

Name: Dr. Erika Duffell

Country: Sweden

Affiliation: European Centre for Disease Prevention and Control (ECDC)

Function: Public health physician trained specialised in the field of communicable disease control

Main expertise (1-2 lines): Provides support to countries in the European Union and European Economic Area in relation to hepatitis surveillance, monitoring, prevention, and control.





Monitoring of progress towards elimination of hepatitis and C in the EU/EEA, focus on HBV vaccination

Dr Erika Duffell European Centre for Disease Prevention and Control (ECDC) Viral Hepatitis Prevention Board meeting, Antwerp 27th March 2025

Global health sector strategies on HIV, viral hepatitis and STIs for 2022-2030; WHO Europe Regional action plan 2022-2030

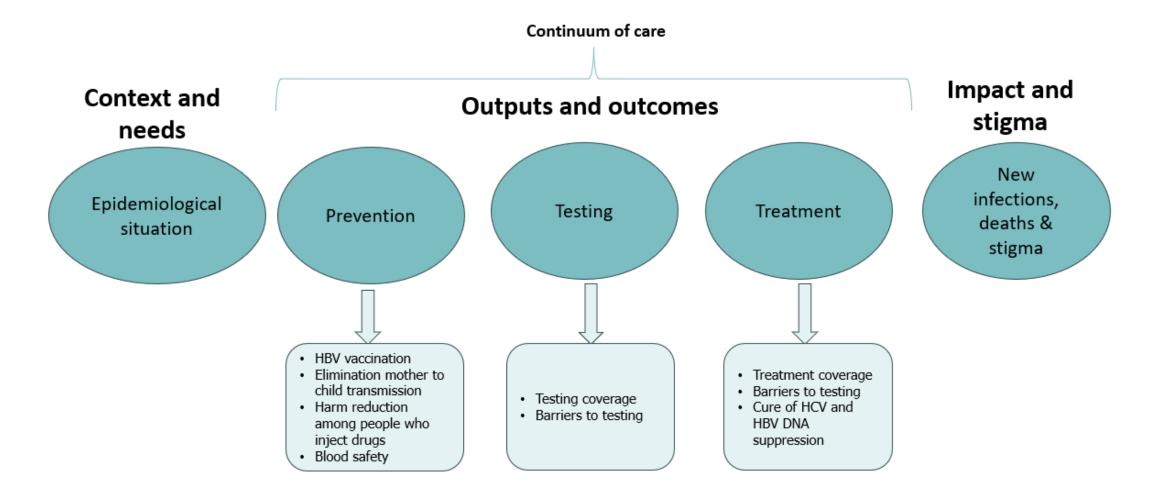


"End viral hepatitis as a major public health threat by 2030"



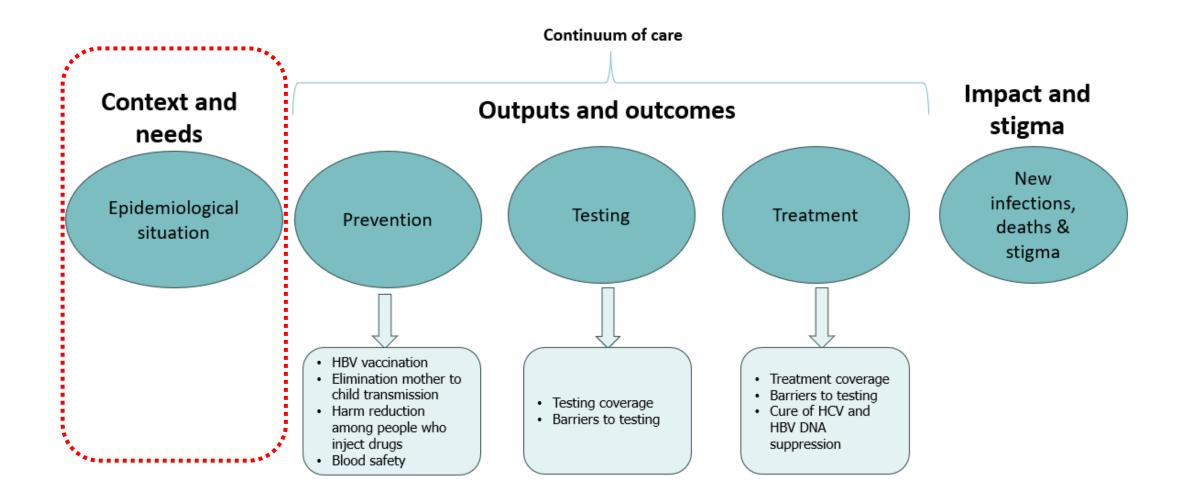
Monitoring progress towards hepatitis elimination





Monitoring progress towards hepatitis elimination





The burden of viral hepatitis B and C in the EU/EEA



3.2 million people living with chronic HBV (2024 estimate)

1.8 million people living with chronic HCV (2022 estimate)

Fall in viraemic HCV prevalence in 22 EU/EEA countries based on recent modelling

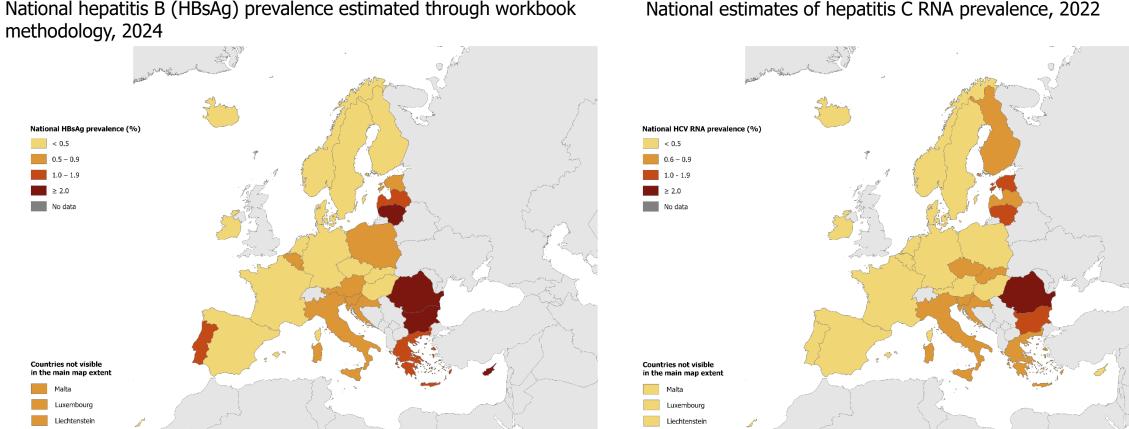
Source: HBV estimate – : Canabarro APF, Duffell E, Hansson D, Niehus R, Seyler T, Dudareva S. et al. Chronic hepatitis B infection in the European Union: estimates of prevalence using the workbook method. Under review for publication. *HCV estimate* -Thomadakis C et al. Prevalence of chronic HCV infection in EU/EEA countries in 2019 using multiparameter evidence synthesis. Lancet Reg Health Eur. 2023 Dec 13;36:100792. The Polaris Observatory HCV Collaborator, Lancet Gastroenterol Hepatol 2023 and Lancet Gastroenterol Hepatol 2022.

