



## SURVEILLANCE REPORT

### Annual Epidemiological Report for 2016

# Cholera

#### Key facts

- Cholera is a rare travel-associated disease in the EU/EEA.
- In 2016, six EU/EEA countries reported 23 laboratory-confirmed cases of cholera, which was in the range of previous years.
- All cases with known travel history were infected outside of Europe.

#### 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, please 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, all EU/EEA countries but Liechtenstein reported cholera data. Twenty-four countries used EU case definitions and the remaining six used other or unknown case definitions. In all countries but the United Kingdom, cholera reporting was compulsory. All countries have a comprehensive surveillance system and all but Belgium reported case-based data.

#### Epidemiology

In 2016, six EU/EEA countries reported 23 confirmed cases of cholera, with the United Kingdom, as in previous years, accounting for more than half of the cases (Table 1). All 22 cases with known importation status were reported as having been imported. Of the 21 cases with known probable country of infection, eight were infected in India, eight in Pakistan and one each in Bangladesh, Indonesia, Kenya, the Philippines and Thailand.

The majority of cases were reported between July and October (Figure 1) and in adults over 24 years (Figure 2).

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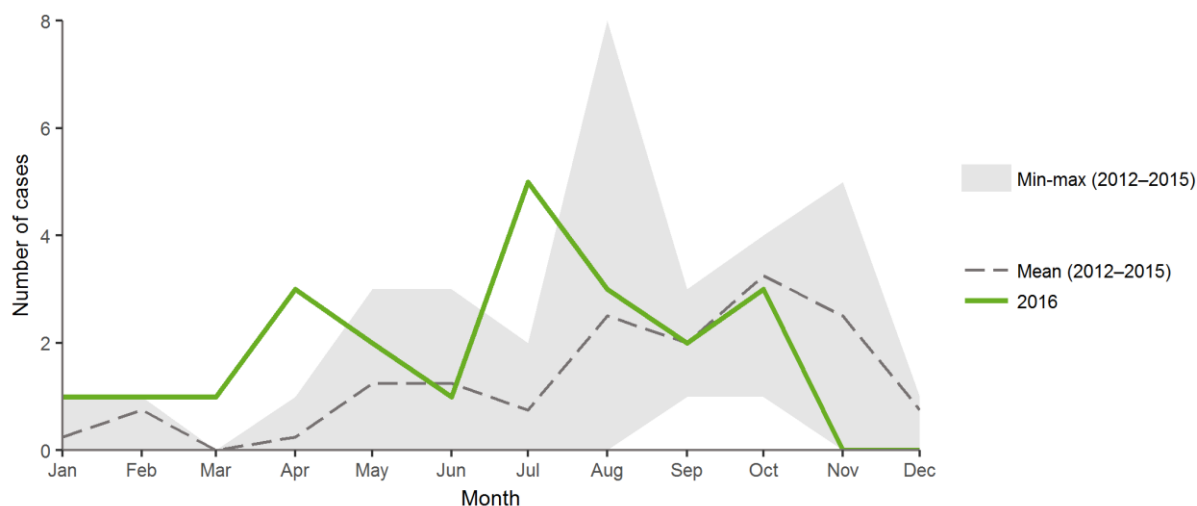
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Stockholm, December 2018

