



SURVEILLANCE REPORT

Annual Epidemiological Report for 2016

Anthrax

Key facts

- Anthrax continues to be a rare disease in humans in Europe, with only a few cases reported every year.
- In 2016, two EU/EEA countries reported six laboratory-confirmed anthrax cases: Romania (5) and Spain (1). The remaining 28 reporting countries notified no cases.

Methods

This report is based on data for 2016 retrieved from The European Surveillance System (TESSy) on 21 February 2018. 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].

In 2016, 30 EU/EEA Member States collected anthrax data through surveillance systems with national coverage. Thirteen of the 30 Member States used the 2012 EU case definition, while 11 used the 2008 definition and one used the 2002 definition. Three Member States used another case definition and two did not specify which case definition they used. The majority of the Member States (26 of 30) undertook passive surveillance. In 19 countries, cases were reported by both laboratory and physicians and/or hospitals. All but one Member State collected case-based data.

Epidemiology

In 2016, six sporadic cases of anthrax were reported in Romania (5) and Spain (1). Five of the six reported cases were males. Four of the cases were 25–64 years of age. No cases were reported in the population under 25 years of age.

From 2012 to 2016, only a few sporadic cases were reported every year (Table 1).

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Table 1. Distribution of confirmed anthrax cases, EU/EEA, 2012–2016

Country	2012	2013	2014	2015	2016
	Confirmed cases	Confirmed cases	Confirmed cases	Confirmed cases	Confirmed cases
Austria	0	0	0	0	0
Belgium	0	0	0	0	0
Bulgaria	1	1	0	2	0
Croatia	-	1	0	0	0
Cyprus	0	0	0	0	0
Czech Republic	0	0	0	0	0
Denmark	2	0	0	0	0
Estonia	0	0	0	0	0
Finland	0	0	0	0	0
France	1	0	0	0	0
Germany	4	0	0	0	0
Greece	0	0	0	0	0
Hungary	0	0	0	0	0
Iceland	0	0	0	0	0
Ireland	0	0	0	0	0
Italy	0	0	0	0	0
Latvia	0	0	0	0	0
Liechtenstein
Lithuania	0	0	0	0	0
Luxembourg	0	0	0	0	0
Malta	0	0	0	0	0
Netherlands	0	0	0	0	0
Norway	0	0	0	0	0
Poland	0	0	0	0	0
Portugal	0	1	0	0	0
Romania	0	1	0	2	5
Slovakia	0	0	0	0	0
Slovenia	0	0	0	0	0
Spain	0	0	1	0	1
Sweden	0	0	0	0	0
United Kingdom	6	2	0	0	0
EU/EEA	14	6	1	4	6

Source: Country reports from Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom.

-.: no notification rate calculated

.: no data reported.

Outbreaks and other threats

No relevant outbreaks or threats were identified in 2016.

Discussion

Anthrax is a rare disease in EU/EEA countries. Between 2012 and 2016, EU/EEA countries reported 31 confirmed cases to the European Surveillance System (TESSy), ranging from one to 14 cases per year. Cutaneous anthrax is usually the most common form of anthrax and can occur after contact with infected livestock [4].

In 2009, anthrax emerged among heroin users in Europe, presenting a novel clinical manifestation, 'injectional anthrax', which has been attributed to contaminated heroin. Before 2009, only one such case was reported. From 2009 to 2010, Scotland experienced the largest-ever outbreak of injectional anthrax, with 119 cases identified [5]. In 2012 and 2013, new cases of injectional anthrax were diagnosed in Denmark, France, Germany and the United Kingdom [6].

Public health implications

People most at risk of cutaneous anthrax are butchers, farmers, veterinarians or people working in the animal hide industry. Anthrax can be treated with antibiotics. Inhalational anthrax requires respiratory support in an intensive care unit.

Control measures include the appropriate handling of dead animals: disinfection, decontamination and disposal of contaminated materials and decontamination of the environment. Anthrax spores may remain infective for decades in the soil. Workers handling infected carcasses must use protective equipment [7,8].

The risk of exposure for heroin users in EU countries presumably remains and the identification of additional cases among injecting drug users cannot be ruled out in the future. Information on anthrax should be disseminated to healthcare workers, drug treatment and harm reduction centres supporting early diagnosis and treatment. The provision of appropriately dosed opiate substitution treatment could also prevent further anthrax cases [9]. In addition, the development of a syringe filter for spore-forming bacteria could be a new tool for the prevention of infections in injecting drug users [10].

Vaccines against anthrax are available. National and international guidelines recommend vaccination for veterinarians, abattoir workers, those working with animal hides or furs, laboratory workers and armed forces in areas with high risk of exposure. Animals can be vaccinated to prevent them from being infected and passing the spores on to humans. In areas prone to the disease, particularly those that experience outbreaks or sporadic cases in livestock, annual vaccination of susceptible animals is commonly performed. The usually peracute clinical symptoms observed in unvaccinated animals lead to a rapid death and make it very unlikely that meat from such animals enters the food chain [11]. Meat-borne transmission of anthrax in the EU is considered a very rare event [12].

References

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