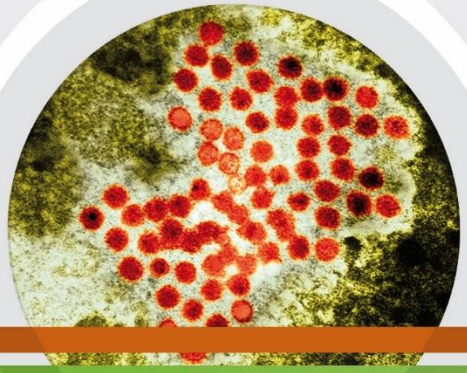


SURVEILLANCE REPORT

Annual Epidemiological Report for 2016

Hepatitis A

Key facts

- In 2016, 29 EU/EEA countries reported 12 502 cases of hepatitis A, of which 12 429 (99.4%) were confirmed.
- The EU/EEA notification rate was 2.4 cases per 100 000 population. Eighteen EU/EEA countries had notification rates below one confirmed case per 100 000 population. The countries with the highest notification rates were Slovakia (25.0), Bulgaria (22.7) and Romania (16.1).
- In 2016, both the number of reported cases and notification rates were at their lowest levels since 2011.
- As in previous years, children between 5 and 14 years of age accounted for most cases (35%) and had the highest notification rate (7.9 cases per 100 000 population).
- At the end of 2016, two EU countries reported small clusters of hepatitis A virus sub-genotype IA infections in men who have sex with men (MSM). These were the first signals of a large and prolonged epidemic in many EU/EEA countries the following year.

Methods

This report is based on data for 2016 retrieved from The European Surveillance System (TESSy) on 27 November 2017. 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].

For 2016, 30 EU/EEA countries (28 EU Member States plus Iceland and Norway) reported hepatitis A data to ECDC; Liechtenstein did not report. Twenty-five countries used EU case definitions: 14 countries used the EU 2012 case definition and 11 countries used the EU 2008 case definition. The remaining five reporting countries used unspecified or other case definitions. Reporting of hepatitis A was compulsory in 29 countries and one country (the United Kingdom) had other arrangements. Twenty-nine countries had a comprehensive surveillance system and one country (Belgium) did not specify the type of surveillance. In 29 countries, surveillance was based on either laboratory or physician reporting or a combination of the two. Romania reported only hospitalised cases. Twenty-seven countries reported case-based data and three countries (Belgium, Bulgaria and Croatia) reported aggregated data [2].

Suggested citation: European Centre for Disease Prevention and Control. Hepatitis A. In: ECDC. Annual epidemiological report for 2016. Stockholm: ECDC; 2019.

Stockholm, January 2019

In addition to TESSy reporting, information from event-based surveillance for hepatitis A clusters or outbreaks with a potential EU dimension was collected through the Epidemic Intelligence Information System for Food- and Waterborne Diseases (EPIS-FWD) and in the Early Warning and Response System (EWRS).

Epidemiology

In 2016, 29 EU/EEA countries reported 12 502 cases of hepatitis A, 12 429 (99.4%) of which were confirmed (Table 1).

2016 was the year with the lowest number of confirmed cases for the period 2012–2016. Eighteen countries reported fewer than 100 confirmed cases, while nine countries reported more than 500 cases. Romania reported 25.7% of all confirmed cases. Compared with the four-year average from 2012–2015, nine countries reported increases of over 50% in the number of confirmed cases (Austria, Croatia, the Czech Republic, Greece, Luxembourg, Malta, Portugal, Slovakia and Spain) in 2016, while three countries (Estonia, Finland and Lithuania) reported decreases of more than 50%.

In the 25 countries reporting information on travel history for all or part of their cases, 813 of 5 968 cases (13.6%) with available information were travel-associated. France (n=307) and Germany (n=151) accounted for more than half (56.3%) of all travel-associated cases.