Prevalence of hepatitis B and C in EU/EEA countries



Hepatitis B

Hepatitis C

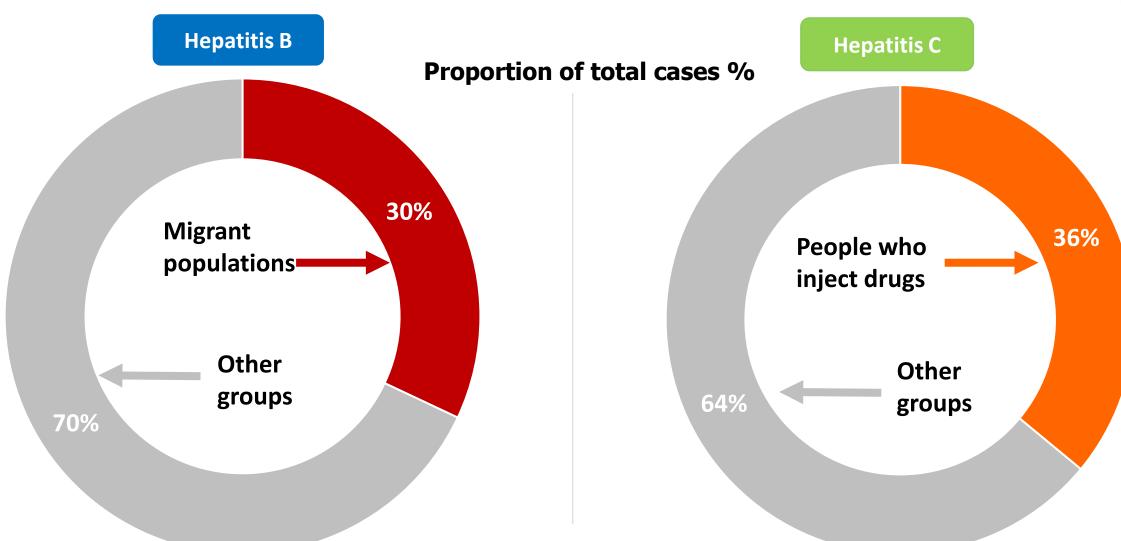


National hepatitis B (HBsAg) prevalence estimated through workbook

Source: HBV: Canabarro APF, Duffell E, Hansson D, Niehus R, Seyler T, Dudareva S. et al. Chronic hepatitis B infection in the European Union: estimates of prevalence using the workbook method. Under review for publication. HCV: Thomadakis C, Gountas I, Duffell E, Gountas K, Bluemel B, Seyler T, et al. Prevalence of chronic HCV infection in EU/EEA countries in 2019 using multiparameter evidence synthesis, Lancet Reg Health Eur. 2023 Dec 13:36:100792, doi: 10.1016/i.lanepe.2023.100792.

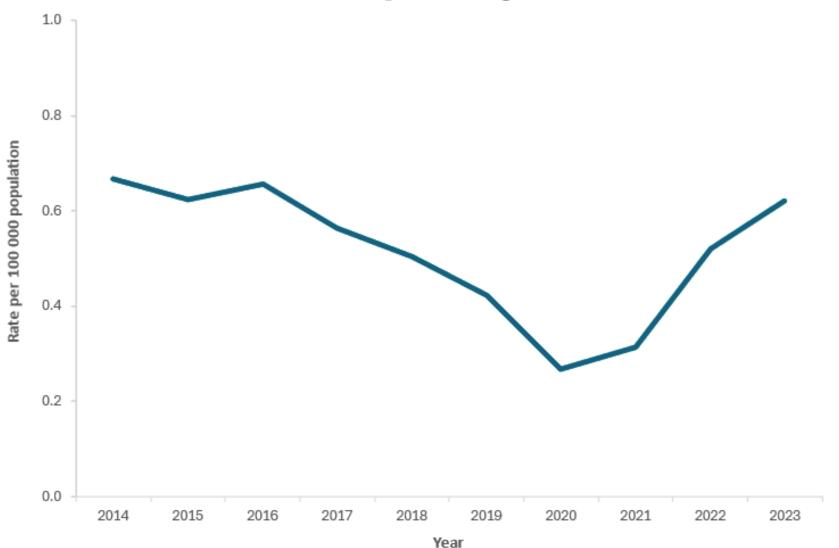
Key populations affected by hepatitis B and C across EU/EEA countries





Source: HBV estimate – Canabarro APF, Duffell E, Hansson D, Niehus R, Seyler T, Dudareva S. et al. Chronic hepatitis B infection in the European Union: estimates of prevalence using the workbook method. Under review for publication. HCV estimate - Thomadakis C et al. Prevalence of chronic HCV infection in EU/EEA countries in 2019 using multiparameter evidence synthesis. Lancet Reg Health Eur. 2023 Dec 13;36:100792.

