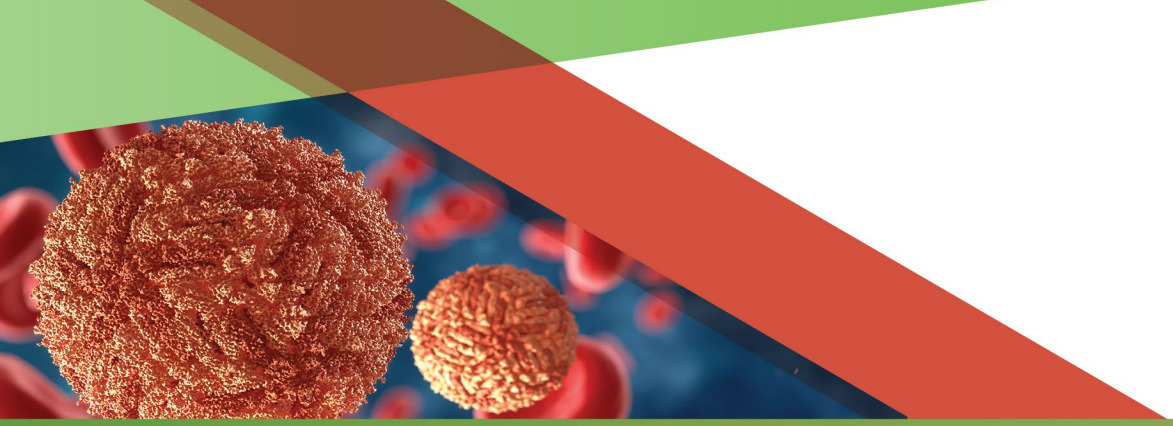

SURVEILLANCE REPORT

Zika virus disease

Annual Epidemiological Report for 2019

Key facts

For 2019, in the EU/EEA countries:

- 71 cases of Zika virus (ZIKV) disease were reported;
- Five cases of ZIKV disease were reported to have been locally-acquired, three autochthonous vector-borne cases, one case of sexual transmission and one case of non-mosquito borne transmission;
- 92% of cases of ZIKV disease with known importation status were from returning travellers.

Introduction

Zika virus was first recognised in Uganda in 1947 and sero-epidemiological evidence suggests widespread distribution in Africa [1]. Zika virus disease is most frequently an acute, febrile illness. 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 2019 retrieved from The European Surveillance System (TESSy) on 9 October 2020. 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-six EU/EEA countries reported data on ZIKV disease for 2019 (Bulgaria, Cyprus, Iceland, Liechtenstein and Poland did not report). All data were case-based. Ten countries used the EU case definition, ten used an alternative case definition, and six countries did not specify. Reporting was compulsory in most countries, voluntary in three (Luxembourg, Slovenia and Sweden) and reported as 'other' in the United Kingdom. Surveillance was mostly comprehensive and passive in reporting countries.

Epidemiology

For 2019, twelve EU/EEA Member States reported 71 cases of ZIKV disease, 32 (45%) of which were confirmed, while 14 countries reported no cases. The largest number of cases were reported by Spain (n=24, 34%), France (n=16, 23%) and Germany (n=11, 15%; Table 1, Figure 1). Of the 32 confirmed cases, 12 were from France, 11 from Germany, six from Spain, two from Norway and one from Malta.

The EU/EEA notification rate for 2019 was 0.02 cases per 100 000 population.

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Stockholm, March 2021

Table 1. Distribution of Zika virus disease cases by country and year, EU/EEA, 2015–2019

