World Health Organization
REGIONAL OFFICE FOR THE Eastern Mediterranean

# Weekly Epidemiological Monitor

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## Current major event

### Hepatitis A outbreak in Northern Aleppo

The Ministry of Health of Syria has reported a cluster of acute jaundice syndrome cases in the northwest area of Aleppo. Laboratory tests performed in WHO's reference laboratory at American University of Beirut identified hepatitis A virus (HAV) as the causative organism of these acute jaundice cases.

### Editorial note

Hepatitis A is a contagious liver infection caused by HAV, which is usually transmitted by faecal-oral route or through consumption of contaminated food or water. HAV is one of the most frequent causes of foodborne or waterborne infections, and epidemics related to contaminated food or water can erupt explosively. The most common symptoms include fever, malaise, loss of appetite, diarrhoea, nausea, abdominal discomfort, dark-colored urine and jaundice. The incubation period of hepatitis A is usually 14–28 days.

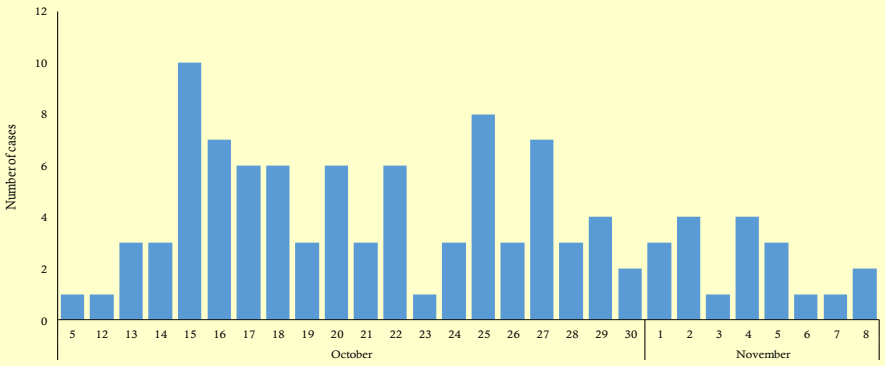
A total of 660 cumulative cases of suspected HAV were reported since 21 July 2018. The cases are from 17 locations in the Azaz and Samaan districts in rural western Aleppo, northwestern Syria, primarily among internal displaced population (IDPs) residing in camps and shelters around Fafin. The number of reported cases peaked in October, and the trend has, since, declined (*See graph*). During week 48, only one suspected case was reported. The most affected age group is children 0-15 years, which accounted for over 90% of the reported cases. A total of 13 serum and blood samples of suspected cases were collected and tested by serology and real time PCR at American University of Beirut. The result showed that 12 samples were positive for hepatitis A virus (HAV) based on serological tests and 10 samples were positive for HAV-RNA according to RT PCR. Further analysis performed at the laboratory showed that the circulating virus belonged to genotype 1 B.

Syria is considered one of the HAV endemic countries in the Region. The last outbreak caused by HAV occurred in 2015, which resulted in more than 600 cases from Deir Ez Zor, Idleb, Damascus and Rural Damascus. Due to the ongoing conflict, there is no safe water and sanitation system in most of the country, especially in the affected districts. Therefore, people are depending more on public wells and private agriculture wells.

Poor sanitation and environmental conditions are likely to have contributed to this increase of HAV cases (*See table*). Recent investigations performed by WHO on water quality in Fafin and Adhath identified high levels of contamination that might have contributed to this HAV outbreak. During the investigation, water samples were collected and tested from wells, water tankers, reservoirs in schools, villages, and hospital. The test results showed that 17 of 30 samples collected from common water sources were contaminated and not suitable for drinking.

As the main route of transmission of HAV is faecal-oral, there is a need to improve sanitation situation in the affected areas, ensure food safety and increase access of the populations to safe water. Personal hygiene should be improved through health education and surveillance should be continued to track spread of HAV to other areas.

**Suspected hepatitis A cases reported in Syria, October and November 2018 ***




*The data is not complete

**Contributing risk factors of HAV transmission**

- poor sanitation;
- lack of safe water;
- use of recreational drugs;
- living in a household with an infected person;
- being a sexual partner of someone with acute hepatitis A infection; and
- travelling to areas of high endemicity without being immunized.

## Update on outbreaks

*in the Eastern Mediterranean Region*

**MERS** in Saudi Arabia; **cholera** in Somalia; **cholera** in Yemen; **West Nile fever** in Tunisia.

**Current public health events of international concern**
[cumulative N° of cases (deaths), **CFR** %]

| | |
|---|---|
| **Avian influenza: 2006-2017** | |
| Egypt (A/H5N1) | [359 (122), 34%] |
| Egypt (A/H9N2) | [4 (0)] |
| **Ebola virus disease (EVD): 2018** | |
| Democratic Republic of Congo (DRC) | [549 (326), 59.3%] |
| **Yellow fever : 2018** | |
| Nigeria | [3510 (74), 2.1 %] |
| **Cholera: 2017-2018** | |
| Somalia | [6 669 (45) , 0.67%] |
| Yemen | [ 1 359 551 (3 152), 0.23%] |
| Tanzania | [4 599 (83), 1.8%] |
| **Diphtheria: 2018** | |
| Yemen | [2 810 (161), 5.72%] |
| Bangladesh | [8 335 (44), 0.52%] |
| **MERS: 2012-2018** | |
| Saudi Arabia | [1 899 (732), 38.5%] |
| **West Nile fever: 2018** | |
| Tunisia | [377 (2), 0.53%] |