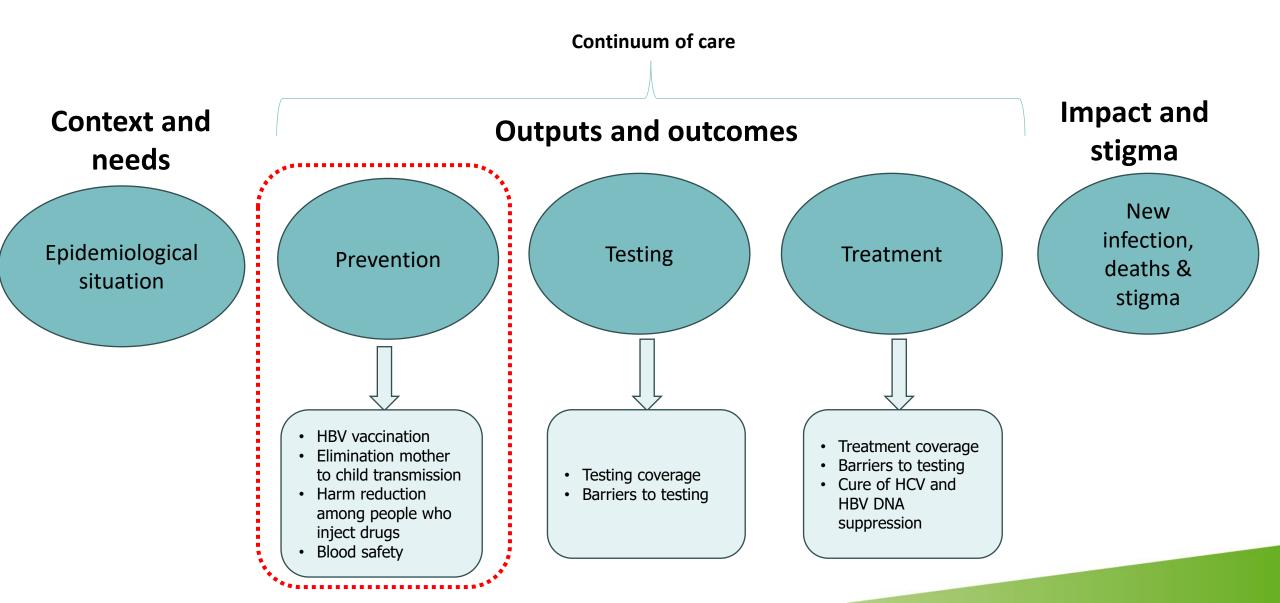
Notification rate of acute hepatitis B among EU/EEA countries with consistent reporting*, 2014 - 2023



*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 and Sweden. Source: ECDC. Hepatitis B: Annual Epidemiological Report for 2023 (awaiting publication)

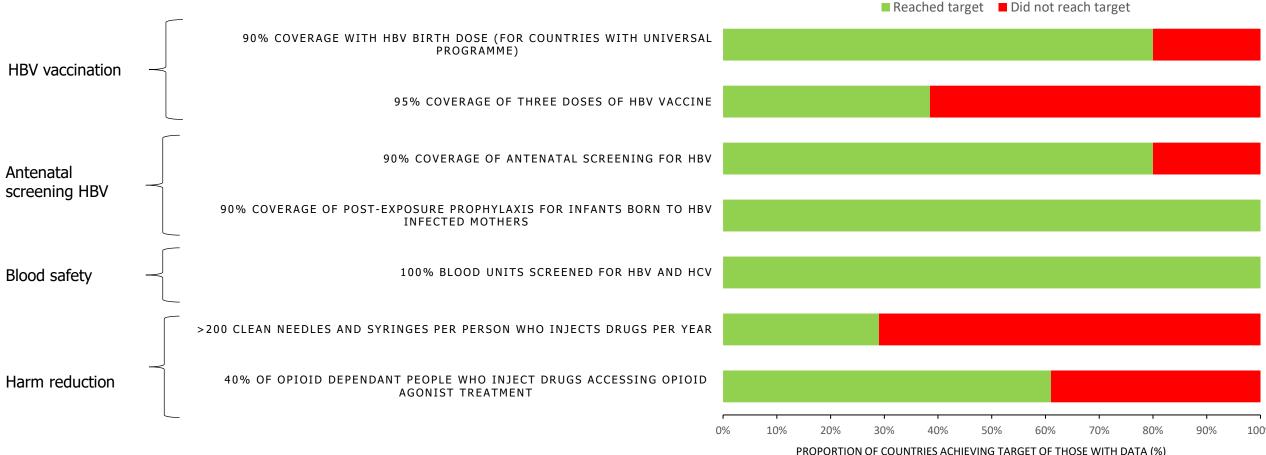
Monitoring progress towards hepatitis elimination





Progress towards the WHO elimination targets for prevention across the EU/EEA countries, 2022



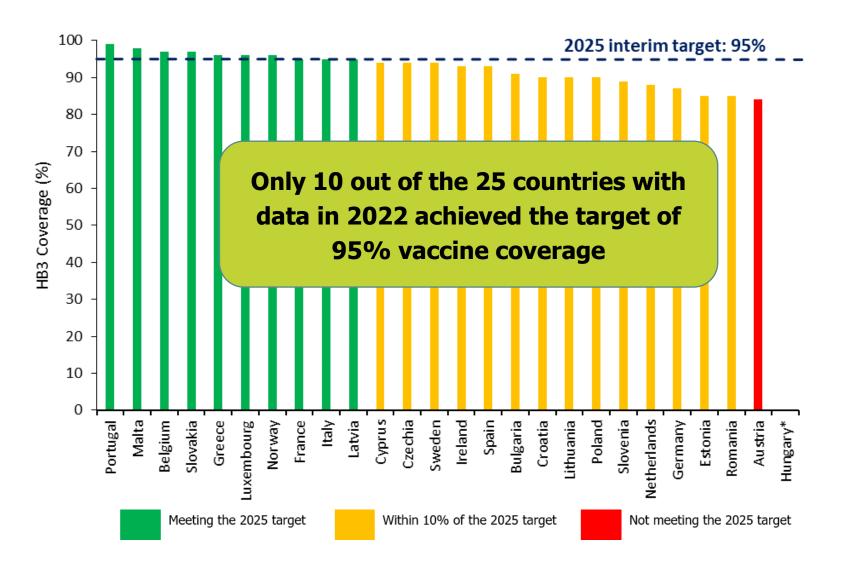


PROPORTION OF COUNTRIES ACHIEVING TARGET OF THOSE WITH DAT

Source: European Centre for Disease Prevention and Control. Evidence brief: Prevention of Hepatitis B and C in the EU/EEA. Stockholm: ECDC; 2024.

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





*No 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: World Health Organization

Prevention of mother-to-child transmission, antenatal screening, 2022





All EU/EEA countries reported a universal antenatal screening programme for HBV 12 of 15 countries with data reached the 90% target

.

