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Hepatitis B and C Screening Practices among At Risk Population Groups in 6 European Countries: A Survey of Experts in Hungary, Germany, Italy, Spain, The Netherlands, and The United Kingdom.

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Content

Abstract

Background: The national low prevalence of hepatitis B and C reported in a number of European countries is not entirely accurate. Higher rates are found among individuals in the population identified as at-risk groups. Early discovery through screening in these groups is essential in alleviating the potential burden due to complications of chronic hepatitis B and C. Not much is known on current practices of hepatitis B and C screening in Europe, despite existing international or national policies and guidelines on viral hepatitis management in most countries. This study is designed to fulfill that information gap and provide an overview of such practices in Europe.

Method: The countries included in the study were Germany, Hungary, Italy, Spain, the Netherlands, and the UK. Questionnaires on hepatitis B and C screening recommendations to specified at-risk groups were developed and translated into five other main languages. Questions were tailored to different fields of expertise as follows: general viral hepatitis care, general practitioners, sexual health services providers, antenatal care providers, and asylum seekers' care providers. The questionnaires were made available on an online platform (LIME survey). Potential respondents were selected based on their involvement in viral hepatitis care. Direct personalized links were disseminated per email, and answers were descriptively analyzed with SPSS 19.

Results: The survey yielded 286 completed questionnaires. The response rates from the surveyed six countries varied considerably (UK: 19.0%, Germany: 14.8%, Netherlands: 53.8%, Hungary: 27.7%, Italy: 35.7% and Spain: 32.5%). Total responses in each field of expertise also varied extensively, with the most coming from antenatal care providers (81 respondents) and the least from asylum seekers' care providers (18 respondents) across the six countries. The results show varying practices in recommending hepatitis B and C screening to all at-risk groups, except in hepatitis B screening among pregnant women. This variety demonstrates a lack of consensus among experts in screening recommendation standards within their knowledge or services, albeit recommendations in available policies or guidelines. Regional differences in standard practices were also suggested in antenatal care for hepatitis C and in asylum seekers' care in most study countries.

Conclusion: Despite existing recommendations on viral hepatitis management and the higher prevalence rates in at-risk groups, current screening recommendation practices in different health care settings remain varied. Efforts to mitigate the potential burden of disease due to chronic viral hepatitis complications must address this issue, as vigilant health professionals is also key to their early detection and appropriate management.

Acronyms and Abbreviations

ANC	Antenatal care
AS	Asylum seeker
CDC	Center for Disease Control
DALY	Disability Adjusted Life Years
DE	Germany
ECDC	European Center for Disease Prevention and Control
EEA	European Economic Area
ELPA	European Liver Patient's Association
ES	Spain
EU	European Union
EUR	Euro
GP	General Practitioner
GS	General survey
GUM	Genitourinary medicine
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HU	Hungary
IDU(s)	Injecting drug use/user(s)
IOM	Institute of Medicine
IT	Italy
LFT	Liver function test
MSM	Men who have sex with men
NGO	Non-governmental organization
NICE	National Institute for Health and Clinical Excellence
NL	Netherlands
RKI	Robert Koch Institute
SHS	Sexual Health Services
Sp	Specialist(s)
STI	Sexually transmitted illness

UK	United Kingdom
US	United States of America
VHPB	Viral Hepatitis Prevention Board
WHO	World Health Organization

Background

Despite the availability of an effective vaccine against hepatitis B and treatment for both hepatitis B and C, they continue to be major health threats in the world today. The most recent estimate from the World Health Organization (WHO) shows that globally, 2 billion people are infected by hepatitis B virus (HBV) and 240 million suffer from its chronic infection. Hepatitis C virus (HCV) infects between 3 to 4 million people annually, and approximately 150 million suffer from chronic hepatitis C. HBV infection results in about 600.000 deaths and HCV infection accounts for approximately 350.000 deaths every year[1,2,3].

Chronic infection of the liver and its following complications result in considerable economic costs[4,5] and indirect costs[6] (burden of disease). Indirect costs include years lost due to early death or living with a disability {quantified in Disability Adjusted Life Years (DALY)}. Calculations of these costs have been attempted, although incomplete available data complicates the task.

The economic costs increase as the disease progresses in severity[4]. Liver cirrhosis is the 9th leading cause of DALYs in the WHO European region as reported in 2004[6], causing 1-2% of all deaths[7]. An estimate of more than 1 million deaths and no less than 16 million DALYs were attributable to chronic progressions of either HBV or HCV infection[8]. HCV alone accounted for 1.2 million DALYs in the WHO European region in 2002 with higher rates found in Eastern countries[9].

The European Center for Disease Prevention and Control (ECDC) published estimates on mortality rates caused by HBV and HCV related cirrhosis and liver cancer based on available data up to 2010. The report found that the highest death rates caused by HBV or HCV related cirrhosis occur in Italy and Spain. Moreover, Italy also has the highest death rate caused by HBV or HCV related liver cancer[10]. A study by Garcia-Fulqueiras et al. reported that HCV is on top of the list of communicable diseases responsible for DALYs in Spain[11]. At the same time, other studies calculated the costs of treating a case of chronic HCV with a combination of two recommended drugs could range from EUR 7.517 to EUR 21.229[12], and even staggeringly more expensive with a triple combination[13].

Hepatitis B and C are both communicable diseases. HBV is transmitted through percutaneous or parenteral contact of blood or bodily fluids, and it is 100 times more infectious than Human Immunodeficiency Virus (HIV). The hepatitis B virus is still able to infect other people even after a week of being outside of a human body[14,15]. Frequent modes of transmission are related to the country/region and its rate of endemicity. In high endemic areas the most noted modes are mother-to-child during birth and household contact, mainly during childhood. Other modes of transmission that

only play smaller roles in these areas are in fact more common in areas of low endemicity, such as unprotected sexual contact (mainly during young adulthood), injecting drug use, and unsafe injection practices in health care settings[2,4,14,15,16].

HCV is transmitted through direct blood contact by similar pathways as HBV, although mother-to-child and sexual contact transmission is uncommon[5,17]. A recent study noted changing trends in common transmission paths in Europe, placing injecting drug use at the top and unsafe injection practices in health care settings (nosocomial infection – infections acquired during hospitalization) or during medical procedures as the most common routes[1,18,19].

Infection of HBV results in an acute infection with two possible outcomes depending on the age of exposure. Chronic infection will almost certainly develop if an individual is infected as a newborn and up to 30% if it occurs in early childhood or after five years of age. On the other hand, adults have as low as a 1-5% probability of acquiring chronic infections, while less than 1 in 100 cases develop into fatal fulminant hepatitis. In 5% of cases, infection results in carriers who remain infectious despite being asymptomatic. Chronic hepatitis B will gradually develop into liver cancer and cirrhosis in 5-10% and 30% of cases, respectively. Cirrhosis may also progress into liver failure or cancer ending in death if liver transplantation is not performed[15,20].

