EUROPEAN TESTING WEEK

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Toolkit 3

Dossier of evidence: a summary of the evidence to support free, confidential and voluntary hepatitis B and hepatitis C testing

Background information to the slide set

Toolkit 3

Dossier of evidence: a summary of the evidence to support free, confidential and voluntary hepatitis B and hepatitis C testing

Thank you for downloading the background information to the hepatitis dossier of evidence slide set

The dossier of evidence has been developed to help support organisations, like yours, during European Testing Week. We see the hepatitis dossier of evidence being useful to you in two ways:

1. To improve and increase understanding within organisations around the necessity of increasing hepatitis testing activities
2. For advocacy purposes to support engagement with cooperating partners (such as government bodies, national and local hepatitis programme planners and coordinators, healthcare providers and civil society organisations) with the aim of gaining their support for endorsing regular hepatitis testing

This background information has been drafted to provide additional information that is not included on the slides and to help support you if you are presenting the dossier of evidence to relevant governing bodies, partners and organisations. The information included in both documents provides support and evidence to back up the key messages for European Testing Week.

This document includes:

This document aims to provide support and guidance only and it is not mandatory that your organisation uses the information outlined in this document, nor is it obligatory to use the dossier of evidence as part of your testing week activities. If you have any questions do get in touch: eurotest.rigshospitalet@regionh.dk

We are also active on Facebook and Twitter. Please tell us about your plans, share information and photos, and tweet us to help build anticipation and excitement for the week.

Section 1 – List of abbreviations and definitions

Abbreviations used in this document

ECDC	European Centre for Disease Prevention and Control
EEA	European Economic Area
EU	European Union
HBV	Hepatitis B virus
HBsAg	Hepatitis B surface antigen
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
MSM	Men who have sex with men
MSM/DU	Men who have sex with men/drug users
MSM/IDU	Men who have sex with men/ injection drug users
PLHIV	People living with HIV
PWID	People who inject drugs
STI	Sexually transmitted infection
SW	Sex worker
WHO	World Health Organization

Definition of countries in the WHO European Region

Western Europe: Andorra, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, Netherlands, Norway, Portugal, San Marino, Spain, Sweden, Switzerland, United Kingdom.

Central Europe: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Hungary, the former Yugoslav Republic of Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey.

Eastern Europe: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

*Definition of countries in the EU/EEA and non-EU/EEA countries

EU/EEA: Austria, Belgium, Bulgaria, Croatia, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden and the UK; No data provided from Cyprus, Czech Republic, Finland, Iceland, Latvia, Norway and Slovenia.

Non-EU/EEA: Albania, Armenia, Azerbaijan, Georgia, Israel, Kazakhstan, Kyrgyzstan, Moldova, Montenegro, Serbia, Switzerland, Tajikistan, Ukraine and Uzbekistan; No data from Andorra, Bosnia and Herzegovina, Kosovo (UNSC 1244), Turkey, Belarus, Liechtenstein, the Former Yugoslav Republic of Macedonia, Monaco, Russia, San Marino, Turkmenistan.

Section 2 – Key messages for ETW

Overview of the key messages

Included in this section are the key messages for European Testing Week. However, in this dossier of evidence, the messages for only Hepatitis B and C are included. For the messages developed for HIV, please refer to the key messages in *the HIV dossier of evidence* (Toolkit 3a).

The overarching goal of European Testing Week is to increase awareness of the benefits of HIV and hepatitis testing so that more people become aware of their HIV and/or hepatitis status. The information included in the dossiers of evidence provide the data to support the rationale for this and the key messages for European Testing Week.

Overarching message

EuroTEST is calling on the European community to unite for one week twice a year, during Spring (May) and Autumn (November), to increase awareness regarding the benefits of HIV and hepatitis testing; in order for more people to become knowledgeable about their risks, understand that there is effective treatment available and are aware of their HIV and/ or hepatitis status.

Core messages

In 2015, European *HIV* Testing Week was expanded to include hepatitis testing because hepatitis C and B are common among people at risk of and among those living with HIV. These viruses are transmitted in many of the same ways HIV is transmitted—through injection drug use and condomless sex.

With advancements in treatment, people today living with HIV and/or hepatitis can live well with a long life expectancy, while those with hepatitis C can be cured. Therefore, it is highly recommended to encourage people to get tested to know their status as soon as possible.