* Clinic-level data

** Poland: data from one region (over five years old)

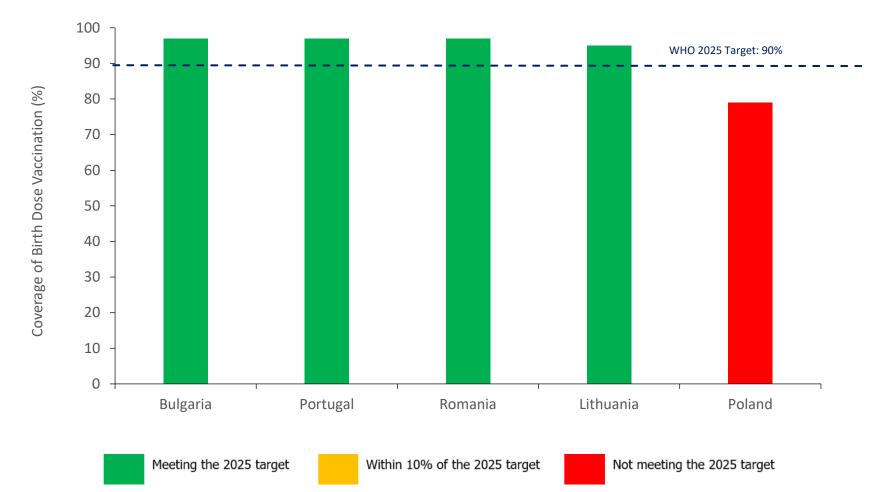
*** Lithuania: data correspond to 2021 and were specially collected

¥ France and Germany: data over five years old

Source: European Centre for Disease Prevention and Control. Evidence brief: Prevention of Hepatitis B and C in the EU/EEA. Stockholm: ECDC; 2024.

Prevention of mother-to-child transmission, provision of timely HBV birth dose for countries with universal policy 2022





<u>All</u> countries with a targeted birth dose policy achieved target of vaccinating 90% infants born to mothers with HBV

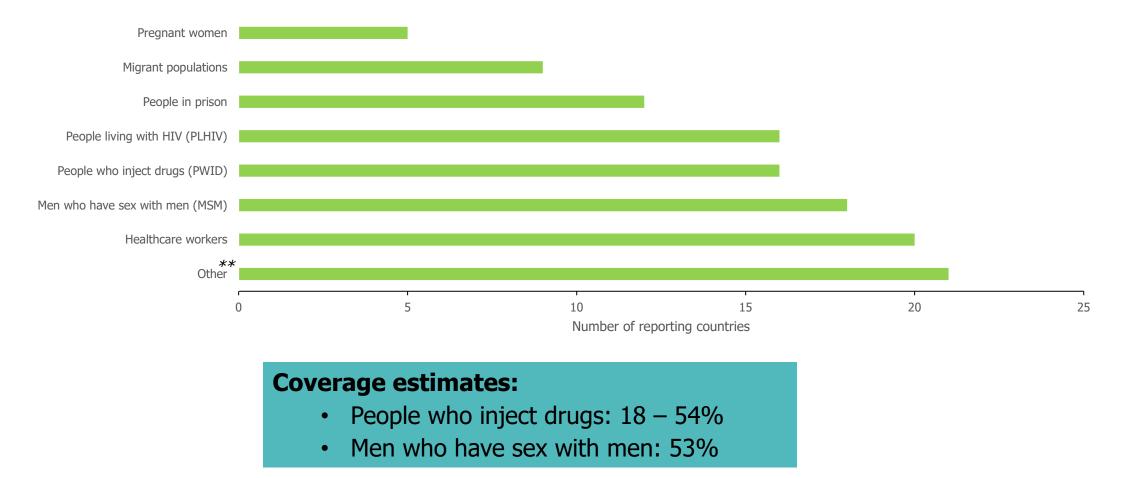
Data on vertical transmission rate available from ten countries ranging from <0.1 - 0.9%

Source: World Health Organization

HBV vaccination of key populations



EU/EEA countries with a national policy for HBV vaccination, 2022 (n=29*)



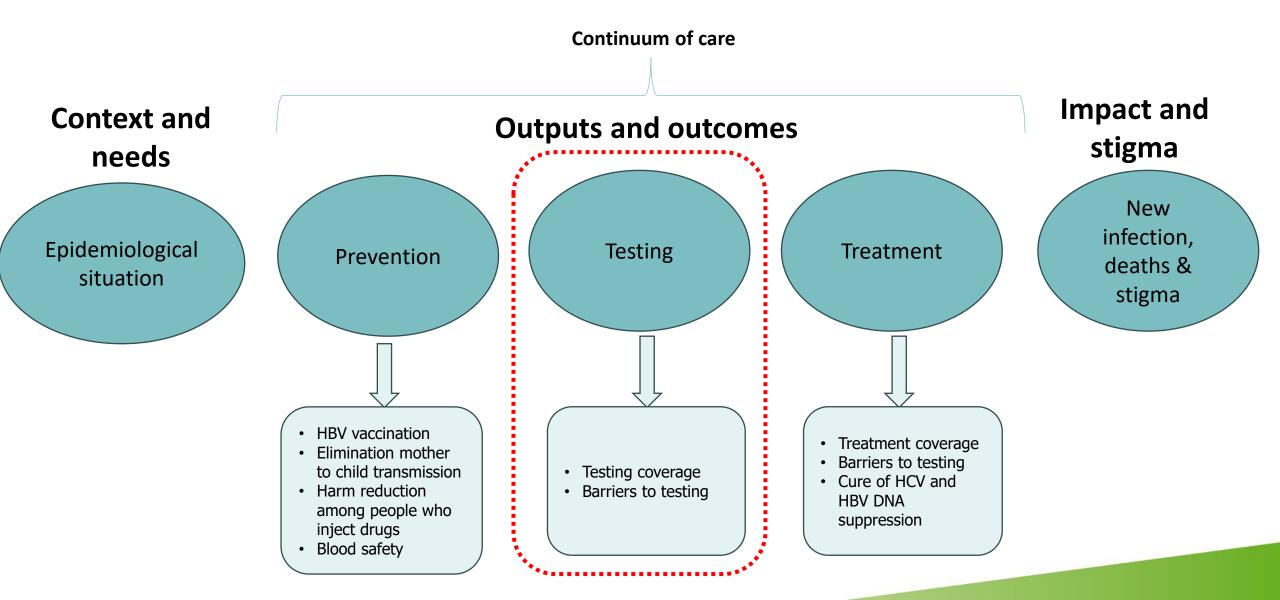
*No report from Portugal.

** Other includes contacts of people living with HBV, people undertaking haemodialysis; coinfection with HCV, sex workers.

Source: European Centre for Disease Prevention and Control. Evidence brief: Prevention of Hepatitis B and C in the EU/EEA. Stockholm: ECDC; 2024 and Brandl M, Schmidt AJ, Marcus U, Duffell E, Severi E, Mozalevskis A, Kivite-Urtane A, An der Heiden M, Dudareva S. Self-reported hepatitis A and B vaccination coverage among men who have sex with men (MSM), associated factors and vaccination recommendations in 43 countries of the WHO European Region: results from the European MSM Internet Survey, EMIS-2017. Euro Surveill. 2024 Nov;29(45):2400100.

