TECHNICAL REPORT

The sustainable development goals and hepatitis B and C in the EU/EEA

March 2021

Key messages

- In order to monitor progress towards the United Nations Sustainable Development Goals 2030 target to combat viral hepatitis, this report provides data on hepatitis B and C prevention, incidence, diagnosis, treatment, cure/viral suppression, and mortality in European Union/European Economic Area (EU/EEA) countries with data collected in 2019.
- For elimination, available data indicate that most countries are not on track to meet the World Health Organization (WHO) targets for reduction in hepatitis B and C incidence and mortality attributable to hepatitis B and C by 2030.
- For prevention, available data show good progress on hepatitis B childhood vaccination programme coverage in most countries, but sub-optimal coverage of harm reduction measures for people who inject drugs to prevent hepatitis C in many countries reporting.
- Relating to the continuum of care, data show most countries are far from achieving targets for the percentage of chronic hepatitis B and C cases diagnosed and the percentage of diagnosed cases treated. Although the target for the percentage of treated hepatitis C cases leading to cure has been met for all countries reporting, indicating good progress, this must be seen in the context of most countries are being far from reaching the targets for the proportion of cases diagnosed and on treatment. However, insufficient data was available to assess progress towards this target for hepatitis B.
- For almost all indicators, a large number of countries did not report data. A lack of robust, reliable data presents a huge challenge to making progress on the viral hepatitis epidemic. Improved monitoring systems and reporting are urgently needed to better understand and take action on hepatitis B and C in the European region.

Introduction

In 2015, the United Nations Member States adopted the Sustainable Development Goals (SDGs) for 2030 [1]. The SDGs, an 'urgent call to action' to further develop and promote prosperity while protecting the planet, are comprised of 17 goals and 179 targets. The third goal includes Target 3.3: 'End the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, waterborne and other communicable diseases'. The countries of the European Union (EU) and the European Economic Area (EEA) are committed to implementing the SDGs and monitoring progress towards these goals.

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Viral hepatitis, especially hepatitis B and hepatitis C, is an important cause of morbidity and mortality globally, including in the European Region. The World Health Organization (WHO) Global Health Sector Strategy (GHSS) for viral hepatitis [2], adopted in 2016, aims to eliminate viral hepatitis as a public health threat by 2030 and provides an incentive to scale up efforts for tackling the epidemics of hepatitis B (HBV) and hepatitis C virus (HCV) infections. The concept of elimination for these infections is based on the global targets set by WHO for reducing the incidence of new chronic infections and the attributable mortality.

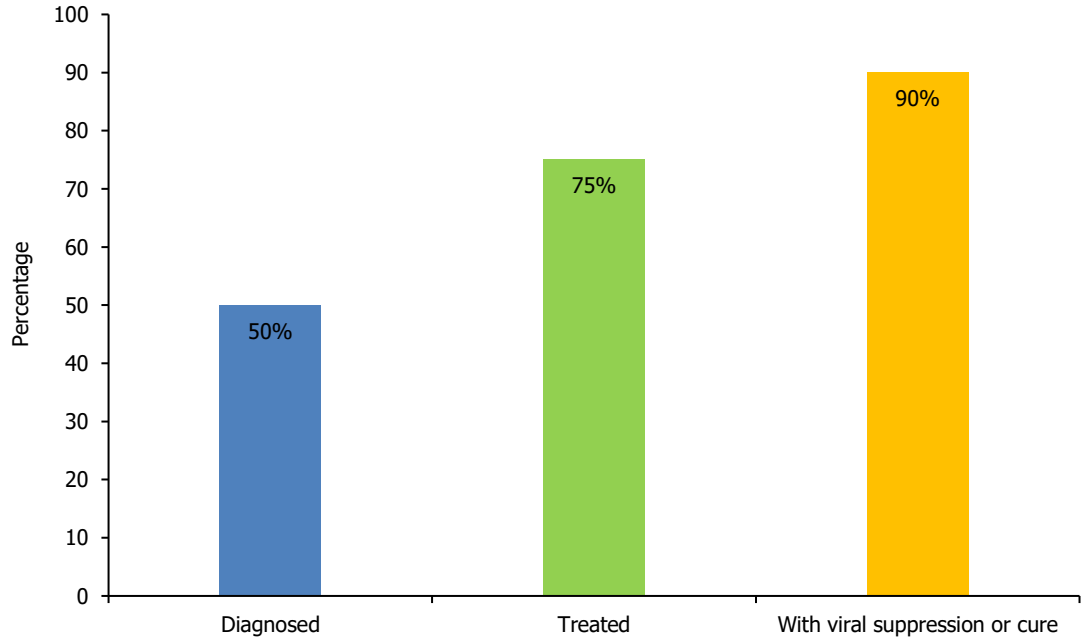
Elimination: WHO global targets for viral hepatitis for 2030
Reduce the incidence of new chronic infections by 90% from the 2015 baseline
Reduce attributable mortality by 65% from the 2015 baseline

The WHO Regional Office for Europe subsequently developed a hepatitis action plan to steer the implementation of the GHSS in the European Region [3], which was endorsed in 2016 by 53 Member States in the Region. Some of the European action plan targets are more ambitious than the global targets, in recognition of the existing prevention and control efforts in the European Region and the capacity of existing systems to further impact on progress against the epidemics.

The targets relating to diagnosis and treatment form a continuum of care (Figure 1). The continuum of care for hepatitis B and C is a conceptual framework that provides a snapshot of critical stages in achieving viral suppression among people living with chronic viral hepatitis. Achieving a high rate of viral suppression for chronic HBV and sustained viral response for chronic HCV plays a major role in reducing the impact of viral hepatitis, resulting in reduced incidence, morbidity, and mortality.

Continuum of care: WHO European action plan targets for 2020
50% of those with chronic HBV and HCV diagnosed
75% of diagnosed patients who are eligible for treatment begin treatment
90% of those who receive treatment achieve viral suppression (for HBV) or a sustained viral response (for HCV).

Figure 1. The viral hepatitis continuum of care and the European action plan 2020 targets for the SDGs [2]



Source: WHO: Global health sector strategy on viral hepatitis 2026-2021: Toward ending viral hepatitis.
**For hepatitis B, the numbers treated is among those eligible for treatment according to clinical guidelines.*

In addition to the elimination and continuum of care targets, three hepatitis prevention targets are highlighted as being critical to progress towards the SDGs: vaccination; provision of syringes for people who inject drugs; and opioid substitution therapy.

Prevention: WHO European action plan targets for 2020
Hepatitis B
95% coverage with three doses of HBV vaccine in countries that implement universal childhood vaccination
Hepatitis C
200 syringes distributed per person who injects drugs (PWID) per year
40% of opioid dependent PWID receiving opioid substitution therapy

A summary of the indicators for monitoring progress towards the SDGs for combatting hepatitis B and C is found in Table 1. These indicators align with the WHO framework for Monitoring and Evaluation for Viral Hepatitis B and C [4].

