ECDC EVIDENCE BRIEF

Prevention of hepatitis B and C in the EU/EEA

April 2024

WHO European Regional Action Plan Prevention Interim Targets for 2025 [1]:

- **95% coverage with three doses of HBV vaccine in countries that implement universal childhood vaccination**
- **90% of pregnant women screened for HBsAg**
- **90% of newborns who received timely (within 24 hours of birth) HBV birth-dose vaccination**
- **100% of blood donations screened for blood borne virus infections**
- **200+ sterile injection equipment kits distributed per person per year for people who inject drugs, as part of a comprehensive package of harm- reduction services**
- **Opioid agonist treatment (OAT) coverage over 40%**
- **95% of injections in health-care settings undertaken with safe injection equipment.**

Key messages

- The decline in the reported number of new transmissions of hepatitis B virus (HBV) and hepatitis C virus (HCV) infections across European Union (EU) and European Economic Area (EEA) countries has continued, but the burden remains high, with an estimated 5.4 million people with chronic HBV and HCV infection in the region.
- There are gaps in the data available on hepatitis prevention activities across the EU/EEA, highlighting the need for countries to prioritise the collection of more complete monitoring data to properly assess progress towards the elimination targets.
- Available data show that progress across the EU/EEA region is variable, with many countries currently not meeting 2025 interim WHO European Action Plan hepatitis prevention targets, especially targets focussing on programmes for people who inject drugs (PWIDs). Continued investment and strengthening of hepatitis prevention programmes is needed.
- The hepatitis B vaccine is an important tool for hepatitis B prevention, but less than 40% of EU/EEA countries with a universal childhood vaccination programme have reached the target of 95% hepatitis B vaccination coverage.
- Countries employ different approaches to help prevent vertical transmission of hepatitis B, including antenatal screening and HBV vaccine birth doses. Data on coverage of these programmes are limited, however they do indicate that most reporting countries achieved the targets for coverage of antenatal screening and hepatitis B vaccine birth dose.
- Data on hepatitis B vaccination programmes aimed at healthcare workers, people in prison and PWID are limited. Available data suggest that countries should expand their adult hepatitis B vaccination coverage, especially for populations at risk.
- While all EU/EEA countries screen blood donations for HBV and HCV, only 14 countries reported screening 100% of blood donations for HBV and HCV using nucleic acid testing (NAT).
- Sterile needle and syringe distribution and opioid agonist treatment (OAT) are effective ways of reducing the transmission of hepatitis B and C. However, although data are lacking from many countries, only four have reached the targets for both of these programmes, suggesting a significant need to strengthen harm reduction programmes focussing on PWID.

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Disease background

Viral hepatitis is an infection that causes inflammation of the liver. The hepatitis B virus (HBV) and hepatitis C virus (HCV) are common causes of viral hepatitis. Both can cause acute and chronic infections and are leading causes of liver cirrhosis and hepatocellular carcinoma.

In the European Union (EU) and European Economic Area (EEA), effective HBV vaccination programmes and a range of other prevention and control strategies have resulted in a decline in the number of new transmissions of HBV and HCV, and a reduction in incidence. However, the most recent estimates suggest that there are still approximately 3.6 million people living with chronic HBV infection and 1.8 million people living with chronic HCV infection in the EU/EEA [2, 3]. Despite the reduction in the incidence of HBV and HCV, viral hepatitis remains a leading cause of hepatitis-related mortality. Based on data from 2015, it has been estimated that across the EU/EEA and the United Kingdom, HBV and HCV are responsible for approximately 55% of all liver cancer deaths and result in approximately 64 000 deaths per year [4].

HBV and HCV are epidemiologically complex diseases, as they affect a wide variety of key populations, have multiple modes of transmission, are often asymptomatic, and may present with different clinical phases during a chronic infection [5]. Tackling the hepatitis burden therefore requires ongoing commitment to prevention programmes and strategies, as well as a strong multi-disciplinary approach, informed by robust data collected from comprehensive and sustainable systems for monitoring.

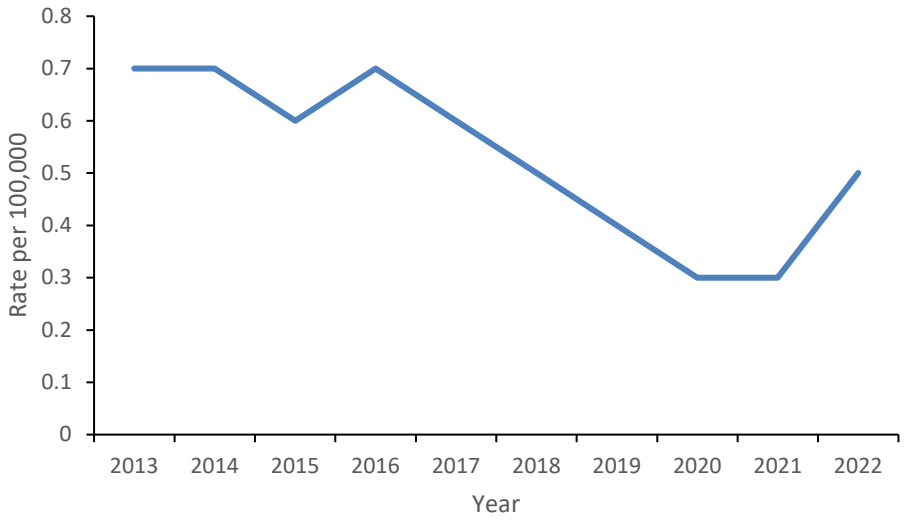
Epidemiological situation of hepatitis B and C across the EU/EEA

Incidence

Surveillance data on newly diagnosed cases of acute hepatitis B reported by EU/EEA countries to European Centre for Disease Prevention and Control (ECDC) provide a proxy for incidence and yield valuable information on trends over time. Unfortunately, notifications of acute hepatitis C infection provide an unreliable proxy for incidence as most infections go unnoticed and the data are heavily influenced by testing.

In 2022, there were a total of 1 971 reported cases of acute hepatitis B from across the region, with eight countries reporting ten or less cases [6]. In recent years, the overall trend has seen a reduction in reported cases in line with global trends, which has been largely attributed to the impact of national vaccination programmes. A recent uptick in the rate (see Figure 1) requires further investigation but is likely to reflect factors such as changes to reporting and testing during and after the pandemic, recent migration population changes or an increase in local transmission.

Figure 1. Notification rates of acute hepatitis B per 100 000 population by year in EU/EEA countries reporting consistently, 2013–2022 [6]



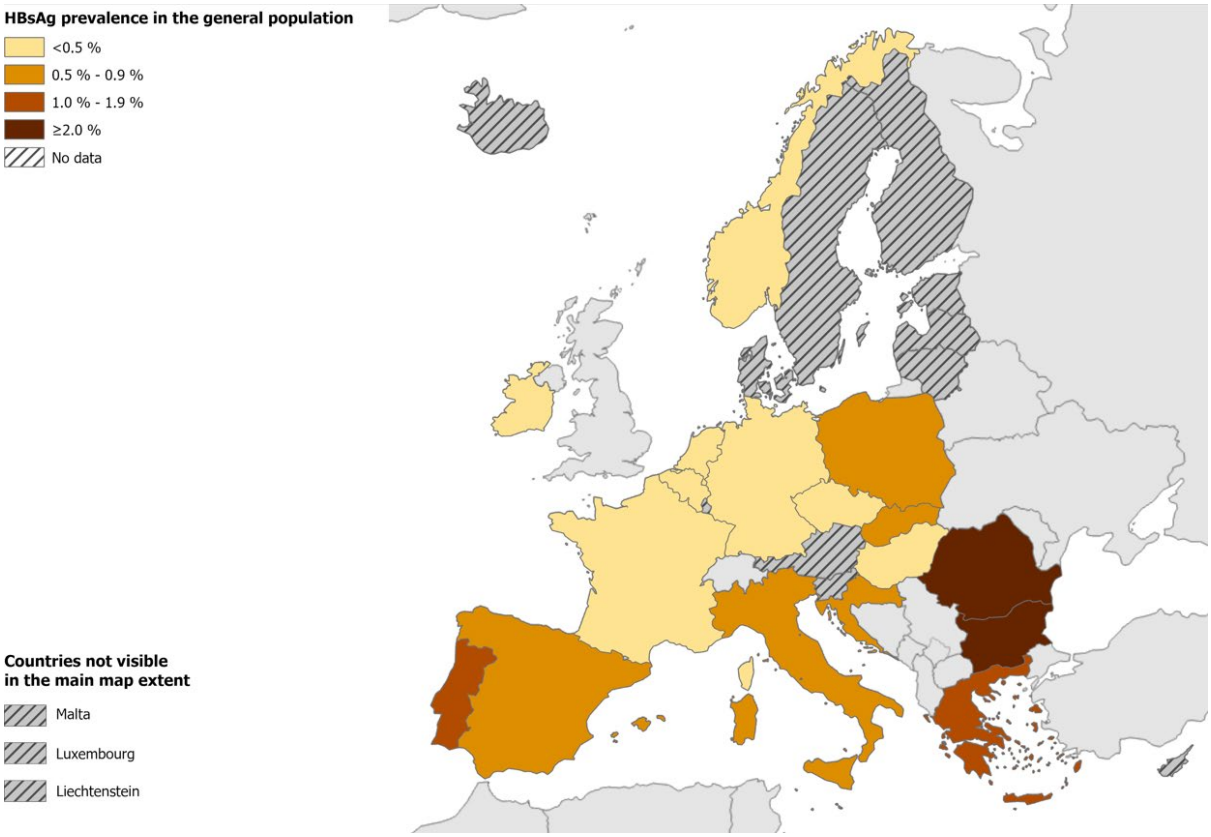
Source: Country reports from Austria, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Latvia, Lithuania, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.