Monitoring progress towards hepatitis elimination





Progress towards the <u>diagnosis targets</u> in EU/EEA countries, 2022



Hepatitis B

WHO 2025 diagnosis target: 60% of people living with chronic HBV infection are diagnosed

<u>No country</u> with sufficient data had reached the target

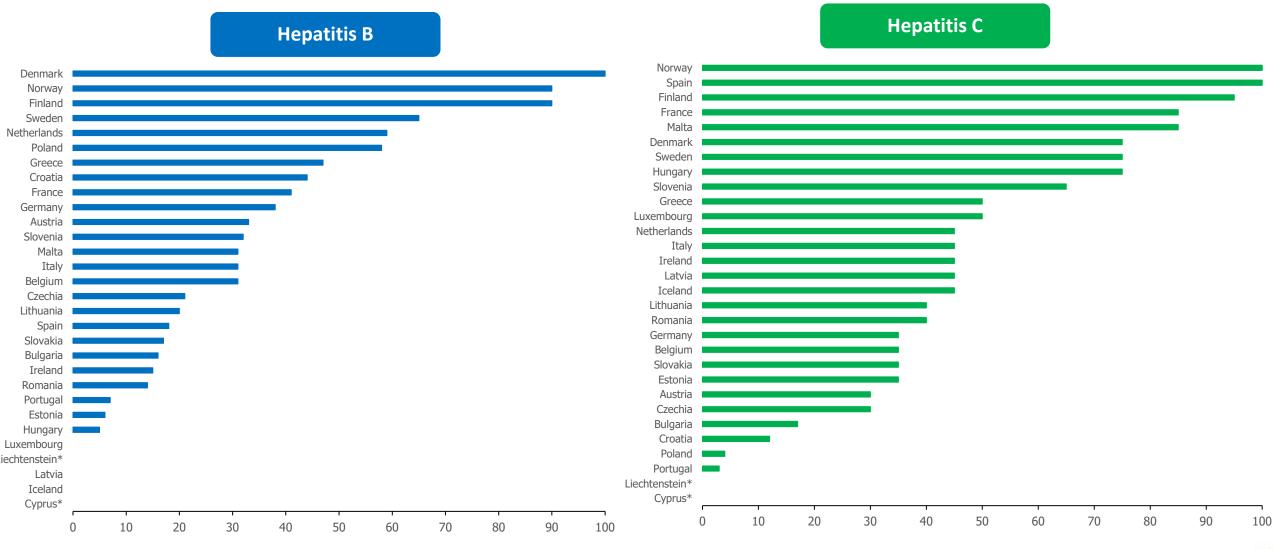
WHO diagnosis 2025 target: 60% of people living with chronic HBV infection are diagnosed

Hepatitis C

<u>Three of the four</u> countries with sufficient data had reached the target

Modelled data relating to proportion of hepatitis B and C cases diagnosed





Proportion of diagnosed infections (%)

Proportion of diagnosed infections (%)

*No data Source: The Polaris Observatory Collaborators. https://doi.org/10.1016/ S2468-1253(23)00233-9

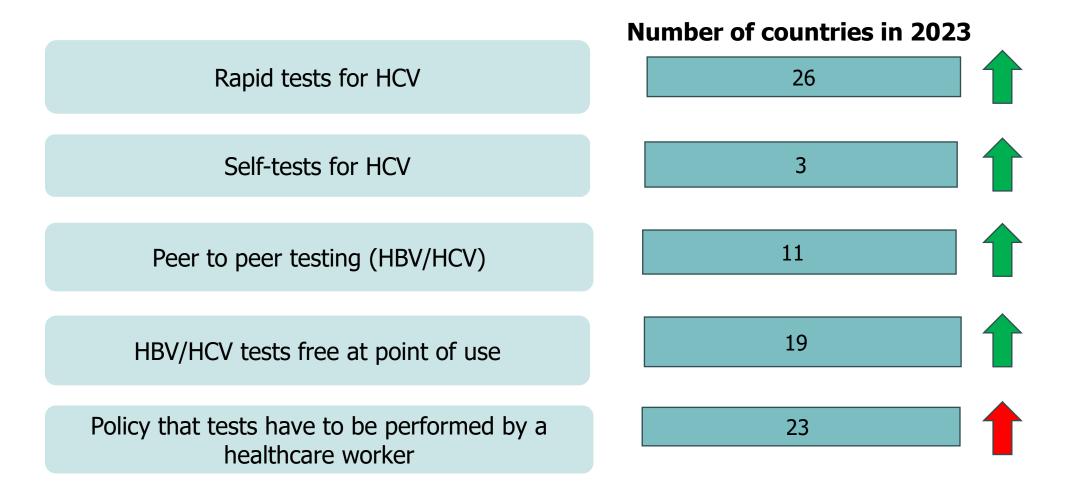
Late diagnosis of hepatitis B and C in 2022, EU/EEA



- ٠ **Hepatitis B** Hepatitis
 - Late diagnosis = "**decompensated cirrhosis** or **hepatocellular carcinoma** at time of HBV/HCV diagnosis"
 - Median estimates indicate 8% of HBV cases and 6% HCV cases are diagnosed late
 - General downward trend in reported proportion cases diagnosed late - but in some countries 1 in 6 HBV/HCV cases diagnosed late