Table 1. Indicators for monitoring progress towards viral hepatitis prevention, care, and elimination.

	Hepatitis B	Hepatitis C
a. Prevention	HBV childhood vaccination coverage	Coverage of needle and syringe programmes (NSP) and opiod substitution therapy (OST)
b. Incidence	Number of new HBV infections (acute) per year per 100 000	
c. Continuum of care	• Percentage of people living with chronic HBV/HCV infections diagnosed and aware of their condition • Percentage treatment coverage of people who are eligible for treatment and diagnosed with HBV/HCV infections • Percentage of people living with chronic HBV infection on long-term treatment with viral suppression; percentage of people on treatment for chronic HCV with sustained viral response/cured	
d. Mortality	Death from liver disease attributable to HBV and HCV infection	

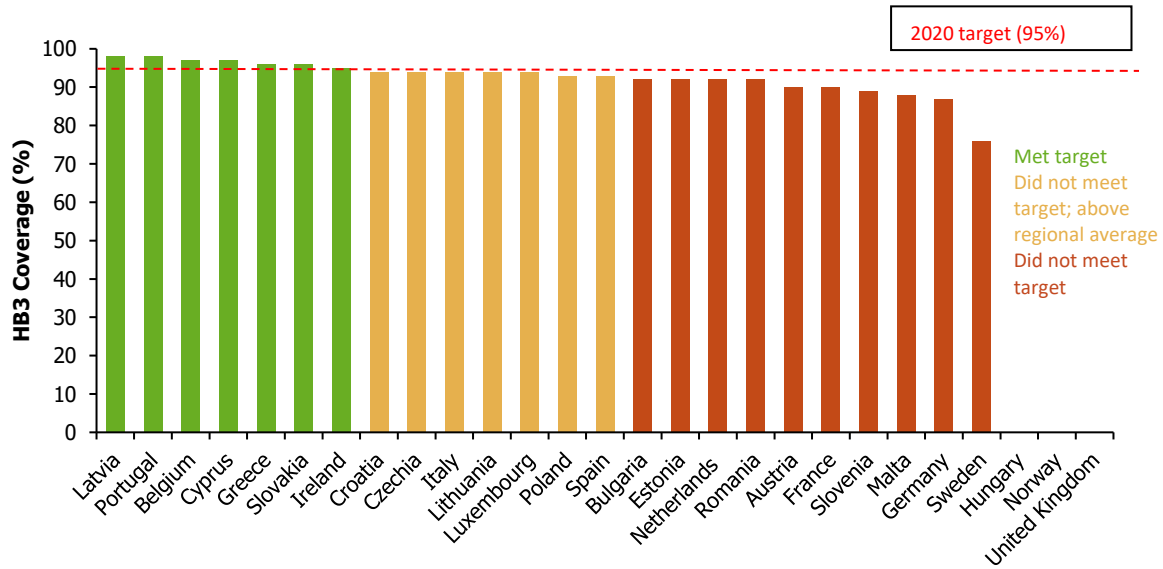
Progress towards the SDG targets in the EU/EEA

Prevention

European Action Plan Target for 2020: 95% coverage with three doses of HBV vaccine in countries that implement universal childhood vaccination.

A total of 27 out of 31 EU/EEA countries recommended universal childhood vaccination against hepatitis B in 2017. Three countries did not have a national policy for universal vaccination (Denmark, Finland and Iceland) and one country (Sweden) had regional implementation of universal hepatitis B vaccination as of 2017. Data on vaccine coverage in 2017 were reported from 24 countries. Of these, seven countries (29%) have reached the 2020 target of 95% coverage (Figure 2).

Figure 2. Coverage (%) of three doses of HBV vaccine (HB3) in EU/EEA countries that implement universal HBV vaccination in 2017*†,‡



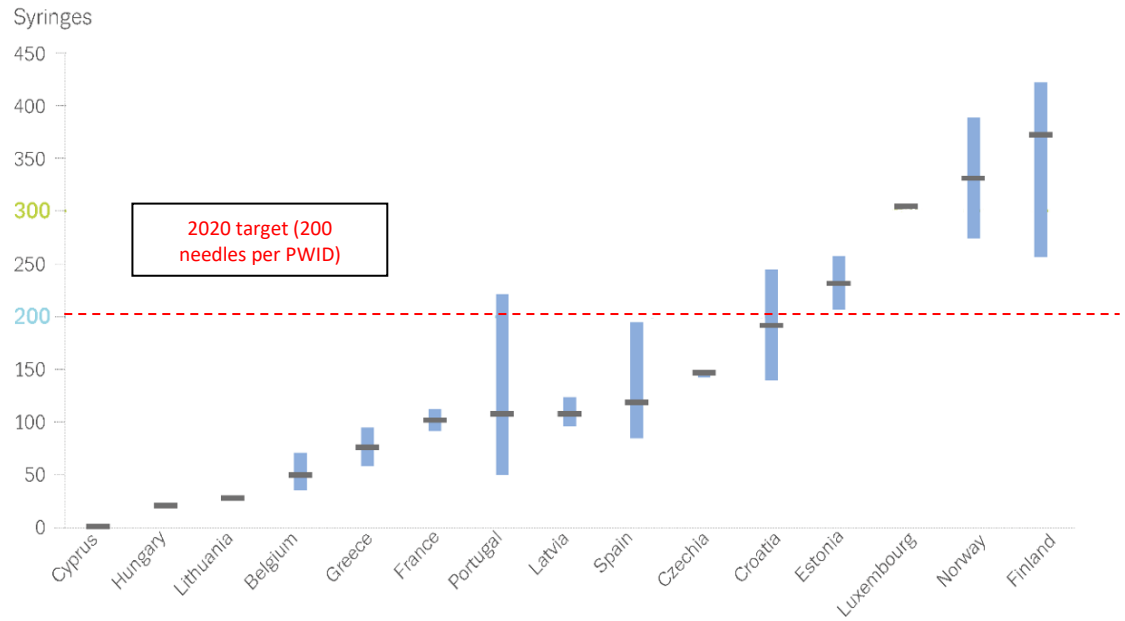
Source: WHO/UNICEF coverage estimates available from https://www.who.int/immunization/monitoring_surveillance/data/en
**No data available from Hungary as the programme is a two-dose regime provided from the age of 13 years.*
†, Data for Austria based on HB3 coverage among children aged four years.
‡, National programme in Sweden only implemented during 2016 and in the United Kingdom in 2017 (with estimated coverage in 2019 >90%).

European Action Plan Target for 2020: A comprehensive package of harm reduction services to all persons who inject drugs (PWID), including: at least 200 syringes distributed per PWID per year; at least 40% of opioid dependent PWID receiving opioid substitution therapy.