Prevalence

Recent estimates of hepatitis B surface antigen (HBsAg) prevalence in the general population are available from 17 EU/EEA countries, ranging from under 0.5% in eight countries to over 2% in Bulgaria and Romania (Figure 2a). This review found that recent estimates of prevalence were highest among people in prison and certain migrant populations, with estimates ranging from 0.6% to 8.3% for people in prison and from 0.9% to 31.7% for studies among different migrant populations in EU/EEA countries.

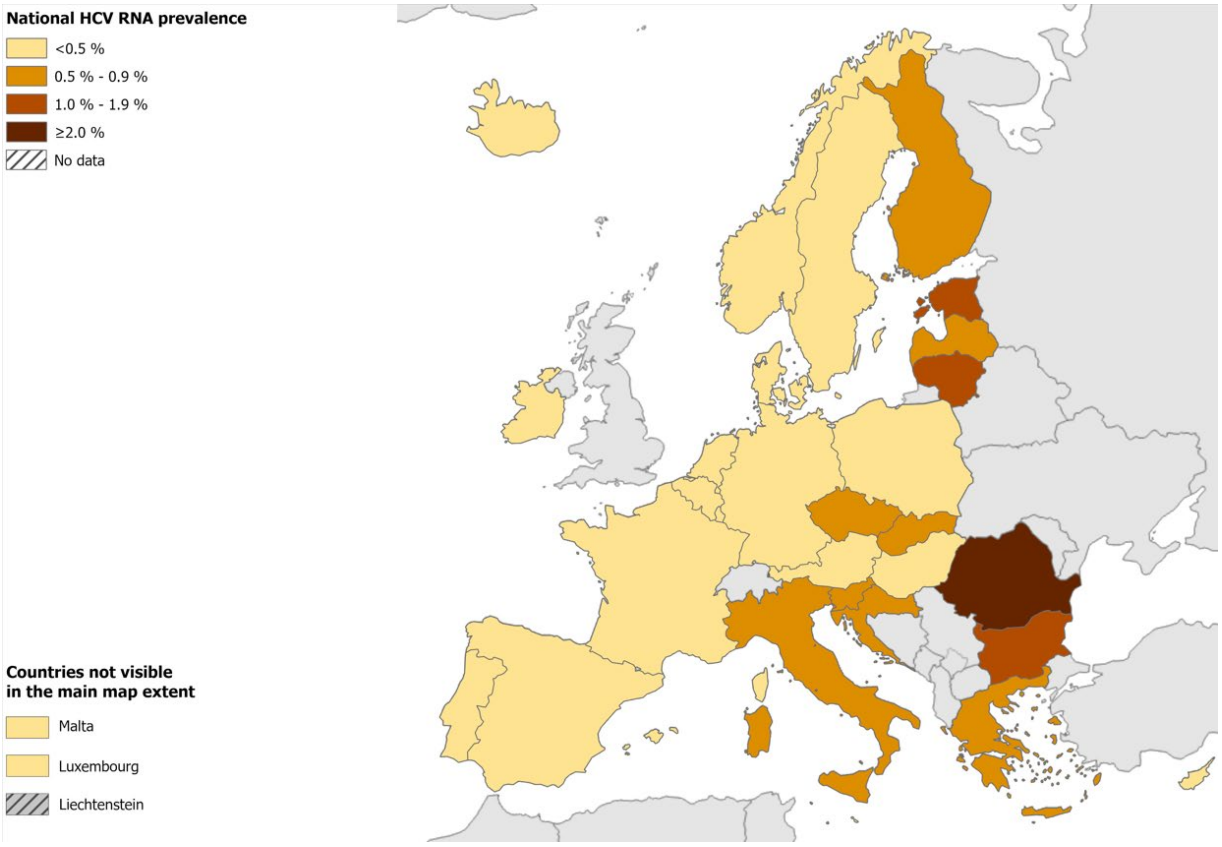
For hepatitis C, national estimates of HCV prevalence have recently been produced using multi-parameter evidence synthesis, based on prevalence estimates in the general population and among people who inject drugs (PWID) [3]. The results indicate that national estimates of HCV RNA prevalence range from ≤0.1% in the Netherlands, Slovenia and Iceland to 2.3% in Romania (Figure 2b). This study estimated that around a third (35.8%) of all cases of chronic HCV were associated with injecting drug use but there was variation across the region, with the proportion highest in northern Europe (70.0%) and lowest in southern Europe (19.4%).

Figure 2a. Estimates of hepatitis B surface antigen (HBsAg) and hepatitis C RNA prevalence, EU/EEA – HBsAg prevalence in the general population based on pooled estimates of prevalence



Source: Bivegete et al. 2023 [2] for all countries except Belgium [7], France [8], Greece [9, 10], Ireland [11] Norway [12] and Portugal [13].

Figure 2b. Estimates of hepatitis B surface antigen (HBsAg) and hepatitis C RNA prevalence, EU/EEA – national estimates of hepatitis C RNA prevalence



Source: Thomadakis C et al. 2023 [3] for all countries except Ireland [14] and Portugal [13].

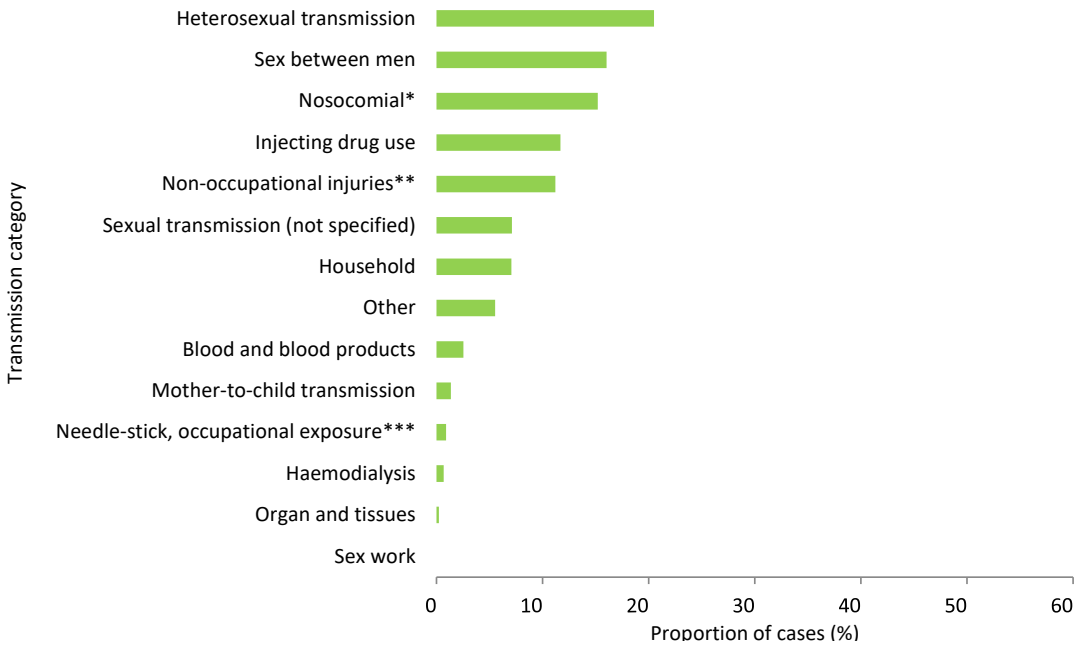
Route of transmission

HBV and HCV are blood-borne infections, have multiple routes of transmission and affect a variety of key populations, leading to a complex prevention landscape. Figure 3 displays the reported routes of transmission for acute hepatitis B and C infections in the EU/EEA in 2022 reported to ECDC. Acute infections reflect new transmissions in the EU/EEA and the prevention of these transmissions are a key target for prevention measures.

