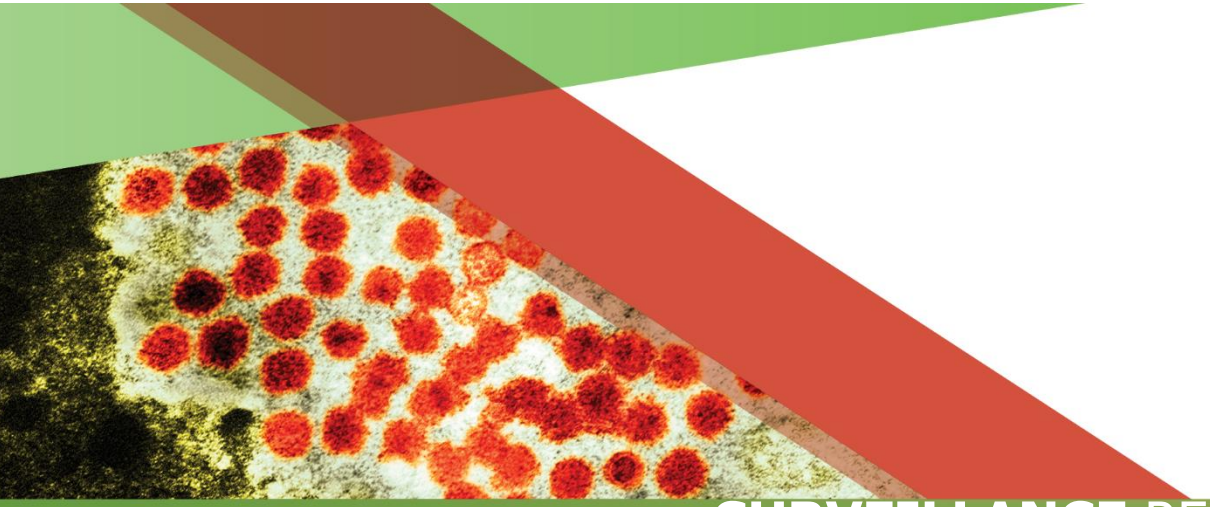


SURVEILLANCE REPORT

Hepatitis A

Annual Epidemiological Report for 2019

Key facts

- In 2019, 30 EU/EEA countries reported 11 370 cases of hepatitis A.
- The EU/EEA notification rate was 2.2 cases per 100 000 population. Sixteen EU/EEA countries had notification rates below one case per 100 000 population. The countries with the highest notification rates were Bulgaria (21.6) and Romania (17.3).
- In 2019, both the number of reported cases and notification rates were at their lowest since the beginning of EU-level hepatitis A surveillance in 2007. This is possibly due to the increased natural immunity in at-risk groups following a large multi-country outbreak in 2017 and 2018.
- Children between five and 14 years of age accounted for a large proportion of cases (32%) and had the highest notification rate (6.5 cases per 100 000 population).
- In 2019, seven multi-country clusters of hepatitis A were reported to EPIS-FWD. Four clusters were of sub-genotype IA infections, two were of sub-genotype IB and one cluster was of sub-genotype IIIA.

Introduction

Hepatitis A is an inflammation of the liver caused by the hepatitis A virus (HAV). In children, hepatitis A virus infection is often asymptomatic or mild. In adults, the onset of illness is usually abrupt, characterised by fever, malaise, and abdominal discomfort. Jaundice is the predominant symptom. Very severe disease is unusual, but the infection can lead to acute liver failure and death, particularly in the elderly and in patients with liver disease. Symptoms may last from one or two weeks to months. Hepatitis A virus is highly transmissible and has an average incubation period of four weeks, ranging from two to six weeks. Transmission most often occurs via the faecal–oral route through contaminated food and water or via person-to-person contact (e.g. among household contacts, sexual contacts, day-care centres or schools).

Methods

This report is based on data for 2020 retrieved from The European Surveillance System (TESSy) on 19 January 2022. 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].

Suggested citation: European Centre for Disease Prevention and Control. Disease name. In: ECDC. Annual epidemiological report for 2019. Stockholm: ECDC; 2022.