PWID are disproportionally affected by HBV and HCV infections due to the sharing of injecting equipment and drug paraphernalia. Data show a high prevalence of chronic HCV and ongoing transmission in this group [5]. Data on coverage of prevention programmes targeting PWID are lacking from half the countries in the EU/EEA.

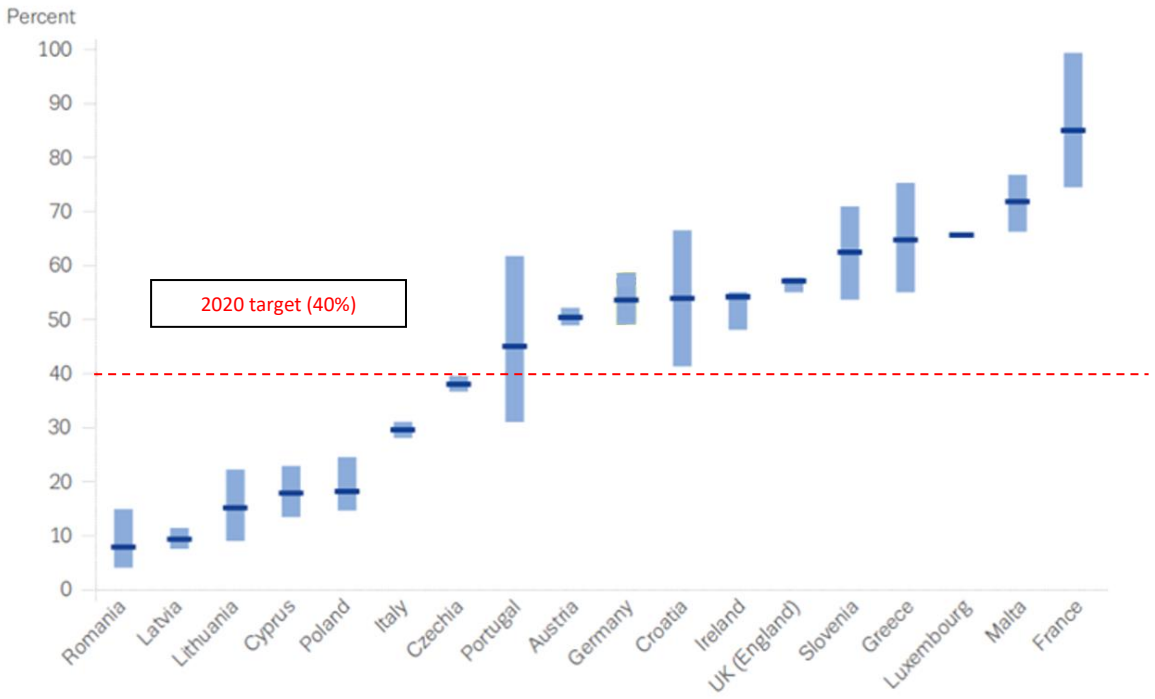
Four out of 15 (29%) of countries with data in 2017 had coverage of at least 200 syringes distributed per PWID per year (Figure 3). Eighteen countries had estimates of the population of high-risk opioid users. Eleven of these countries (61%) reported achieving the 2020 target of at least 40% coverage of OST (Figure 4).

Figure 3. Coverage of syringe programmes: estimated number of syringes provided per person who injects drugs in 2017 [6]



Source: EMCDDA. The elimination barometer for viral hepatitis among PWID in Europe, 2019 [6].

Figure 4. Coverage of opioid substitution treatment (% of estimated high-risk opioid users receiving treatment with uncertainty interval) in 2017 or most recent year [6]



Source: EMCDDA. The elimination barometer for viral hepatitis among PWID in Europe, 2019 [6]

Incidence

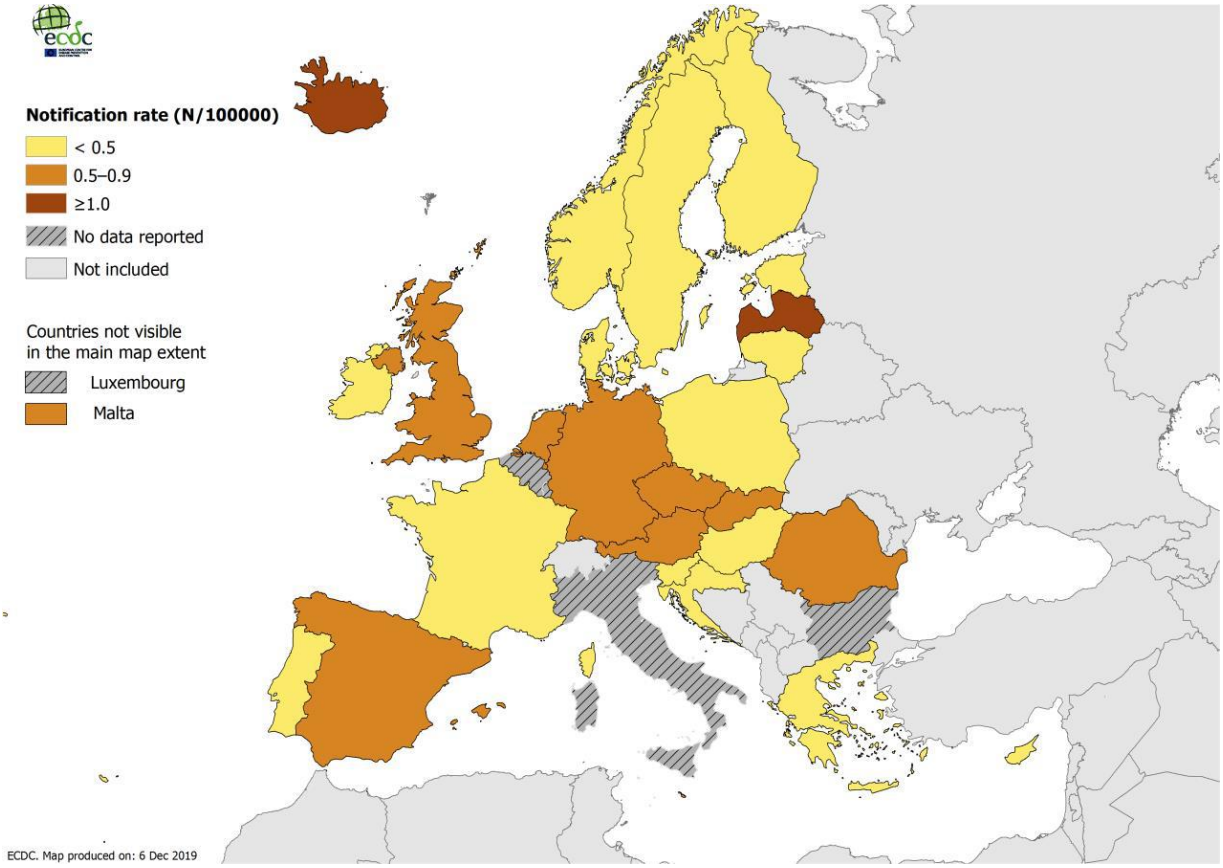
WHO global target for 2030: Reduce the incidence of chronic hepatitis infections by 90% from 2015 baseline.

