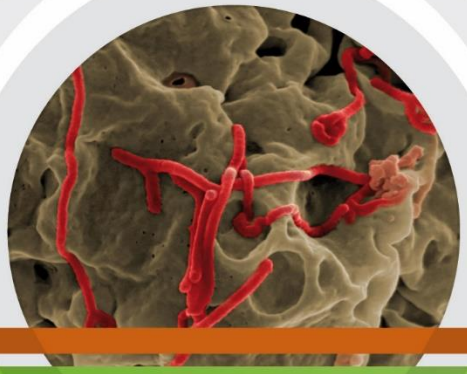

SURVEILLANCE REPORT

Annual Epidemiological Report for 2015

Ebola and Marburg fevers

Key facts

- No cases of Ebola viral haemorrhagic fever and Marburg haemorrhagic fever infections were reported in EU/EEA countries in 2015.

Methods

This report is based on data for 2015 retrieved from The European Surveillance System (TESSy) on 12 December 2016 and additional information from epidemic intelligence. TESSy is a system for the collection, analysis and dissemination of data on communicable diseases. EU Member States and EEA countries contribute to the system by uploading their infectious disease surveillance data at regular intervals [1].

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

A subset of the data used for this report is available through the interactive *Surveillance atlas of infectious diseases* [3].

For 2015, 27 EU/EEA Member States reported Ebola/Marburg data to TESSy. Nineteen countries use the EU case definition, four countries (the Czech Republic, Denmark, Germany and the United Kingdom) used different case definitions, and Belgium, Cyprus, Finland and France did not specify the case definition they used.

Reporting is compulsory in 25 countries, and 'not specified' in Cyprus and Latvia. Surveillance is comprehensive ('not specified' in Cyprus) and mostly passive (22 countries, except for the Czech Republic, Slovakia, Portugal and the United Kingdom; 'not specified' in Cyprus) [2]. Reporting is case based and conducted at the national level.

Epidemiology

No cases of Ebola viral haemorrhagic fever and Marburg haemorrhagic fever infections were reported in EU/EEA countries in 2015.

Suggested citation: European Centre for Disease Prevention and Control. Ebola and Marburg fevers. In: ECDC. Annual epidemiological report for 2015. Stockholm: ECDC; 2018.

Stockholm, January 2018

Table 1. Number and rate of reported Ebola and Marburg fevers cases per 100 000 population, EU/EEA, 2011–2015

Country	2011		2012		2013		2014		2015				
	Reported cases		Reported cases		Reported cases		Reported cases		National coverage	Reported cases			Confirmed cases
	Number	Rate	Number	Rate	Number	Rate	Number	Rate		Number	Rate	ASR	
Austria	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Belgium	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Bulgaria	0	0.0	·	·	·	·	·	·	·	·	·	·	·
Croatia	·	·	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Cyprus	·	·	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Czech Republic	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Denmark	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Estonia	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Finland	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
France	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Germany	0	0.0	0	0.0	0	0.0	3	0.0	Y	0	0.0	0.0	0
Greece	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Hungary	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Ireland	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Italy	0	0.0	0	0.0	0	0.0	·	·	·	·	·	·	·
Latvia	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Lithuania	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Luxembourg	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Malta	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Netherlands	0	0.0	0	0.0	0	0.0	·	·	·	·	·	·	·
Poland	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Portugal	·	·	·	·	·	·	·	·	Y	0	0.0	0.0	0
Romania	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Slovakia	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Slovenia	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Spain	0	0.0	0	0.0	0	0.0	3	0.0	Y	0	0.0	0.0	0
Sweden	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
United Kingdom	0	0.0	0	0.0	0	0.0	1	0.0	Y	0	0.0	0.0	0
EU	0	0.0	0	0.0	0	0.0	7	0.0	·	0	0.0	0.0	0
Iceland	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0.0	0.0	0
Liechtenstein	·	·	·	·	·	·	·	·	.	·	·	·	·
Norway	0	0.0	0	0.0	0	0.0	1	0.0	Y	0	0.0	0.0	0
EU/EEA	0	0.0	0	0.0	0	0.0	8	0.0	·	0	0.0	0.0	0

Source: Country reports. Legend: Y = yes, · = no data reported, ASR: age-standardised rate, - = no notification rate calculated

Discussion

On 8 August 2014, following a large outbreak of Zaire Ebola virus in March 2014 in Guinea and the further spread to Sierra Leone and Liberia, WHO declared the Ebola epidemic in West Africa a Public Health Emergency of International Concern [4,5]. The outbreak continued in 2015 and as of 12 May 2016, WHO had reported 28 616 cases of Ebola virus disease related to the outbreak in West Africa, including 11 310 deaths [6]. The number of cases in the most affected countries peaked in autumn 2014 and slowly decreased after that. Liberia was first declared free of Ebola transmission in May 2015 but the virus was re-introduced a few times since then. Sierra Leone was declared free of Ebola transmission on 7 November 2015 and Guinea on 29 December 2015. Countries experienced small flare-ups later on, likely due to virus persistence in the fluids and tissues of some of the survivors [7]. The Public Health Emergency of International Concern related to Ebola in West Africa was lifted on 29 Mar 2016.