Data on the likely route of transmission of HBV were only available for 22% of acute cases reported in 2022, representing 17 countries [6]. The incompleteness of the data is a major challenge for the interpretation of the results. Available data show that heterosexual transmission (20%), sex between men (16%) and nosocomial transmission (15%) account for over half of acute transmissions (Figure 2a). Only 1% of acute HBV cases with available data were attributed to mother-to-child transmission, suggesting that vertical transmission of HBV is now uncommon in the EU/EEA countries. However, strategies to prevent transmission via this route are still vital because the majority of newborns infected perinatally will develop chronic infection. The most common transmission route for newly-diagnosed chronic HBV cases reported through surveillance was mother-to-child transmission, accounting for 41% of cases with a reported transmission route, but it should be noted that the majority (90%) of these cases were classified as imported cases from outside the reporting country.

Data on the likely route of transmission of HCV were only available for 45% of acute cases reported in 2022 (representing 18 countries), again making interpretation difficult [15]. The most common routes of transmission for acute HCV cases were injecting drug use (53%), nosocomial transmission (17%) and sex between men (8%) (Figure 2b). A total of 64% of newly-diagnosed chronic HCV cases reported through surveillance were attributed to injecting drug use. Given the limited data on route of transmission and substantial variation between countries, data are not likely to be fully representative. It should be noted that the data on transmission may be subject to a diagnostic bias among certain groups who may be more likely to be tested regularly and in whom the infection, which is frequently asymptomatic, is therefore more likely to be identified. The data may also be subject to a reporting bias, with transmission more readily attributed to some routes of transmission than others. However, in spite of the challenges concerning the data, it is clear that PWID are a key risk group in the region.

Figure 3a. Reported route of transmission for acute hepatitis B cases in the EU/EEA, 2022[1]



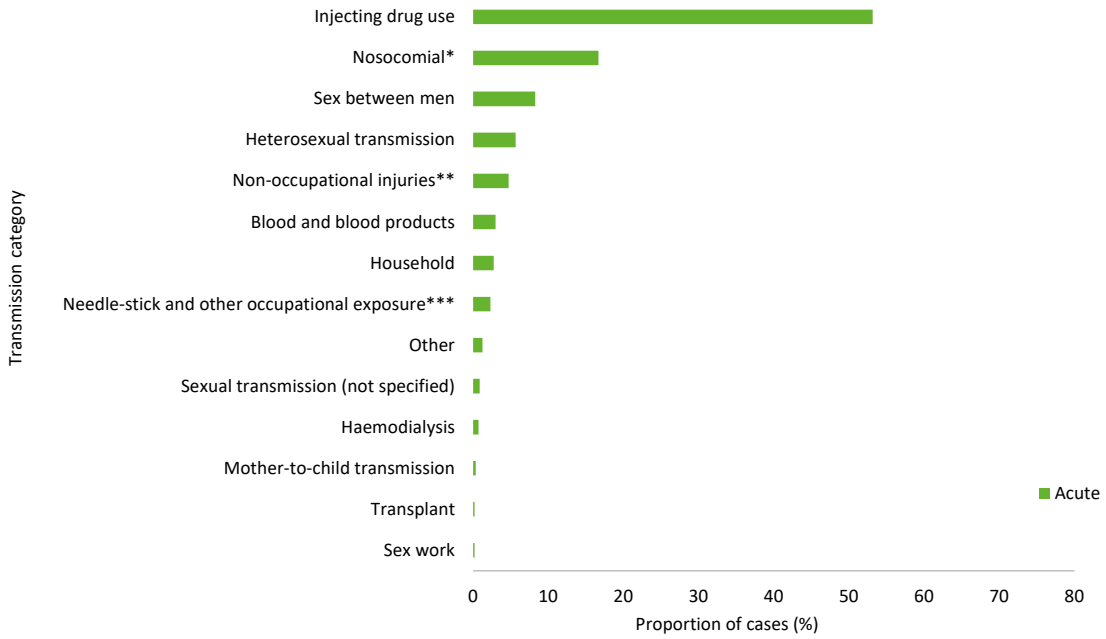
** Nosocomial transmission includes hospitals, nursing homes, psychiatric institutions and dental services. This category refers mainly to patients exposed through healthcare settings, distinct from 'needle-stick and other occupational exposure', which refers to staff.*

*** 'Non-occupational injuries' include needle sticks that occur outside a healthcare setting, bites, tattoos, piercings.*
**** 'Needle-stick and other occupational exposure' refers to occupational injuries.*

Reports from Austria, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Italy, Latvia, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain and Sweden.

Source: ECDC. Hepatitis B: Annual Epidemiological Report for 2022 [6].

Figure 3b. Reported route of transmission of acute hepatitis C cases in the EU/EEA, 2022[1]



** Nosocomial transmission includes hospitals, nursing homes, psychiatric institutions and dental services. This category refers mainly to patients exposed through healthcare settings, distinct from 'needle-stick and other occupational exposure', which refers to staff.*

*** 'Non-occupational injuries' include needle sticks that occur outside a healthcare setting, bites, tattoos, piercings.*
**** 'Needle-stick, occupational exposure' refers to occupational injuries.*

Reports from Austria, Croatia, Cyprus, Denmark, Estonia, Germany, Greece, Hungary, Ireland, Italy, Latvia, the Netherlands, Poland, Portugal, Romania, Slovakia, Spain, and Sweden.

Source: ECDC. Hepatitis C: Annual Epidemiological Report for 2022 [15].

[1] Cases with known transmission status

Prevention measures: progress towards the elimination targets

See Annex 1 for details on country-level progress towards the elimination targets.

Hepatitis B vaccination

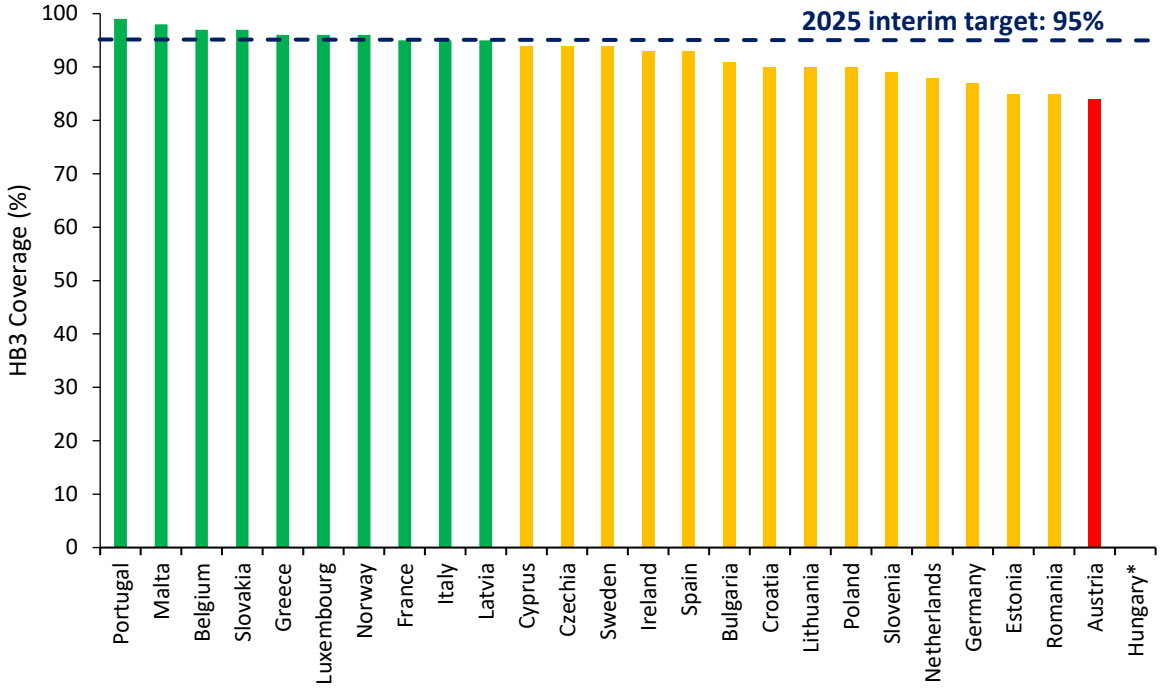
2025 Interim target

95% coverage with three doses of the childhood hepatitis B vaccine.