Hepatitis B

In order to monitor progress towards reducing chronic hepatitis infections by 90% by 2030, a baseline of incidence data should be established. Notification-based data on newly diagnosed acute cases can provide a rough proxy measure for the incidence of chronic hepatitis B in the general population, with the following noted caveats. Notification-based data for hepatitis B are highly affected by local testing and screening policies and under-reporting of cases is known to be a major issue. Additionally, as most of the acute cases occur among adults (88% of notifications are in people age 25+), and with most of these infections expected to resolve spontaneously, extrapolating from acute case notification data to incidence of chronic infection has its limitations. However, notification data on acute cases is currently the most available source of information on hepatitis B incidence.

For hepatitis B, 27 countries from the EU/EEA provided data on incidence of acute cases in 2018. The overall incidence of acute cases was 0.5 per 100 000 population. There was notable variation between countries, ranging from no cases in Luxembourg to 1.5 cases per 100 000 in Latvia (Figure 5).

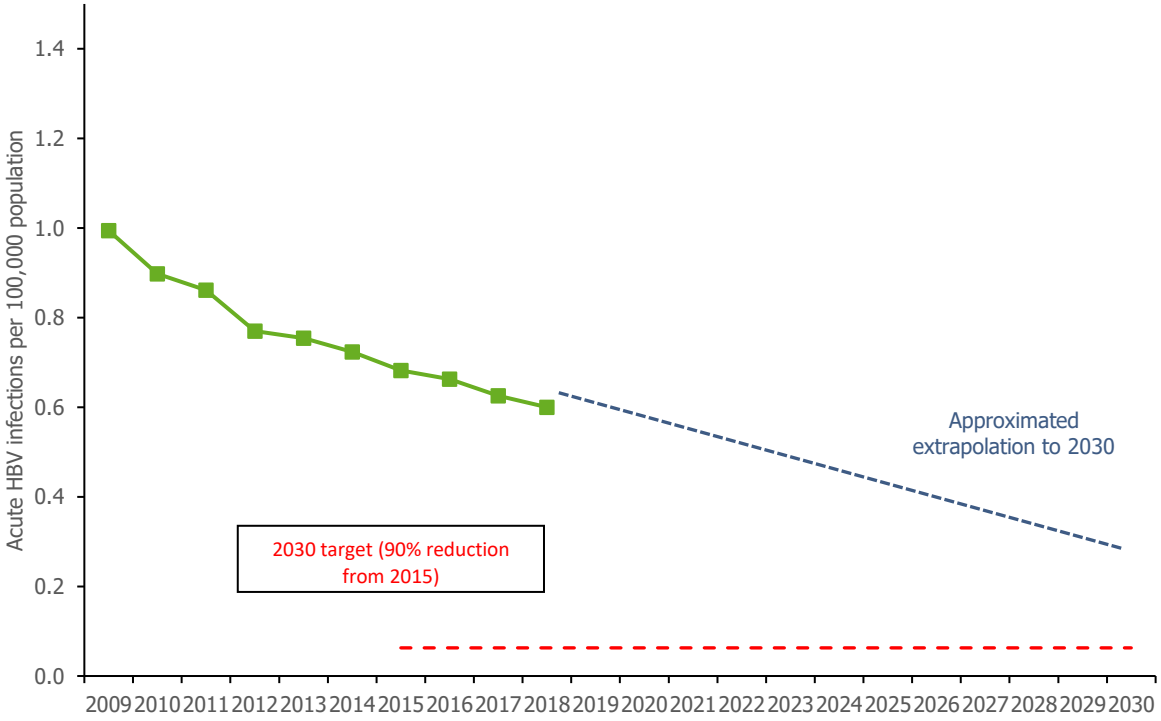
Figure 5. Notification rate of acute hepatitis B cases per 100 000 population in EU/EEA, 2018 [7]



Source: ECDC Hepatitis B Annual Epidemiological Report for 2018 [7]

When restricting the data to the 20 countries that reported consistently from 2009–2018, the notification rate for acute hepatitis B cases showed a steady decline from 1.0 cases per 100 000 population in 2008 to 0.6 in 2018 (Figure 6). The incidence of acute hepatitis B infections across these counties in 2015, the baseline year, was 0.68 cases per 100 000 population. The extrapolation line in Figure 6 suggests that if the observed decline in incidence is continued to 2030, the region is unlikely to meet the target of a 90% reduction in incidence by 2030.

Figure 6. Notification of acute hepatitis B infections per 100 000 population by year in 20 EU/EEA countries reporting consistently from 2009-2018* [7]



Source: ECDC Hepatitis B Annual Epidemiological Report for 2018 [7].

**Countries include Austria, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Latvia, Malta, the Netherlands, Norway, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.*

Hepatitis C

Robustly estimating incidence of hepatitis C in general populations is not possible with the monitoring and surveillance systems currently in place. Notification of acute cases of hepatitis C are not a good proxy for incidence because acute cases are largely asymptomatic and are difficult to diagnose due to complexities and limitations of laboratory procedures. Data on prevalence of anti-HCV among PWID who are under 25 years and among those who have been injecting for fewer than two years, are sometimes used as a rough proxy for trends in incidence in this key population, as these prevalence measures are considered to reflect relatively recent transmission [8]. WHO is conducting modelling that will provide estimates that can be used to monitor progress towards the incidence target.

Continuum of care

European Action Plan Targets for 2020: 50% of those with chronic HBV and HCV are diagnosed; 75% of diagnosed patients who are eligible for treatment begin treatment; 90% of those who receive treatment achieve viral suppression (for HBV) or a sustained viral response (for HCV).

Aggregated data on the hepatitis continuum of care reported by the 31 countries in the EU/EEA for 2017 are summarised in Table 2, with each stage of the continuum presented separately in the following sections. Disaggregated data for countries can be found in annex Table A.