Progress over time in relation to testing

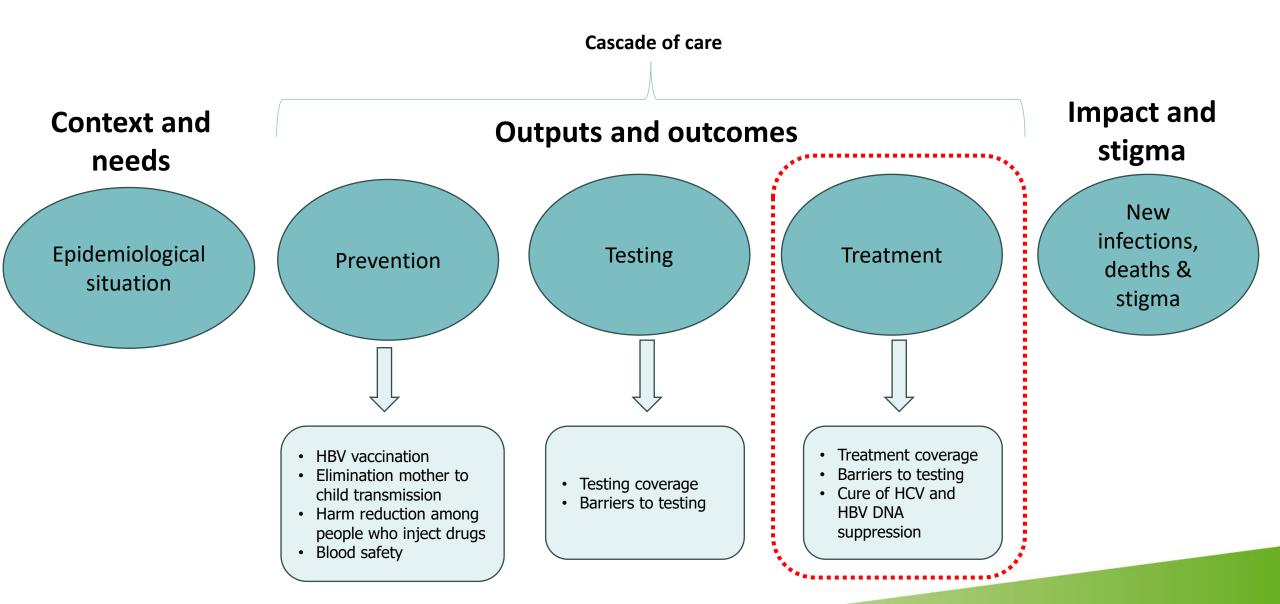




Source: European Centre for Disease Prevention and Control. Monitoring of responses to the hepatitis B and C epidemics in EU/EEA countries – 2022 data. Stockholm: ECDC; 20224

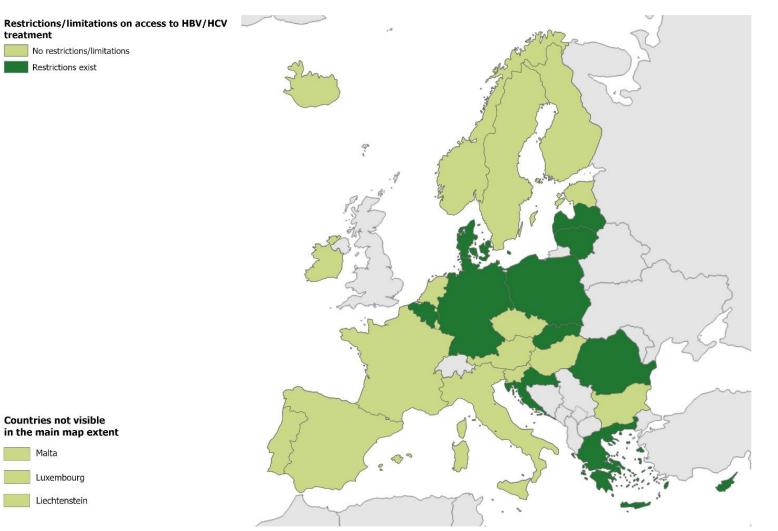
Monitoring progress towards hepatitis elimination





Existence of restrictions on access to HBV/HCV treatment in EU/EEA countries, 2023





11 of 30 countries reported restrictions on access to treatment for:

- Undocumented migrants (9 countries)
- Current/former injectors (1 country)

Source: European Centre for Disease Prevention and Control. Monitoring of responses to the hepatitis B and C epidemics in EU/EEA countries – 2022 data. Stockholm: ECDC; 2024.

Progress towards the treatment targets in EU/EEA countries*, 2022



Hepatitis B

WHO 2025 treatment target: 50% of people living with chronic hepatitis B infection on treatment in 2022

No country with data reached the target

<u>Viral suppression</u>: 72 to 100% based on data from three countries

Hepatitis C

WHO 2025 treatment target: 50% of people living with chronic hepatitis C infection cured

No country with data reached the target

Between 5 to 22% of cases ever diagnosed with chronic HCV (excluding any resolved/cured infections) were treated in 2022.

<u>Sustained viral response</u>: 90 to 100% based on data from nine countries

*Only four countries reporting data for HBV and five for HCV.

Source: European Centre for Disease Prevention and Control. Monitoring of responses to the hepatitis B and C epidemics in EU/EEA countries - 2022 data. Stockholm: ECDC; 2024





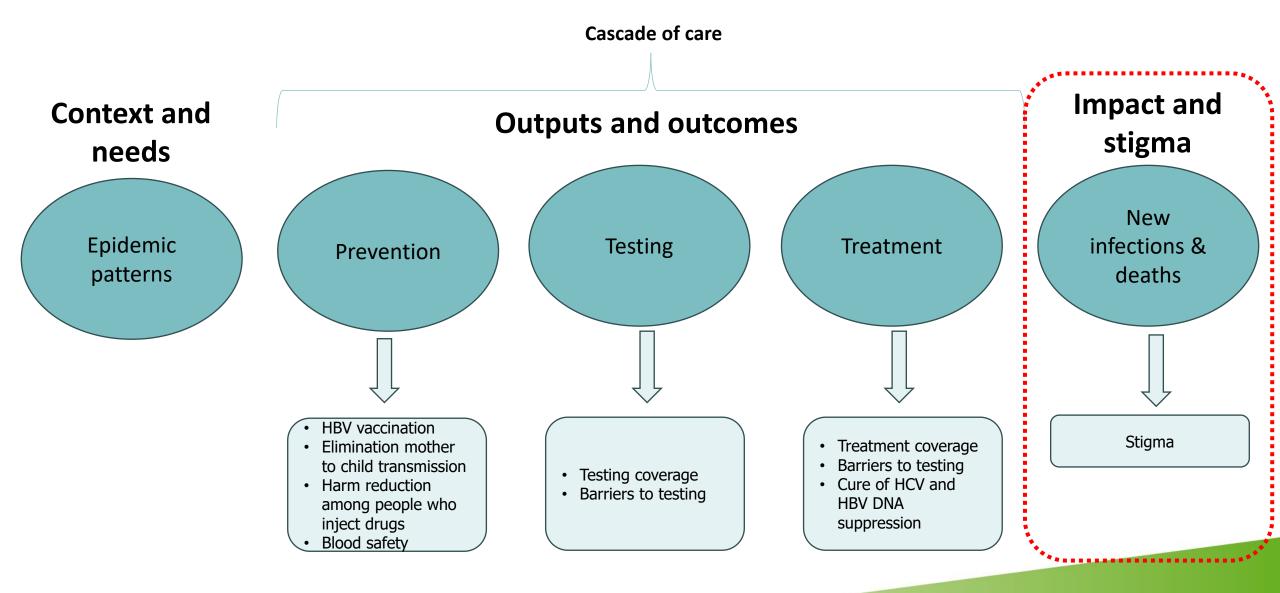
Hepatitis B <u>WHO 2025 treatment target</u> : 50% of people living with chronic hepatitis B infection on treatment in 2022			Hepatitis C <u>WHO 2025 treatment target</u> : 50% of people living with chronic hepatitis C infection cured	
No country with Focusing on targets alone huge efforts in scaling up region for both infections hepatitis C		tre	eatment across the	ed the target ever diagnosed with resolved/cured infections)
<u>Viral suppression</u> : 72 to 100% based on data from three countries			<u>Sustained viral response</u> : 90 to 100% based on data from nine countries	

*Only four countries reporting data for HBV and five for HCV.