The hepatitis B vaccine has been instrumental in reducing the global incidence of hepatitis B among children under the age of five years. In the EU/EEA, 27 countries recommend universal vaccination against hepatitis B. Three countries have not yet implemented a national policy for universal HBV vaccination: Denmark, Finland and Iceland.

Data on three-dose hepatitis B vaccination coverage in 2022 were available from 25 countries, ranging from 84% in Austria to 99% in Portugal (Figure 4). Of these, 10 countries (38.5%) are currently meeting the 2025 interim target of 95% coverage and 14 countries (53.8%) are within 10% of the target.

Figure 4. Coverage (%) of three doses of hepatitis B vaccine (HB3) in EU/EEA countries that implement universal HBV vaccination, 2022



** Country did not provide data.*
NB. Denmark, Finland and Iceland do not have a national policy for universal childhood vaccination against hepatitis B and Hungary has a universal vaccination programme targeting school-aged children.

Source: WHO/UNICEF coverage estimates [16]

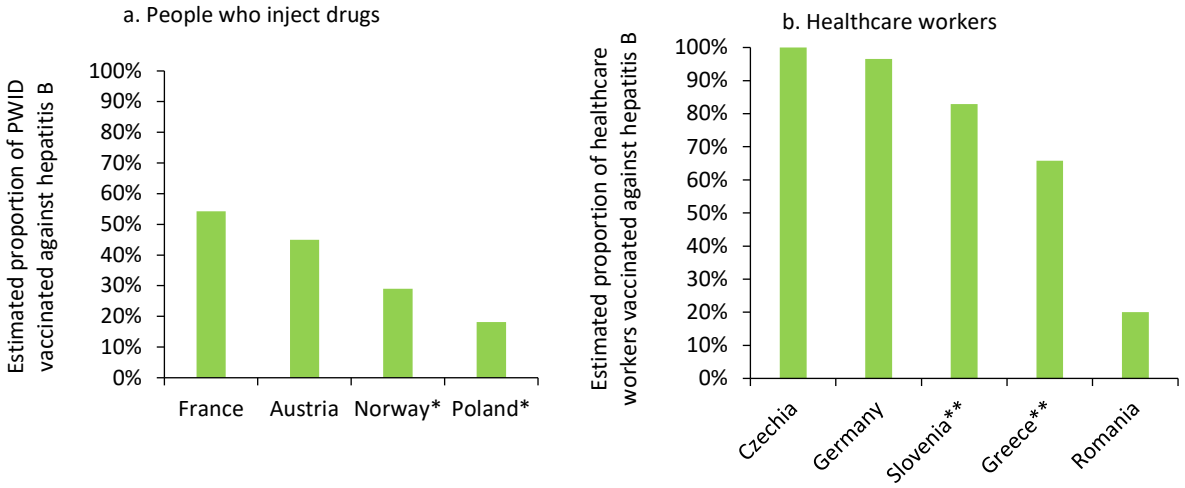
Another important element to a hepatitis prevention strategy is enabling adults in key populations (e.g. PWID and healthcare workers) to access the hepatitis B vaccine. Data on vaccination uptake in these key populations are limited (Figure 5).

In the EU/EEA, 17 countries reported that they had a hepatitis B vaccination policy or programme aimed at vaccinating PWID. Only four countries were able to provide data on the hepatitis B vaccination coverage rate among PWID, with rates ranging from 18.2% to 54.3% (Figure 5a). The data provided mostly came from self-reported surveys. Twenty-three countries in the EU/EEA have hepatitis B vaccination programmes focussing on PWID in prisons, however data on vaccine coverage in this population were not available.

Twenty-six countries reported that they have national hepatitis B vaccination policies or programmes focussing on healthcare workers. Seven countries reported that the hepatitis B vaccine was mandatory for all healthcare workers, while an additional four reported that it was mandatory for all healthcare workers 'at risk' of contracting HBV[2]. Seventeen countries reported that hepatitis B vaccine was offered to all or some healthcare workers and two reported 'other'. Five countries reported estimates of hepatitis B vaccination coverage among eligible healthcare workers, which ranged from 20%–100% (Figure 5b). The data provided were largely derived from surveys, although some countries reported that the data came from surveillance and occupation registries.

[2] The definition of 'at risk' varied from country to country, with most countries defining 'at risk' as employees who come into contact with blood products likely to be contaminated with HBV, or those at risk of needle-stick injuries.

Figure 5. Hepatitis B vaccination coverage among people who inject drugs and healthcare workers, 2022



** City-level data (Norway - Oslo; Poland - Chorzów, Warsaw and Wrocław relating to PWID born prior to the implementation of the national childhood vaccination programme in 1996 and who were not reached through subsequent catch-up campaigns)*
***Clinic-level data*
Source: ECDC hepatitis monitoring survey, 2023.

Prevention of vertical transmission

2025 Interim targets

90% screening coverage in pregnant women.
90% coverage with timely (within 24 hours of birth) hepatitis B birth-dose vaccine.

In the EU/EEA, rates of vertical transmission of HBV are low, with national vertical transmission rates ranging from 0–1.8%. However, data availability on the rates of vertical transmission are limited, with only six countries able to provide national-level data within the last five years (Table 1).

Table 1. National-level rates of vertical transmission of hepatitis B virus in six EU/EEA countries

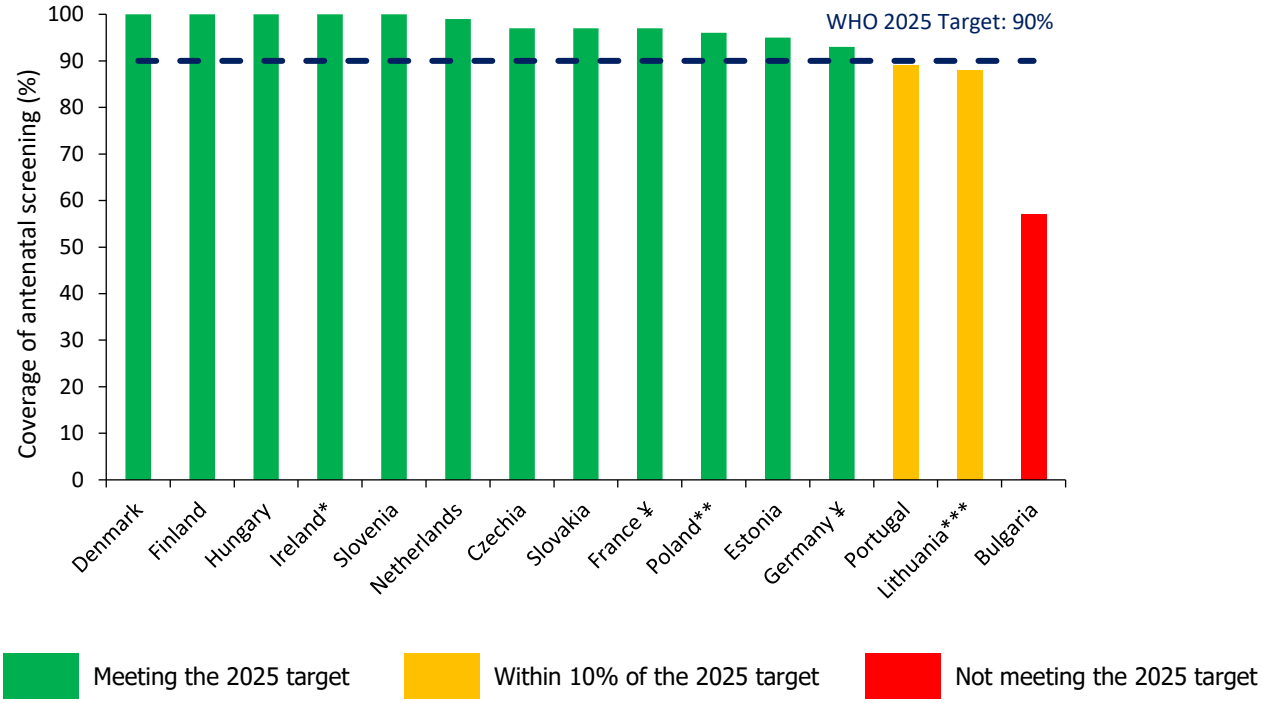
Country	Rate of vertical HBV transmission (%)	Year(s) of data collection
Denmark	0.0	2022
Greece	0.0	2022
Hungary	0.0	2022
Netherlands	0.0	2020-2021
Norway	0.0	2022
Slovakia	1.8	2021

Source: ECDC hepatitis monitoring survey, 2023.

