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## Annual epidemiological report

### Cholera

Reporting on 2014 data retrieved from TESSy\* on 24 November 2015

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#### Key facts

- In 2014, 16 cases of cholera, 14 of which were confirmed, were reported by five EU/EEA countries.
- Cholera cases were reported in Belgium, France, Germany, the Netherlands and the United Kingdom.
- All cases were reported in adults between 15 and 64 years of age. Nine were females and five males.
- The number of reported cases in 2014 was lower than the mean number of cases reported in the period 2010–2014.
- All cases reported in 2014, except two, had been reported as infected outside of the EU.

#### Methods

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In 2014, all EU/EEA countries, except Liechtenstein, reported cholera data; the majority of countries reported zero cases.

Twenty-four countries used EU case definitions (nine countries used the EU-2012 case definition, 14 countries used the EU-2008 case definition, and one country used the EU-2002 case definition). The remaining six reporting countries used non-specified or other case-definitions. In all countries but two, reporting of cholera was compulsory. All countries have a comprehensive surveillance system and were able to report case-based data to TESSy. Romania was the only country reporting data only from hospitals. In all other countries, surveillance was based either on reporting by laboratories or physicians, or both (Annex 1).

#### Epidemiology

In 2014, five EU/EEA countries reported 16 cases of cholera. Belgium reported two confirmed cases. France and Germany reported one confirmed case each, with a probable source of infection outside the EU. The Netherlands reported two probable cases; the United Kingdom reported 10 confirmed cases with a travel history outside the EU. Of the 14 travel-associated cases, four cases were infected in Ghana, four in India, three in Pakistan, and Egypt, Myanmar and Thailand accounted for the remaining three cases.

Table 1. Reported confirmed cholera cases, EU/EEA, 2010–2014

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Country	2010	2011	2012	2013	2014			
	Cases	Cases	Cases	Cases	National data	Report type	Reported cases	Confirmed cases
Austria	0	0	1	1	Y	C	0	0
Belgium	0	0	0	0	Y	C	2	2
Bulgaria	0	0	0	0	Y	C	0	0
Croatia	.	.	0	0	Y	C	0	0
Cyprus	0	0	0	0	Y	C	0	0
Czech Republic	0	0	0	0	Y	C	0	0
Denmark	0	1	0	0	Y	C	0	0
Estonia	0	0	0	0	Y	C	0	0
Finland	0	0	0	0	Y	C	0	0
France	1	1	4	1	Y	C	1	1
Germany	6	3	0	1	Y	C	1	1
Greece	0	0	0	0	Y	C	0	0
Hungary	0	0	0	0	Y	C	0	0
Iceland	0	0	0	0	Y	C	0	0
Ireland	0	0	0	0	Y	C	0	0
Italy	0	0	0	0	Y	C	0	0
Latvia	0	0	0	0	Y	C	0	0
Liechtenstein	.	.	.	.	.	.	.	.

Lithuania	0	0	0	0	Y	C	0	0
Luxembourg	0	0	0	0	Y	C	0	0
Malta	0	0	0	0	Y	C	0	0
Netherlands	0	2	0	0	Y	C	2	0
Norway	0	0	0	0	Y	C	0	0
Poland	0	0	0	0	Y	C	0	0
Portugal	0	0	0	0	Y	C	0	0
Romania	0	0	0	0	Y	C	0	0
Slovakia	0	0	0	0	Y	C	0	0
Slovenia	0	0	0	0	Y	C	0	0
Spain	0	1	0	1	Y	C	0	0
Sweden	1	1	1	0	Y	C	0	0
United Kingdom	13	26	12	5	Y	C	10	10
<b>EU/EEA</b>	<b>21</b>	<b>35</b>	<b>18</b>	<b>9</b>	.	<b>C</b>	<b>16</b>	<b>14</b>

Source: Country reports. Legend: Y = yes, N = no, C = case based, A = aggregated, . = no data reported, ASR: age-standardised rate, - = no notification rate calculated

The number of cases reported in 2014 is the second lowest when compared with the annual number of cases reported between 2010 and 2014. During this five-year period, the annual mean number of reported confirmed cases was 21, ranging from 9 in 2013 to 35 in 2011.

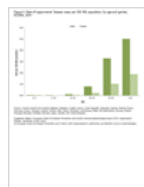
Figure 1. Reported confirmed cholera cases, EU/EEA, 2014



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

All confirmed cholera cases in 2014 were in adults between 17 and 63 years of age. Nine infections were in females and five in males.

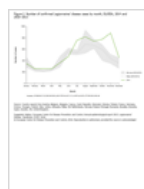
Figure 2. Reported confirmed cholera cases by age and gender, EU/EEA, 2014



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

Similarly to the previous four years, the highest number of cases for 2014 was reported in autumn, with three confirmed cases reported in September and four in October.

Figure 3. Reported confirmed cholera cases: seasonal distribution, EU/EEA, 2014 compared with 2010–2013



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

The overall number of reported confirmed cases has been decreasing steadily since 2010 and 2011 when the highest peaks in the last five years were noted.

Figure 4. Reported confirmed cholera cases: trend and number, EU/EEA, 2010–2014



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

## Discussion

Data on cholera were reported to TESSy from all EU/EEA countries, except Liechtenstein, but only five countries had cases, most of them with travel history outside EU/EEA. The number of cases reported in 2014 is lower than the mean number of cases reported from 2010 to 2013, albeit slightly higher than in the previous year. This reflects random, sporadic variation at a stage when there is no circulation of the pathogen in the EU/EEA.

The vast majority of cases are associated with travel to countries outside the EU: the age distribution of the confirmed cases reported in 2014 is consistent with the usual age of European travellers and, as in previous years, cases are reported mostly during and after the summer months. Cholera is endemic in many tropical countries in Asia and Africa and was re-introduced to the Caribbean area a few years ago [1-4].

The two confirmed cases reported as infected in the EU are two unusual events. Between 2010 and 2013, the only confirmed autochthonous case in the EU was reported by Spain in 2013.

### Public health conclusions

Cholera is mainly a disease imported through travelling, with little or no transmission within the EU. European travellers should be informed about the availability of a cholera vaccine before travelling to destinations where cholera is endemic [5-7]. Travellers to endemic countries should follow good personal hygiene practices and drink only bottled water to prevent or minimise the risk for *Vibrio cholerae*-infection.

### References

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### Additional information

[ECDC Surveillance Atlas of Infectious Diseases](#)

### Annex

Table. Cholera, surveillance systems overview, 2014

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\* The European Surveillance System (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.

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