Stockholm, November 2022

For 2019, 30 EU/EEA countries (28 EU Member States plus Iceland and Norway) reported hepatitis A data to ECDC; Liechtenstein did not report, the reasons for this are unknown. Twenty-six countries used EU case definitions: seven countries used the EU 2018 case definition; 12 countries used the EU 2012 case definition, and seven countries used the EU 2008 case definition. The remaining four reporting countries used unspecified or other case definitions. The only difference between the 2018 definition and the 2012 and 2008 definitions is that the former considers laboratory confirmation as sufficient for a confirmed case when information on clinical symptoms is missing. 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-eight countries reported case-based data and two countries (Belgium and Bulgaria) reported aggregated data [2].

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).

Epidemiology

In 2019, 29 EU/EEA countries reported 11 370 cases of hepatitis A (Table 1). One country, Cyprus, reported zero cases. The EU/EEA notification rate was 2.2 cases per 100 000 population. In 2019, both the lowest number of reported cases and the lowest notification rate were reported since the beginning of EU-level hepatitis A surveillance in 2007. The number of cases in 2019 represented a 27.5% decrease compared with 2018, and a 56.5% decrease compared with 2017, when an unprecedently large and prolonged outbreak occurred which disproportionally affected men who have sex with men.

Comparing the number of cases reported in 2019 to 2018, most countries (n=22; 73%) reported a reduction in the number of cases, while Croatia (-91%), Cyprus (-100%) and Greece (-73%) reported a notable reduction in the number of cases. Eight countries reported an increase in the number of cases (Table 1).

In 2019, 18 countries reported fewer than 100 confirmed cases, while seven countries reported more than 500 cases. Romania accounted for 29.5% of all EU/EEA reported cases and the second highest notification rate at 17.3 confirmed cases per 100 000 population. The highest notification rate was reported by Bulgaria at 21.6 cases per 100 000 population.

In the 25 countries reporting information on travel history for all or part of their cases, 1 256 of 8 603 cases (14.5%) with available information were travel-associated. France (n=577), Germany (n=174) and Spain (n=191) accounted for three quarters (75%) of all travel-associated cases.

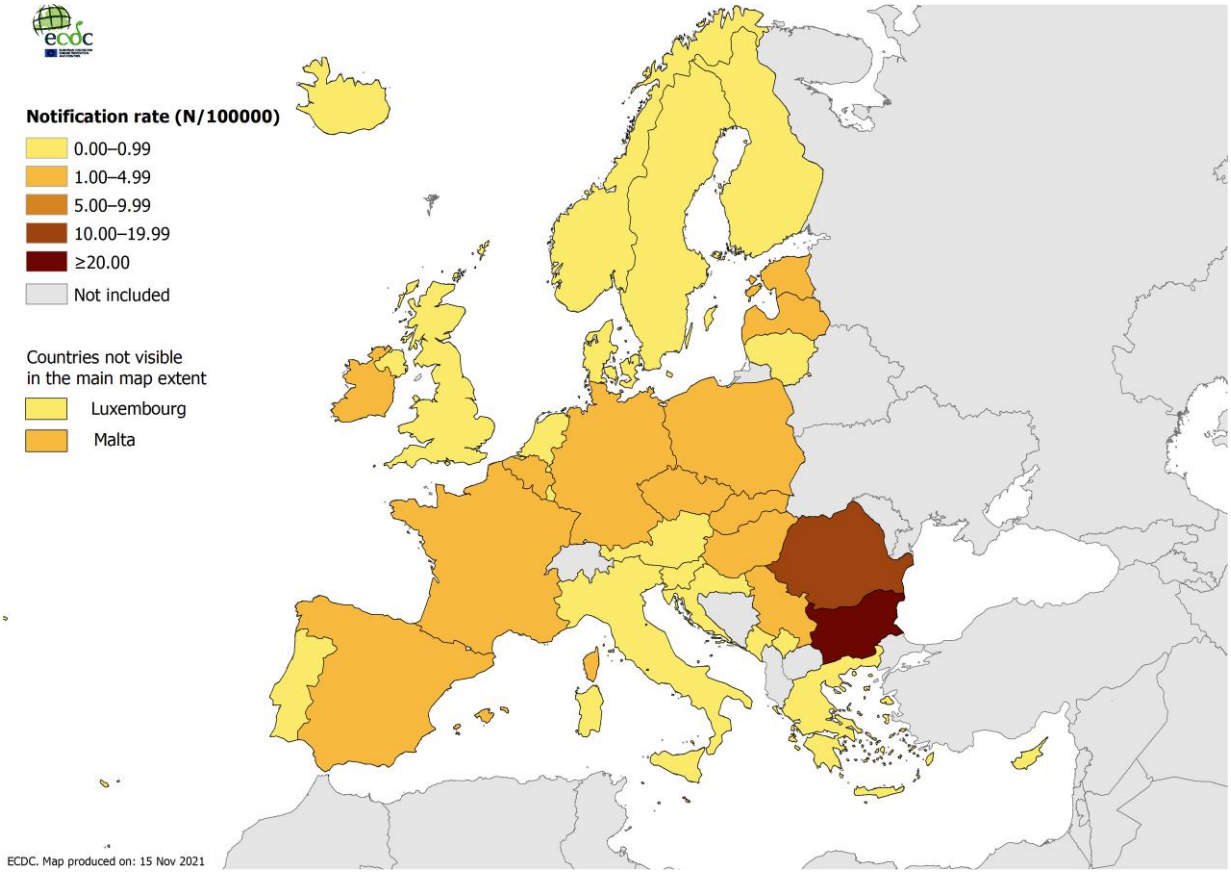
Table 1. Confirmed hepatitis A cases and rates per 100 000 population by country and year, EU/EEA, 2015–2019