There are different strategies which countries can implement to reduce the risk of vertical transmission, including antenatal screening combined with post-exposure prophylaxis and new-born vaccination.

In the EU/EEA, all countries implement universal antenatal screening, however only 15 countries in the region could provide data on antenatal screening coverage (Figure 6). Coverage varied from 57% to 100% (median: 97%). Of the 15 countries, 12 (80%) are currently meeting the WHO 2025 interim target of 90% coverage of antenatal screening. Two additional countries are within 10% of the interim target.

Figure 6. Coverage of antenatal screening for HBV in EU/EEA countries with available data, 2022 (or most recent year with data)



** Clinic-level data*
*** Poland: data from one region (over five years old)*
**** Lithuania: data correspond to 2021*
¥ France and Germany: data over five years old
Source: ECDC hepatitis monitoring survey, 2023.

The estimated proportion of pregnant women screened for HBsAg infection who tested positive in the ten countries with available data ranged from 0.07% (Slovakia) to 0.87% (Poland) (Table 2).

Table 2. Estimated proportion of pregnant women screened for HBsAg infection in 2022 (or most recent year with data) who tested positive, in the EU/EEA

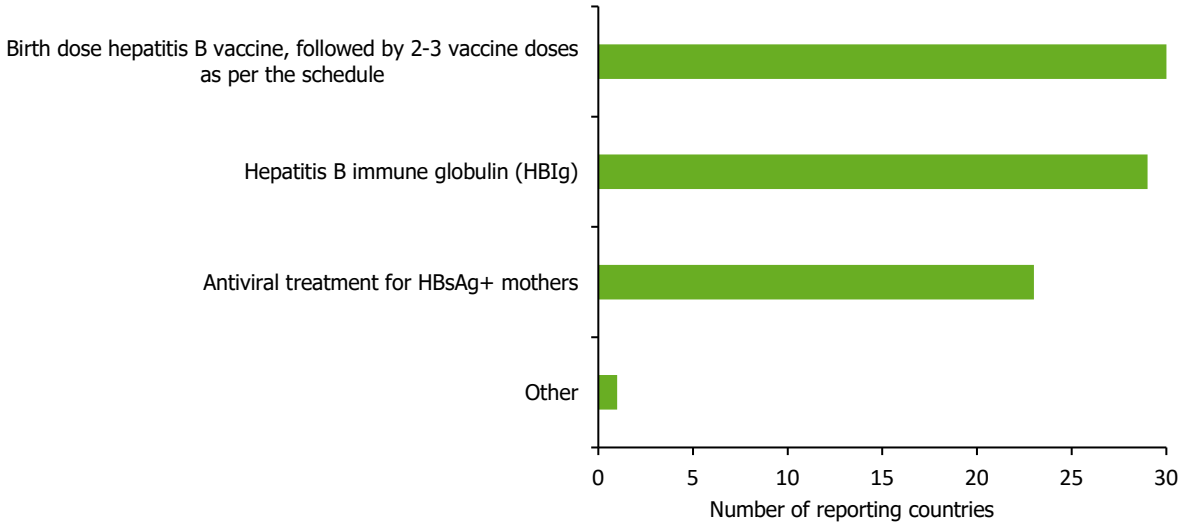
Country	Estimated proportion of pregnant women screened for HBsAg infection who tested positive
Czechia	0.25%
Denmark	0.17%
Estonia	<0.1%
France	0.84%
Hungary	0.08%
Ireland	0.51%
Italy	0.86%
Netherlands	0.22%
Poland	0.87%
Slovakia	0.07%

Source: ECDC hepatitis monitoring survey, 2023

All countries reported that there was a policy on post-exposure prophylaxis for children born to mothers who have HBV (Figure 7). Of the 30 EU/EEA countries, all (100%) reported that their policies included a birth dose of the hepatitis B vaccine, followed by two to three doses, as per the childhood vaccination schedule. Twenty-nine of the 30 countries (97%) reported a policy for hepatitis B immunoglobulin (HBIg) and 23 (77%) reported an antiviral treatment policy for mothers identified with HBV infection. One country indicated 'other', reporting a policy on follow-up HBsAg testing for the infant.

Countries reported on the eligibility criteria for mothers accessing antiviral treatment. Twenty-nine countries[3] reported that mothers with high viremia (HBV DNA ≥200 000 IU/mL) were eligible for antiviral treatment. In addition, two countries, Hungary and Latvia, reported that pregnant women testing HBsAg positive could access antiviral treatment irrespective of viral load. Two countries, Hungary and the Netherlands, reported that pregnant people who are HBeAg positive would be offered antiviral treatment. Two countries reported 'other', stating the following treatment eligibility criteria: HBsAg>4 log10 IU/mL in week 24–28 (Romania) and 'HBV-DNA >200 000 IU/mL and HBeAg positive, and additionally any women wishing to minimise HBV transmission not meeting the aforementioned criteria'(Austria).

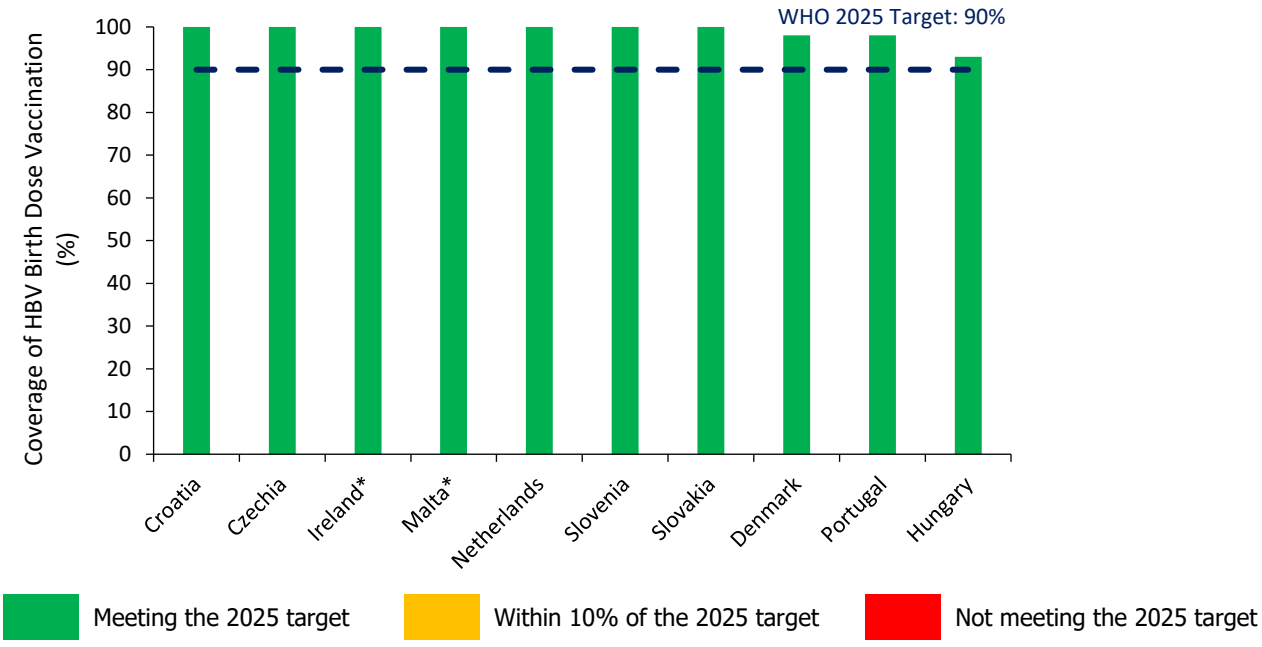
Figure 7. Measures included in national policies on post-exposure prophylaxis for children born to mothers who have HBV in EU/EEA countries in 2023 (n=30)



Source: ECDC hepatitis monitoring survey, 2023

While all countries reported policies on post-exposure prophylaxis for infants born to mothers who have HBV, only ten were able to provide data on birth-dose vaccine coverage (Figure 8). Seven of the ten countries reported 100% coverage, while the other three countries reported 93% (Hungary) and 98% (Denmark and Portugal).