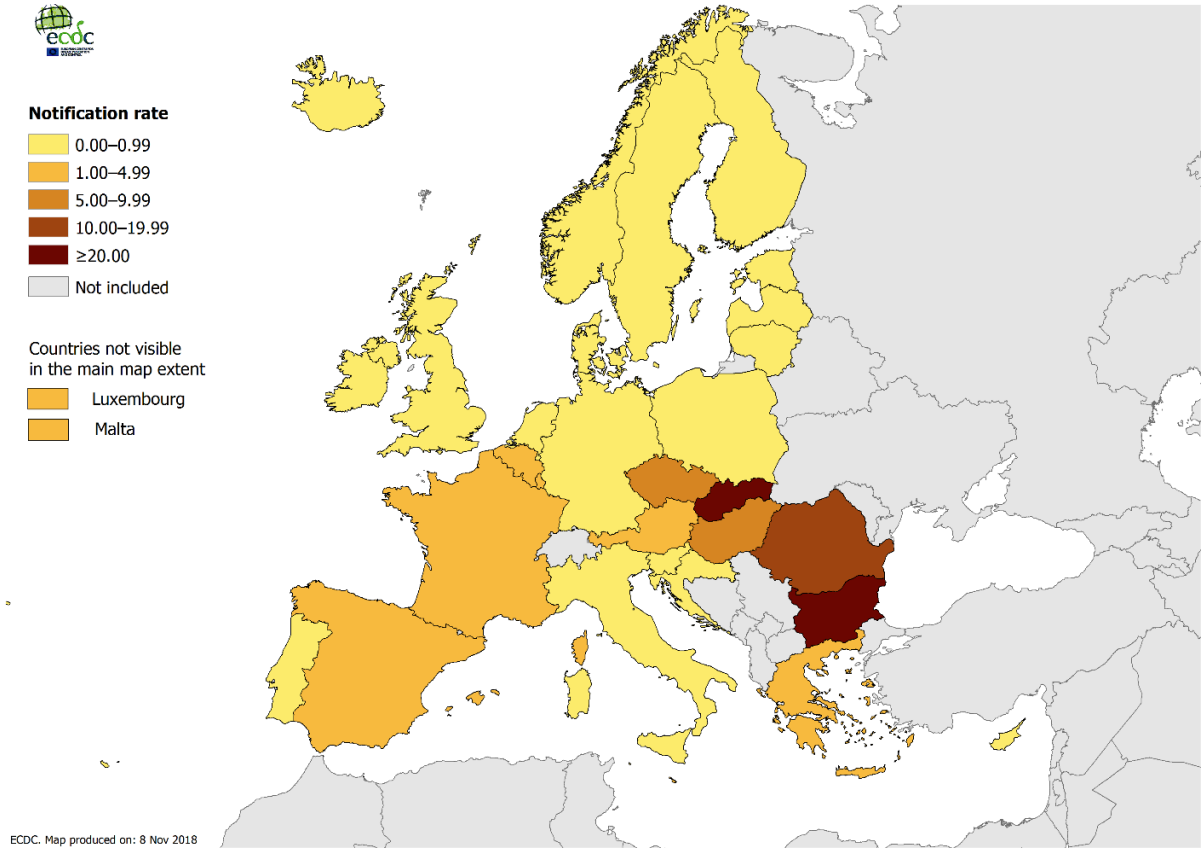
Table 1. Distribution of confirmed hepatitis A cases, EU/EEA, 2012–2016

