RAPID RISK ASSESSMENT

Multi-country outbreak of hepatitis A in the EU/EEA

18 June 2025

Summary

Epidemiological situation

Between January and May 2025, Austria, Czechia, Hungary, and Slovakia reported a higher-than-expected number of hepatitis A virus (HAV) subgenotype IB cases. Two clusters involving two closely related HAV subgenotype IB strains were identified from sequence data from four countries (Austria, Germany, Hungary and Slovakia). This rise in HAV infections is primarily affecting adults experiencing homelessness, individuals who use or inject drugs, and those living in poor sanitary conditions. Additionally, cases have been reported among members of the Roma communities in both Czechia and Slovakia.

Risk assessment

People who have not previously been infected by, or vaccinated against hepatitis A are susceptible to HAV infection.

In the **European Union/European Economic Area (EU/EEA) countries currently experiencing outbreaks** (Austria, Czechia, Hungary, and Slovakia), the probability for sustained transmission and circulation of the virus within groups who are more likely to be exposed to HAV (i.e. people experiencing homelessness, people who use or inject drugs, and people living in poor sanitary conditions) is assessed as high. Within these groups, the risk of the disease is assessed as moderate for those below 40 years of age and high for adults 40 years of age or older, as the severity of the disease increases with age. For people with predisposing liver disease or older adults, the risk can be very high. The risk for the broader population in these countries is assessed as low to moderate.

In **non-affected EU/EEA countries**, as there currently are no reports of increases in HAV IB infections, and therefore considering the very low probability of infection, the risk for the broader population is assessed as very low to low. However, it is important to note that the probability of infection is higher among groups more likely to be exposed to HAV, and the impact of disease increases with age and predisposing conditions, thus the overall risk may vary across different population groups.

Recommendations

- Investigate HAV transmission routes in EU/EEA countries currently experiencing outbreaks (to spot possible foodborne transmission or spill-overs into other groups at increased risk of infection) and increase sequencing both in groups more likely to be exposed to HAV and within the broader population to reflect the epidemiological diversity of reported cases.

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- Targeted single dose pre-exposure hepatitis A vaccination programmes for populations who are not vaccinated and who are more likely to be exposed to the virus.
- Provide post-exposure prophylaxis to close contacts of cases by administering the hepatitis A vaccine, or in very specific circumstances hepatitis A immunoglobulins, in accordance with national guidelines to prevent secondary cases.
- Consider targeted vaccination of population groups more likely to be exposed to HAV in low and very low endemicity settings to provide individual health benefits.
- Tailor outreach to populations more likely to be exposed to HAV based on an understanding of their needs, attitudes and knowledge, to inform strategies to embed vaccination programmes and hygiene interventions into services that are easily accessible to them. Provide information in multiple languages, adapted to different literacy levels, and address rumours and misinformation that may be circulating.

Epidemiological situation

Multi-country outbreak of hepatitis A

Between January and May 2025, Austria, Czechia [1], and Hungary [2] have reported a higher-than-expected number of hepatitis A virus (HAV) subgenotype IB cases. Slovakia started to observe an increase in hepatitis A cases at the end of 2022. The rise in HAV infections primarily affect adults experiencing homelessness, individuals who use or inject drugs, and those living in poor sanitary conditions. Additionally, cases have been reported among members of the Roma communities in both Czechia and Slovakia.

Austria

Since 1 January 2025, **Austria** has reported 87 confirmed cases meeting the European Union (EU) hepatitis A case definition [3], and an additional 44 non-confirmed cases under investigation. The number of reported cases for the first five months of 2025 already exceeds the total recorded in 2024 (n=73). Among the 87 confirmed cases, 59 (68%) were males. The median age of affected individuals was 34 years (IQR: 23-49), with ages ranging from three to 84 years. Forty-four (63%) out of 70 cases where information was available required hospitalisation, and three fatalities have been reported. Forty-three confirmed cases were reported from Vienna. Individuals experiencing homelessness and those who use or inject drugs have been identified among the affected populations. Investigations into potential routes of transmission are currently ongoing.

Czechia

Between January 1 and May 2025, **Czechia** reported 600 confirmed cases of hepatitis A. Of these, 63% were males. The most affected age groups were young children aged 1–9 years (131 cases), and adults aged 25–44 years (187 cases). Approximately 18% of all cases in 2025 were reported among the Roma population. Additionally, 67 cases involved individuals experiencing homelessness, and two cases were identified in male sex workers. More than 86% of the cases were hospitalised and six deaths have been reported during 2025. Contributing risk factors among those who died included one or more of the following: alcohol use disorder, substance use disorder, co-morbidities, experiencing homelessness and use of shelters/dormitories with shared sanitation facilities. In Czechia, HAV circulation was mainly associated with the Roma population in 2024, and children less than 15 years were disproportionately observed among the cases, and school settings were also affected.