Country	2015		2016		2017		2018		2019		
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	ASR
Austria	60	0.7	92	1.1	242	2.8	80	0.9	76	0.9	0.9
Belgium	113	1.0	152	1.3	368	3.2	241	2.1	219	1.9	1.9
Bulgaria	1 061	14.7	1 625	22.7	2 510	35.3	1 347	19.1	1 512	21.6	24.0
Croatia	4	0.1	5	0.1	46	1.1	96	2.3	9	0.2	0.2
Cyprus	4	0.5	3	0.4	6	0.7	9	1.0	0	0.0	0.0
Czechia	724	6.9	930	8.8	772	7.3	209	2.0	240	2.3	2.3
Denmark	19	0.3	37	0.6	38	0.7	65	1.1	34	0.6	0.6
Estonia	6	0.5	7	0.5	45	3.4	15	1.1	20	1.5	1.6
Finland	45	0.8	6	0.1	26	0.5	27	0.5	18	0.3	0.3
France	743	1.1	693	1.0	3 387	5.1	1 525	2.3	1 375	2.0	2.1
Germany	846	1.0	729	0.9	1 227	1.5	1 038	1.3	871	1.0	1.0
Greece	62	0.6	207	1.9	276	2.6	104	1.0	28	0.3	0.3
Hungary	963	9.8	685	7.0	366	3.7	177	1.8	104	1.1	1.1
Iceland	0	0.0	0	0.0	5	1.5	1	0.3	2	0.6	0.6
Ireland	35	0.7	37	0.8	67	1.4	35	0.7	51	1.0	1.0
Italy	487	0.8	523	0.9	3 766	6.2	1 077	1.8	528	0.9	1.0
Latvia	6	0.3	10	0.5	75	3.8	67	3.5	37	1.9	2.1
Liechtenstein	ND	NR	ND	NR	ND	NR	ND	NR	ND	NR	NR
Lithuania	7	0.2	17	0.6	38	1.3	13	0.5	8	0.3	0.3
Luxembourg	5	0.9	6	1.0	7	1.2	2	0.3	4	0.7	0.6
Malta	4	0.9	6	1.3	27	5.9	4	0.8	11	2.2	2.2
Netherlands	75	0.4	77	0.5	345	2.0	180	1.0	146	0.8	0.9
Norway	32	0.6	42	0.8	49	0.9	32	0.6	37	0.7	0.7
Poland	49	0.1	35	0.1	2 990	7.9	1 440	3.8	1 054	2.8	2.8
Portugal	26	0.3	53	0.5	559	5.4	82	0.8	42	0.4	0.4
Romania	5 176	26.0	3 190	16.1	2 477	12.6	4 527	23.2	3 351	17.3	18.4
Slovakia	883	16.3	1 358	25.0	673	12.4	173	3.2	99	1.8	1.8
Slovenia	5	0.2	13	0.6	35	1.7	16	0.8	12	0.6	0.5
Spain	557	1.2	1 308	2.8	4 528	9.7	2 294	4.9	974	2.1	2.2
Sweden	96	1.0	88	0.9	110	1.1	123	1.2	90	0.9	0.9
United Kingdom	435	0.7	496	0.8	1 085	1.6	681	1.0	418	0.6	0.6
EU-EEA	**12 528**	**2.4**	**12 430**	**2.4**	**26 145**	**5.1**	**15 680**	**3.0**	**11 370**	**2.2**	**2.3**

Source: Country reports.
ASR: age-standardised rate.
ND: no data reported.
NR: no rate calculated.