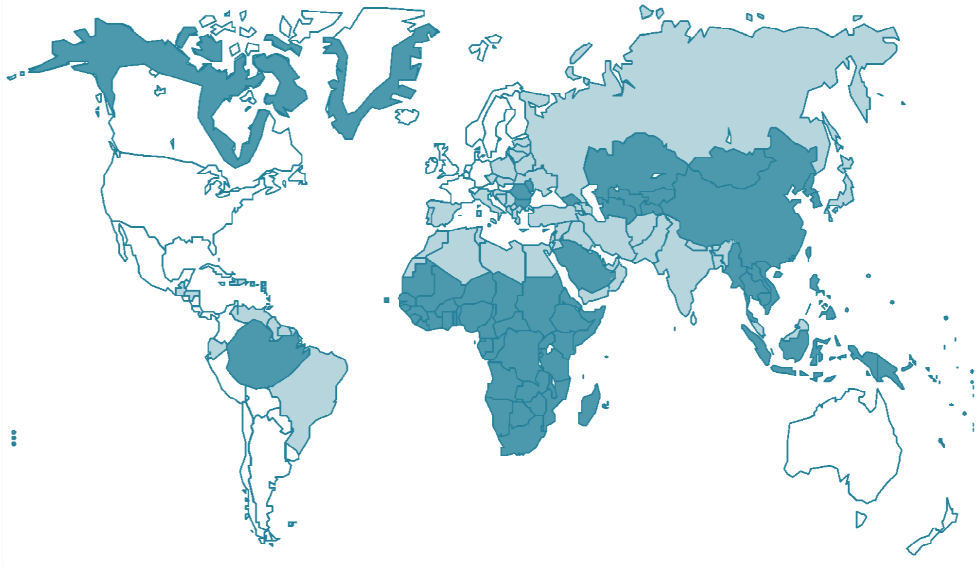
People suffering from acute infection of HCV will develop a chronic infection in 85% of cases. Approximately 22% of chronic infections will develop into cirrhosis in 20 years; less than 10% if the infection occurs during young adulthood, while in half of the cases the outcome is difficult to predict. Liver cirrhosis may progress into liver failure or cancer, requiring liver transplant[21,22].

There are treatments available for hepatitis B and C which have shown to be effective if given in the early or mild stages of the disease. Treatment with antivirals alone or combined with interferon are recommended, although liver transplant is the only option once the disease has progressed into liver failure or liver cancer[1,14,15,17,21].

Hepatitis B is preventable through vaccination. If the series of vaccination are completed, it is 95% effective in preventing acute and chronic infections. Most countries have adopted a universal HBV vaccination program; however, in some countries such as the UK and Netherlands, vaccination is only recommended for groups considered at risk {i.e. injecting drug users (IDUs) and men who have sex with men (MSM)}[15,23].

As mentioned earlier, without any intervention HBV and HCV infections can result in chronic hepatitis. Chronic cases of hepatitis B are measured through HBsAg serological markers. Its

prevalence varies between countries as the range is divided into low, intermediate, and high endemicity[24]. A WHO report in 2002 stated that the most endemic regions are found in Africa and Asia, where as high as 10-15% of the population was estimated to carry HBsAg[14].



High (HBsAg prevalence ≥8%)

Intermediate (HBsAg prevalence 2 – 7%)

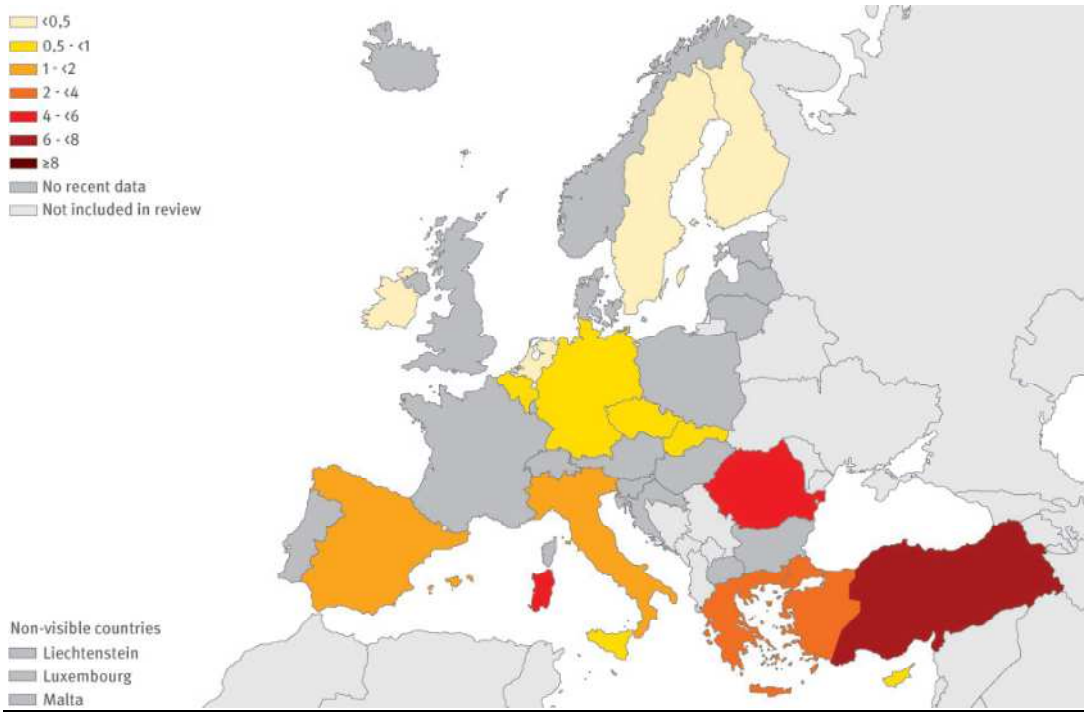
Low (HBsAg prevalence <2%)

Source: World Health Organization. Introduction of hepatitis B vaccine into childhood immunization services. Management guidelines, including information for health workers and parents. 2001.WHO. Geneva, Switzerland.

Hepatitis B prevalence also varies widely across Europe. A recent ECDC report estimated a prevalence rate between 0.1-7%, with Romania showing the highest prevalence of over 4% and countries such as Germany, Netherlands, Ireland, and parts of Italy demonstrating the lowest prevalence rates (less than 1%). As seen in Figure 2, Germany, Netherland and Sicily in the south of Italy has similar HBV prevalence while the rest of Italy has a higher estimate[10]. Cases are mostly found in 25-44 year old men and 15-24 year old women, following the typical pattern for sexually transmitted illnesses[25].

The incidence of hepatitis B seems to be decreasing in most European countries, although in some countries such as Finland and Spain, the opposite trend is observed. In 2008, there were 6,369 confirmed cases reported by 28 European Union or European Economic Area (EU/EEA) countries, which presents a 1.29 cases for every 100.000 people[25].

Figure 1. Hepatitis B prevalence in Europe (HBsAg)