Key messages – general audiences

Treatment and Prevention

- It's better to know your status as soon as possible because today people with hepatitis B can live with a long life expectancy when treatment starts early, and those with hepatitis C can be cured.
- Knowing your status can also help prevent passing on the viruses to others.
- **Hepatitis C** treatment advances mean that a cure is now available.
  Hepatitis B treatment exists to prevent liver cancer and liver cirrhosis. There is also a vaccine, with 95% effectiveness, and is the main mode of prevention to avoid getting infected with HBV.

Prevalence

- **Hepatitis C:** In the WHO European Region, it is estimated that 14 million people are living with hepatitis C; however, only a small minority of people receive treatment. The most recent estimates of treatment rate in the WHO European Region is only 4.6%.
- **Hepatitis B:** It's estimated that around 15 million people are living with hepatitis B in the WHO European Region. Most of the people living with hepatitis B in the Region are adults born before the hepatitis B vaccination became available in the 1990s. Approximately 20-30% of infected individuals will develop cirrhosis or liver cancer.

Key messages – healthcare workers

- Help ensure that you and your team can effectively assess individuals for hepatitis testing by offering training on the risk-factors and update your prevention messages and advice on vaccinations.
- When people are diagnosed with hepatitis late, they are **less likely** to respond well to treatment and **more likely** to have health and treatment complications.
- A positive hepatitis test result requires that your patient is linked to appropriate care and treatment.
- Hepatitis testing should be voluntary, confidential and offered in a wider range of settings than is presently available. Other settings may include: healthcare and community-based settings and via outreach programmes by peers and/or medical staff. When possible, the risk for other infections should be assessed and testing for HIV and sexually transmitted infections (STIs) should be offered.
- Late diagnosis of hepatitis is more costly for the healthcare system.

Key messages – pharmaceutical industry

- European Testing Week presents a unique opportunity to promote your company and market its products, whilst simultaneously demonstrating a high level of corporate social responsibility through donating rapid testing kits to participating partners in 2019.

Key messages – Government Bodies

- Robust data collection and surveillance of hepatitis transmission on a country level is key to understanding how to develop cost-effective, targeted testing initiatives and strategies that help to reduce the number of new infections in your country.
- New testing technology offers a variety of cost-effective rapid testing kits that are now available across Europe and should be used to improve access to testing.
- Hepatitis testing guidelines should state that hepatitis testing can take place in the community, as well as healthcare settings, using blood testing kits or oral swabs and should be aligned with international/regional guidance including from WHO and the 2018 ECDC guidance on integrated testing of HBV, HCV and HIV.
- Increasing access to, and acceptance of, free, confidential and voluntary hepatitis testing, including linkage to treatment and care, need to be a priority for governments across Europe.
- Early diagnosis of hepatitis C can increase the chances of a successful course of treatment and limit onward transmission.
- Routine hepatitis testing is critical for early diagnosis and survival, because people can go without symptoms for decades, making it a silent killer.
- Late presentation for hepatitis care is more costly for the healthcare system.
- Guilt and fear associated with hepatitis, reinforced by societal stigma, can prevent people from getting tested, resulting in lost treatment opportunities.

Access to treatment

- **Late diagnosis** and **delayed access to treatment** are the two most important factors associated with ongoing transmission of hepatitis and preventable related illnesses and death.
- Once diagnosed, people infected with hepatitis C must have access to treatment. Hepatitis C is curable, and new antiviral medicines can cure more than 95% of people.
- Early diagnosis and early treatment help reduce and prevent continued transmission of hepatitis C to others.

Key messages – supporting organisations

- We are in need of your continued support for European Testing Week.
- Through united efforts, on a national and international level, we aim to ensure that more people become aware of their HIV and hepatitis status by providing access to free and safe HIV and/or hepatitis tests.

Section 3 – Hepatitis virus: The Basics

This section includes an overview of the content contained on **slides 3 to 10**.

Viral hepatitis is an inflammation of the liver caused by infection with a hepatitis virus. There are five main hepatitis viruses that cause acute and/or chronic infection, referred to as types A, B, C, D and E. In particular, types B and C lead to chronic disease in hundreds of millions of people worldwide. For purposes of ETW, this toolkit will primarily focus on hepatitis B and C but will briefly address hepatitis types A, D and E.