This was the first outbreak of Ebola virus in West Africa and the worst Ebola outbreak ever reported. The usual source of infection and the start of the chain of transmission is usually related to exposure to infected wildlife animals or animal products. However, the initial source of infection of this outbreak remains unknown.

Many healthcare workers were infected while treating patients with Ebola infection during the outbreak. From the start of the outbreak to 13 October 2015, a total of 881 confirmed cases among healthcare workers was reported in Guinea, Liberia and Sierra Leone; 513 of these cases (58%) were fatal.

Outside of the three most affected countries, infected healthcare workers were reported from Mali (2), Nigeria (11), Spain (1, infected while caring for an evacuated Ebola patient), UK (two, both infected in Sierra Leone), USA (two infected in Sierra Leone, two in Liberia, and two while caring for a confirmed Ebola case in a Texas hospital), and Italy (two, infected in Sierra Leone) [8,9]. In May 2015, a healthcare worker developed symptoms in Italy, three days after returning from Sierra Leone [9].

Public health implications

There are currently no licensed Ebola vaccines but several potential candidates are undergoing evaluation. One prototype, the rVSV-ZEBOV, has been used during a ring trial in Guinea and offered substantial protection against Ebola virus disease [10].

The goal of outbreak control is to interrupt direct human-to-human transmission through the early identification and systematic isolation of cases, timely contact-tracing, proper personal protection, safely conducted burials, improved community awareness about risk factors of viral infection, and individual protective measures.

Quarantine of infected patients has been shown to effectively stop the spread of the disease in previous outbreaks. Implementation of appropriate infection control measures in healthcare settings, including use of personal protective equipment, is effective in minimising the risk for transmission of filoviruses.

References

1. European Centre for Disease Prevention and Control. Introduction to the Annual epidemiological report for 2015. In: ECDC. Annual epidemiological report for 2015. Stockholm: ECDC; 2017. Available from: https://ecdc.europa.eu/en/annual-epidemiological-reports-2016/methods.
2. European Centre for Disease Prevention and Control. Surveillance systems overview [internet]. Stockholm: ECDC; 2017. Available from: https://ecdc.europa.eu/sites/portal/files/documents/Table-surveillance_systems_overview_0.xlsx
3. European Centre for Disease Prevention and Control. Surveillance atlas of infectious diseases [internet]. Stockholm: ECDC; 2017 [cited 30 May 2017]. Available from: http://atlas.ecdc.europa.eu/public/index.asp
4. European Centre for Disease Prevention and Control. Rapid risk assessment – Outbreak of Ebola virus disease in West Africa. Fourth update 2014. Available from: http://ecdc.europa.eu/en/publications/Publications/Ebola-virus-disease-west-africa-risk-assessment-27-08-2014.pdf
5. World Health Organization. WHO statement on the meeting of the International Health Regulations Emergency Committee regarding the 2014 Ebola outbreak in West Africa [Internet]. Geneva: WHO; 2014. Available from: http://who.int/mediacentre/news/statements/2014/ebola-20140808/en/
6. World Health Organization. Situation report – Ebola virus disease, 5 May 2016. Geneva: WHO; 2016. Available from: http://apps.who.int/iris/bitstream/10665/205945/1/ebolasitrep_5may2016_eng.pdf
7. European Centre for Disease Prevention and Control. Rapid risk assessment: Outbreak of Ebola virus disease in West Africa, 13th update: http://ecdc.europa.eu/en/publications/Publications/Ebola-west-africa-13th-update.pdf
8. Salce L, Barbato S, Renna D, Bianchini F, Vaccaro P, Mazzeo F, et al. First Italian Ebola virus disease case: management of hospital internal and external communication. New Microbiol. 2015 Oct;38(4):565-70]
9. World Health Organization. Disease outbreak news: Ebola virus disease – Italy. Geneva: WHO; 2015 [cited 14 Oct 2016]. Available from: http://www.who.int/csr/don/13-may-2015-ebola/en/
10. Henao-Restrepo AM, Camacho A, Longini IM, Watson CH, Edmunds WJ, Egger M, et al. Efficacy and effectiveness of an rVSV-vectored vaccine in preventing Ebola virus disease: final results from the Guinea ring vaccination, open-label, cluster-randomised trial (Ebola Ça Suffit!). Lancet. 2017 Feb 4;389(10068):505-518.