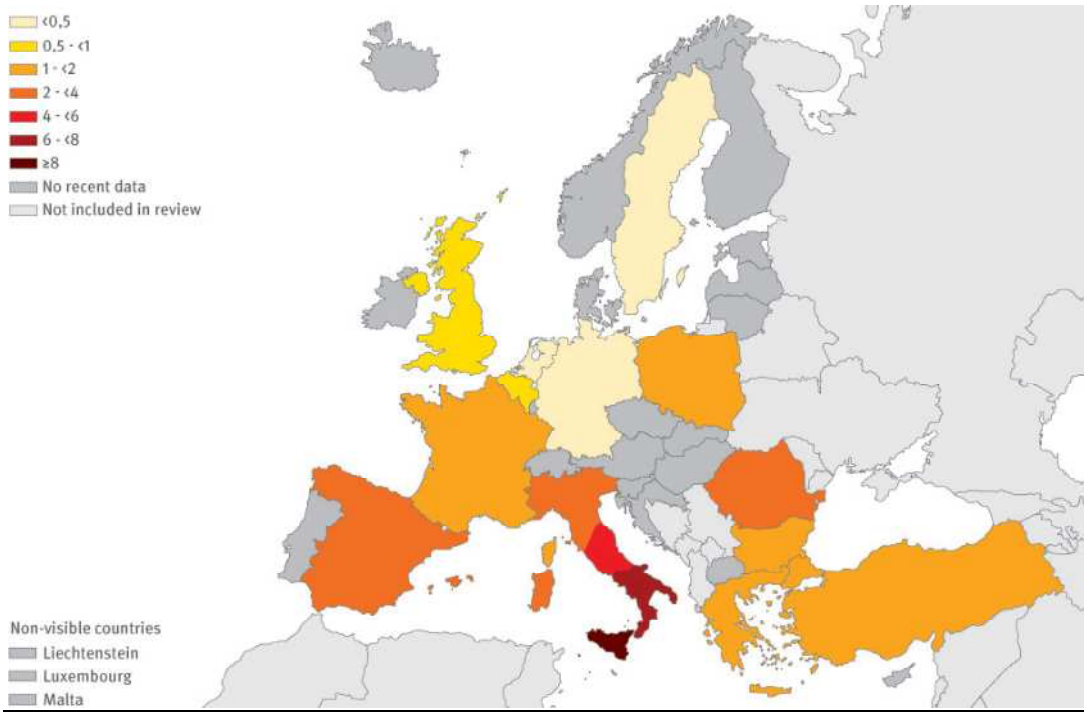


Source: European Centre for Disease Prevention and Control. Hepatitis B and C in the EU Neighbourhood: Prevalence, Burden of Disease and Screening Policies. 2010. ECDC. Stockholm, Sweden.

Chronic hepatitis C is measured by levels of antiHCV, an antibody found in the blood. HCV prevalence in Europe varies as well; the same ECDC study mentioned earlier estimates a prevalence rate of 0.4 to 3.5% between countries and 0.2 to 10.4% between regions within countries. The highest prevalence (more than 2%) is apparent in Italy, Romania, and Spain, while a less than 1% rate is seen in countries such as Germany, Netherlands, and the UK[10]. The southern regions in Italy has a markedly higher prevalence, possible factors include older age and the use of glass syringes that was popular in the 70s and a history of dental treatment[26]. Another study applied WHO prevalence data and national estimates on 22 countries in the WHO European region between 1997 to 2004 and estimated that 7.3 – 8.8 million people are infected with HCV[9]. The majority of reported cases of HCV are among 25-44 year old males and females. This may be due to the fact that sexual transmission does not play a significant role in HCV transmission, but rather needle-sharing among IDUs[25].

According to an ECDC report, HCV incidence has been on an overall increasing trend within the last few years. In 2008 alone 29.927 confirmed new cases were reported, equating to a 8.97 rate per 100.000 people[25].

Figure 2. Hepatitis C prevalence (antiHCV)



Source: European Centre for Disease Prevention and Control. Hepatitis B and C in the EU Neighbourhood: Prevalence, Burden of Disease and Screening Policies. 2010. ECDC. Stockholm, Sweden.

It is important to note that data on incidence and prevalence rates of HBV and HCV infection is limited because of the lack of standardized surveillance and reporting system among EU/EEA countries. This is mainly caused by the fact that some countries differentiate acute and chronic cases while others do not, inconsistent case definition between countries, and incomplete reporting within and from countries[23,25]. Consequently, comparing the various surveillance data between countries is difficult, as presented in a Viral Hepatitis Prevention Board (VHPB) meeting[27] and the actual rates may likely be higher than the estimates. The asymptomatic nature of chronic cases and carriers together with the lack of awareness of the population contribute to the possibility of unidentified cases. The European Liver Patient's Association (ELPA) did a survey in 2008 in 12 European countries and found that 73% and 79% of chronic HBV and HCV patients, respectively, were unaware of the disease before their diagnosis[28].

The burden of disease caused by chronic hepatitis B and C, in addition to the possibility of undiscovered cases and carriers, as well as the availability of reliable testing and treatment should promote early case finding. However, routine screening of HBV in the general population is not deemed cost-effective in Europe. The rationale is primarily because most European countries has implemented effective vaccination programs that lead to an overall low HBV endemicity coupled with its relatively low probability of progressing into chronic cases when contracted during young

adult or adult years[29]. Meanwhile, routine screening of hepatitis C in the general population is not recommended due to its relative high costs[5].

As a cost-effective measure, investigations on the patterns of transmission have identified certain groups in the population as vulnerable, namely newborns born from HBV positive mothers and blood transfusion recipients. An ECDC literature review reported a range of up to 5.2% HBV and between 0.02% to 3.3% HCV prevalence rates in first time blood donors in 17 and 18 European countries, respectively. Less than 0.5% prevalence rates are estimated in both forms of hepatitis in Germany, Hungary, Spain, the UK, and the Netherlands, but only hepatitis B in Italy[10]. The same review also estimated similar rates for HBV (0.1% -4.4%) and HCV (0% - 1.7%) in pregnant women in some countries in Europe. It shows a <0.5% estimated HBV prevalence rate in Spain and 1% - <2% in Germany, the UK, Netherlands, and Italy. While a <0.5% estimated HCV prevalence rate in the UK, 0.5% - <1% in Germany, and 1% - <2% in Italy are reported[10].

Higher prevalence rates of HBV and HCV have also been reported in other groups considered as at-risk in European countries. The previously mentioned ECDC study found limited data on HBV prevalence in IDUs. It also found that estimates were widely varied in Europe, though they are usually higher in Central and Eastern Europe compared to Western Europe. The most recent national estimate is 0.4% in Hungary, and regional estimates were 2% in Germany and 3% in Netherlands[10]. An ECDC survey found a 13.7% prevalence rate of HBV among IDUs in Italy[30]. Changing trends in HCV transmission routes have made injecting drug use as the main risk factor[18]. The same ECDC literature study found an approximately 30% - 95% HCV prevalence in Europe[10]. From EU countries who self-report, Italy has the lowest rate of 10.8% - 25.6% of HCV among IDUs, while the UK has the highest at 40%[30].

Other groups at-risk are those who may have been exposed through sexual contact including MSM, IDUs, prisoners, and sexual workers[31]. Another study also highlighted persons who are HIV positive[32], the contacts of such persons and contacts of HBV positive persons[33]. Studies in patients attending sexual health clinics in London found a 4.2% HBsAg prevalence among homosexual men, approximately 7 times as heterosexual men or women[34]. Another study in a similar setting in the Netherlands found no HBsAg among homosexual men but a 2.1% and 1.4% prevalence among heterosexual men and women, respectively[35]. HCV could be sexually transmitted[33] but more likely to occur in the presence of other risk factors such as IDU or being HIV positive[32,36,37]. A presentation at a meeting on viral hepatitis reported higher HBV prevalence rates among sex workers than the general population (7.8% in the Netherlands and 10.9% in Belgium)[38].

Health care workers[4,39], hospitalized patients or patients undergoing a variety of medical procedures involving blood products[40] such as dialysis, injections or dental treatments, as well as the staff or residents in long term confined facilities such as nursing homes[41], mental institutions[33], and prisons are also at risk of contracting HBV or HCV. Health care workers have an approximately 33% risk of being infected by HBV and 3% by HCV following a percutaneous injury during a medical procedure[42]. Studies in Italy reported high risks of undergoing surgeries in acquiring these diseases[43,44]. A study in Hungary found a 1.5% prevalence of HBV and 4.9% of HCV among inmates in 7 prisons with IDU reported as the major source of HCV transmission[45].