Hepatitis B virus (HBV) and hepatitis C virus (HCV) are both viruses that attack the liver, causing scarring of the liver tissue (cirrhosis), liver cancer, liver failure and death. Damage to the liver can occur over a period of many years without outward signs of illness, and a person infected with HBV or HCV might not learn about his or her disease until it has progressed to an advanced stage.

While there are some similarities in how HBV and HCV manifest in those living with the infection, the two diseases are entirely distinct from each other.

Hepatitis B virus may cause only short-term (acute) illness followed by a full recovery, or it may cause incurable chronic illness. There is a strong correlation between age and likelihood of chronic illness: most people who are infected early in life develop chronic HBV, while most people who are infected as adults only experience the acute form of the disease. An effective HBV vaccine exists, and many, but not all, Member States of the WHO European Region have universal infant HBV vaccination programmes. (As of this writing, the countries without universal infant HBV vaccination programmes are Denmark, Finland, Iceland, Norway, Sweden and the United Kingdom).

HBV is spread through exposure to infected blood and other body fluids, and children born to HBV-infected mothers are at high risk of acquiring HBV if they do not undergo timely vaccination. Other modes of transmission include sexual contact and the reuse of needles and syringes. People also can acquire HBV through exposure to contaminated objects such as razors, toothbrushes and tattooing equipment. Although chronic HBV cannot be cured, there are treatment regimens that can slow the progression of the disease and improve health outcomes.

Hepatitis C virus also has both an acute and a chronic form, but in the case of HCV, chronic disease is much more likely to occur in adults than in children. Fifteen to 45 percent of people who acquire HCV clear the virus naturally without medical interventions, and some will clear the virus without even knowing they were infected. Those who do not clear the virus within six months will be considered chronically infected.

There is **no vaccine** against HCV. HCV is a bloodborne virus and is commonly spread through the reuse of injection equipment, among people who inject drugs, and by sharing razors, toothbrushes and tattooing equipment and sexual practices where potential blood-to-blood exposure may occur. HCV is also increasing at high rates due to recreational drug use in the gay community. Therefore, it is important to recognise risk behaviours among MSM especially for those who share snorting equipment or syringes.

In addition to drug use and drug injecting, HCV is also spread in medical settings due to inadequate sterilisation of medical equipment and the transfusion of unscreened blood where appropriate infection prevention control measures are not followed.

Treatment for HCV is improving rapidly, and new antiviral medicines can cure HCV in more than 95% of cases with a shorter treatment period (usually 12 weeks).

HBV and HCV both have a major worldwide health impact. The 2017 WHO Global Hepatitis Report urgently calls for strategic investment to eliminate viral hepatitis as a public health threat by the year of 2030. This report focuses on HBV and HCV which are responsible for 96% of all hepatitis mortality.

Hepatitis A virus is highly contagious and is most commonly spread through contaminated food or water. It can also be transmitted through sexual contact (oral-anal sex) with an infected partner. Hepatitis A frequently shows no symptoms or results in mild illness. Most people can expect to make a full recovery and acquire lifelong immunity. Additionally, safe and effective vaccines against hepatitis A are available.

Hepatitis D virus is a liver disease in both acute and chronic forms caused by the hepatitis D virus (HDV) that requires HBV for its replication. Hepatitis D infection cannot occur in the absence of hepatitis B virus. The virus is transmitted through contact with blood or other body fluids of an infected person. A vaccine against hepatitis B is the only method to prevent HDV infection.

Hepatitis E virus is mainly a zoonosis infection in Europe with a reservoir in pigs or wild boar. It is transmitted through the consumption of contaminated and not properly

cooked pork meat or other pork or game products. In Europe, hepatitis E infection is locally-acquired and asymptomatic.