Country	2012		2013		2014		2015		2016			
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Confirmed cases	Rate	ASR	Reported cases
Austria	43	0.5	78	0.9	47	0.6	60	0.7	92	1.1	1.1	94
Belgium	147	1.3	134	1.2	125	1.1	113	1.0	152	1.3	1.3	152
Bulgaria	4 896	66.8	1 819	25.0	601	8.3	1 061	14.7	1 625	22.7	25.4	1 627
Croatia	0	0.0	0	0.0	7	0.2	4	0.1	5	0.1	0.1	5
Cyprus	2	0.2	2	0.2	8	0.9	4	0.5	3	0.4	0.3	3
Czech Republic	284	2.7	348	3.3	673	6.4	724	6.9	930	8.8	9.0	930
Denmark	53	0.9	103	1.8	29	0.5	19	0.3	37	0.6	0.7	37
Estonia	63	4.8	6	0.5	12	0.9	6	0.5	7	0.5	0.5	7
Finland	8	0.1	41	0.8	27	0.5	45	0.8	6	0.1	0.1	6
France	1 096	1.7	914	1.4	933	1.4	743	1.1	693	1.0	1.0	693
Germany	828	1.0	766	1.0	679	0.8	844	1.0	728	0.9	0.9	736
Greece	74	0.7	155	1.4	84	0.8	62	0.6	207	1.9	2.1	214
Hungary	331	3.3	1 117	11.3	1 548	15.7	963	9.8	685	7.0	7.2	699
Iceland	4	1.3	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0
Ireland	28	0.6	47	1.0	21	0.5	35	0.8	37	0.8	0.7	38
Italy	458	0.8	1 388	2.3	601	1.0	487	0.8	523	0.9	0.9	526
Latvia	11	0.5	12	0.6	20	1.0	6	0.3	10	0.5	0.5	10
Liechtenstein	.	.	.	.	.	.	.	.	.	.	.	.
Lithuania	113	3.8	64	2.2	17	0.6	7	0.2	17	0.6	0.6	17
Luxembourg	2	0.4	3	0.6	5	0.9	5	0.9	6	1.0	1.0	6
Malta	0	0.0	0	0.0	2	0.5	4	0.9	6	1.4	1.4	6
Netherlands	112	0.7	105	0.6	97	0.6	75	0.4	77	0.5	0.5	77
Norway	40	0.8	51	1.0	75	1.5	32	0.6	42	0.8	0.8	42
Poland	70	0.2	48	0.1	75	0.2	49	0.1	35	0.1	0.1	35
Portugal	10	0.1	15	0.1	23	0.2	26	0.3	53	0.5	0.5	53
Romania	3 603	17.9	4 173	20.8	6 646	33.3	5 176	26.0	3 190	16.1	16.7	3 211
Slovakia	124	2.3	204	3.8	735	13.6	883	16.3	1 358	25.0	25.6	1 362
Slovenia	11	0.5	23	1.1	11	0.5	5	0.2	13	0.6	0.7	13
Spain	557	1.2	629	1.3	594	1.3	557	1.2	1 308	2.8	2.9	1 319
Sweden	87	0.9	105	1.1	84	0.9	96	1.0	88	0.9	0.9	88
United Kingdom	314	0.5	309	0.5	334	0.5	435	0.7	496	0.8	0.8	496
EU/EEA	**13 369**	**2.6**	**12 659**	**2.5**	**14 113**	**2.8**	**12 526**	**2.4**	**12 429**	**2.4**	**2.5**	**12 502**

ASR: age-standardised rate
.: no data reported.

In 2016, the EU/EEA notification rate was 2.4 cases per 100 000 population, ranging from 0 in Iceland to 25.0 in Slovakia (Table 1). About two-thirds of the EU/EEA countries (18/29) had notification rates below one confirmed case per 100 000 population (Figure 1). In addition to Slovakia (25.0 cases per 100 000 population), high notification rates were reported in Bulgaria (22.7 cases) and Romania (16.1 cases).

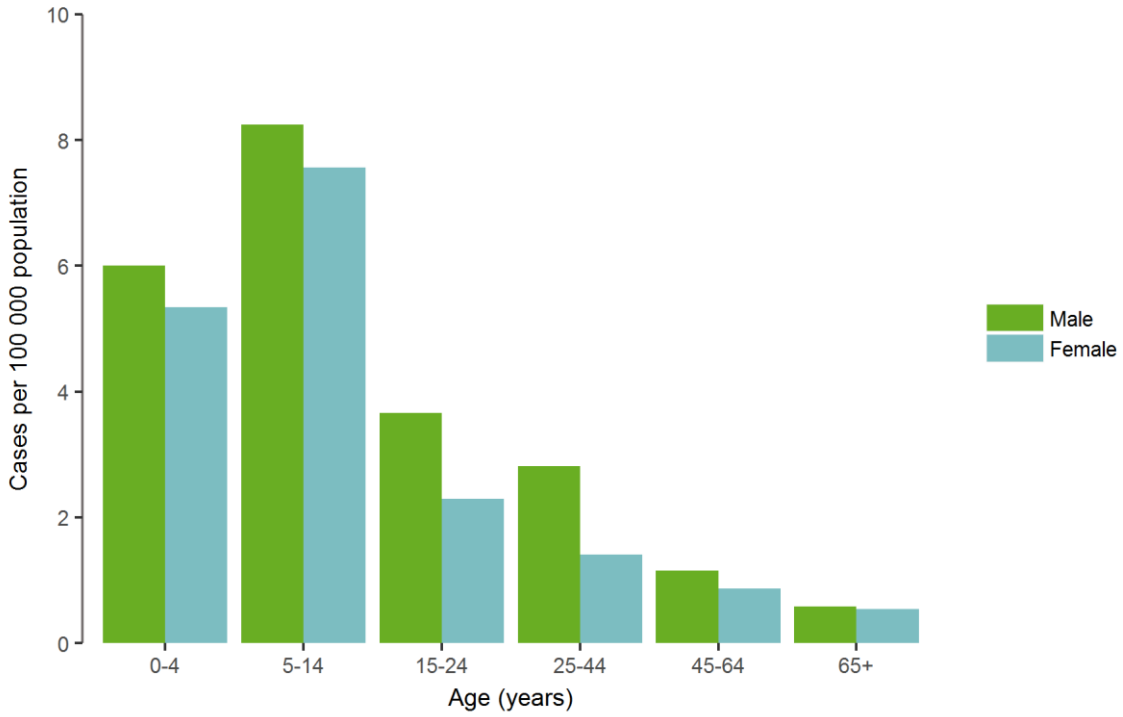
Figure 1. Distribution of confirmed hepatitis A cases per 100 000 population by country, EU/EEA, 2016