One of the major concerning risk factors in recent years despite the low endemicity of HBV and HCV in Europe is people with migration background from intermediate or high endemic regions[46]. People with migration background include migrants, refugees (approved asylum seekers), and asylum seekers (people forced to leave their countries and applying for refuge in other countries). According to Eurostat, there were a total of 1.7 million migrants entering the EU countries from non-EU countries in 2011. The main receiving countries were the UK (566.044), Germany (489.422), Spain (457.649), and Italy (385.793), which amounted to 60.3% of all migrants that year[47]. Until 2012 there are approximately 33 million foreign-born population (persons born in countries outside the EU-27 Member State). There were 20.7 million foreign population (persons with citizenship of countries outside the EU-27 Member States) living in the EU-27 Member State, and 13.6 million persons with an EU Member State citizenship living in another EU Member State. Germany, Spain, Italy, the UK and France are home to more than 77% of foreigners in the EU. Up to January 2012 the most EU countries of origin are Romania, Poland, and Italy, while non EU countries are Turkey, Morocco, Albania and China[47]. All of them, except for Poland, have intermediate or high HBV endemicity and higher HCV endemicity than the countries of residence[46].

The number of asylum seekers has been increasing in the last 5 years and reached 302.445 in 2011. The highest number of applicants in 2011 originate from Afghanistan, Russia, and Pakistan. France and Germany each receive more than 53.000 applicants, while Italy and Belgium receive more than 31.000 applicants, each[48].

Studies found that prevalence rates among migrants are indeed often higher than the prevalence in the general population of their countries of residence, especially for HBV[10,46,49,50], even though these rates may be lower in comparison to those in their countries of origin[51,52]. ECDC found widely ranged prevalence rates among migrant and minority groups in Europe, up to 15.4% of HBV in Greece (Albanian refugees) and up to 23.4% in Hungary (a Roma population consisting many

IDUs)[10]. Interestingly, it also found that Italy was the only country where the estimated HCV prevalence was lower in migrants than the general population[10].

The migrant background poses an even higher risk when combined with prostitution. A presentation at a VHPB meeting mentioned high HBV prevalence rates among migrant sex workers in Belgium and the Netherlands. The lowest was among Latin American sex workers in Belgium (21.4%) and the highest was among Asian sex workers in the Netherlands (71.4%)[38].

HBV and HCV prevalence studies on refugees and asylum seekers also found higher rates in comparison to the general population of the receiving countries. A guideline on emergency management of injuries in Ireland mentioned a 5% HBsAg prevalence among asylum seekers in the eastern region of Ireland's national health services between 1999 and 2003[53]. A study in Italy on 510 African and 19 Asian refugees found prevalence rates of 8.3% for HBsAg and 4.5% for anti-HCV[54]. Another study in Turkey identified the HBV and HCV prevalence rates according to the countries of origin. It reported a 5.5% prevalence rate of HBsAg and anti-HCV among Pakistani asylum seekers and 9.0% prevalence rate of HBsAg and 4.9% of anti-HCV among those from Somalia[55].

Increasing global mobility and the influx of these people into Europe have benefited the local economies but it also brings about public health consequences. One of the consequences is the burden of hepatitis B and C as infectious diseases. When migrants develop the complications of chronic HBV and HCV infections in their new residential countries, the burden falls onto their adoptive countries, both direct and indirect costs[56], not to mention the possibility of transmission to the general population. To address this impending problem and prevent it, HBV and HCV screening and treatment practices should be promoted among such individuals.

Screening of hepatitis B in migrants[57] and pregnant women[9,58] has been projected to be cost-effective. A similar idea is suggested for other groups at-risk[59] such as HCV screening in IDUs[57]. However, evidence is scarce and some are even controversial. A few studies discussed in an ECDC literature review found screening in prisoners, or sexual health clinics not cost-effective[10]. However, a study on the burden of hepatitis C stated that in light of its enormity, experts should not rely on economic analysis alone in determining whether to screen for HCV or not[5].

Despite the controversial and lack of evidence, the threat of viral hepatitis remains. Thus, targeted screening programs are highly recommended. In 2008 WHO reported that 28 countries in their European region consider viral hepatitis an urgent public health issue. National policies or strategies to prevent and control viral hepatitis exist in 29 countries, while testing is available to more than 50% of the population in 38 countries[23]. However, an ELPA survey in the same period

found that only 5 countries in Europe have a comprehensive national plan against hepatitis (France, Spain, Netherlands, Scotland and England, and Sweden)[60]. The WHO[14,17], Centre for Disease Control (CDC)[61,62], and the European guideline[40] for managing hepatitis B and C infections have published vaccination or screening recommendations, which in themselves are not entirely the same [See ***Annex Table A.1 and A.2***].

While testing is recommended in the above stated population groups, European countries with their particular health systems may not always deem it mandatory or include it in their statutory health insurance scheme. In Germany, Hungary, Italy, Spain, the UK and the Netherlands, standard policies only exist for HBsAg testing in pregnant women and for both HBV and HCV in blood banks. Prevention and control program targeting specified groups such as IDUs, health care staff, and HIV positive persons, and some also include migrants, MSM, and sex workers, exist in Italy, the Netherlands, Spain and the UK[63]. WHO reported that when testing is free in only 12 countries in its European region. In some countries testing is only free to identified groups at-risk such as pregnant women, IDUs, or health workers[23]. However, an ECDC report found no published literature on national screening policies of migrants and only few of IDUs and MSM. Furthermore, when screening programs were offered to at-risk groups, many seemed ineffective except among IDUs (in Ireland) and among pregnant women[10]. Other available sources have provided an overview of recommendations on who should be screened for HCV[10,64,65,66,67,68] or HBV and vaccinated against HBV[10,67,69,70,71,72,73,74]. The table illustrates which at-risk groups are of significance to each country [See ***Annex Table A.3 and A.4***].

Despite copious evidence of the public health threat posed by hepatitis B and C in Europe, discrepancies exists in available national policies on hepatitis B and C prevention and control programs in the region. European countries with low prevalence of these viral infections in the general population are vulnerable because their surveillance systems are incomparable and the estimated rates are misleading. HBV and HCV remain endemic in Europe and many people are not aware of their own risks[75,76]. Efforts are in fact ongoing in several countries to increase awareness in the general or selected population[59,60,77,78]. However, it is also of great importance to understand the current practices on the side of health care providers and policy makers in order to improve their services, when necessary, and support these efforts. WHO in its Framework for Global Action to prevent and control viral hepatitis has called for actions to promote awareness of viral hepatitis in both the public and health professionals[79].

There is limited research on the awareness of health professionals in Europe on available HBV and HCV screening policies and guidelines. Furthermore, it is also not known the extent of

their awareness on identified groups at-risk and how vigilant they are in following these guidelines when they encounter individuals belonging to these groups. A report by the Institute of Medicine (IOM) revealed limited awareness of hepatitis B and C among health and social care providers in the US[80]. A study in Germany focusing on the knowledge on viral hepatitis among infectious disease epidemiology conference participants revealed a lack of awareness on HBV risk factors and transmission[81]. On a national scale, The National Institute for Health and Clinical Excellence (NICE) in the UK has issued a guide on promoting and offering testing which includes promoting awareness among health care providers, namely those in primary care settings, prisons, and immigration removal centers[82].