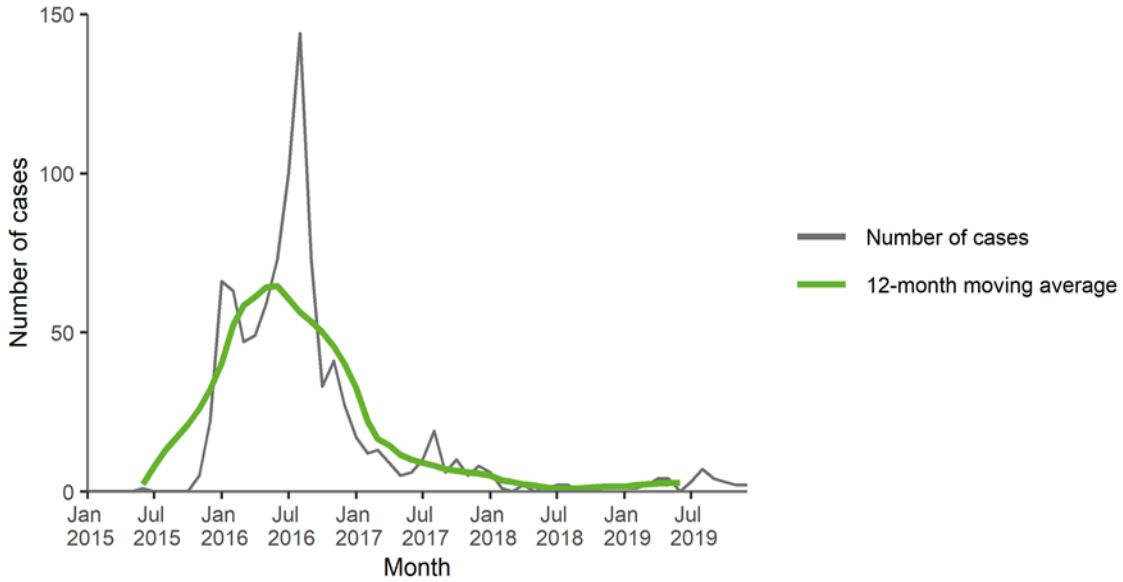
Country	2015	2016	2017	2018	2019
	Number		Number		Number
Austria	1	41	8	0	0
Belgium	1	120	42	2	1
Bulgaria	.	.	.	.	.
Croatia	-	-	0	0	0
Cyprus	.	.	.	.	.
Czechia	-	13	4	2	1
Denmark	-	8	6	0	2
Estonia	-	0	0	0	0
Finland	1	6	2	0	2
France	-	1 141	28	10	16
Germany	-	-	68	18	11
Greece	-	2	1	2	0
Hungary	-	2	0	1	1
Iceland	.	.	.	.	.
Ireland	1	15	4	0	0
Italy	-	101	25	2	4
Latvia	0	0	0	0	0
Liechtenstein	.	.	.	.	.
Lithuania	-	-	0	0	0
Luxembourg	-	2	1	0	0
Malta	-	2	0	0	1
Netherlands	11	98	6	3	0
Norway	-	8	4	0	2
Poland	.	.	.	.	.
Portugal	-	18	1	0	0
Romania	-	3	0	0	0
Slovakia	-	3	0	0	0
Slovenia	-	7	0	0	0
Spain	10	301	44	9	24
Sweden	1	34	16	0	0
UK	3	194	14	2	6
EU-EEA	**29**	**2119**	**274**	**51**	**71**

Source: Country reports.
.: no data reported.
-: no rate calculated.

Figure 1. Distribution of Zika virus disease cases by country, EU/EEA, 2019

For 2019, the number of ZIKV disease cases reported by the EU/EEA countries has increased compared to 2018, but with a lower notification rate than 2016 (0.6 per 100 000) and 2017 (0.1 per 100 000). Two peaks in reporting were noted between April and May (n=17), representing 24% of cases, and between August and September 2019 (n=22), representing 31% of cases.