Table 2. Summary of progress towards the 2020 targets for the continuum of care in the 31 countries in the EU/EEA, 2017

	% Chronic cases diagnosed*	% Diagnosed cases treated	% Treated cases with viral suppression (HBV) or sustained viral response (HCV)
Target	*50%*	*75%*	*90%*
Hepatitis B	**20.3%** 12 countries reporting	***25.1%***** *6 countries reporting*	**Insufficient data** 3 countries reporting
Hepatitis C	**26.8%** 16 countries reporting	**23.0%** 12 countries reporting	**92.4%** 12 countries reporting

Source: ECDC: Monitoring the responses to hepatitis B and C epidemics in the EU/EEA Member States, 2019 [8].
**As a proportion of those with chronic infection in the population.*
***Estimate does not discount cases not eligible for treatment according to clinical guidelines.*

Chronic cases diagnosed

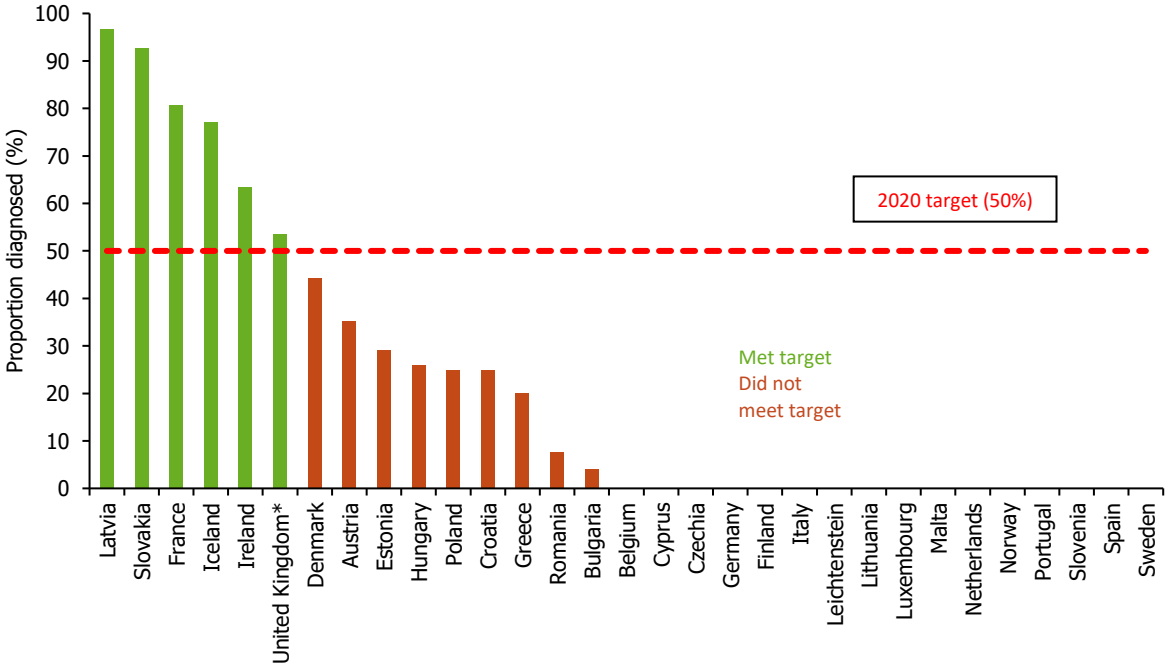
Currently, estimating the proportion of chronic HBV and HCV cases that are diagnosed is very difficult due to a lack of robust estimates of both the numerator (number diagnosed) and the denominator (current numbers infected with chronic infection). Among the 12 countries reporting data on both the estimated number of people living with HBV infection and the number diagnosed, there were an estimated 1 597 377 people with chronic HBV infection, of whom 20.3% (range 2.4–71.8%) were reported to have been diagnosed. Four of the 12 countries had met or exceeded the 50% target in 2017 (Figure 7).

Figure 7. Proportion (%) of people living with chronic HBV infection who had been diagnosed in EU/EEA countries **, 2017 [8]

**Data represent Scotland only*
***Data incomplete on diagnosed cases from Bulgaria (data from 2016), Estonia (data from 2004) and the Netherlands (data from 2000).*
Source: Monitoring the responses to hepatitis B and C epidemics in the EU/EEA Member States, 2019 [8].

Among the 15 countries reporting data on both the estimated number of people living with chronic HCV infection and the number diagnosed via RNA test, there were an estimated 1 422 285 people with chronic HCV infection, of whom 26.8% (range 4.1–96.8%) have been diagnosed. Six of the 15 countries had met the 50% target in 2017 (Figure 8). However, there are a number of notable limitations of this data. For HCV, the proportion diagnosed is difficult to interpret as there are changes to the denominator (number living with chronic HCV) as over time, individuals are treated and cured. Additionally, the quality of data is weak in some countries reporting. For example, the data from Bulgaria reflects numbers diagnosed over a span of two years, representing an under-estimation of individuals diagnosed.

Figure 8. Proportion (%) of people living with chronic HCV infection who had been diagnosed in EU/EEA countries **, 2017 [8].



**Data represent England and Scotland.*
***Data incomplete on diagnosed cases from Austria (data from 2009), Bulgaria (data from 2016), Estonia (data from 2004) and Spain (data from 2015). For some countries data include cured/spontaneously resolved cases.*
Source: Monitoring the responses to hepatitis B and C epidemics in the EU/EEA Member States, 2019 (8).

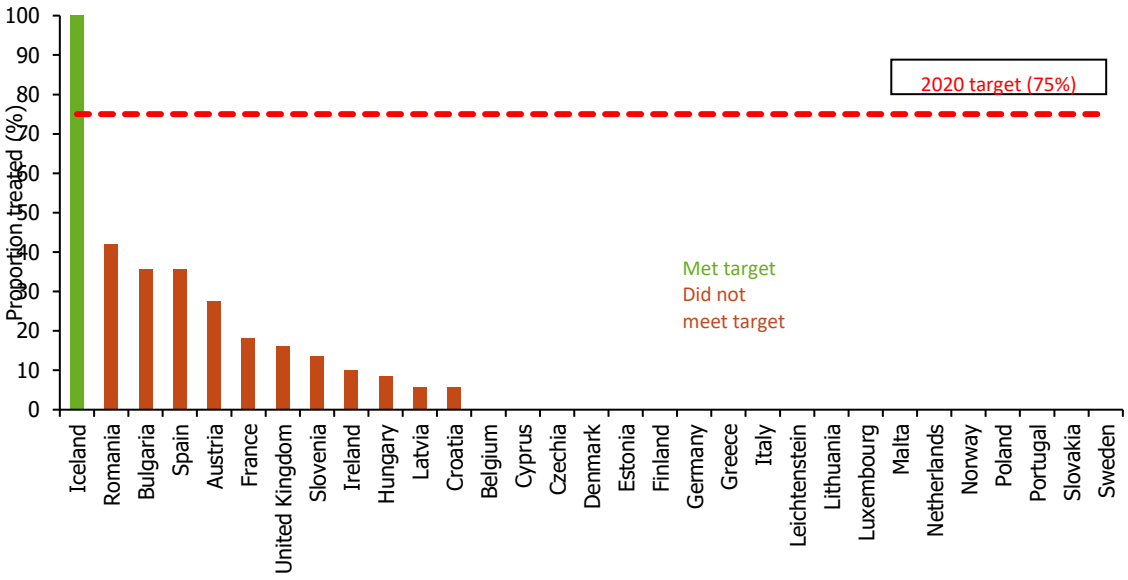
Eligible diagnosed cases treated

Among the six countries reporting data on both the number of people with chronic HBV infection diagnosed and the number treated, 25.1% of those diagnosed were on treatment (range 4.3–100%). However, many cases diagnosed with chronic infection may not be eligible for treatment according to clinical guidelines and the data contributing to this estimate were not adjusted to discount for cases not eligible for treatment. Romania was the only country that reported data on the estimated number of all chronic HBV infections eligible for treatment and the numbers on treatment, with available data indicating that an estimated 7.7% of all eligible individuals were receiving treatment. No country reported data on both the number of diagnosed and treatment eligible individuals with chronic HBV infections and the number of those receiving treatment, so it is not possible to measure progress towards the treatment target for HBV.