Moreover, the unique situation concerning migrants and asylum seekers from regions with higher HBV and HCV prevalence and the health consequences they unknowingly impose on the general population, increases the necessity of comprehending the current situation from the health care providers' perspective. This study is designed to gather such information on health professionals in Europe.

Aim

This study aims to gain insight on current practices in screening of Hepatitis B and C as known or performed by health experts and professionals in six countries representing Europe, with special focus on identified at-risk groups in the population, specifically people with migration background.

Method

This study is part of a larger project named EU HepScreen which aims to uncover the current practices in hepatitis B and C screening, treatment, and referral in six countries in Europe. The project began with a systematic literature review of published and grey literature on relevant topics in English. Findings from this review are discussed in a different thesis. These findings were incorporated to draw up a preliminary questionnaire on screening, treatment, and referral practices in Hepatitis B and C management, which is addressed to health professionals in the viral hepatitis field. The targeted health professionals are categorized into 6 expert groups who would be asked to complete questionnaires specifically tailored to their expertise. The survey target groups are:

1. General experts.

Respondents in this group are professionals involved in health policy making and or individuals from organizations involved in activities relevant to viral hepatitis and it complications in Europe. These would include members of health ministries responsible for infectious diseases, prevention of infectious diseases, members of organizations working within the field of hepatitis and liver diseases, such as ELPA and EASL.

2. General practitioners.

Respondents in this group include general practitioners working on the frontlines of primary health care. They are the ones who usually have the first contact with patients, symptomatic or asymptomatic, who belong in identified at-risk groups in contracting HBV and HCV, including individuals with migration background.

3. Antenatal care providers.

Respondents in this group are health professionals involved in the care of pregnant women, including midwives, nurses, and obstetricians at antenatal care centres. They are the ones who come first in contact with pregnant women, who are subject to screening tests recommended during pregnancy, specifically HBV and or HCV.

4. Sexual health care providers.

Respondents in this group are health professionals involved in sexual health clinics' services, including physicians specializing in dermatology and venereal diseases, nurses, and other professionals relevant to prevention and treatment of STI. Such clinics tend to patients with symptoms of STIs, sexually active patients who would like to have medical check-ups, and patients with HIV/AIDS.

5. Specialists.

Respondents in this group are medical doctors specializing in infectious diseases, gastroenterology, hepatology, and liver oncology. They receive referrals and are responsible for the treatment of viral hepatitis, as well as their complications.

6. Asylum seekers' care providers.

Respondents in this group are health professionals who come in contact with persons applying for asylum or refugees. They may include general practitioners, nurses, midwives who work in refugee

reception centres, detention centres, and primary health care clinics referred to asylum seekers by the local government.

The names of potential respondents, affiliated institutions or organizations, their positions in such institutions, and their contact details were gathered through means of Internet browsing (Google), personal contacts, electronic correspondence and telephoning. The search was done first in English and continued in other languages, when possible. This process generated a varying total number of personal email addresses for each respondent group in each country.

The questionnaire was developed through several refinement stages. The initial version include questions on screening among identified groups at-risk, pre-testing counseling, contact tracing, vaccination, costs pertaining the tests and vaccination, referral practices, treatment practices, barriers to screening, referral, and treatment, and known campaigns to improve the uptake of screening tests. The questions relevant to screening practices and contact tracing are based on available national guidelines on HBV and HCV screening, as well as reported programs or projects found in the previous literature review.

The first version was further modified into 6 questionnaires fitting the survey target groups. Several topics appear in every questionnaire such as whether HBV or HCV screening is offered to specific groups at-risk, whether copayment is required, or whether household or sexual contacts are traced, and which health services are responsible in tracing contacts. However, variations are made between questionnaires because certain issues are targeted only for specific expert groups, not all groups at-risk are addressed in every survey, or the question formulation required adjustments.

In principal there are two types of questions, multiple choice questions and conditional questions. Conditional questions only appear to the respondent when they fulfill the criterion to answer such questions. Specifically the respondent replies with a “yes” to screening of HBV or HCV being offered to the addressed groups. Therefore, the total number of responses in such questions may be less than the total number of respondents in that survey in one country.

A pilot test of the questionnaires was done in a small number of subjects fitting the characteristics of expert groups targeted in the survey. The task was divided between the three teams in three countries with each team testing two surveys. Comments and suggestions from interviewed pilot subjects were consolidated and considered to improve the questionnaires.

As 6 countries with 6 different official languages were included in the survey, the questionnaires were professionally translated into respective languages. The translations were then proof-read by native speakers of each language.

An online survey platform (LIME survey) was established by the Netherlands team with help of their university associates. A code book was generated, giving each question a distinct label and variable names, and answer options were given similar codings, where applicable. Several questions were optional and in these cases LIME survey software automatically labeled it "77" when a respondent decides to skip the question, which overlaps with an "unsure" answer. After the system was ready, all 6 questionnaires were uploaded in 6 languages. Invitation emails were sent to prospective respondents, providing them with a personal link to the survey website, where they can fill out the survey in a language of their preference.

Invitations to participate were sent in 3 stages, each occurring a few weeks after the other, mindful of the different holiday times and rate of responses. The stages include first invitation, then a reminder, and finally invitations to more potential respondents, who are identified later in the process due to lack of responsiveness in the first stage. This occurred with certain expert groups in particular countries namely sexual health services and antenatal care providers in Spain and Hungary. The online survey platform was kept available for 1 month after disseminating the last invitations.

Results from the online survey platform were automatically transferred to and analyzed with SPSS 19 software. Data was analyzed descriptively, using cross tabulation between 2 or 3 variables. For the purpose of this thesis, only questions regarding screening practices are analyzed and discussed. The results of the analysis are presented in actual numbers within a country.

As not all questions are asked in every survey, the analysis also only includes the surveys in which the questions are inquired. Regarding conditional questions, only answers from respondents fitting the conditions were considered in the analysis.

The original English questionnaires are attached at the end of this thesis [See **Questionnaires 1-6**].

Results

The 6 different survey questionnaires were sent to a total of 1181 experts in the six selected survey countries. Each identified expert received one questionnaire depending on her/his field of expertise. There were 286 completed questionnaires, which have been analyzed (basic descriptive statistics) using SPSS version 19. The response rates from the surveyed six countries varied considerably (UK: 19.0%, Germany: 14.8%, Netherlands: 53.8%, Hungary: 27.7%, Italy: 35.7% and Spain: 32.5%). Responses of the expert groups on the current hepatitis B and C screening practices in i) pregnant women, different at risk groups including ii) migrants, iii) asylum seekers, iv) behavioral

high risk groups, v) HIV positive patients, vi) patients with abnormal liver function test (LFT), and vii) concerned people in the general population, are given below.

Pregnant Women

Hepatitis B screening [See ***Table 1 & 2***]

Antenatal care providers and public health experts were asked about the current hepatitis B screening practices for pregnant women. Almost all the antenatal care experts in the six countries stated that hepatitis B screening was offered to pregnant women on a regular basis. A similar response was obtained from the public health experts.