Hungary

Between January and May 2025, **Hungary** reported 641 suspected cases of hepatitis A, of which 530 have been confirmed so far. The reported cases were mainly adults, but children were also affected. Most cases were reported from Budapest and its surroundings. Thirteen cases were among people experiencing homelessness.

Slovakia

Slovakia started to observe an increase of hepatitis A cases at the end of 2022. The highest number of cases were reported in 2023 and 2024 and two associated deaths were reported for each year. In 2023 and 2024, cases were especially reported in Roma communities in eastern Slovakia, where children were mainly affected. In 2023 and 2024, as part of the outbreak response, approximately 40% of children up to 15 years of age in Roma communities were vaccinated.

In 2025, a total of 880 hepatitis A cases have been reported, with no associated deaths. Of these cases, 60% occurred in males. The current epidemiological pattern marks a notable shift from previous years. Although nearly half (47%) of the reported cases have been identified among individuals from Roma communities, an additional 20% involve adults experiencing homelessness and/or those who use or inject drugs. Moreover, several smaller clusters have been reported in pre-school facilities, primarily affecting young children.

Germany

Germany has reported three non-fatal domestic cases of hepatitis A with HAV sequences identical to the cases in Hungary. Two females and one male (all adults) were affected, two of whom were reported to use drugs. The cases were reported between January 2025 and March 2025 and do not have a known epidemiological link between them. Currently, there are no reported hepatitis A outbreak among people experiencing homelessness or using drugs in Germany.

Microbiological investigation

Sequence data for confirmed hepatitis A cases were reported to ECDC by four countries, Austria (43 cases), Hungary (66 cases), Slovakia (23 cases) and Germany (three cases). Two clusters were identified, involving two closely related HAV subgenotype IB strains, strain 3256048_HUN_2025 (first reported by Hungary, cluster a; Annex A.1) and strain ERS23282329 (first reported by Slovakia, cluster b; Annex A.2). These two strains differ by a single nucleotide within the 460bp region of the VP1/P2A junction, one of the most variable regions of the HAV genome, allowing good resolution when comparing sequences [4].

Cluster a (reference strain 3256048_HUN_2025, Hungary) includes 12 sequence-confirmed cases from Austria, 57 cases from Hungary and three cases from Germany. All Austrian cases in this cluster are adult males residing in Vienna, with a median age of 32 years (range: 23–66). The cases were reported between November 2024 and May 2025. Three cases were hospitalised, and no deaths were reported. While most of Hungary's cases belong to cluster a, four cases had closely related sequences that differed from the cluster a strain by a single nucleotide substitution at three different positions compared to the reference strain 3256048_HUN_2025.

Cluster b (reference strain ENA: ERS23282329/GenBank: OZ223852, Slovakia) comprises cases from both Austria and Slovakia. Among the 31 sequence-confirmed hepatitis A cases from Austria in this cluster, the majority are adult males (27 males, four females) living in Vienna, with a median age of 42 years (range: 26–85). These cases were reported between June 2023 and June 2025, with most notifications occurring after March 2025. Of these, 39% were hospitalised and three deaths were reported. Five cases were identified in people who use drugs (including intravenous use), and six cases were in people experiencing homelessness. Slovakia reported sequence data for 13 cases in cluster b, including the reference strain ENA: ERS23282329/GenBank: OZ223852. All sequences were identical within the 40bp region of the VP1/P2A junction.

In 2024, Czechia sequenced a total of 52 samples, of which 34 were identified as subgenotype IB. Between January and end of April 2025, 30 additional samples were analysed, with 25 identified as subgenotype IB. Although final sequence confirmation is still pending, Czechia, like Slovakia and Hungary, has reported subgenotype IB as the predominant strain detected.

ECDC risk assessment for countries reporting outbreaks and the EU/EEA

This risk assessment has been developed based on the data available at the time of publication and follows the ECDC rapid risk assessment methodology, where the overall risk is determined by a combination of the probability of infection and the impact of disease [5].

