World Health Organization
Regional Office for the Eastern Mediterranean

# Weekly Epidemiological Monitor

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## Current major events

### Suspected Anthrax in southern Sudan ?

The State Ministry of Health (SMOH) of Western Bahr El Ghazal and Warrap States of southern Sudan recently notified WHO of 31 suspected cases of cutaneous Anthrax from several villages. All suspected cases presented clinical symptoms (skin lesions with blisters, swelling of lymph nodes, etc) that are consistent with cutaneous Anthrax. All the cases ported close contact with dead animals before they developed their symptoms.

The blood specimens from the suspected cases have been sent to a Reference laboratory for confirmation. Four related deaths have also been reported from the area. The rest of the suspected cases have improved following treatment with appropriate antibiotics.

### Editorial note

Anthrax is a Zoonoses and the disease most commonly occurs in grazing herbivores which are infected by ingesting spores from the soil. The disease is transmitted accidentally to humans by contact with infected animals or by contact with animal products. Anthrax is transmitted to humans as spores that enter the body via small abrasions or through inhalation or ingestion. There is no known case of human-to-human transmission.

Typically, an anthrax outbreak in an enzootic form and usually follows a prolonged hot and dry spell. Anthrax may persist in the environment for many years after contamination of a pasture. Environmental persistence appears to be related to a number of factors including ambient temperature. Drought or heavy rains can trigger spore germination and bacterial multiplication, which also appear important in maintaining the organism in potentially infectious quantities.

During the past two decades, the sequence of emerging and re-emerging zoonoses seems to be accelerating. Although many high-income countries can contain them, many low-income countries can not respond adequately to existing and emerging Zoonoses.

Control of anthrax in humans begins with control of the disease in livestock. integration of veterinary and human health surveillance and control programmes, routine cross-notification between these two health surveillance systems are key to control of this disease in humans. The early detection of an outbreak and rapid identification of infected individuals within an exposed population would, no doubt (as has been the case in southern Sudan) allow for a fast and effective response.

Given the rarity of the disease in humans and the possibility that early cases are a harbinger of an impending epidemic, the situation in southern Sudan warrants a urgent call for joint investigation and surveillance between the animal and human health sector. The need for active case finding in the affected areas can not, thus, be over-emphasized.

**Case classification of Anthrax**

**A. Confirmed case**

A confirmed case of anthrax in a human can be defined as a clinically compatible case of cutaneous, inhalational or gastrointestinal illness that is laboratory-confirmed by:

- isolation of *B. anthracis* from an affected tissue or site; or
- other laboratory evidence of *B. anthracis* infection based on at least two supportive laboratory tests.

**B. Suspected case**

A suspected case of anthrax in a human may be defined as:

- a clinically-compatible case of illness without isolation of *B. anthracis* and no alternative diagnosis, but with laboratory evidence of *B. anthracis* by one supportive laboratory test; or
- a clinically-compatible case of anthrax epidemiologically linked to a confirmed environmental exposure (infected animal product, contaminated fomite, or other source).

**Clinical presentation of anthrax in humans**

- *Cutaneous* Anthrax occurs in 95% of natural infections and follows inoculation of spores into damaged skin (with previous cuts or abrasions susceptible to infection). It is self-limiting and has the best outcome with less than 1% mortality
- *Gastrointestinal* disease can develop if spores are ingested (by way of eating badly cooked meat contaminated with anthrax spores). This is a least common form of anthrax but has a high mortality.
- *Inhalation* anthrax is rare, caused by spore inhalation which is usually fatal. A diagnosis of inhalation anthrax should raise the probability of a biological attack

## Update on outbreaks

*in the Eastern Mediterranean Region*

**Suspected viral haemorrhagic fever (VHF)** in Iraq; **Suspected Anthrax** in southern Sudan; **Cholera** in Djibouti

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

| | |
|---|---|
| **Avian influenza** | |
| Egypt | [109 (34), **31.1%**] |
| Indonesia | [165 (136), **82.4 %**] |
| Cambodia | [10 (8), **80%**] |
| Global total | [498(294), **59%**] |
| **Dengue fever** | |
| Sudan | [1599 (12), **0.7%**] |
| **Rift Valley Fever** | |
| Saudi Arabia | [ 1 (0), **0%**] |
| South Africa | [ 186 (18), **9.6%**] |
| **Pandemic (H1N1) 2009** | |
| AFRO | No of deaths: 168 |
| AMRO | No of deaths: At least 8361 |
| EMRO | No of deaths: 1019 |
| EURO | No of deaths: At least 4861 |
| SEARO | No of deaths: 1798 |
| WPRO | No of deaths: 1829 |
| **GLOBAL Total** | No of deaths: 18,036 |

*CFR=Case-Fatality Rate*