Source: European Centre for Disease Prevention and Control. Monitoring of responses to the hepatitis B and C epidemics in EU/EEA countries - 2022 data. Stockholm: ECDC; 2024.

Monitoring progress towards hepatitis elimination





Trends in Anti-HCV prevalence among **PWID injecting <2**

(injected <2 years) and young PWID (<25 years)

Türkiye (National)

Czechia (National)

2019

2020

- Greece (National)

Türkiye (National)

Spain (National)

2021

2022

years: results from diagnostic tests and seroprevalence studies with national or multi-city coverage, 2014 - 2022

Italy (National)

Hepatitis C incidence Proxies for incidence: trends in anti-HCV prevalence among new PWID

Greece (National)

2016

50

40

30

20

10

2014

2015

Czechia (National)

+ Italy (National)

Prevalence %

Trends in Anti-HCV prevalence among **PWID aged <25 years:** results from diagnostic tests and seroprevalence studies with national or multi-city coverage, 2014 - 2022



--- Greece (Multi-region)

---- Spain (National)

2018

Year

2017



45

40

35

30



2022



 \equiv

Progress towards a reduction in hepatitis B and C related mortality



Numbers of hepatocellular carcinoma cases attributed to hepatitis B and C in the EU/EEA, 2011 - 2021 25.000 Number of cases of hepatocellular carcinoma 20.000 15.000 10.000 5.000 0 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 Year

Deaths from hepatocellular carcinoma show no convincing downward trend

Based on the latest Global Burden of Disease data for 2021, **seven countries in the EU/EEA** achieved the impact target of a combined hepatitis B and C mortality rate of ≤6 per 100 000 per year

Combined hepatitis B and C mortality rate across the EU was 11.3 per 100 000

Stigma and viral hepatitis





of people living [...] hepatitis [...] and key populations experience stigma

Sources: ¹ Global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022-2030. Geneva: World Health Organization; 2022. ² European Centre for Disease Prevention and Control. The sustainable development goals and hepatitis B and C in the EU/EEA. March 2021. ECDC: Stockholm, 2021.





Break the silence around hepatitis stigma and discrimination.

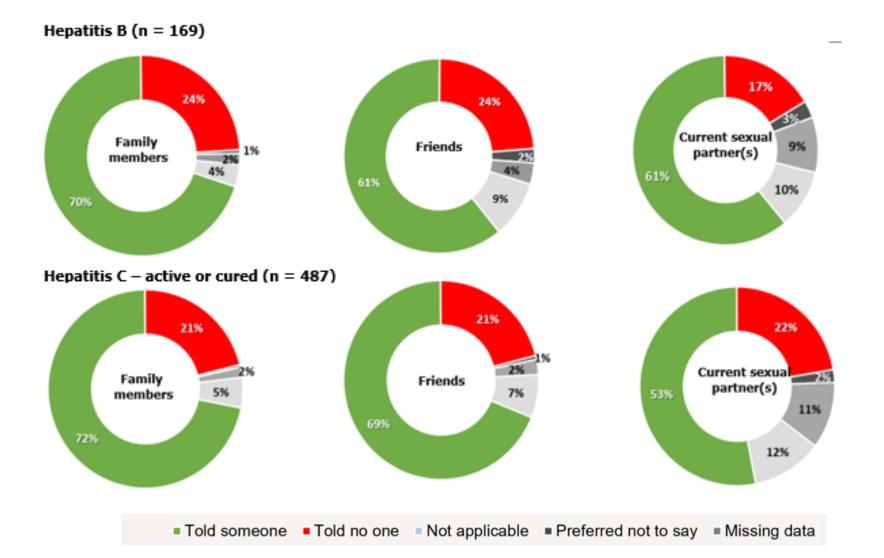
Please take this survey



https://www.worldhepatitisalliance.org/stigma/

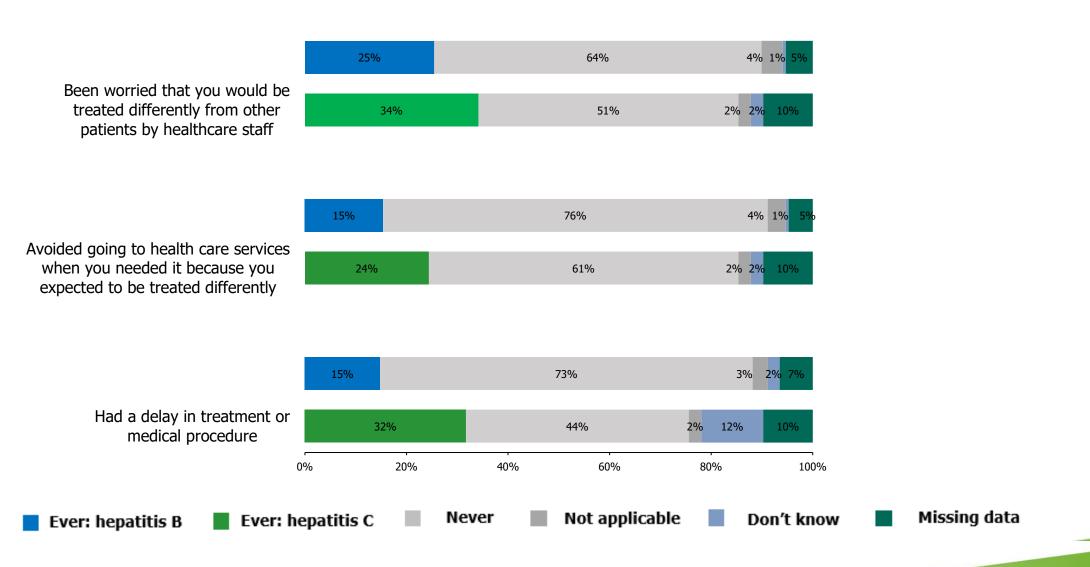
Results from the European pilot study 2024: Who have you told you are/were living with hepatitis?