Among the 12 countries reporting data on both the number of people with diagnosed chronic HCV infection and the number of those diagnosed who were started on treatment in 2017, 23.0% (range 5.8–100%) had been started on treatment. Iceland was the only country that achieved the 2020 target of 75% of those with diagnosed infections started on treatment in 2017 (Figure 9).

Several of the countries reported that the diagnostic data included in this indicator included those who had cleared their infection spontaneously or through treatment. This would result in an under-estimation of the proportion of those receiving treatment among those diagnosed. The difficulty of adjusting the estimate for those clearing their HCV infection is a major challenge in accurately estimating this indicator. Some countries reporting data on diagnosis only had data available going back a couple years which also contributes to an under-estimation of those diagnosed.

Figure 9. Proportion of people diagnosed with chronic HCV infection who have been started on treatment in EU/EEA countries, 2017 [8].

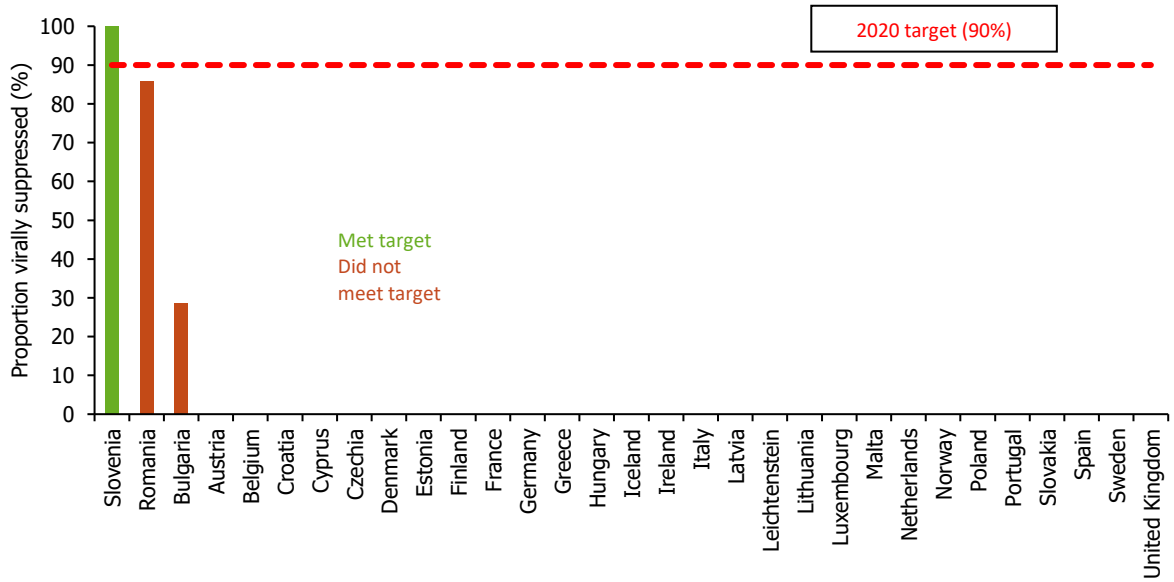


Source: Monitoring the responses to hepatitis B and C epidemics in the EU/EEA Member States, 2019 [8].

Viral suppression/sustained viral response among patients treated

For chronic HBV cases, only three countries reported data on proportion of those treated who attained viral suppression. Slovenia was the only country of the three to reach the 2020 target of having 90% of treated patients with viral suppression in 2017 (Figure 10).

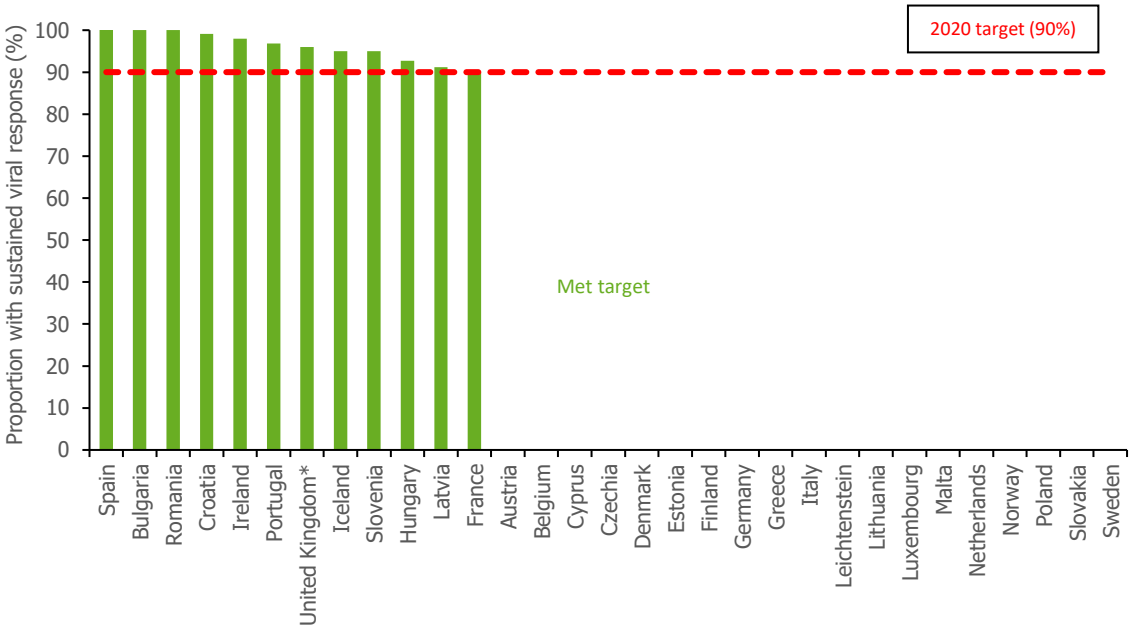
Figure 10. Proportion of patients on treatment for chronic HBV infection who have achieved viral suppression in EU/EEA countries, 2017 (8).



