

SURVEILLANCE REPORT

Annual Epidemiological Report for 2020

Zika virus disease

Key facts

- For 2020, nine EU/EEA countries reported 22 cases of Zika virus (ZIKV) disease, the lowest number ever reported since the start of EU/EEA surveillance in 2016.
- All cases with available information (20/22) were associated with travel outside the EU/EEA.
- All cases with available information (7/22) were infected through mosquitoes.

Introduction

Zika virus disease is a mosquito-borne disease caused by a virus of the *Flaviviridae* family. The disease is most frequently an acute febrile illness with symptoms such as myalgia, skin rash, arthralgia, and neurological signs. Subclinical and asymptomatic cases are common. Zika virus was first recognised in Uganda in 1947 and sero-epidemiological evidence suggests wide distribution in Africa [1]. The virus emerged in 2007, in Micronesia, followed by outbreaks in other countries and territories in the Pacific (2013–2014). In 2015, it caused an epidemic of unprecedented magnitude in the Americas, leading to the recognition of the teratogenic effects of ZIKV to the developing foetal brain [2,3].

Methods

This report is based on data for 2020 retrieved from The European Surveillance System (TESSy) on 25 October 2021. 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 *Introduction to the Annual Epidemiological Report* chapter [4].

An overview of the national surveillance systems is available online [5].

A subset of the data used for this report is available through ECDC's online *Surveillance atlas of infectious diseases* [6].

Twenty-four EU/EEA countries reported data on ZIKV disease for 2020 (Bulgaria, Cyprus, Denmark, Iceland, Liechtenstein and Poland did not report). Ten countries used the EU case definition, seven used an alternative case

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definition, and four countries did not specify. Reporting was compulsory in most countries, and voluntary in three (Luxembourg, Slovenia and Sweden). Surveillance was mostly comprehensive and passive in reporting countries.

Epidemiology

For 2020, nine EU/EEA Member States reported 22 cases of ZIKV disease, 17 (77%) of which were confirmed cases, while 14 countries reported no cases. The largest number of cases were reported by Germany (n=6), Italy (n=4), France (n=3) and Sweden (n=3; Table 1, Figure 1).

Table 1. Distribution of Zika virus disease cases by country and year, EU/EEA, 2016–2020

Country	2016	2017	2018	2019	2020
	Number	Number	Number	Number	Number
Austria	41	8	0	0	1
Belgium	120	42	2	1	0
Bulgaria	.	.	.	.	.
Croatia	-	0	0	0	0
Cyprus	.	.	.	.	.
Czechia	13	4	2	1	1
Denmark	8	6	0	2	-
Estonia	0	0	0	0	0
Finland	6	2	0	2	1
France	1 141	28	10	16	3
Germany	-	68	18	11	6
Greece	2	1	2	0	0
Hungary	2	0	1	1	0
Iceland	.	.	.	.	.
Ireland	15	4	0	0	2
Italy	101	25	2	4	4
Latvia	0	0	0	0	0
Liechtenstein	.	.	.	.	.
Lithuania	-	0	0	0	0
Luxembourg	2	1	0	0	0
Malta	2	0	0	1	0
Netherlands	98	6	3	0	0
Norway	8	4	0	2	0
Poland	.	.	.	.	.
Portugal	18	1	0	0	1
Romania	3	0	0	0	0
Slovakia	3	0	0	0	0
Slovenia	7	0	0	0	0
Spain	301	44	9	23	0
Sweden	34	16	0	0	3
EU-EEA	1 925	260	49	64	22

Source: Country reports.

..: no data reported.

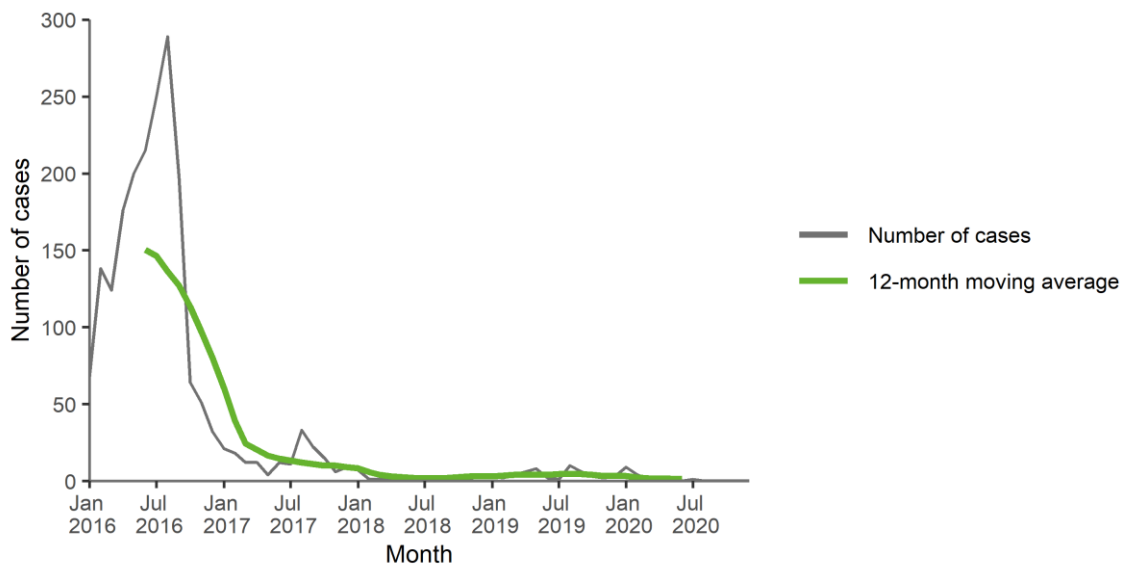
-.: no rate calculated.