Figure 8. Coverage (%) of birth dose vaccine for infants born to mothers who have HBV in EU/EEA countries, 2022

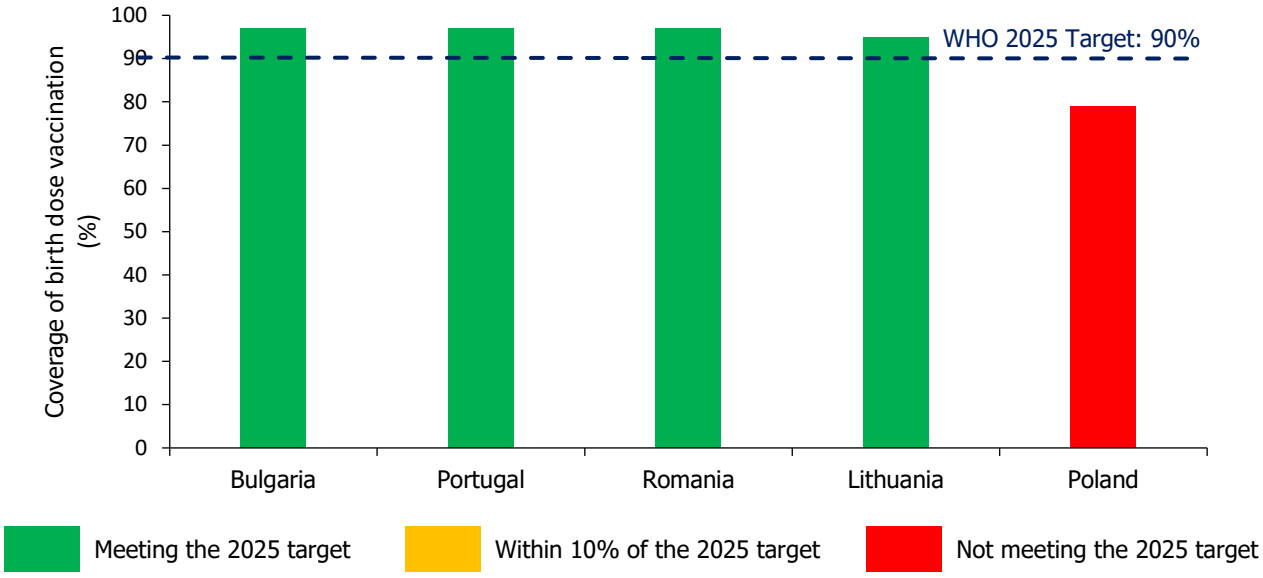


**Clinic-level data*
Source: ECDC hepatitis monitoring survey, 2023.

[3] One country, Czechia, reported that their treatment eligibility criteria were based on the guidelines from the Society of Hepatologists, however, the treatment criteria were not specified.

Five countries in the EU/EEA provide a universal birth dose of the HBV vaccine, with four of the five countries reporting over 95% coverage and currently meeting the WHO 2025 interim target (Figure 9).

Figure 9. Coverage (%) of birth dose vaccine (given within 24 hours of birth) in EU/EEA countries that implement universal new-born vaccination, 2022



Source: World Health Organization [16].

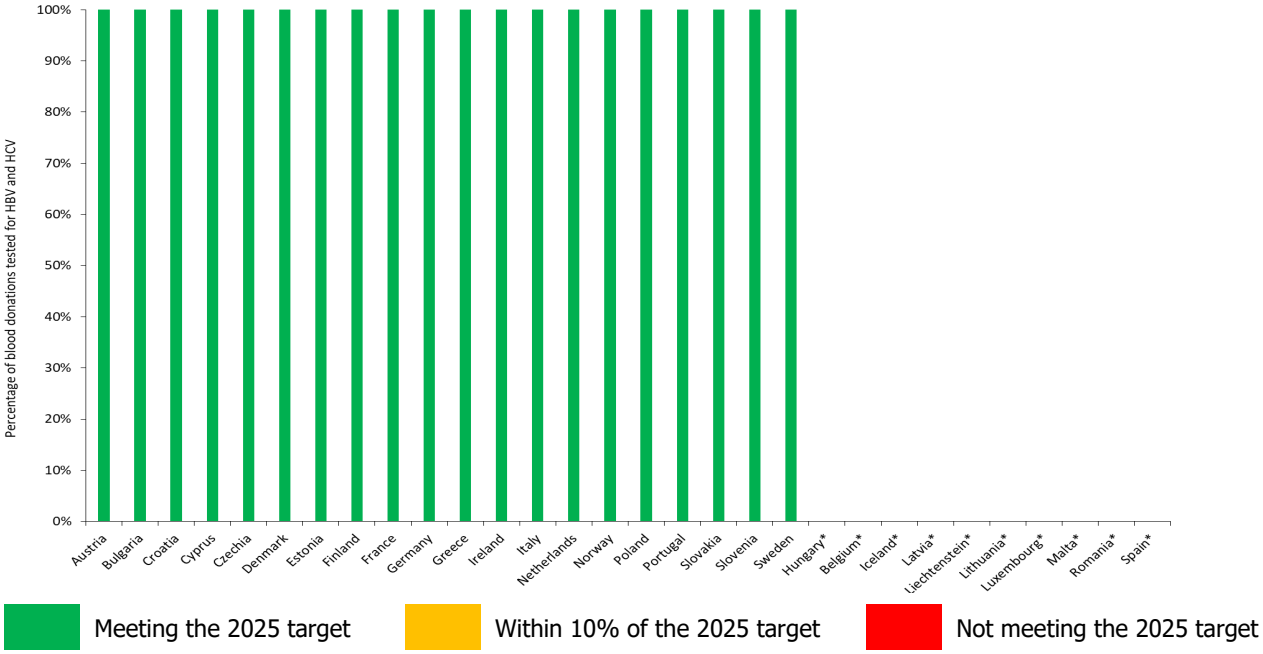
Blood safety and haemovigilance

2025 Interim target

100% of blood units screened for bloodborne diseases.

Haemovigilance refers to the surveillance of the blood transfusion chain, including efforts to monitor and evaluate adverse events associated with the blood supply and transfusion service. All blood donations in EU/EEA countries are from voluntary, non-remunerated donors, except in three countries which allow replacement blood donors: Bulgaria, Greece, and Poland [17]. In addition, all EU/EEA countries have haemovigilance systems in place, with donations tested using serological methods for HBV and HCV infections as a minimum [18]. In the 20 countries able to provide data, 19 countries are currently meeting the 2025 interim target of 100% of blood units screened for bloodborne diseases (Figure 10).

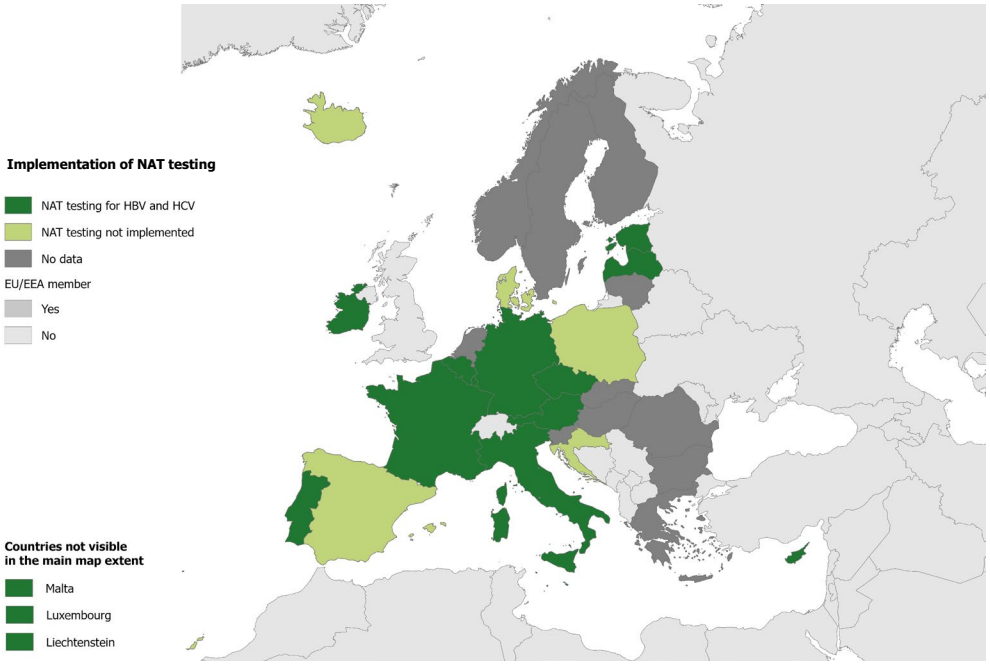
Figure 10. Proportion of blood donations tested for HBV and HCV in EU/EEA countries, 2019