Source: European Centre for Disease Prevention and Control and World Hepatitis Alliance. A pilot survey of stigma related to infect ion with hepatitis B and C. Stockholm: ECDC; 2024. (awaiting publication)

Results from the European pilot study 2024: Experiences of stigma at healthcare settings



Source: European Centre for Disease Prevention and Control and World Hepatitis Alliance. A pilot survey of stigma related to infect ion with hepatitis B and C. Stockholm: ECDC; 2024. (awaiting publication)

What is needed to achieve elimination?



Prevention

- Eliminate vertical transmission through development of robust and well-monitored mother to child transmission programmes
- Increase HBV vaccine coverage

Testing

- Development and implementation of local testing strategies tailored to the local epidemiological situation
- Removal of any barriers to testing such as policies around healthcare workers testing
- Scaling up of evidence based approaches that are effective at increasing testing e.g. self-testing

 Reduction in barriers to treatment for all those in need

Treatment

- Greater linkage to care for diagnosed cases
- Scaling up of test and treat iniatives in key settings e.g. prisons
- Consideration around how costs in treatment could be reduced

Stigma

- Further work to understand the stigma and discrimination in community and in healthcare settings
- Strong community engagement to identify solutions

Acknowledgements



European Hepatitis Network: Austria: Ziad El-Khatib, Irene Kaszoni-Rückerl, Lena König, Jiale Lin, Thomas Reiberger, Irene Schmutterer, Margit Winterleitner. Belgium: Benoit Kabamba, Laure Mortgat, Els Plettinckx, Michael Peeters, Dominique van Beckhoven, Thomas Vanwolleghem. Bulgaria: Mariya Tyufekchieva, Tonka Varleva. Croatia: Maja Ilic, Tatjana Nemeth-Blažić, Adriana Vince. Cyprus: Fani Theophanous. Czechia: Jitka Castkova, Vratislav Nemecek. Denmark: Anders Koch, Louise Hedevang Holm, Maria Wessman. Estonia: Jevgenia Epštein, Irina Filippova. Finland: Henrikki Brummer-Korvenkontio, Tuula Hannila-Handelberg, Kirsi Liitsola, Henna Rautiainen,, Päivi Viitanen, Sunna Wesberg. France: Cécile Brouard, Florence Lot, Claire Sauvage, Sophie Vaux. Germany: Sandra Dudareva, Amrei Krings, Ida Sperle-Heupel, Gyde Steffen, Ruth Zimmermann. Greece: Stergios Georgoulas, Georgia Nikolopoulou, George Papatheodoridis, Ioanna Samiou, Panagiota Touloumi, Sois Zoutsos. Hungary: Emese Kozma, Mihály Makara, Zsuzsanna Molnár, Gyula Mucsi. Iceland: Guðrún Aspelund, Már Kristjánsson. Ireland: Jeff Connell, Suzanne Cotter, Cillian De Gascun, Derval Igoe, Joanne Moran, Aiden McCormick, Niamh Murphy, Aisling O'Leary, Mary O'Riordan. Italy: Loreta Kondili, Francesco Maraglino, Barbara Suligoi, Maria Elena Tosti, Sabrina Valle. Latvia: Inga Ažina, Sarlote Konova, Serges Nikisins. Liechtenstein: Silvia Dehler, Esther Walser-Domjan. Lithuania: Giedre Aleksienė, Viktoras Bumšteinas, Aušra Guobužaitė, Ligita Jančorienė, Ginreta Megelinskienė, Jurgita Pakalniškienė, Kęstutis Rudaitis, Birutė Semėnaitė. Luxembourg: Carole Devaux, Patrick Hoffmann, Joël Mossong, Pit Braguet. Malta: Michael Borg, Chris Barbara, Moses Camilleri, Chris Cremona, Charles Mallia Azzopardi, Jackie Melillo, Tanya Melillo, David Pace, Anna Maria Vella. Netherlands: Kim Benschop Silke David, Jaap Maas, Annemarie Meiberg, Eline Op de Coul, Marleen van Dijk, Tom Woudenberg. Norway: Robert Whittaker, Anne-Marte Bakken Kran, Rikard Rykkvin. Poland: Małgorzata Stepień, Karolina Zakrzewska. Portugal: Joana Bettencourt, Mariana Ferreira, Alexandre Gomes, Pedro Pinto Leite, Rui Tato Marinho, Vítor Cabral Veríssimo, João Vieira Martins. Romania: Anca Sîrbu, Odette Popovici, Mihaela Ion, Răzvan Grecu, Alexandru Abagiu. Slovakia: Mária Avdičová, Janka Kerlik, Adriana Mečochová. Slovenia: Lina Berlot, Jože Hren, Marta Aleš Korošec, Irena Klavs, Janja Križman Miklavčič, Tanja Kustec, Eva Leban, Mojca Matičič, Mario Poljak, Urška Rahne Potokar, Veronika Učakar, Grgič Vitek. Spain: Agustín Albillos, Maria Buti, Javier Crespo, Julia del Amo, Asunción Diaz, José Luis Calleja, Javier García Samaniego, Victoria Hernando, Oriana Ramírez-Rubio, Pablo Ryan. Sweden: Soo Aleman, Maria Axelsson, Hanna Edberg, Lars-Håkan Nilsson, Ann-Sofi Duberg, Marie Nordahl

European Hepatitis Monitoring Advisory Group: European Liver Patients' Association: Marko Korenjak. European Monitoring Centre for Drugs and Drug Addiction: Thomas Seyler, Linda Montanari, Filippo Pericoli. WHO: Giorgi Kuchukhidze, Marcelo Naveira. Correlation Network: Rafaela Rigoni. Viral Hepatitis Prevention Board: Greet Hendrickx. European Association for the Study of the Liver: Maria Buti. National AIDS Trust: Annie Howard, Katherine Turpie. World Hepatitis Alliance: Rachel Halford, Jessica Hicks.

World Hepatitis Alliance Stigma Survey team: Jessica Hicks, Cary James, Cynthia Pokuah, Justin Webb.

University of Cyprus: Georgios Nikolopoulos Christos Thomadakis; Ilias Gounntas; Konstantinos Gountas.

ECDC: Ana Finatto-Canabarro, Ndeindo Ndeikoundam Ngangro Teymur Noori.



Thank you!

Erika.duffell@ecdc.europa.eu