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.

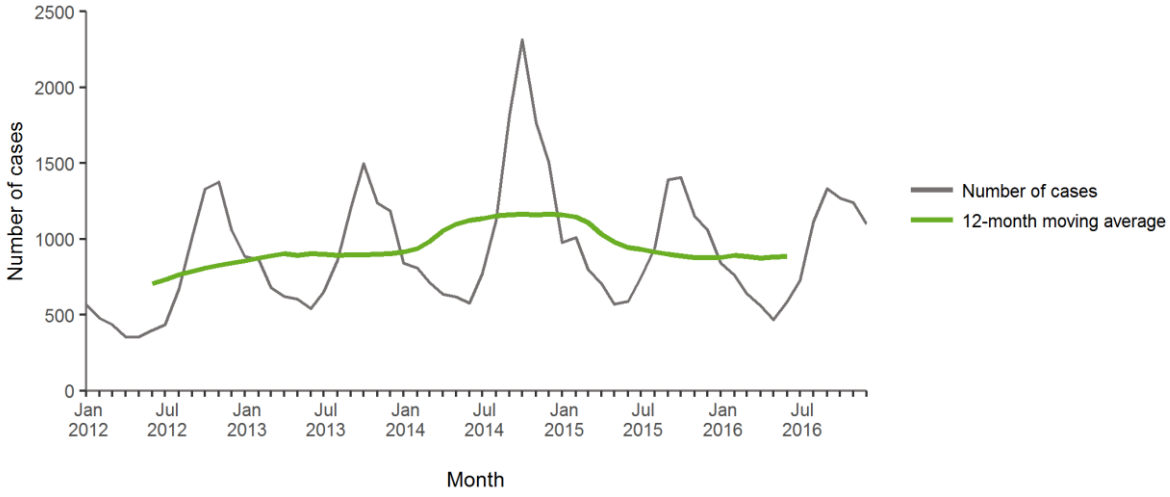
In 2016, the highest notification rate was observed in the age group 5 to 14 years (7.9 confirmed cases per 100 000 population), followed by the age group 0 to 4 years (5.7 confirmed cases per 100 000 population, Figure 2). Confirmed male cases had slightly higher notification rates than confirmed female cases in all age groups. Confirmed cases older than 44 years of age accounted for 16.0% of all confirmed cases.

Figure 2. Distribution of confirmed hepatitis A cases per 100 000 population by age and gender, EU/EEA, 2016