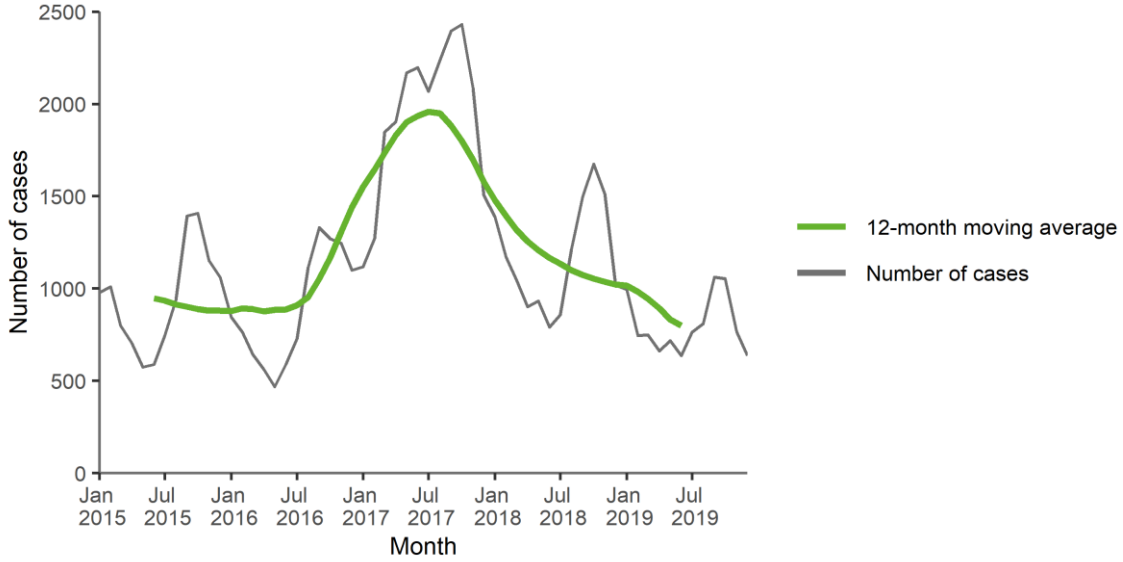
In 2019, the EU/EEA notification rate was 2.2 cases per 100 000 population, ranging from no cases in Cyprus to 21.6 cases per 100 000 population in Bulgaria (Table 1). The second highest notification rate was reported by Romania at 17.3 cases per 100 000 population. Slightly over half of EU/EEA countries (16/30; 53%) had a notification rate less than one confirmed case per 100 000 population (Figure 1). Age-standardised rates did not differ substantially from crude rates (Table 1).

Figure 1. Confirmed hepatitis A cases per 100 000 population by country, EU/EEA, 2019