Table 1.*Standard screening practices for hepatitis B in pregnant women (GS survey).*

HBV: pregnant women		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n=9)	(n=14)	(n=7)	(n=2)	(n=8)	(n=8)
GS	Yes - on a regular basis	9	12	7	2	8	7
	Yes - sporadically / rarely	0	1	0	0	0	0
	No	0	1	0	0	0	0
	Unsure	0	0	0	0	0	1

Table2. *Standard screening practices for hepatitis B in pregnant women (ANC survey).*

HBV: pregnant women		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n=8)	(n=36)	(n=6)	(n=4)	(n=25)	(n=8)
ANC	Yes - on a regular basis	8	34	6	4	24	8
	Yes - sporadically / rarely	0	1	0	0	0	0
	No	0	0	0	0	1	0
	Unsure	0	1	0	0	0	0

Hepatitis C screening [See ***Table 3 & 4***]

Antenatal care experts were also asked about the screening of pregnant women for hepatitis C. The depicted situation here is different from hepatitis B. While about two thirds of the antenatal care providers in Italy (18/25) and Spain (5/8) stated that hepatitis C screening is part of the regular antenatal care, most respondents from the UK, the Netherlands and Germany said that this was not offered. In Hungary one expert said that this was done regularly while two said this was done sporadically.

To get a broader picture, public health experts were also asked to comment on this issue. Hepatitis C screening seems to be regular practice in Italy according to three quarters of the Italian

public health experts. In the UK, the Netherlands, and Hungary most public health experts answered that the test was not offered. Answers from Germany and Spain were diverse.

When comparing the responses of the antenatal care experts with those of the public health experts, within the countries, it can be seen that the responses in the UK, the Netherlands and Italy are in line with each other in both expert groups. In Spain the answers of the antenatal care providers seem to suggest that HCV screening is offered more often than public health experts thought. In contrast, the majority of antenatal care providers in Germany (31/36) reported that HCV screening was not offered to pregnant women.

Table 5. *Standard screening practices for hepatitis C in pregnant women (GS survey).*

HCV: pregnant women		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n=9)	(n=14)	(n=7)	(n=2)	(n=8)	(n=8)
GS	Yes - on a regular basis	0	2	0	0	6	2
	Yes - sporadically / rarely	3	3	0	0	1	2
	No	5	5	5	2	1	2
	Unsure	1	4	2	0	0	2

Table 6. *Standard screening practices for hepatitis C in pregnant women (ANC survey).*

HCV: pregnant women		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n=8)	(n=36)	(n=6)	(n=4)	(n=25)	(n=8)
ANC	Yes - on a regular basis	1	0	1	1	18	5
	Yes - sporadically / rarely	2	2	0	2	1	2
	No	5	31	3	1	6	1
	Unsure	0	3	2	0	0	0

Regional differences in hepatitis B screening in antenatal care [See ***Table 7***]

Most respondents stated that there were no regional differences in hepatitis B screening in antenatal care, but a small portion in Italy said they did. At the same time, several respondents in Germany, Italy, and Spain expressed their uncertainty.

Table 7. *Regional differences in the standard hepatitis B screening practices of pregnant women (ANC survey).*

Regional differences in standard HBV screening practices of pregnant women	**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
	(n=8)	(n=36)	(n=6)	(n=4)	(n=25)	(n=8)
Yes	0	0	0	0	2	0
No	8	31	6	4	15	5
Unsure	0	5	0	0	8	3

Regional differences in hepatitis C screening in antenatal care [See ***Table 8***]

Approximately half of respondents in the UK, Germany, the Netherlands, and Italy and all in Hungary claimed that there were no regional differences in the standard hepatitis C screening recommendations in antenatal care. However, 3 out of 7 respondents in the UK, 2 of 25 in Italy, and 2 of 8 in Spain mentioned that differences were present. A number of respondents, particularly in Germany, Italy, and Spain were uncertain of this matter.

Table 8. *Regional differences in the standard hepatitis C screening practices of pregnant women (ANC survey).*

Regional differences in standard HCV screening practices of pregnant women	**UK** (n=8)	**DE** (n=36)	**NL** (n=6)	**HU** (n=4)	**IT** (n=25)	**ES** (n=8)
Yes	3	0	1	0	2	2
No	4	21	3	4	13	2
Unsure	1	15	2	0	10	4

Copayment for hepatitis B and C screening from pregnant women in antenatal care [See ***Annex Table A.5***]

Respondents of the ANC survey who answered that hepatitis B screening was offered to pregnant women were asked whether a financial contribution was required for the screening. All but one respondent stated that this test is free for all pregnant women. One respondent in Italy mentioned that it was free only for women in their third trimester of pregnancy.

A similar question regarding copayment for hepatitis C screening was asked. Of those who reported offering this screening in ANC, everyone in Spain, the UK and the Netherlands, along with most in Italy (17/19) and 2 of 3 in Hungary stated that a contribution was required from all pregnant women. One participant in Germany reported that this test was free for all while the other was unsure. Two respondents in Italy mentioned that it was free for pregnant women who were at risk or in their third trimester.

Migrants (including resident and new migrants)

Hepatitis B screening [See ***Table 9 & 10***]

Public health experts, general practitioners and sexual health service providers were asked whether migrants were offered hepatitis B screening and the current practices in the study countries explored. In the public health expert survey, responses from the UK, Italy, and Spain show a diversity that does not indicate streamlined national practices regarding hepatitis B screening of **new migrants**. The two respondents in Hungary also provided varying answers. Most of the respondents

from Germany were unsure as to the standard practice, and none answered that it was regularly offered. Out of 7 participants in the Netherlands, 5 reported that this screening was not offered to new migrants.

Public health expert responses to whether it was standard practice to offer this test to **resident migrants,** also varied widely within countries. Respondents mostly stated that the test was not regularly offered (NL – 4/7, ES 4/8) or that they were unsure of the current practices (DE – 7/14). None of the public health experts in the Netherlands and Hungary and only very few in the other countries stated that this test was offered on a regular basis to resident migrants.

Results from the GP survey showed that 3 of 4 respondents in Germany, 5 of 9 in the Netherlands, the one in Hungary and 1 of the 2 in Spain stated that it was very common to offer hepatitis B testing to migrants from endemic regions. On the other hand, approximately half of the respondents in the UK and Italy, as well as the other respondent in Spain answered that this was not practiced on a routine basis, hence showing diverse practices.

In the SHS survey about two thirds of respondents in the UK, the Netherlands, and all respondents in Italy and Spain stated that it was very common practice to offer the test to migrants from endemic regions. In Germany most (3/5) stated that they do not routinely practice this.

When comparing the responses of the different expert groups on the hepatitis B screening practices among migrants within the study countries, a non-coherent picture emerges [see ***Table 9 & 10***]. In general GPs and SHS providers tend to offer the test either commonly or sporadically, while the opinion of public health experts on the current practices is very mixed.

Table 9. *Screening practices for hepatitis B in new and resident migrants (GS survey).*

HBV: new & resident migrants		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n= 8)
GS: New migrants	Yes - on a regular basis	1	0	1	1	3	2
	Yes - sporadically / rarely	3	2	1	1	1	2
	No	3	3	5	0	2	1
	Unsure	2	9	0	0	2	3
GS: Resident migrants	Yes - on a regular basis	1	1	0	0	2	1
	Yes - sporadically / rarely	3	5	4	1	2	4
	No	3	1	3	1	1	1
	Unsure	2	7	0	0	3	2

Table 10*. Screening practices for hepatitis B in migrants (GP and SHS surveys).*

HBV: migrants		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP: Migrants	Very common	2	3	5	1	2	1
	Variable or not routinely	6	1	2	0	7	1
	Rarely or never	1	0	2	0	4	0
	Unsure	1	0	0	0	1	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS: Migrants	Very common	7	1	5	0	1	2
	Variable or not routinely	2	3	0	2	0	0
	Rarely or never	1	0	2	0	0	0
	Unsure	0	1	1	1	0	0

Hepatitis C screening [See ***Table 11 &12***]

Public health experts, general practitioners and sexual health service providers were also asked whether migrants were offered hepatitis C testing. None of the responding public health experts in the UK, Germany, and the Netherlands mentioned offering this screening on a regular basis to **new migrants**. In addition, in the Netherlands none answered that it was offered sporadically and most (5 of 7) experts reported that it was not offered. Others provided varying answers, although in Hungary they were divided between it being a regular and a sporadic practice and in Spain half were uncertain.