Source: Monitoring the responses to hepatitis B and C epidemics in the EU/EEA Member States, 2019 [8].

For chronic hepatitis C cases, 12 countries reported data on proportion of those treated who had a sustained viral response, or cure. Among the 12 countries, 92.4% of those treated achieved sustained viral response. All 12 countries had reached the 2020 target of having 90% of treated patients with sustained viral response in 2017 (Figure 11).

Figure 11. Proportion of patients treated for HCV who achieved a sustained viral response in EU/EEA countries, 2017 [8].



**Represents data from England. Proportion with sustained viral response in Scotland estimated at 97% and in Wales 550 individuals had a sustained viral response.*
Source: Monitoring the responses to hepatitis B and C epidemics in the EU/EEA Member States, 2019 [8].

Mortality

WHO global target for 2030: Reduce the mortality attributable to hepatitis infections by 65% from 2015 baseline.

The mortality indicator proposed by WHO [4] indicates that numbers of deaths from hepatocellular carcinoma (HCC) and chronic liver diseases (including cirrhosis) should be considered beside deaths from chronic viral hepatitis B and C infection for monitoring mortality attributable to HBV and HCV. Deaths from HCC and chronic liver diseases should be adjusted by proportion of cases that died with HBV and HCV infection. Data on mortality from these causes is available for the EU/EEA from 2015 [9] and can be utilised to establish a baseline for future monitoring towards the WHO global target for 2030.

Chronic hepatitis B and C

In 2015, 6 475 persons died with chronic hepatitis B and C as the underlying cause, resulting in an EU/EEA rate of 1.3 per 100 000 [9]. Italy, German, and Spain reported 66.1% of the cases.

Hepatocellular carcinoma

A total of 23 883 persons were reported to have died of HCC in the 31 EU/EEA countries in 2015, representing a rate of 4.6 per 100 000 population [9]. France, Germany, Italy, Spain and the UK accounted for 77% of the total number of EU/EEA and UK cases. National mortality rates ranged between 1.3 in Cyprus to 7.1 in Italy and the highest rates of mortality from HCC were generally in the western part of the region.

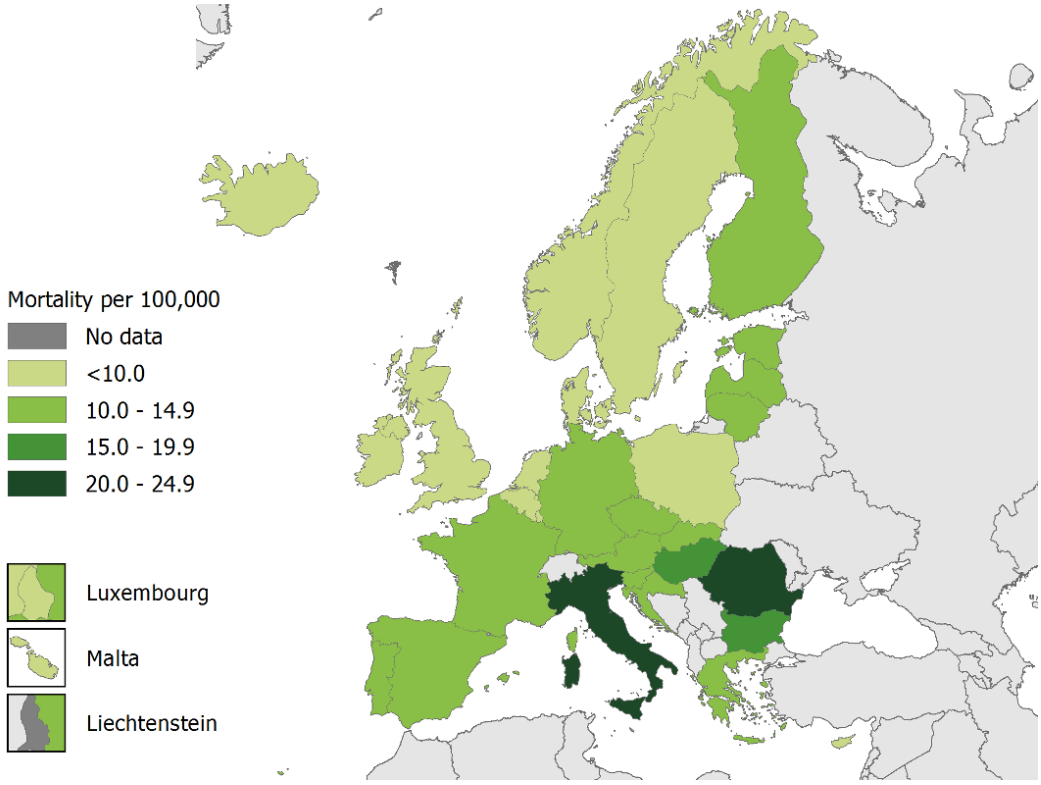
Chronic liver disease

There were 41 146 deaths from chronic liver diseases reported from the 31 countries in 2015, a rate of 8.0 per 100 000 population [9]. Half (49.4%) of the deaths were reported by Romania, Germany, and Italy. Geographical variation was larger than for mortality from HCC, with the mortality rate in Romania (43.1 per 100 000) almost 50 times higher than that for Slovenia (0.9 per 100 000).

Estimates for the proportion of deaths from HCC and chronic liver diseases attributable to HBV and HCB for EU/EEA countries are scarce and mostly inconsistent with the WHO mortality indicator. Instead, aetiology fraction (AF) estimates are available for liver cancer and cirrhosis and other chronic liver diseases (a larger category that includes, for example, alcoholic liver diseases and chronic viral hepatitis B and C) [9]. Overall, for the EU/EEA, 54.5% of all liver cancer deaths (53 250) and 44.7% of cirrhosis and other chronic liver diseases deaths (78 094) could be attributed to HBV and HCV. Mortality baseline that can be attributed to HBV and HCV in 2015 can thus be estimated at 63 927 deaths [9]. See Figure 12 for a map of mortality attributable to HBV and HCV (mortality from HCC and chronic liver diseases adjusted using AF estimates) by country in 2015.

This 2015 estimate can be used as a baseline for comparison with future mortality data to track progress towards the SDGs. To reach the mortality target, a total of 41 553 deaths should be prevented by 2030 (65% of the 2015 baseline).

Figure 12. Number of deaths per 100 000 population from hepatocellular carcinoma and cirrhosis and other chronic liver diseases combined attributable to HBV and HCV* in the EU/EEA in 2015.



Source: Mardh O, et al [9].
**Number of deaths adjusted by aetiology fraction estimates from the Global Burden of Disease study.*

Conclusions

The available data on the continuum of care indicate that there are large gaps in diagnosis and treatment of chronic cases of both hepatitis B and C. Dramatic improvements in testing and treatment services are needed in the majority of countries in order to meet the WHO European action plan targets that were set for 2020. The best progress is reflected in the proportion of those with chronic hepatitis C who received treatment and who achieved sustained viral response, or cure, with all countries reporting data having met the 2020 target. Data were not reported from the majority of countries on the continuum of care indicators, especially for chronic hepatitis B infection, again highlighting the critical need to improve systems of data collection.