**No data available*
Source: All countries - EDQM (Council of Europe) [17] except for France [18].

Nucleic acid amplification testing (NAT) is a highly sensitive molecular technique for screening blood donations. Only 14 reporting countries indicated that NAT testing was used to screen all blood donations for both HBV and HCV (Figure 11). One additional country reported that NAT testing for HCV was implemented.

Figure 11. Countries implementing NAT testing for HBV and HCV in the EU/EEA, 2019



Source: All countries - EDQM (Council of Europe) [17].

The prevalence of HBV and HCV infections among first-time blood donors in the EU/EEA is low, with a median HBV prevalence of 56.1 per 100 000 first-time donors (range: 0 to 347 per 100 000) and HCV prevalence of 48.5 per 100 000 first-time donors (range: 0 to 388 per 100 000) [17].

Prevention among PWID

2025 Interim targets

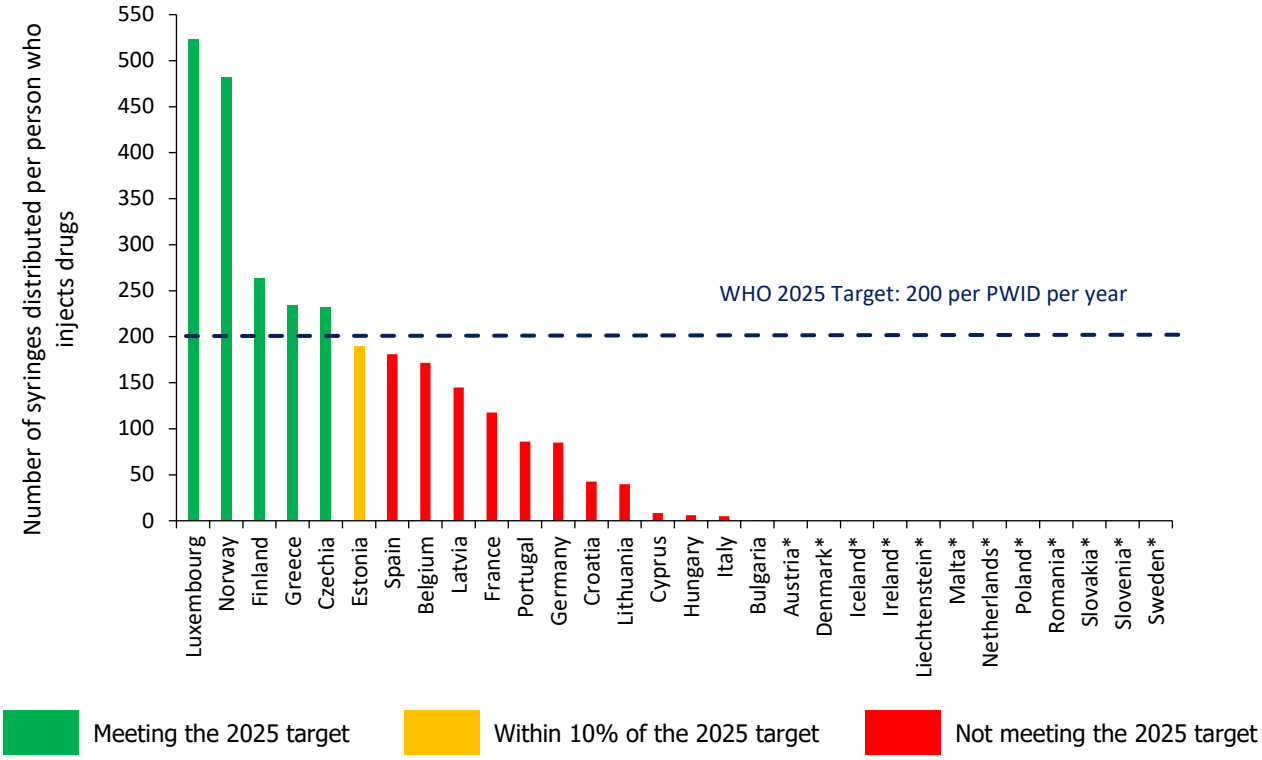
200 sterile injection equipment kits distributed per PWID per year as part of a comprehensive package of harm-reduction services.

40% of opioid dependent PWID receive opioid agonist treatment (OAT).

Injecting drug use has declined in many EU/EEA countries in the past ten years but there is variation across the region in the prevalence and in the substances used and in some countries, especially in the eastern part of the region, injecting drug use prevalence remains high [20]. PWID are disproportionately affected by HBV and HCV infections due to shared injection equipment and drug paraphernalia. In Europe, there is a high prevalence of infection and ongoing transmission in this population, especially with regard to HCV. High levels of needle and syringe exchange coverage and OAT are effective at reducing the risk of viral hepatitis transmission among PWID and the updated guidance from ECDC and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) recommends the provision of sterile injecting equipment in combination with OAT (19). Data on needle and syringe coverage and OAT are collected by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) [20].

Seventeen countries were able to provide data on the coverage of needle and syringe programmes, with the number of kits distributed per PWID per year ranging from 0.05 (Bulgaria) to 523 (Luxembourg)(median: 144) (Figure 12) [20]. Of the 17 countries with data, five countries are currently meeting the 2025 interim target of 200 needle and syringes distributed per PWID per year. One country is within 10% of the target.

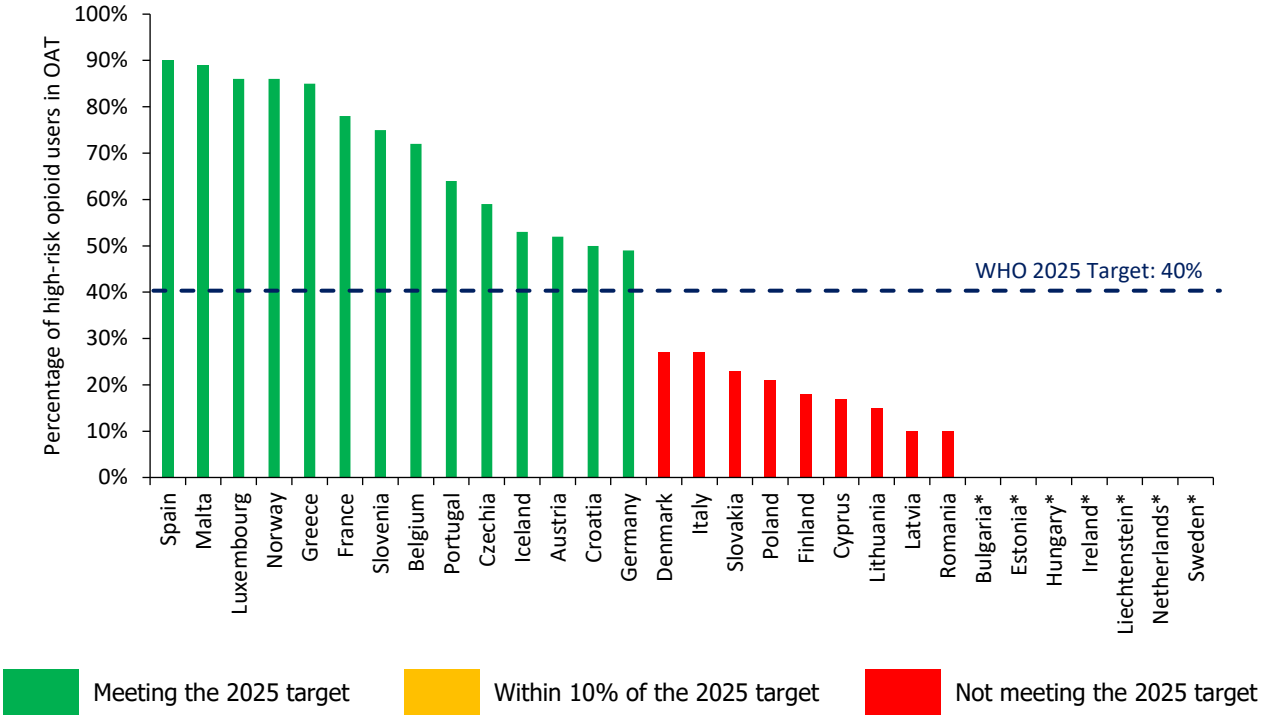
Figure 12. Number of sterile injection equipment kits distributed per year per PWID, EU/EEA countries, 2021 or latest available data