As for **resident migrants**, except for one respondent in Italy, none mentioned that it was routine practice to offer hepatitis C screening to this risk group. Answers ranged between screening being offered sporadically to not being offered at all. Most experts in Germany and half in Spain expressed their uncertainty on the standard practices.

Most GPs stated that they either routinely or variably offer the test to migrants from endemic regions. This, however, does not include Hungary, where the respondent was uncertain of their common practice.

Five out of ten UK SHS survey respondents reported that hepatitis C testing was very commonly offered to this risk group, while 4 of 10 did not routinely offer the test. In Germany and Hungary responses did not show any dominant trend, although none in Germany mentioned recommending this test routinely in their practices. The one respondent in Italy and 1 of the 2 in Spain stated that it was very common to offer the test to such patients. In contrast, this test was rarely or never recommended by most professionals in the Netherlands.

Table 11. *Screening practices for hepatitis C in new and resident migrants (GS survey).*

HCV: new & resident migrants		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n= 8)
GS: New migrants	Yes - on a regular basis	0	0	0	1	2	1
	Yes - sporadically / rarely	3	3	0	1	2	2
	No	3	1	5	0	2	1
	Unsure	3	10	2	0	2	4
GS: Resident migrants	Yes - on a regular basis	0	0	0	0	1	0
	Yes - sporadically / rarely	3	3	3	1	3	3
	No	3	2	2	1	1	1
	Unsure	3	9	2	0	3	4

Table 12. *Screening practices for hepatitis C in migrants (GP and SHS surveys).*

HCV: migrants		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP: Migrants	Very common	4	3	6	0	4	1
	Variable or not routinely	3	1	1	0	8	1
	Rarely or never	1	0	2	0	2	0
	Unsure	2	0	0	1	0	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS: Migrants	Very common	5	0	1	1	1	1
	Variable or not routinely	4	2	1	1	0	0
	Rarely or never	1	1	6	0	0	0
	Unsure	0	2	0	1	0	1

When comparing the responses of the different expert groups on hepatitis C screening practices among migrants within the study countries, it can be summarized that very few public health experts in the 6 countries mentioned it being offered on a regular basis to migrants from endemic regions. Practices according to SHS professionals are diverse, however, quite a number of GPs reported very commonly offering this test.

Copayment for hepatitis B and C screening from migrants [See ***Annex Table A.6-8***]

Public health experts who answered that new or resident migrants were offered hepatitis B/C screening were asked whether financial contribution was required for HBV and HCV screening from these at-risk groups. At the same time, respondents in the GP and SHS survey were asked this question on migrants without separating for hepatitis B or C.

Approximately half of public health experts in most countries stated that hepatitis B screening was free for all new and resident migrants. However, nearly half of the experts were unsure of the current practice for new migrants. One respondent in Hungary mentioned that contribution was required from all new migrants. Responses on requirement of copayment from resident migrants varied considerably in Germany and the Netherlands. As for a contribution being required from new and resident migrants for hepatitis C screening, all public health experts answered that they were not sure of the practices in this regard.

From the GP survey, all respondents in Germany and Spain, as well as the majority in the UK (6/8), the Netherlands (4/7), and Italy (5/9) reported that hepatitis B/C screening was free for all migrants. The one respondent in Hungary mentioned that contribution was required from some.

In the UK and Spain all SHS survey participants, 3 of 5 in the Netherlands and 1 of 2 participants in Hungary, answered that contribution for hepatitis B/C screening was required from all migrants. One respondent each in the Netherlands, Hungary, and Italy, as well as most in Germany (3/4), mentioned that contribution was required from some migrants.

Respondents who answered that financial contribution was only required from certain patients, mentioned several criteria for whom the test was free of charge. Public health experts in the UK reported the test being free for new migrants who are eligible for treatment from the National Health Services. An expert from Germany mentioned that it was free for resident migrants originating from an endemic country, and in the Netherlands certain health projects provided free testing. Additional criteria were mentioned by participants in the GP and SHS surveys entitling migrants to receive a hepatitis B test free of charge:

- The test is recommended by a GP (DE)
- The migrant belongs to a high risk group but without access to health care (UK)
- For a declaration of health (HU)
- Hepatitis B screening is free at sexual health clinics, but hepatitis C screening is not offered (NL)
- Certain age or income (IT)
- When it is included in the STIKO (German national immunization commission) recommendation (DE).

Asylum seekers

Hepatitis B screening [See ***Table 13 & 14***]

People involved in the care of asylum seekers, as well as public health experts, were asked whether asylum seekers in their respective countries were screened for hepatitis B. The public health experts' responses to this question were quite diverse. Four of nine UK respondents stated that this screening was sporadically offered, more than half in Germany (8/14) were unsure of the standard practices, and 4 of 7 in the Netherlands reported that the test was not offered to asylum seekers.

Most of the asylum seekers' care survey respondents mentioned hepatitis B screening being carried out only sporadically or not being offered at all. Only in Italy two of three participants mentioned it being routinely recommended to asylum seekers.

Table 13. *Standard screening practices for hepatitis B in asylum seekers (GS survey).*

HBV: asylum seekers		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	1	1	2	1	3	2
	Yes - sporadically / rarely	4	2	1	1	2	3
	No	2	3	4	0	1	1
	Unsure	2	8	0	0	2	2

Table 14. *Standard screening practices for hepatitis B in asylum seekers (AS survey).*

HBV: asylum seekers		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 4)	(n= 3)	(n= 4)	(n= 3)	(n= 3)	(n=1)
AS	Yes - on a regular basis	0	0	0	0	2	0
	Yes - sporadically / rarely	2	2	3	1	1	1
	No	2	1	1	2	0	0
	Unsure	0	0	0	0	0	0

When comparing the responses of public health experts and asylum seeker care providers, Italy was the most consistent in stating the test was offered regularly. In every other respective country, public health experts were unsure whereas asylum seeker care providers stated the test was offered sporadically.

Hepatitis C screening [See ***Table 15 & 16***]

People involved in the care of asylum seekers as well as public health experts were also asked whether asylum seekers were screened for hepatitis C. None of the public health expert respondents in the UK, Germany, and the Netherlands mentioned offering this screening on a regular basis to asylum seekers. In the Netherlands most experts reported that it was not offered. Other experts

provided varying answers, while in Hungary they were divided between it being a regular and a sporadic practice, and most in Spain were uncertain.

Asylum seeker care survey respondents were asked to specify the standard practices regarding hepatitis C screening of asylum seekers. The majority of respondents in the UK, Germany, the Netherlands and Spain stated that hepatitis C screening was only offered sporadically. On the other hand, 2 of 3 respondents in Italy stated that it was practiced on a regular basis, and 2 of 3 in Hungary reported that hepatitis C screening is not offered.