Further reading:

1. World Health Organization Regional Office for Europe. Hepatitis B in the WHO European Region: Factsheet – July 2019. Copenhagen: WHO; 2019.
2. World Health Organization Regional Office for Europe. Hepatitis C in the WHO European Region: Factsheet – July 2019. Copenhagen: WHO; 2019.
3. European Union HCV Collaborators. Hepatitis C virus prevalence and level of intervention required to achieve the WHO targets for elimination in the European Union by 2030: a modelling study. Lancet Gastroenterol Hepatol. 2017; 2(5):325-336. doi: 10.1016/S2468-1253(17)30045-6.
4. World Health Organization. Global Hepatitis Report 2017. Geneva: WHO; 2017.
5. World Health Organization. Hepatitis A. Geneva: WHO; 2019 [Available from: https://www.who.int/news-room/fact-sheets/detail/hepatitis-a
6. World Health Organization. Hepatitis D. Geneva: WHO; 2019 [Available from: https://www.who.int/news-room/fact-sheets/detail/hepatitis-d
7. World Health Organization. Hepatitis E. Geneva: WHO; 2019 [Available from: https://www.who.int/news-room/fact-sheets/detail/hepatitis-e

Section 4 – Know your epidemics: the situation of hepatitis B and hepatitis C in Europe

This section includes an overview of the content contained on **slides 11 to 21**.

Data limitations make it difficult to precisely measure the burden of disease from HBV and HCV in Europe, but the available evidence confirms that both viruses are causing epidemics of considerable magnitude. At the same time, HBV and HCV disease patterns appear to vary greatly across European countries.

The prevalence of HBV in the general population in the EU/EEA can range from 0.0 to 7.5%. HBV is responsible for the deaths of 56 000 people every year.

As Table 1 indicates, HBsAg prevalence varies greatly across the EU/EEA.

Table 1. HBV prevalence in countries with data representing the general population, 2018

Country	HBsAg prevalence (%)
Austria	-
Belgium	0.6-0.7
Bulgaria	-
Croatia	0.7-2.3
Cyprus	-
Czech Republic	0.6
Denmark	-
Finland	-
France	0.7-2.2
Germany	0.3-0.7
Greece	3.5-7.5
Hungary	0.4
Iceland	-
Ireland	0.1
Italy	0.5-5.8
Latvia	-
Liechtenstein	-
Lithuania	-
Luxembourg	-
Malta	-
Netherlands	0.2-0.7
Norway	-
Poland	0.9-1.1
Portugal	-

Romania	4.4-6.2
Slovakia	1.1
Slovenia	-
Spain	0.0-0.7
Sweden	-
United Kingdom	1.7

Data retrieved from the page 11, Table 8 of the 2018 ECDC Technical Report: Hepatitis B and C epidemiology in selected population groups in the EU/EEA.

In 2017, 29 907 cases of hepatitis B virus infection were reported in 30 EU/EEA Member States. Of these cases, 9% were acute, 58% were chronic, 32% were 'unknown,' and 1% could not be classified.

Migrant and refugee populations warrant careful consideration in the response to HBV in Europe. The ongoing movement of people from regions with higher HBV prevalence appears to be making a substantial contribution to HBV prevalence in countries that receive large numbers of migrants. In 2018, among first-generation migrants, the prevalence of HBV ranged from 0-5.6% among migrants from the east Mediterranean region and prevalence for HCV ranged from 0-3.0%.

In the EU/EEA, an estimated 4.7 million people are chronically infected with hepatitis B, and 3.9 million people have chronic hepatitis C. Many of these infections may go undiagnosed as chronic infection is often asymptomatic.

Chronic HCV levels, like chronic HBV levels, vary greatly across the EU/EEA (Table 2).

Table 2. HCV RNA prevalence in countries with data representing the general population*

Country	HCV RNA prevalence (%)
Austria	
Belgium	0.1
Bulgaria	-
Croatia	0-0.9
Cyprus	-
Czech Republic	-
Denmark	-
Estonia	-
Finland	-
France	0.8-0.9
Germany	0.3-1.0
Greece	2.2

Hungary	0.5
Iceland	0.9
Ireland	0.1
Italy	0.6-27.6
Latvia	2.4
Liechtenstein	-
Lithuania	2.9
Luxembourg	-
Malta	-
Netherlands	0.1-1.1
Norway	-
Poland	0.9-2.9
Portugal	-
Romania	3.2
Slovakia	2.0
Slovenia	-
Spain	0.4-1.5
Sweden	-
United Kingdom	0.4-1.2

Data retrieved from the page 11, Table 9 of the Technical Report: Hepatitis B and C epidemiology in selected population groups in the EU/EEA.

In 2017, 31 273 cases of hepatitis C were reported in 29 EU/EEA Member States. Of the cases reported, 3% were classified as acute, 22% as chronic and 75% as 'unknown'.