Anyone who has not previously been infected by, or vaccinated against hepatitis A are susceptible to HAV infection. In areas where the virus is widespread, most HAV infections occur during early childhood, most often as asymptomatic or mild infections. The most common risk factors for infection include living in poor sanitary conditions, lack of access to safe water, close contact with an infected person (including sexual behaviour with increased risk of exposure i.e. anogenital-oral sex), use of recreational drugs as well as travelling to areas of high endemicity [6,7]. The risk of developing symptomatic and severe hepatitis A increases with age, and among individuals who are immunosuppressed or have chronic liver disease. These groups are more likely to experience complications, including severe or fulminant hepatitis [8].

An overview of the ECDC risk assessment for the affected countries (Austria, Czechia, Hungary and Slovakia) that are currently experiencing outbreaks is presented below in Table 1. In the context of the assessment, Germany is considered to belong to the non-affected EU/EEA countries, as only three cases have been reported with no epidemiological link between them, with no reports about ongoing outbreaks of this particular HAV strain. The assessment is stratified by groups more likely to be exposed to HAV, such as people experiencing homelessness, people who use or inject drugs, and people living in poor sanitary conditions; and for the broader population, divided into two age groups as the impact of the disease increases with age.

Table 1. Assessment of the risk associated with HAV infection in the affected EU/EEA countries, by different population groups

	Groups more likely to be exposed to HAV		Broader population	
	<40 years	≥40 years	<40 years	≥40 years
Probability	High	High	Moderate	Moderate
Impact	Low	Moderate	Very low	Low
Risk	Moderate	High	Low	Moderate

Risk assessment for countries reporting outbreaks

The probability of sustained transmission and circulation of the virus within groups more likely to be exposed to HAV is high (Table 1). This is primarily due to the poor sanitary living conditions of those groups. Under-ascertainment of hepatitis A infections, and challenges in conducting outbreak investigation and contact tracing in some settings which are hard to access by healthcare professionals, increases the likelihood of HAV transmission. Although no increased transmission has been reported among men who have sex with men during the current outbreak, this group has previously been identified as being at higher risk of acquiring the disease when HAV is circulating.

The impact, (i.e. the severity of disease) within the groups more likely to be exposed, is estimated to be low among people aged below 40 years and moderate in people aged 40 years or above.

When combining probability and impact, the overall risk for the groups more likely to be exposed to HAV is assessed as moderate for people under 40 years and high for adults 40 years or above. However, for people with predisposing liver disease or older adults (i.e. people more prone to a severe disease outcome), the risk is estimated to be very high in the affected countries.

The probability of infection for the broader population is assessed to be moderate across all age categories due to the current circulation of HAV in these countries (Table 1), as many of the reported cases in the current outbreaks are not in groups previously considered more likely to be exposed. Among people under 40 years of age in the broader population, the impact of hepatitis A is expected to be very low, thus the assessed overall risk of disease is low, while in adults aged 40 years or above, the expected impact is low, and therefore the overall risk is assessed as moderate.

Risk assessment for non-affected EU/EEA countries

In non-affected EU/EEA countries (including Germany), the risk for the broader population is assessed as very low to low, as there currently are no reports of increases in HAV IB infections, meaning there is a very low probability of infection. However, it is important to note that the probability of infection is higher among groups more likely to be exposed to HAV and the impact of disease increases with age and predisposing conditions, thus the overall risk may vary across different population groups.

ECDC recommendations

ECDC encourages EU/EEA public health authorities to focus on the following activities in view of the current multi-country outbreak of hepatitis A. The same recommendations also apply for countries experiencing outbreaks associated with other HAV strains but affecting populations with similar characteristics.

Surveillance and case detection

- Strengthen monitoring of HAV infections by investigating transmission routes (to spot possible foodborne transmission or spill-overs into other groups at increased risk of infection).
- Sequence a representative subset of samples from hepatitis A cases, which reflects the epidemiological diversity of reported cases, for example including samples from different regions, and population groups, taking into account age and sex distribution. To enhance comparability across countries, we recommend sequencing at minimum the 460 bp region of the VP1/P2A junction, following the HAVnet protocol [9]. ECDC can offer sequencing support for a limited number of samples for Hepatitis A if needed. Priority will be given to countries with limited sequencing capacity. Please contact ECDC.Microbiology@ecdc.europa.eu for further information
- Sequence both in the broader population and in specific groups more likely to be exposed to HAV (e.g. people living in poor sanitary conditions, people who use or inject drugs, people experiencing homelessness and men who have sex with men,) both in affected and in non-affected countries.
- Share information on epidemiological and microbiological investigations with ECDC and the other EU/EEA countries through EpiPulse Events.

