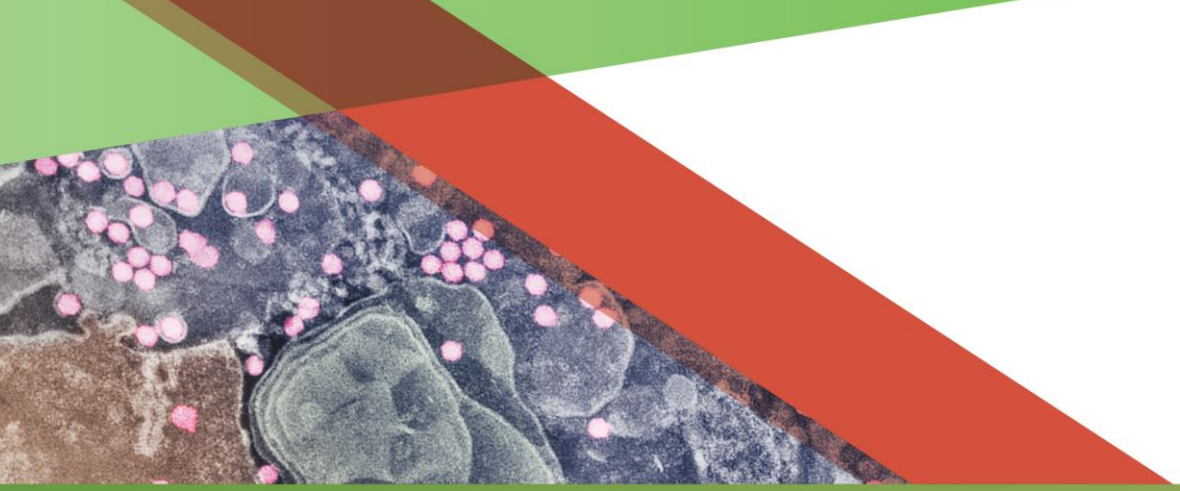

SURVEILLANCE REPORT

Yellow fever

Annual Epidemiological Report for 2018

Key facts

- For 2018, EU/EEA countries reported 13 travel-related cases of yellow fever. The cases were reported by France (7), Germany (2), Czechia (1), the Netherlands (1), Romania (1) and the United Kingdom (1). The case reported by the Netherlands acquired the infection in Senegal or Gambia. All other cases acquired the infection in Brazil.
- This was the highest number of yellow fever cases ever reported in the EU/EEA in one year. In the previous four years, only one case was reported: the Netherlands reported an imported case with a travel history to Suriname.

Methods

This report is based on data for 2018 retrieved from The European Surveillance System (TESSy) on 10 September 2019. TESSy is a system for the collection, analysis and dissemination of data on communicable diseases.

For a detailed description of methods used to produce this report, refer to the *Methods* chapter [1].

An overview of the national surveillance systems is available online [2].

A subset of the data used for this report is available through ECDC's online Surveillance atlas of infectious diseases [3].

For 2018, 30 EU/EEA countries reported case-based data (Liechtenstein did not report). Twenty-four countries used the EU case definition, four countries (Denmark, Germany, Italy and the United Kingdom) used an alternative case definition, and two countries (Finland and France) did not specify which definition they used. Surveillance was compulsory in all EU/EEA countries except the United Kingdom, comprehensive in all countries, and mostly passive.

Epidemiology

For 2018, EU/EEA countries reported 13 travel-related cases of yellow fever, 11 of which were confirmed cases. One case was fatal. The cases were reported by France (7), Germany (2), Czechia (1), the Netherlands (1), Romania (1) and the United Kingdom (1). The case reported by the Netherlands acquired the infection in Senegal or Gambia [4]. All other cases acquired the infection in Brazil.

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This was the highest number of yellow fever cases ever reported in the EU/EEA in one year. In the previous four years, only one case was reported: an imported case, reported by the Netherlands, with a travel history to Suriname [5].

Discussion

Yellow fever is endemic in tropical areas of Africa and Central and South America [6]. In the WHO Region of the Americas, Bolivia, Brazil, Colombia, Ecuador, French Guiana, and Peru reported confirmed cases of yellow fever in 2017 and 2018. The number of cases reported in this Region in these two years exceeded the case numbers reported in several decades [7]. For the 2016–2017 season, Brazil reported 778 human cases, including 262 deaths. For the 2017–2018 season, 1 376 human cases were reported by Brazil, including 483 deaths [7].

The increase in yellow fever transmission in central and south-eastern Brazil resulted in a number of travel-related cases among European travellers; at least five of them were unvaccinated. The change in the yellow fever epidemiological situation in Brazil seemed to be particularly noticeable in Ilha Grande, a common travel destination and the place of exposure for several of the travel-related cases [8].

Public health implications

Vaccination is the most important preventive measure against yellow fever. As described in WHO documents, the vaccine is safe, affordable, highly effective, and a single dose is sufficient to confer sustained immunity and lifelong protection against yellow fever. The vaccine provides effective immunity within 30 days for 99% of vaccinees [6].

The yellow fever cases in non-vaccinated tourists highlight the relevance of yellow fever vaccination for people who want to travel to risk areas for yellow fever. It also emphasises the need for comprehensive pre-travel advice to assess the vaccination status. Travel-related cases also demonstrate that the epidemiological situation in each region may evolve rapidly and that pre-travel advice should be completed in a timeframe that allows for reviewing the latest epidemiological situation while also giving the traveller enough time to get effective protection through vaccination [8].

The principle vector of the yellow fever virus, the mosquito *Aedes aegypti*, is not present in the continental EU, and therefore the risk of autochthonous transmission from travel-related cases is negligible. It can, however, not be ruled out that the Asian tiger mosquito *Aedes albopictus*, which is present in large parts of southern Europe, could transmit yellow fever, although this is considered unlikely [9].

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