The most commonly reported route of transmission for HCV was injecting drug use, which accounted for 44% of cases. In the EU/EEA, HCV predominantly affects men aged 25–44 years. A ECDC systematic review of hepatitis C seroprevalence in the EU/EEA, found that HCV prevalence among people who inject drugs (PWID) in most EU/EEA countries is high (>50%).

Other populations that may be at elevated risk for hepatitis C include migrants, prisoners, homeless people, SWs, PLHIV, and MSM. However, 2017 data shows that the second most common route of transmission among acute cases was nosocomial, accounting for 17% of acute cases, followed by sex between men (15%).

Section 5 – Late presentation for viral hepatitis

This section includes an overview of the content contained **on slides 22 to 23**.

A better understanding of the testing policies and strategies is needed. In October 2015, a consensus definition of late presentation for viral hepatitis was reached:

Definition 1:

Advanced HBV, HCV or HDV associated liver disease is clinically defined by presence of hepatocellular carcinoma or decompensated cirrhosis (jaundice, hepatic encephalopathy, clinically detectable ascites, variceal bleeding).

Definition 2:

Late presentation of HBV or HCV associated liver disease is defined as a patient with chronic hepatitis B or C and significant fibrosis (≥F3 assessed by APRI score >1.5, FIB-4 >3.25, Fibrotest > 0.59 or alternatively a FibroScan >9.5 kPa) with no previous antiviral treatment.

This definition, if implemented by policy makers, health authorities and researchers, will contribute to understanding the magnitude of the proportion of late presenters for viral hepatitis.

Section 6 – The importance of timely diagnosis of hepatitis B and hepatitis C

This section includes an overview of the content contained on **slides 24 to 30**.

Although it would be difficult to accurately calculate levels of undiagnosed HBV and HCV in the European Region because of data limitations, the available evidence suggests that this is a problem of immense proportion. The interpretation of hepatitis B and C data across the EU/EEA remains a challenge, with ongoing differences in surveillance systems and interpretations of definitions for acute and chronic cases.

The public health rationale for encouraging more people to learn their HBV and HCV status is based on **three** key points.

- First, there are drugs that have been proven to work against both viruses. The effectiveness of HBV and HCV treatment has been clearly documented. The antiviral drugs used to treat chronic HBV have been shown to slow the development of cirrhosis, reduce liver cancer and improve long-term survival. Treatment for HCV is improving rapidly, and new antiviral medicines can achieve cure in more than 95% of cases with a shorter treatment period (usually 12 weeks).
- Second, people with chronic HBV and HCV will not access these drugs if they do not know that they need them. Both HBV and HCV can remain asymptomatic while causing progressively worse liver damage over a period of many years. Chronically infected people who learn about their disease status early enough may have the opportunity to interrupt this process by initiating treatment.
- Finally, people who are aware that they have chronic HBV and HCV may be more likely to take measures to prevent onward transmission of the infection.

Findings in the field of health economics further suggest the importance of identifying more people with HBV and HCV before they develop more severe liver problems.

The two drugs that have been shown to work best against HBV, entecavir and tenofovir, are not affordable, and since HBV cannot be cured, people who are prescribed these drugs may need to continue taking them indefinitely. Nonetheless, a study concluded that both treatments are cost-effective. It is important to consider cost-effectiveness questions on a country-by-country basis since drug prices and other factors that affect the cost of disease management may vary greatly from one country to another.

The situation in the field of hepatitis C treatment is less clear-cut, but emerging evidence supports an economic argument for getting more people to take drugs that

can cure their HCV infection. The newest drug regimens have high cure rates; however these medicines remain very expensive in many high- and middle-income countries. Some countries in the WHO European Region have been able to negotiate lower prices, but there is a great need to improve access to treatment. In primarily low-income countries, introduction of generic versions of these medicines have brought down the prices. Making HCV treatment more affordable is currently a topic of intense interest in health advocacy and policy circles worldwide and international organisations, including the WHO, who continue to advocate government bodies to invest in prevention, testing and treatment to eliminate hepatitis.

Section 7 – Barriers to hepatitis B and hepatitis C testing

This section includes an overview of the content contained on **slides 31 to 35**.