The EU Health Task Force is available to provide support to affected countries at any step of the response to this event [10].

Vaccination

Evidence suggests that pre-exposure vaccination with a single dose of monovalent hepatitis A vaccines is effective at controlling outbreaks and reducing transmission [11,12]. There is also demonstrated long-term efficacy of one-dose hepatitis A vaccination in younger age groups [13-16]. To ensure long-term protection, especially in adults 40+ years, the complete series of two doses should be administered if possible [8].

- Targeted single dose pre-exposure hepatitis A vaccination programmes for populations who are not vaccinated and who are more likely to be exposed to HAV, including the Roma community, people experiencing homelessness, persons who inject drugs.
- Provide post-exposure prophylaxis to identified close contacts of cases by administering hepatitis A vaccine, or in very specific circumstances hepatitis A immunoglobulins, in accordance with national guidelines to prevent secondary cases.
- Consider targeted vaccination of population groups more likely to be exposed to HAV in low and very low endemicity settings to provide individual health benefits (for a list of potential high-risk groups see Annex B), in line with the World Health Organization (WHO) 2022 position paper on hepatitis A vaccines [8].

Outreach to populations more likely to be exposed to the virus

- Tailor approaches to reach populations more likely to be exposed to HAV, such as people experiencing homelessness, people who use or inject drugs, and the Roma population, by understanding where these populations live and their needs, expectations and concerns regarding hepatitis A.
- If needed, consider administering a brief survey to gain a better understanding of their attitudes and knowledge around hepatitis A, the vaccine, as well as adopted protective practices (such as washing hands with soap), access to the larger healthcare systems, health seeking behaviour and perceived stigma. ECDC's survey tool to facilitate vaccination acceptance and uptake could be adapted to the hepatitis A vaccine and the relevant key populations in a given setting [17], and expanded to include questions on knowledge, protective practices, and belief in disease- or vaccine-related misinformation which could inform vaccination strategies. Member States wishing to receive support in the development of a survey tool for this purpose are welcome to contact sbs@ecdc.europa.eu
- Consider strategies on how to embed vaccination, outreach programmes (including increasing disease awareness) and hygiene interventions into existing services so that they are easily accessible. For people experiencing homelessness and people who use or inject drugs, these services could include homeless shelters, food banks, syringe exchange programmes and drug treatment facilities [18,19]. For the Roma population, with its own language and culture, a community engagement approach could be taken in which interventions are co-created. This could also help increase trust in the health system, which can be low in this population [20,21].
- Information should be adapted to serve the needs of populations most likely to be exposed to HAV. This could mean adapting content to meet different language requirements and different literacy levels, as well as addressing any rumours and misinformation that may be circulating.
- Facilitating easy adherence to hygiene practices for groups more likely to be exposed to HAV should be prioritised, e.g. by ensuring that water and soap supplies are always made available in places that are accessible to these groups, such as public restrooms, homeless shelters and food banks [22]. Upstream determinants, such as the drivers of homelessness and drug use, should also be critically evaluated and, where possible, targeted and access to healthcare improved.

Limitations

In most settings, hepatitis A surveillance is affected by under-ascertainment, either due to asymptomatic infections or because mild forms of the disease go unreported [23]. As a result, the overall number of cases presented in this risk assessment is likely underestimated. There is also limited information on the reported cases due to the challenges of conducting outbreak investigation and contact tracing in some settings and population groups associated with this outbreak.

In countries where not all HAV samples are sequenced (which includes most EU/EEA countries), it is not possible to rule out circulation of the outbreak strains. Therefore, it cannot be excluded that additional countries are affected by this multi-country outbreak.

Lastly, other hepatitis A clusters and outbreaks, including some with suspected foodborne transmission, are currently under investigation in various EU/EEA countries. While some of these also involve individuals or communities living in poor sanitary conditions, they have not been included in this risk assessment, as they are associated with outbreak strains different from those described in this report. Nonetheless, many of the recommendations provided here remain applicable to those situations.

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Annex A. Sequences in the current outbreaks

Annex A.1 - Cluster a:

Reference strain 3256048_HUN_2025 (460bp), kindly provided by Hungary.