**No data available*
Source: All countries - EMCDDA [20] except for Germany [21].

Twenty-three countries were able to provide data on the coverage of OAT (Figure 1). The proportion of people with high-risk opioid use in OAT ranged from 90% in Spain to 10% in Latvia and Romania (median: 52%). Fourteen of the 23 countries are meeting the 2025 interim target of 40% of people with high-risk opioid use accessing OAT.

Figure 13. Proportion of people with high-risk opioid use on OAT in EU/EEA countries, 2021 or latest available data



**No data available*
Source: EMCDDA. Viral hepatitis elimination barometer among people who inject drugs in Europe, 2023 [20]

Treatment as prevention

With the discovery of effective direct-acting antivirals (DAAs) and the increased availability of hepatitis C treatment, treatment as prevention is an emerging tool to help prevent HCV transmission [22]. Several studies have concluded that DAAs are effective tools to help progress towards HCV micro-elimination in key populations, including men who have sex with men (MSM), PWID, and people in prisons [22,23,24,25]. However, civil society organisations in five countries across the EU/EEA have reported restrictions on DAA access, such as where DAAs are accessible, populations ineligible for DAAs (e.g. uninsured people in Bulgaria), and clinical eligibility [26]. Such restrictions may limit the potential to use DAAs as a prevention tool [15]. In addition, data from EMCDDA suggest that five EU/EEA countries still have clinical and/or financial restrictions on DAA access for PWID [17]. Moreover, data collected by ECDC from across the EU/EEA on numbers diagnosed and treated indicate that a significant number of individuals with chronic hepatitis C remain undiagnosed and, although the data are incomplete, in some countries a large proportion of those diagnosed have not yet been treated [27].

Prevention of nosocomial transmission

2025 Interim target

95% of injections in healthcare settings undertaken with safe injection equipment.

Although nosocomial infections account for 15% of acute HBV and 17% of acute HCV transmissions[4] [6, 15], there are no readily available data on efforts to prevent viral hepatitis infections in hospitals. Twenty-five countries reported that their HBV vaccination policies include healthcare workers, however, only five countries were able to provide data on the coverage of HBV vaccination, with significant variation (range: 20%–100%). In order to have a comprehensive understanding of nosocomial HBV and HCV infections, further work is needed to determine how best to monitor nosocomial infections and the coverage of prevention measures, such as the use of safety-engineered injection devices.

Conclusions

Action is required to improve efforts to prevent new hepatitis B and C infections and get the region on track to reach United Nations Sustainable Development Goal 3.3, combatting viral hepatitis. The epidemics of HBV and HCV in the EU/EEA are complex and dynamic, with evidence of ongoing transmission of infections and high prevalence in some population groups. There are gaps in data on HBV and HCV epidemiology and current prevention efforts, which present major challenges in monitoring progress towards elimination targets. ECDC is ready to support countries in their efforts to improve the availability and quality of their data.

While data are lacking from many countries, according to the data available, many countries may not be on track to meet some of the WHO European Action Plan 2025 interim targets for viral hepatitis prevention. At present, there is sub-optimal HBV vaccine coverage across EU/EEA countries for programmes targeting children as part of the primary schedule, and among key adult populations at risk of infection. Programmes for the prevention of vertical transmission are not well monitored and data from these programmes should be collected routinely to assess their delivery and identify any gaps in service that need addressing. Given the importance of harm reduction services for the prevention of transmission of blood-borne infections among PWID, and the high burden of infections among this group, there is an urgent need to strengthen and expand prevention and testing services for this population, as there is evidence of sub-optimal implementation in many EU/EEA countries.

Priority areas for action

- Countries should consider strengthening their viral hepatitis prevention strategies to get on track towards eliminating viral hepatitis as a public health threat in Europe:
  - Although injecting drug use has declined across the region, prevalence still remains high in some countries and drug trends are variable, so high coverage of harm reduction programmes is critical and, in many countries, this needs further expansion.
  - National hepatitis B vaccination programmes are central to prevention efforts and have resulted in a major reduction in incidence. However, consideration is still needed in several countries to address suboptimal coverage of national vaccination programmes for hepatitis B.
  - Targeted hepatitis B vaccination efforts should be developed, addressing any structural barriers and offering vaccination in local settings to key population groups, based on a local assessment of the situation. Special attention should be given to people who inject drugs, by ensuring there is good access to vaccination in local harm reduction services and prisons.
  - Measures to prevent mother-to-child transmission of hepatitis B should be tightened to minimise potential for any vertical transmission. The provision of a timely birth dose (via universal or targeted programmes) is critical, and all countries should aim to exceed the WHO target.

[4] Where the transmission route is known and reported.

- Efforts to scale up testing to diagnose individuals with chronic HBV and HCV, and offer antiviral treatment to those who are diagnosed, is critical to prevent the development of cirrhosis and hepatocellular carcinoma and reduce the high disease burden associated with these infections.
- A lack of robust, reliable data on hepatitis B and C prevention is a significant barrier to monitoring progress towards the WHO European Action Plan targets. There is an urgent need for better systems to monitor progress at the national level. Improved data collection for monitoring is a top priority, especially for the following areas:
    - vaccination policies and coverage in children and key adult populations, including PWID, people in prisons, people living with HIV, MSM and healthcare workers;
    - data on the prevention of hepatitis via sexual and nosocomial transmission routes, with the development of key indicators for which data can be easily collected;
    - coverage of harm reduction measures;
    - coverage of measures to prevent mother-to-child transmission.

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Annex 1. Progress towards the WHO European Action Plan prevention targets

Table A1. Progress towards the WHO European Action Plan 2025 interim targets for hepatitis prevention, 2023

	95% coverage with three doses of childhood HBV vaccine*	90% coverage with timely birth dose vaccination (universal)	90% coverage with timely birth dose vaccination (targeted)	90% coverage with screening in pregnant women	100% of blood units screened for bloodborne diseases	200 syringes distributed per PWID as part of a comprehensive package of harm reduction services	40% of opioid dependent PWID receive opioid agonist treatment	95% of injections in healthcare settings undertaken with safe injection equipment
Austria	84%				100%		52%	
Belgium	97%					172	72%	
Bulgaria	91%	97%		57%	100%	0.05		
Croatia	90%		100%		100%	43	50%	
Cyprus	94%				100%	8	17%	
Czechia	94%		100%	97%	100%	232	59%	
Denmark*			98%	100%	100%		27%	
Estonia	85%			95%	100%	190		
Finland*				100%	100%	264	18%	
France	95%			97%	100%	118	78%	
Germany	87%			93%	100%	85	49%	
Greece	96%				100%	234	85%	
Hungary			93%	100%		6		
Iceland*							53%	
Ireland	93%		100%	100%	100%			
Italy	95%				100%	5	27%	
Latvia	95%					145	10%	
Liechtenstein								
Lithuania	90%	95%		88%		40	15%	
Luxembourg	96%					523	86%	
Malta	98%		100%				89%	
Netherlands	88%		100%	99%	100%			
Norway	96%				100%	482	86%	
Poland	90%	79%		96%	100%		21%	
Portugal	99%	97%	98%	89%	100%	86	64%	
Romania	85%	97%					10%	
Slovakia	97%		100%	97%	100%		23%	
Slovenia	89%		100%	100%	100%		75%	
Spain	93%					181	90%	
Sweden	94%				100%			

**Denmark, Finland and Iceland do not have a national policy for universal childhood vaccination against hepatitis B.*

Meeting the 2025 target Within 10% of the 2025 target Not meeting the 2025 target