28), 65.1%]
Egypt	[168 (60), 35.7%]
Indonesia	[190 (158), 83.1 %]
Viet Nam	[123(61), 49.5%]
Cambodia	[21(19), 90.4%]
Bangladesh	[6(0), 0%]
Global total	[607(358), 58.9%]

Hepatitis E

S. Sudan	[384 (16), 4.2%] #
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Measles

Pakistan	[9623 (137), 1.4%]#
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Crimean-congo haemorrhagic fever

Pakistan	[41 (11) 26.8%]#
Afghanistan	[6(1), 16.6%]#

Hantavirus Pulmonary Syndrome (HPS)

USA	[9 (3), 33.3%]
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Ebola Haemorrhagic Fever

D.R Congo	[41 (18), 43.9%]
Uganda	[24(16), 66.7%]

CFR=Case-Fatality Rate; # Suspected cases