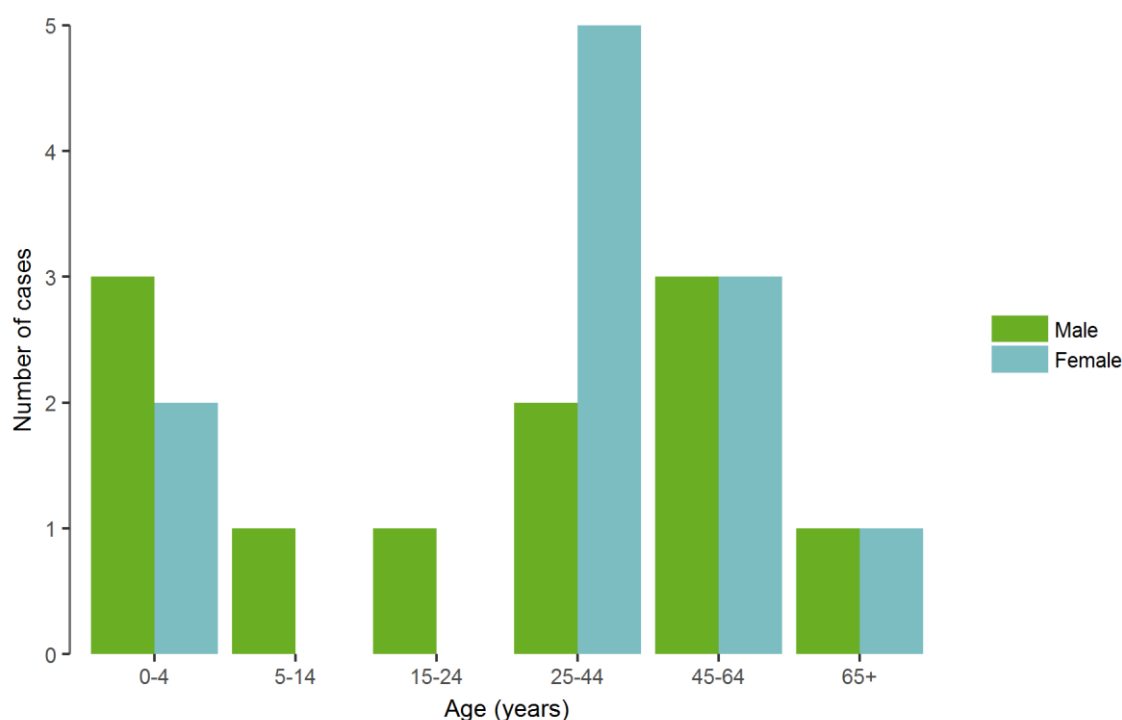
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**Table 1. Distribution of confirmed cholera cases by country and year, EU/EEA, 2012–2016**

Country	2012	2013	2014	2015	2016
	Confirmed cases	Confirmed cases	Confirmed cases	Confirmed cases	Confirmed cases
Austria	1	1	0	0	0
Belgium	0	0	0	1	1
Bulgaria	0	0	0	0	0
Croatia	0	0	0	0	0
Cyprus	0	0	0	0	0
Czech Republic	0	0	0	0	0
Denmark	0	0	0	0	1
Estonia	0	0	0	0	0
Finland	0	0	0	0	0
France	4	1	1	1	0
Germany	0	1	1	3	1
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	1	1
Poland	0	0	0	0	0
Portugal	0	0	0	0	0
Romania	0	0	0	0	0
Slovakia	0	0	0	0	0
Slovenia	0	0	0	0	0
Spain	0	1	0	2	3
Sweden	1	0	0	1	0
United Kingdom	12	5	10	15	16
<b>EU/EEA</b>	<b>18</b>	<b>9</b>	<b>12</b>	<b>24</b>	<b>23</b>

**Figure 1. Distribution of confirmed cholera cases by month, EU/EEA, 2012–2015 and 2016**

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.

**Figure 2. Distribution of confirmed cholera cases by age and gender, EU/EEA, 2016**

Source: country reports from Belgium, Denmark, Germany, Norway, Spain and United Kingdom.

## Discussion

Cholera is endemic in many tropical countries in Asia and Africa and was re-introduced into the Caribbean region in 2010 [4,5]. In the EU/EEA, cholera is rare and primarily associated with travel to endemic countries.

Cholera can be prevented by adhering to basic rules for drinking water and food hygiene [6]. Cholera vaccines are safe and moderately effective for at least five years, depending on the vaccine [4]. WHO does not recommend cholera vaccination for international workers and travellers in general, but only for 'emergency and relief workers who are likely to be directly exposed to cholera patients or to contaminated food or water, particularly those staying in areas with poor access to healthcare facilities' [7].

## Public health implications

European travellers to cholera-endemic destinations should follow the same hygiene rules as in any country with a lack of clean water. Cholera vaccination should be considered for emergency and relief workers at risk of direct exposure to cholera patients or contaminated food or water, in line with national and international guidelines.

## References

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