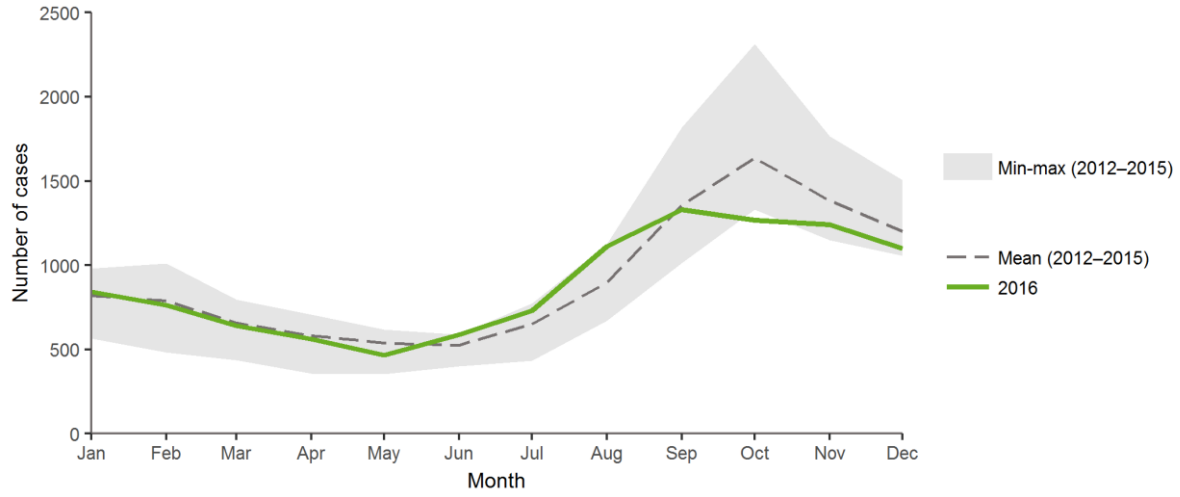
The monthly pattern of the number of cases reported in 2012–2016 was similar except for the second half of 2014 and the early months of 2015. Hepatitis A has a marked seasonality in EU/EEA countries, with a peak of confirmed cases reported between September and November (Figures 3–4).

Figure 3. Distribution of confirmed hepatitis A cases by month, EU/EEA, 2012–2016



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 4. Distribution of confirmed hepatitis A 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.

Outbreaks and other threats

In 2016, four clusters of hepatitis A virus infection were reported through EPIS-FWD or EWRS. The first was a cluster of hepatitis A virus sub-genotype IB infections reported by a non-EU/EEA country and associated with consumption of a berry blend containing contaminated berries.

The second was a small cluster of hepatitis A virus sub-genotype IB infections with a strain different from the previous cluster affecting people who inject drugs (PWID) in two EU countries.

In October and December 2016, the Netherlands, then the United Kingdom reported two clusters of hepatitis A virus sub-genotype IA infections. Both events affected adult men living in different parts of the two countries. In the following months, the investigation of these events uncovered a very large and prolonged hepatitis A outbreak disproportionally affecting MSM in many EU/EEA countries [4].

Discussion

The number of hepatitis A cases reported in 2016 was the lowest in more than five years. This does not seem to be related to changes in national surveillance systems, as little change in hepatitis A surveillance occurred in EU/EEA countries compared to previous years. The decrease rather appears to be linked to the cyclical character of hepatitis A incidence observed in low-endemicity settings, both within the general population and groups at increased risk of infection [5].

As in previous years, most cases were reported in children, who are more likely to develop a mild or very mild disease, which is difficult to capture with disease surveillance systems. It is possible that the findings underestimate actual case numbers. While the majority of cases was in young people, about 2 000 cases were reported in older adults known to be at risk of severe outcome as hepatitis A severity is closely associated with patient age [5]. This highlights the risk associated with sporadic transmission within the growing cohort of a susceptible elderly population.

Eastern EU countries reported most hepatitis A cases and notification rates in some of these countries were more than 20 times higher than in other European countries. A substantial proportion of the cases reported in the rest of the EU/EEA appears to be associated with infections acquired abroad. The number of cases reported as travel-associated is likely to be underestimated due to under-reporting. A more detailed analysis of such cases in the EU/EEA found a higher proportion of travel-associated cases, thus stressing that travel is still a major risk factor for hepatitis A virus infection in the EU/EEA [6]. Vaccination of travellers would prevent such infections, as recommended by WHO and in all EU/EEA countries.

Unlike previous years, only small outbreaks of hepatitis A were reported. However, these were associated with known risk factors involving either food-borne or person-to-person transmission. The food-borne outbreak was associated with consumption of contaminated berries as observed in large outbreaks in the past [7-9]. Person-to-person transmission affected groups at increased risk of infection (i.e. PWID and MSM) for whom vaccination is recommended in most EU/EEA countries.

Public health implications

Molecular characterisation and sharing of sequences at the international level offers the opportunity to rapidly link seemingly sporadic cases and detect diffuse cross-border outbreaks. The molecular characterisation of hepatitis A viruses and sharing of sequences should therefore be prioritised at the European level.

Current WHO vaccination recommendations outline several options for intervention (i.e. universal childhood vaccination in countries at intermediate endemicity and vaccination of groups at increased risk of infection and severe outcome in low- and very-low-endemicity countries) [5]. Vaccination of travellers to hepatitis A virus-endemic areas should be promoted in all EU/EEA countries in accordance with national guidelines.

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