Regarding prevention indicators, data on coverage of childhood HBV vaccination programmes were available from most countries and indicate wide coverage of vaccination programmes in children, a key step in success in eliminating chronic hepatitis B infections going forward. Better efforts to reach targets for needle and syringe programmes and opioid substitution therapy for PWID as part of comprehensive harm reduction are urgently needed in most countries, with few countries meeting the 2020 target.

Elimination targets include indicators for incidence and mortality. Obtaining a clear assessment of progress towards the target on incidence of new chronic infections is challenging due to the difficulty in accurately measuring incidence of hepatitis B and C infections. HBV and HCV attributable mortality in the EU/EEA is high, emphasising the need for increased efforts to identify HBV and HCV infections at an early stage and link diagnosed cases to care in order to reduce mortality from liver diseases. Monitoring progress towards the target on mortality would be made more accurate by having better estimates of the aetiology fraction, including country-specific estimates.

The data presented above on key indicators, including those related to prevention, the continuum of care, and elimination, provide a baseline to measure progress towards the 2030 UN Sustainable Development Goals. While data of better quality and from more robust sources is urgently needed, available data still provide valuable information for assessing progress towards targets. Although robust, reliable data on most indicators are lacking, the data available show that most countries are far from reaching the WHO elimination targets for hepatitis B and C. The existing gaps in reported data highlight the areas where countries need to focus their monitoring and surveillance efforts.

Priority areas for action

- For most of the indicators chosen to monitor progress towards the SDG 2030 targets, there were large numbers of countries that did not report data. This makes it difficult to draw conclusions about progress towards the targets. It is critical to improve monitoring data collection, including modelling, seroprevalence surveys, cohort studies, and death recording, at the national and EU-region level.
- Monitoring progress towards the SDG targets will greatly benefit from the consistent use of uniform indicators for prevention, incidence, the continuum of care, and mortality.
- There is evidence of suboptimal HBV vaccination coverage in some EU/EEA countries, indicating a need to strengthen existing vaccination programmes. Countries without universal HBV childhood vaccination programme in line with WHO recommendations should consider developing such a programme.
- There remains a need to scale up both prevention and testing services as part of harm reduction services for PWID, as there is indication of suboptimal implementation in many countries.
- Data relating to the care continuum are especially lacking, particularly data on testing and treatment. It is important that public health and clinical bodies come together, with support from community stakeholders, to improve national estimates at all stages of the continuum of care for both hepatitis B and C.
- Available data suggest that a high proportion of people living with hepatitis B and C infections are undiagnosed. Concerted efforts are needed to scale up testing for hepatitis B and C if countries in the EU/EEA are to approach the 2030 targets on diagnosis, treatment and viral suppression.
- Evidence suggests that large numbers of people living with diagnosed hepatitis B and C infection are not receiving life-saving treatment. Most countries in the EU/EEA are not on track to meet the 75% treatment targets for chronic hepatitis B and C by 2020 and a significant scale-up in treatment is needed if they are to meet the SDGs by 2030.
- HBV and HCV related mortality is high in EU/EEA countries and there is very little evidence to assess progress towards the 2030 elimination target of a 65% reduction in mortality. Reliable national estimates of the proportion of patients that died of liver disease with chronic HBV and/or HCV are needed to calculate the true burden of mortality attributable to HBV and HCV.

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Annex

Table A. Country progress against targets for prevention of new hepatitis infections and the hepatitis condinuum of care in the EU/EEA, 2017 (8)

	Hepatitis B				Hepatitis C				
Country	HBV vaccine coverage	% diagnosed	% treated	% with viral suppression	# syringes distributed /PWID	OST coverage	% diagnosed	% treated	% with cure
TARGET	*95%*	*50%*	*75%*	*90%*	*200*	*40%*	*50%*	*75%*	*90%*
Austria	90	No data	61.0	No data	No data	50	35.3	27.7	No data
Belgium	97	No data	No data	No data	50	No data	No data	No data	No data
Bulgaria	92	2.4	100.0	28.6	No data	No data	4.1	35.7	100.0
Croatia	94	No data	No data	No data	192	54	24.8	5.8	99.1
Cyprus	97	No data	No data	No data	1	18	No data	No data	No data
Czechia	94	No data	No data	No data	147	38	No data	No data	No data
Denmark	NA*	71.8	No data	No data	No data	No data	44.3	No data	No data
Estonia	92	11.0	No data	No data	232	No data	29.1	No data	No data
Finland	NA*	No data	No data	No data	373	No data	No data	No data	No data
France	90	17.5	No data	No data	109	85	80.6	18.1	90.0
Germany	87	No data	No data	No data	No data	54	No data	No data	No data
Greece	96	35.0	No data	No data	76	65	20.0	No data	No data
Hungary	No data	No data	No data	No data	21	No data	25.9	8.4	92.7
Iceland	NA*	No data	No data	No data	NA**	NA**	77.2	100.0	95.0
Ireland	95	57.1	No data	No data	No data	54	63.4	10.1	98.0
Italy	94	No data	No data	No data	No data	30	No data	No data	No data
Latvia	98	24.0	No data	No data	108	9	96.8	5.8	91.2
Leichtenstein	NA*	No data	No data	No data	NA**	NA**	No data	No data	No data
Lithuania	94	No data	No data	No data	28	15	No data	No data	No data
Luxembourg	94	No data	No data	No data	305	66	No data	No data	No data
Malta	88	No data	No data	No data	No data	72	No data	No data	No data
Netherlands	92	51.5	22.2	No data	No data	No data	No data	No data	No data
Norway	No data	No data	4.3	No data	332	No data	No data	No data	No data
Poland	93	47.3	No data	No data	No data	18	24.9	No data	No data
Portugal	98	No data	No data	No data	108	45	No data	No data	96.8
Romania	92	7.1	21.7	85.8	No data	8	7.6	42.0	100.0
Slovakia	96	14.6	No data	No data	No data	No data	92.7	No data	No data
Slovenia	89	No data	28.1	100.0	No data	62	No data	13.6	95.0
Spain	93	No data	No data	No data	119	No data	No data	35.6	100.5
Sweden	76	No data	No data	No data	No data	No data	No data	No data	No data
United Kingdom	No data	59.3	No data	No data	No data	57	53.5	16.1	96.0

** Not applicable because country did not have a universal childhood HBV vaccination programme*
*** Not applicable because country was not included in data collection efforts*
Source: Monitoring the responses to hepatitis B and C epidemics in the EU/EEA Member States, 2019 [8].