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

Figure 2. Confirmed hepatitis A cases by month, EU/EEA, 2015–2019

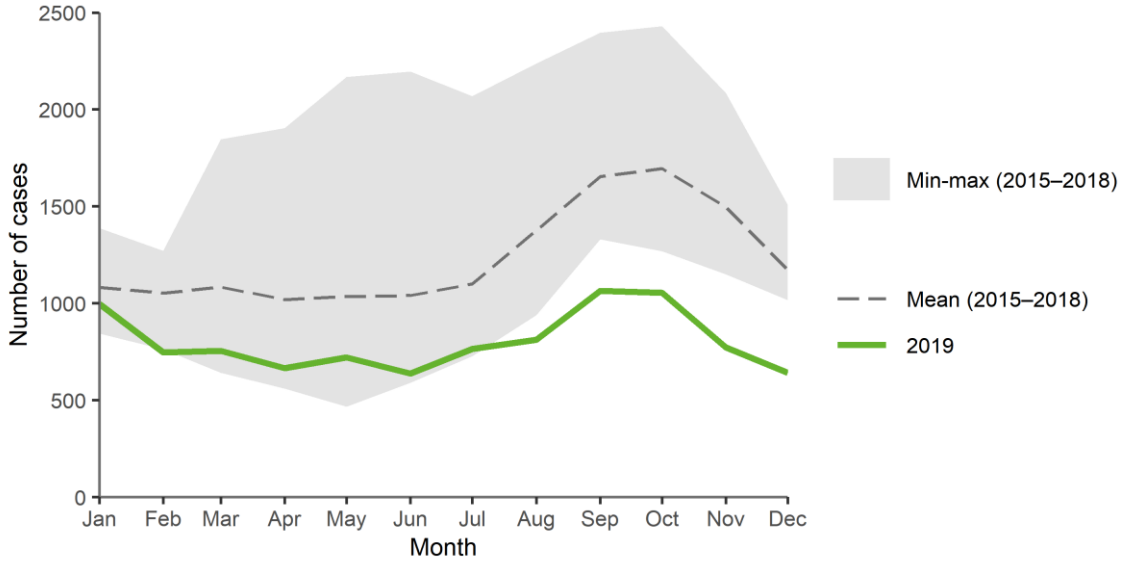


Source: Country reports from Austria, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, the United Kingdom.

Between 2015 and 2019, the 12-month moving average of the number of cases reported shows an increasing trend from mid-2016 onwards, with cases peaking in mid-2017 (Figure 2). This increase in cases corresponds to an unprecedentedly large and prolonged outbreak of hepatitis A sub-genotype IA in several EU/EEA countries in 2017 and 2018, which disproportionally affected men who have sex with men. From mid-2017 onwards, a decreasing trend was observed. The number of cases reported in 2019 (n=11 370) was similar to the average number of cases reported in the five years between 2012 and 2016 (n=13 480). Despite this, the lowest number of cases ever reported since the beginning of EU-level surveillance in 2007 was in 2019.

Hepatitis A typically has a marked seasonality in EU/EEA countries, with cases peaking between September and November (Figure 3). This typical seasonal trend with a peak in case numbers in September and October was also observed in 2019, albeit the monthly number of cases reported in throughout 2019 were consistently lower for each month when compared to the mean number of cases reported during 2015-2018 (Figure 3). In 2019, the number of cases reported between February and August were relatively stable, consistent with previous years.

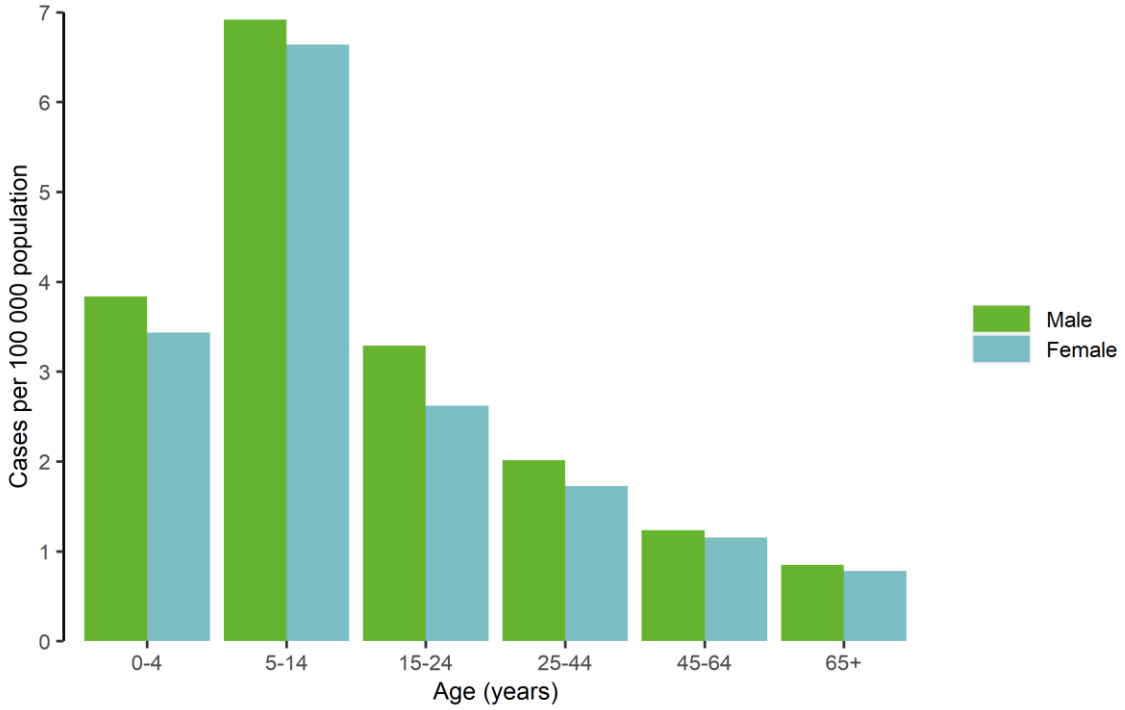
Figure 3. Confirmed hepatitis A cases by month, EU/EEA, 2019 and 2015–2018



Source: Country reports from Austria, Cyprus, Czechia, 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.