In the WHO European Region, less than one third of people living with HCV are aware their infection. The World Hepatitis Alliance commissioned a multicountry survey on barriers to viral hepatitis testing and found that the five main barriers included: lack of public knowledge of the diseases, lack of knowledge of viral hepatitis among healthcare professionals, lack of easily accessible testing, stigma and discrimination and out of pocket costs for the population. The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) also developed a checklist to identify barriers to HCV testing for PWID and identified systemic, provider and client-level barriers:

On the **systemic level**, some barriers to testing included lack of national strategic planning for viral hepatitis, lack of legal framework for national screening strategies and treatment, criminalisation of drug use and societal stigma and discrimination against people with HCV and/or PWID.

On the **provider-level**, findings show that there is a lack of provider knowledge of HCV, insufficient staff available to offer and provide testing services, lack of time to offer testing and the high cost of testing act as barriers.

On the **client-level**, factors that may affect a person's decision-making around testing include a low risk perception of HCV, lack of information about where to go for testing, lack of accessible testing, stigma and discrimination and fear of consequences of a positive test result.

Section 8 – Creating more testing opportunities

This section includes an overview of the content contained on **slides 36 to 40.**

WHO guidelines on hepatitis B and C testing highlights that there are several key reasons for the low rate of hepatitis testing. These include the limited facilities or services for hepatitis testing, lack of effective testing policies or national guidelines, complex diagnostic algorithms, and poor laboratory capacity and quality assurance systems.

The WHO guidelines states that effective interventions that increase testing uptake, improve linkage and retention in care and provide preventative care should vary and depend on the local context, including the health-care delivery system, geography and target population. WHO recommends four key components to increase update of testing:

1. Promotion of HBV testing by lay health workers
2. Clinician reminders to prompt HCV testing during clinical visits
3. Integrated care between mental health and HCV treatment specialists
4. Interventions to promote linkage to care for HIV

The WHO Guidelines highlights that evidence from HIV interventions that improve linkage to care and treatment can also be applied to viral hepatitis care and prevention.

Box 14.1. Good practices for promoting linkage to care from HIV testing services

- Comprehensive home-based testing, which includes offering home assessment and home-based treatment initiation;
- Integrated services, where testing, prevention, treatment and care, TB and STI screening, and other relevant services are provided together at a single facility or site;
- Providing on-site or immediate testing with same-day results;
- Providing assistance with transport, such as transportation vouchers, if the treatment site is far from the testing service site;
- Decentralized treatment provision and community-based distribution of treatment;
- Support and involvement of trained lay providers who are peers and act as peer navigators, expert patients/clients, and community outreach workers to provide support, and identify and reach people lost to follow up;
- Intensified post-test counselling by community health workers;
- Using communication technologies, such as mobile phones and text messaging, which may help with disclosure, adherence and retention;
- Providing brief strengths-based case management, which emphasizes people's self-determination and strengths, is client-led and focuses on future outcomes, helps clients set and accomplish goals, establishes good working relationships among the client, health worker and other sources of support in the community, and provides services outside of office settings;
- Promoting partner testing may increase rates of testing and linkage to care.

Source: Consolidated guidelines on HIV testing services. Geneva: WHO; 2015 *(11)*.

Box retrieved from page 98, Box 14.1 of the WHO Guidelines on hepatitis B and C testing, 2017.

The WHO guidelines recommend that viral hepatitis testing can be delivered to different populations in different settings in both health-care and communities. Factors that may increase access to testing in some health care settings include:

- Integration with other health services (e.g. HIV)
- Decentralisation of testing to other health care settings (including primary care, HIV, tuberculosis or STI clinics, drug treatment and harm reduction services and inpatient and outpatient hospital settings)
- Task sharing of testing responsibilities to other health workers, including trained lay providers.

