Yellow fever in the state of São Paulo (Brazil)

Date: 21 January 2018

Sources:
- Rapid risk assessment: Outbreak of yellow fever in Brazil, Second update (ECDC 18th January 2018)
- PAHO/WHO Epidemiological Update, Yellow Fever
- ProMED 15th January 2018 “Yellow fever - Netherlands: ex Brazil”

ECDC executive summary and conclusions
The 2016/2017 yellow fever (YF) outbreak in Brazil was declared over in September 2017, yet the upsurge of human cases since December 2017 and non-human primate epizootics since September 2017 indicate a resurgence of YF virus circulation in Brazil, particularly in the state of São Paulo.

The detection of non-human primate cases in the vicinity of the metropolitan regions of São Paulo and Rio de Janeiro is of concern, particularly in light of the start of the mosquito activity season in December 2017 and the suboptimal vaccination coverage in some areas. There is an increased likelihood of peri-urban or urban cycles of YF transmission, which significantly increases the number of potentially exposed people.

The Carnival, one of the largest international mass gatherings in Brazil, will take place from 9 to 14 February 2018. During the Carnival, the number of EU/EEA travellers to Brazil is expected to increase, hence the number of travel-related cases among unvaccinated travellers may increase in the coming month.

The risk of YF importation and subsequent transmission in the continental EU/EEA is currently very low because the virus has to be introduced by viraemic travellers in an area with an established, competent and active mosquito vector population.

Options for response:
Advice to travelers:
EU/EEA citizens who travel to or live in areas at risk of YF in Brazil and other countries in South America are advised to:

1. check their vaccination status and get vaccinated if necessary, in accordance with national and WHO recommendations. Vaccination against YF is recommended for people visiting or living in YF risk areas [1-9], from nine months of age and without contraindication. An individual risk–benefit analysis should be conducted by professionals in tropical or travel medicine prior to vaccination, taking into account the period, destination, duration of travel and likelihood of being bitten by mosquitoes as well as individual risk factors for adverse events following YF vaccination;
2. take measures to prevent mosquito bites indoors and outdoors, especially between sunrise and sunset when mosquito vectors are most active [10]. These measures include:
   - the use of mosquito repellent in accordance with the instructions indicated on the product label;
   - wearing long-sleeved shirts and long trousers;
   - sleeping or resting in screened/air-conditioned rooms or using mosquito nets at night and during the day.
International travellers returning from affected areas may be requested to show proof of YF vaccination (or a contraindication certificate) when entering countries or territories infested with *Aedes aegypti* mosquitoes. Vaccination requirements and recommendations for international travellers are available from the WHO’s website [1-8].

**Advice to health professionals**

Physicians, health professionals and travel health clinics should be provided with, or have access to, regularly updated information on areas with ongoing YF transmission and should consider YF in the differential diagnoses for illnesses in relation to unvaccinated travellers returning from at risk areas.

To reduce the risk of adverse events following immunization, healthcare practitioners responsible for YF vaccinations should be aware of the contraindications and follow the manufacturers’ advice on precautions before administering YF vaccine [11,12].

**Option for the EU Overseas Countries and Territories and Outermost Regions with presence of *Aedes aegypti***:

In the EU Overseas Countries and Territories and Outermost Regions where *Aedes aegypti* is established or has been introduced, YF vaccination checks should be considered for travellers coming from Brazil in order to reduce the risk of YF importation.

On the 15th of January, ProMED reported a tourist returning to the Netherlands with YF probably contracted in the São Paolo area.

**Comment**

There is no doubt that YF is a real risk in the state of São Paolo, including the metropolitatan city of São Paolo itself. Travellers to Brazil are strongly advused to seek pre-travel advice and check that they have been immunized against YF.

The vaccine against YF is a live, attenuated vaccine that provides life-long protection.

For clinicians, patients with symptoms of a haemorrhagic fever should have a travel history obtained and if it includes Brazil, YF should be considered among the differential diagnostics possibilities. Clinically, YF can not be differentiated from complicated malaria, complicated dengue fever, septicemia with disseminated intravascular coagulation and leptospirosis.

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