In 2019, the overall male-to-female ratio was 1.1:1.0. Children between the ages of five and 14 years accounted for a large proportion of cases (31.6%) and the highest notification rate (6.5 cases per 100 000 population) (Figure 4). Male cases had slightly higher notification rates than female cases in all age groups (Figure 4). Almost a quarter of all cases (22.5%) were aged 45 years and over.

Figure 4. Confirmed hepatitis A cases per 100 000 population, by age and gender, EU/EEA, 2019



Outbreaks and other threats

In 2019, seven multi-country clusters of hepatitis A virus infections were reported through EPIS-FWD. Among these, four clusters of hepatitis A virus sub-genotype IA infections were reported; three clusters affected men who have sex with men (MSM) and in the fourth cluster, berries (fresh and/or frozen) were considered the suspected vehicle of infection. Two multi-country clusters of hepatitis A virus sub-genotype IB were also reported 2019; frozen berries were considered the suspected vehicle of infection in one cluster and a vehicle of infection was not identified in the other. One multi-country cluster of hepatitis A sub-genotype IIIA was also reported in 2019; imported dates were considered the suspected vehicle of infection.

Discussion

In 2019, hepatitis A was the third most commonly reported foodborne infectious disease in the EU/EEA. Despite this, the number of reported hepatitis A cases in 2019 was at the lowest level since the beginning of EU-level surveillance in 2007. Indeed, the overall trend of the reported number of cases of in the EU/EEA has been decreasing since 2017. The increased prevalence of natural immunity in the population following the large multi-country outbreak of hepatitis A sub-genotype IB in 2017 and 2018 [1-4], in addition to heightened awareness of hepatitis A preventive measures (e.g. practising good hygiene and increased vaccine uptake) among at-risk groups, are also likely to have contributed to this decreasing trend.

In 2019, one third of cases were reported among children, which is consistent with previous years. Compared to adults, children are more likely to develop mild or very mild disease. As result, it can be difficult to capture the true number of cases in this population group, possibly leading to an underestimation of the number of cases [5]. In 2019, adults older than 44 years of age accounted for one quarter of cases in the EU/EEA. Older adults are at increased risk of severe disease, hospitalisations and, albeit rarely, death [6].

Eastern EU countries reported most hepatitis A cases and notification rates in some of these countries were more than 15 times higher than in other European countries. A notable 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 indicating that travel remains an important risk factor for hepatitis A virus infection in the EU/EEA [7]. Vaccination of individuals travelling abroad would help prevent such infections, as recommended by WHO and all EU/EEA countries.

In 2019, similar to previous years, national authorities reported investigating clusters of cases suspected to be associated with foodborne transmission or with transmission taking place among MSM, a demographic known to be at increased risk of infection [8]. In the foodborne events investigated by national authorities, berries were the suspected vehicle of infection highlighting that contamination of this food is often associated hepatitis A transmission in Europe [9].

Public health implications

The World Health Organization (WHO) sets out the following vaccination recommendations to reduce the incidence of hepatitis A. In countries at very low and low HAV endemicity, like most EU/EEA countries, WHO recommends vaccinating men who have sex with men (MSM), travellers to endemic areas and people who inject drugs (PWID) [5, 8]. The same group should also be targeted by communication campaigns to increase awareness on the infection and on the mode of transmission. In very low and low HAV endemicity settings, WHO also recommends vaccinating those individuals at risk of a severe outcome (i.e. immunocompromised individuals and the elderly). In countries of intermediate endemicity, WHO recommends universal childhood vaccination [8].

In all settings, measures aiming to improve hygiene and sanitation and rapid implementation of outbreak response are essential to reduce HAV transmission, including timely tracing of contacts of cases to reduce the likelihood of secondary and tertiary transmission. Further, collaboration between the public health and the food safety sectors is important to help reduce foodborne infections.

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