Community-based testing can help reach certain at-risk populations and has been found to increase testing acceptance and uptake, help achieve earlier diagnosis,

reach first-time testers and people who do not typically use health care services. Evidence for community-based testing interventions include examples that utilised:

- Mobile/outreach testing through mobile vans or tents at community sites (e.g. churches, mosques, bars, clubs, etc).
- Door-to-door/home-based testing
- National testing campaigns
- Mass media and social media awareness campaigns
- Workplace testing
- Testing in schools, colleges or other educational establishments
- Testing in prions and other correctional system settings

A 2016 systematic review and meta-analysis analysing evidence from interventions that optimise the care continuum for chronic viral hepatitis identified the following as factors that contribute to programme effectiveness:

For HBV testing:

- Lay health workers providing educational interventions to improve HBV knowledge and promote testing
- Utilising bicultural and bilingual community members educated on HBV infection and trained to provide culturally-tailored information

For HCV testing:

- Clinician reminders to prompt HCV testing during clinical visits
- HCV education and pre-test counselling with on-site testing by health-care professionals at facilities serving high-risk populations

Several principles in the 2018 ECDC Guidance also emphasise that to create more testing opportunities, HBV and HCV testing:

- Should be accessible, voluntary, confidential and contingent on informed consent;
- Should make appropriate information available before and after testing;
- Should organise linkage to care as part of an effective testing programme;
- Should opt to normalise testing in health care settings;
- Should offer appropriate training and education to those carrying out HBV and/or HCV testing;
- Finally, a national testing strategy is critical in responding effectively to HBV, HCV (and HIV)

Section 9 – Conclusions

This section includes an overview of the content contained on **slides 41 to 43**.

Hepatitis B and C affects millions of people in the WHO European region and many may be unaware of their infection due to dormant symptoms. There is greater variability among countries with people who inject drugs who are disproportionally affected. Past harm reduction efforts have not been able to prevent new viral hepatitis infections, though the HBV vaccine has been highly effective. Scaling up of testing is therefore essential, and new and dedicated initiatives are needed to turn the epidemic around.

Successful increase of viral hepatitis testing, and linkage to treatment and care initiatives will not only result in rapid decreases in morbidity and mortality among patients, it will also reduce the number of new infections by decreasing on-going virus transmission and consequently lessen the economic burden in health systems.

To be most effective, these efforts should target barriers to HBV and HCV testing at three different levels: **patient level**, **healthcare provider** and **institutional/policy level**.

The specific kinds of barriers vary from country to country and should be targeted after careful analysis in individual countries.

- Populations at high risk of hepatitis should be targeted with focused interventions in healthcare systems, including assessment for risk behaviours, provided information on preventive measures and offered repeated and/or additional testing.
- National hepatitis testing guidelines, aligned with the latest recommendations from international and regional guidelines, should be implemented and take an ethical approach based on human rights principles.
- Training and awareness raising is crucial in order to normalise hepatitis testing in the healthcare system; as is training in health care staff to talk about risk behaviour for especially HCV.
- Laws that are jeopardising viral hepatitis prevention efforts should be abolished;
- Monitoring and evaluation systems should be implemented and help ensure high quality HBV and HCV testing.

Section 10 – Template slides

This section includes an overview of the template slides that are included in the slide deck. These can be edited by you with some or all of the information suggested on the slides.

Slide 20 and Slide 21: Know your HBV and HCV epidemic

This is a template slide for you to insert data on national statistics such as HCV incidence and HIV prevalence from your own country.

Slide 35: Barriers to HBV and HCV testing

This is a template slide for you to insert information about local barriers to testing.

Further reading

1. European Centre for Disease Prevention and Control. Hepatitis B and C epidemiology in selected population groups in the EU/EEA. Stockholm: ECDC; 2018.
2. World Health Organization Regional Office for Europe. Hepatitis B in the WHO European Region: Factsheet – July 2019. Copenhagen: WHO; 2019.
3. European Centre for Disease Prevention and Control. Hepatitis B. In: ECDC. Annual epidemiological report for 2017. Stockholm: ECDC; 2019.
4. European Centre for Disease Prevention and Control. Hepatitis C. In: ECDC. Annual epidemiological report for 2017. Stockholm: ECDC; 2019.
5. European Centre for Disease Prevention and Control. Systematic review on hepatitis B and C prevalence in the EU/EEA. Stockholm: ECDC; 2016.
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11. Sperle I, Hedrich D, Palczak K, Singleton N, Zimmermann R. Barriers to HCV testing in drug treatment services for people who inject drugs. Poster session presented at: 7th International Symposium on Hepatitis Care in Drug Users; 2018 19-21 Sep; Cascais, Portugal.
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14. European Centre for Disease Prevention and Control. Public health guidance on HIV, hepatitis B and C testing in the EU/EEA – An integrated approach. Stockholm: ECDC; 2018.