CAATCATTCTGATGAGTATTTGTCTTTTAGTTGTTATTTGTCTGTCACAGAGCAATCAGAGTTTTATTTTCCCAGAGCTCCATT
GAATTCAAATGCCATGTTATCCACTGAATCAATGATGAGCAGAATTGCAGCTGGAGACTTGGAGTCATCAGTGGATGATCCTA
GATCAGAGGAGGACAGAAGATTTGAGAGTCATATAGAATGTAGGAAGCCATACAAAGAATTGAGATTAGAAGTTGGGAAACA
AAGACTCAAGTATGCTCAGGAAGAATTGTCAAATGAAGTACTTCCACCCCCTAGGAAAATTAAGGGACTGTTTTCACAAGCCA
AAATTTCTCTTTTTTATACTGAGGAGCATGAAATAATGAAATTTTCCTGGAGAGGAGTGACTGCTGATACTAGAGCTTTAAGG
AGGTTTGGATTCTCTTTGGCTGCTGGGAGAAGTGTGTGGACTCTT

Annex A.2 - Cluster b:

Reference strain ENA: ERS23282329/GenBank: OZ223852 (Only the 460 bp region is shown here; however, the full genome has been submitted to ENA), kindly provided by Slovakia.

CAATCATTCTGATGAGTATTTGTCTTTTAGTTGTTATTTGTCTGTCACAGAGCAATCAGAGTTTTATTTTCCCAGAGCTCCATT
GAATTCAAATGCCATGTTATCCACTGAATCAATGATGAGCAGAATTGCAGCTGGAGACTTGGAGTCATCAGTGGATGATCCTA
GATCAGAGGAGGACAAAAGATTTGAGAGTCATATAGAATGTAGGAAGCCATACAAAGAATTGAGATTAGAAGTTGGGAAACA
AAGACTCAAGTATGCTCAGGAAGAATTGTCAAATGAAGTACTTCCACCCCCTAGGAAAATTAAGGGACTGTTTTCACAAGCCA
AAATTTCTCTTTTTTATACTGAGGAGCATGAAATAATGAAATTTTCCTGGAGAGGAGTGACTGCTGATACTAGAGCTTTAAGG
AGGTTTGGATTCTCTTTGGCTGCTGGGAGAAGTGTGTGGACTCTT

Annex B. Vaccination evidence

Outbreak-specific targeted pre-exposure and post-exposure hepatitis A vaccination programmes and strategies

Pre-exposure targeted vaccination programmes

In the EU/EEA, hepatitis A vaccines exist as stand-alone or in combination with hepatitis B antigen or typhoid antigen. Monovalent hepatitis A vaccines available in the EU/EEA include AVAXIM, Havrix and VAQTA and all are licenced through national regulatory authorities [24]. Monovalent hepatitis A vaccines are licensed for use from one year of age for the paediatric formulation. Adult formulations are licensed from 16 years for AVAXIM and Havrix or 18 years for VAQTA. A complete vaccination schedule consists of two doses with, in general, an interval of six to twelve months between the first and booster dose. The interval between two doses is flexible and can be extended from six months up to 4-5 years, as per WHO recommendations. Two doses are believed to possibly provide life-long protection [8].

Combined hepatitis A and hepatitis B vaccines authorised in the EU, which include Ambirix indicated for children 1-15 years in a two-dose schedule [14] and Twinrix Adult or Twinrix Padeatric indicated as a 3-dose series [15,16], should be considered when it is highly likely that the two doses for Ambirix or the three-dose vaccination course for Twinrix can be completed to ensure adequate protection.

Post-exposure vaccination strategies

Post-exposure hepatitis A vaccines are most effective when administered as soon as possible after exposure to hepatitis A virus, and within two weeks following exposure [8]. The protective efficacy of hepatitis A vaccine when used within two weeks of exposure has been shown to be high [8,25]. The efficacy of hepatitis A vaccine administered >2 weeks after exposure has not been established [8,11]. Single-antigen hepatitis A vaccine should be used for post-exposure as no data exists regarding the performance of a combination vaccine for prophylaxis after exposure to hepatitis A virus [13].

Low and very low endemicity settings

In line with the World Health Organization (WHO) position paper on hepatitis A vaccines targeted vaccination of populations at high risk of acquiring the disease should be considered in low and very low endemicity settings to provide individual health benefits [8]. National recommendations vary and may include targeted vaccination for those at increased likelihood of HAV exposure or those at risk of serious health outcomes after infection, such as the following groups [26]:

- travellers to areas of intermediate or high endemicity;
- men who have sex with men;
- people who inject drugs;
- people experiencing homelessness
- contact persons of confirmed HAV cases;
- exposed immunocompromised persons;
- persons with chronic liver disease at risk of severe adverse consequences of HAV infection;
- occupational groups including food handlers, those working with non-human primates;
- individuals living in institutions for people with developmental disabilities.

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