Figure 1. Distribution of Zika virus disease cases by country, EU/EEA, 2020



The number of ZIKV disease cases reported by EU/EEA countries decreased in 2020 compared with 2019 (n=64), and compared with 2016 where the highest number of notifications was observed (n=1 925). Half of the cases reported in 2020 were reported in January (n= 11).

Figure 2. Distribution of Zika virus disease cases by month, EU/EEA, 2016–2020



Source: Country reports from Austria, Belgium, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.

Among cases where gender was reported (n= 22), half were female (n=11, 50%). Age was specified for 22 cases and cases notification was most frequent among those aged 25–44 years (n=13, 59%) followed by 45–64-year-olds (n= 6, 27%).

Pregnancy status was known for five female cases (45%), none of whom was reported to be pregnant.

For 2020, importation status was reported for 22 cases (100%). All were imported cases in returning travellers. Of the cases with reported mode of transmission (n = 7, 32%), all were infected through mosquitoes.

The place of infection was known for 20 cases (91%), most occurred in Southeast Asia (n= 10, 50%), followed by Africa (n= 4, 20%), the Middle East (n=2, 10%), South Asia (n=2, 10%), the Caribbean region (n=1, 5%), and South America (n=1, 5%).

Discussion

The large ZIKV disease outbreak in South America in 2016 led to increased concern of the introduction of the virus in Europe and potential local transmission in areas where *Aedes albopictus* is present. Surveillance of Zika virus disease started in March 2016. The main objectives of the surveillance was early detection of locally-acquired cases in the EU/EEA and timely reporting of travel-associated cases, particularly those residing in areas in the EU/EEA where *Ae. albopictus* is established (receptive areas), in order to trigger appropriate control measures [7].

After 2016, the number of imported Zika virus disease cases in EU/EEA countries decreased (Figure 2), most likely reflecting the low levels of transmission in the countries visited by European travellers. Additionally, the traveling restrictions due to the COVID-19 pandemic probably contributed to this decreasing trend in 2020 [8].

The largest proportion of imported cases in 2020 originated from Southeast Asia, in particular from Thailand, suggesting ongoing transmission in the country.

In 2019, France reported three autochthonous vector-borne cases of ZIKV disease in the Var department. In response to the detection of these cases, national and local health authorities carried out active case finding, entomological investigations, vector control activities, and awareness campaigns. These were the first reported autochthonous ZIKV disease cases acquired via vector-borne transmission in the EU/EEA [9,10]. In 2020, no autochthonous case was reported.

Investigators have revealed that *Ae. albopictus* in Europe are competent vectors of ZIKV but taking into consideration the variations of local populations and a short window for transmission in the summer months in the northern hemisphere, the capability for a sustained transmission remains limited [11-13].

Public health implications

The impact of Zika virus disease in Europe has been mainly limited to returning travellers, a few sporadic locally-acquired cases due to sexual transmission and, for the first time in 2019, three autochthonous vector-borne transmissions.

WHO advises against any restriction of travel to, or trade with, countries, areas and territories with Zika virus transmission. WHO recommends that pregnant women avoid travel to areas with Zika virus transmission, particularly during outbreaks, based on the increased risk of microcephaly and other severe congenital malformations. All residents of, and travellers to areas with ongoing or historical transmission of ZIKV should prevent mosquito bites and be able to make informed decisions on whether to abstain from sex, practice safer sex, or avoid/delay pregnancy. Pregnant women and their partners, and anyone planning pregnancy should be provided with comprehensive information about the risk associated with ZIKV infection, especially before travelling. Ideally, this information should also address other infectious agents that can have a significant impact on pregnancy and cause foetal development disorders, such as the so-called TORCH agents (e.g. *Toxoplasma gondii* rubella virus, cytomegalovirus, herpes simplex virus and other pathogens) that have worldwide distribution [14,15].

Despite the evidence of limited competence of European *Ae. albopictus* populations in transmitting Zika virus, continued surveillance, especially focusing on returning travellers, is warranted to allow for the early detection of risk areas and outbreaks, as well as to facilitate an efficient public health response.

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