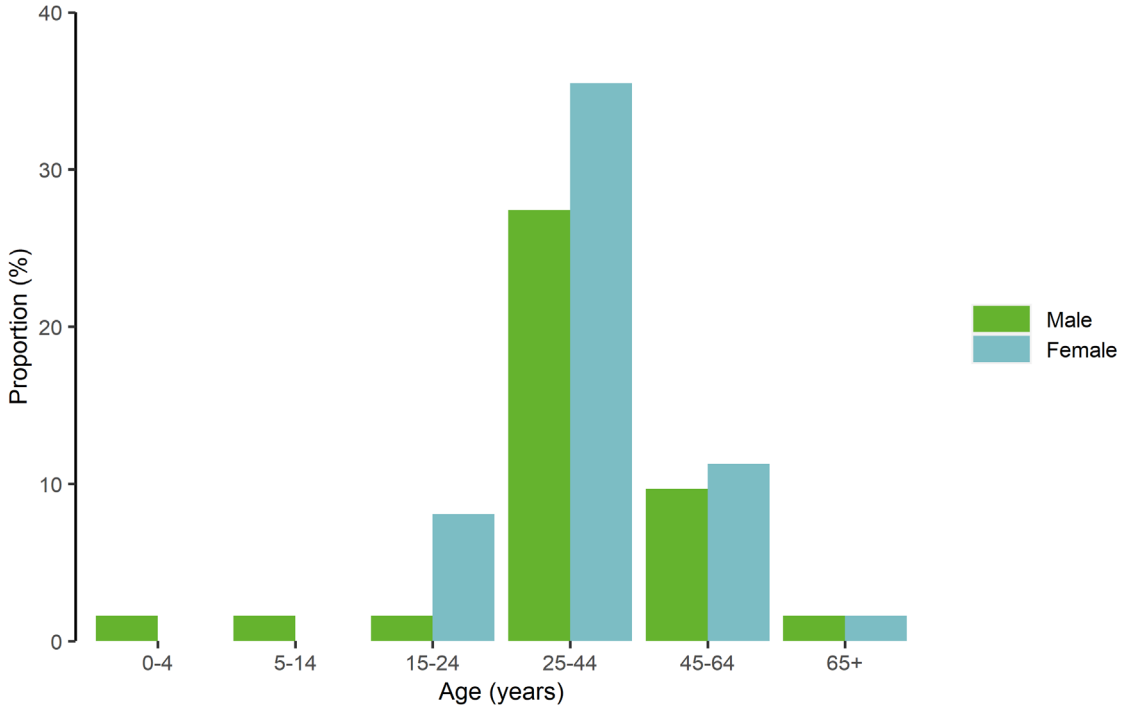
Figure 2. Distribution of Zika virus disease cases by month, EU/EEA, 2015–2019



Source: Country reports from Austria, Belgium, Finland, Ireland, the Netherlands, Spain and the UK

Among cases where gender was reported (n=70), the majority were female (n=40, 57%) and the overall male-to-female ratio was 0.7:1. Age was specified for 69 cases and reports were most frequent among those aged 25–44 years (n=45, 65%) followed by 45–64-year-olds (n=13, 19%).

Figure 3. Distribution of Zika virus disease proportion (%), by age and gender, EU/EEA, 2019



Pregnancy status was known for 20 female cases (50%), seven of whom (35%) were reported to be pregnant. The outcome of the pregnancy was unknown for three cases and four cases had live births, one of which was born with microcephaly.

For 2019, importation status was reported for 68 cases (96%). Of these, 63 were imported cases in returning travellers and five were locally-acquired. Of the locally-acquired cases, one was acquired through sexual transmission in Norway, three via mosquitoes in France, and one non-mosquito borne (laboratory exposure [7]) in Germany. Of the imported cases with reported mode of transmission (n=28, 44%), 27 were infected through mosquitoes and one through vertical transmission from mother to infant.

The place of infection was known for 61 cases (86%), mostly having occurred in South-East Asia (n=27, 44%), the majority in Thailand (n=20, 74%), followed by Central and South America (n=11, 18%), Africa (n=8, 13%), the Caribbean (n=8, 13%), Europe (n=5, 8%), and two in Mexico.

Discussion

The large ZIKV disease outbreak in South America in 2016 led to increased concern that the virus could potentially be introduced into Europe and locally transmitted in areas where *Aedes albopictus* is present. In March 2016, surveillance of Zika virus disease started. The main objectives were early detection of locally-acquired cases in the EU/EEA and timely reporting of travel-associated cases, particularly those residing in areas of the EU/EEA where *Ae. albopictus* is established (receptive areas), in order to trigger appropriate control measures [8].

After 2016, the number of imported Zika virus disease cases in EU/EEA countries decreased rapidly (Figure 2), most probably reflecting the low levels of transmission in the countries visited by European travellers. The largest proportion of imported cases in 2019 originated from South-East 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 are the first reported autochthonous ZIKV disease cases acquired via vector-borne transmission in the EU/EEA [9,10].

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

Public health implications

The impact of Zika virus in Europe has been 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 take precautions to 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 concerning 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 (i.e. *Toxoplasma gondii,* rubella virus, cytomegalovirus, herpes simplex virus and other pathogens) that are distributed worldwide [14,15].

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

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