Table 15. *Standard screening practices for hepatitis C in asylum seekers (GS survey).*

HCV: asylum seekers		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	0	0	0	1	2	1
	Yes - sporadically / rarely	3	3	0	1	2	1
	No	3	2	5	0	2	1
	Unsure	3	9	2	0	2	5

Table 16. *Standard screening practices for hepatitis C in asylum seekers (AS survey).*

HCV: asylum seekers		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 4)	(n= 3)	(n= 4)	(n= 3)	(n= 3)	(n=1)
AS	Yes - on a regular basis	1	0	1	0	2	0
	Yes - sporadically / rarely	2	2	2	1	0	1
	No	1	0	1	2	0	0
	Unsure	0	1	0	0	1	0

When comparing the responses of the public health experts with those of the asylum seeker care providers, within countries, it can be seen that many public health experts were unsure of the current situation while most asylum seeker care providers said the test was offered sporadically, except for Italy where the test was offered regularly.

Regional differences in hepatitis B screening of asylum seekers [See ***Table 17***]

Respondents in the asylum seeker care survey were asked if within their respective countries regional differences existed in the standard practices of offering hepatitis B screening to asylum seekers from endemic countries. In the UK, Germany, and Italy respondents either answered that regional differences existed or they were unsure. Participants from the Netherlands were divided between regional differences being present and nonexistent. All Hungarian participants stated that there were no regional differences.

Table 17. *Regional differences in the standard hepatitis B screening practices of asylum seekers (AS survey).*

Regional differences in standard HBV screening practices of asylum seekers	**UK** (n= 4)	**DE** (n= 3)	**NL** (n= 4)	**HU** (n= 3)	**IT** (n= 3)	**ES** (n=1)
Yes	2	1	2	0	1	0
No	0	0	2	3	0	0
Unsure	2	2	0	0	2	1

Regional differences in hepatitis C screening of asylum seekers [See ***Table 18***]

A similar question was asked regarding regional differences in hepatitis C screening practices within a country. Most respondents from the UK, Germany and Italy declared that differences in regional practices do exist in their countries. Respondents from Hungary, in contrast, stated that one hepatitis C screening policy was followed in their country. In the Netherlands respondents (2) saying that regional differences exist equaled those saying that there are no differences.

Table 18. *Regional differences in the standard hepatitis C screening practices of asylum seekers (AS survey).*

Regional differences in standard HCV screening practices of asylum seekers	**UK** (n= 4)	**DE** (n= 3)	**NL** (n= 4)	**HU** (n= 3)	**IT** (n= 3)	**ES** (n=1)
Yes	2	2	2	0	2	0
No	1	0	2	3	0	0
Unsure	1	1	0	0	1	1

Behavioral high risk groups (IDUs, Sex workers, MSM)

Public health experts, GPs and SHS experts were asked to comment on the standard practices of offering hepatitis B or C screening to IDUs, sex workers, and MSM, since these are considered to be behavioral high risk groups.

Hepatitis B screening of IDUs [See ***Table 19 & 20***]

Approximately half of the participating public health experts in the UK, Germany, and the Netherlands stated that hepatitis B testing was offered irregularly to known IDUs, while in Spain a larger proportion (5/8) stated that it was regular practice. In Italy the proportion of experts saying that hepatitis B screening was offered on a regular basis equaled those saying that it was offered sporadically. A similar trend is also seen in Hungary.

A majority of GPs from the UK, Germany, and Italy, along with the one in Hungary and the two in Spain reported that they would routinely offer hepatitis B screening to IDUs. Responses of GPs in the Netherlands, however, varied between very commonly or variably offering the test.

In the UK and Germany nearly all of SHS survey respondents and all in Italy (1) and Spain (2) reported very commonly offering hepatitis B screening to known IDUs. Responses from the Netherlands, on the other hand, showed divergent practices in the country. For Hungary all (3) respondents answered that this offer was not routinely extended to this risk group.

Table 19. *Screening practices for hepatitis B in injecting drug users (GS survey).*

HBV: IDUs		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	2	3	2	1	3	5
	Yes - sporadically / rarely	5	7	4	1	3	2
	No	1	1	1	0	1	0
	Unsure	1	3	0	0	1	1

Table 20. *Screening practices for hepatitis B in injecting drug users (GP and SHS surveys).*

HBV: IDUs		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	9	3	4	1	9	2
	Variable or not routinely	0	1	4	0	2	0
	Rarely or never	0	0	0	0	2	0
	Unsure	1	0	1	0	1	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	9	4	4	0	1	2
	Variable or not routinely	1	1	2	3	0	0
	Rarely or never	0	0	2	0	0	0
	Unsure	0	0	0	0	0	0

In overview, larger proportions of GPs and SHS survey participants reported that it was very common to offer hepatitis B screening to IDUs compared to public health experts in the respective countries. An exception is found in case of SHS survey respondents in Hungary.

Hepatitis C screening of IDUs [See ***Table 21 & 22***]

Approximately half of the public health experts in the UK and Spain stated that it was routine practice to suggest a hepatitis C test to IDUs, while half in Germany and the two in Hungary answered that it was done sporadically. Experts in the other two countries responded variedly and one in the Netherlands mentioned that the test was not offered.

Most GPs in the UK, Germany, the Netherlands, and Italy and all (3) in Hungary and Spain reported that they routinely offered hepatitis C screening to IDUs.

Similarly, all SHS survey respondents in the UK, 4 of 5 in Germany, and the one in Italy said that offering the test to IDUs was routine practice. In the Netherlands responses varied with half of 8 respondents stating that they rarely or never recommend the test to this at-risk group. In Hungary 2 of 3 participants did not routinely offer the screening in this case. Responses in Spain were divided between it being very common practice and that they were unsure.

Table 21. *Screening practices for hepatitis C in injecting drug users (GS survey).*

HCV: IDUs		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	5	3	2	0	3	4
	Yes - sporadically / rarely	2	7	2	2	2	2
	No	0	1	1	0	0	0
	Unsure	2	3	2	0	3	2

Table 22. *Screening practices for hepatitis C in injecting drug users (GP and SHS surveys).*

HCV: IDUs		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	5	3	6	1	10	2
	Variable or not routinely	3	1	2	0	2	0
	Rarely or never	0	0	1	0	2	0
	Unsure	2	0	0	0	0	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	10	4	2	1	1	1
	Variable or not routinely	0	0	2	2	0	0
	Rarely or never	0	0	4	0	0	0
	Unsure	0	1	0	0	0	1

Hepatitis B screening of Sex Workers [See ***Table 23 & 24***]

Half of the public health expert respondents in Spain together with a majority of respondents in the Netherlands and the two in Hungary reported sex workers as a regular group to be offered hepatitis B screening. However, in the UK 5 of 9 participants stated that the screening was offered sporadically. Responses from Germany and Italy were mixed with many respondents being uncertain about the current practice.

In the UK and Germany most GPs answered that it was very common to offer a hepatitis B test to sex workers, and the two respondents in Spain were also of this opinion. The one GP respondent in Hungary mentioned it being a variable practice. However, in the Netherlands respondents were split between it being a very common and an irregular practice, and responses from Italy varied without an apparent trend.

When SHS providers were asked whether sex workers are offered a hepatitis B screening test, almost all respondents (the lowest is two thirds in Hungary) in the six countries reported that it was routine practice to offer this screening.

Table 23. *Screening practices for hepatitis B in sex workers (GS survey).*

HBV: sex workers		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	2	2	5	2	2	4
	Yes - sporadically / rarely	5	5	1	0	2	3
	No	1	1	1	0	1	0
	Unsure	1	6	0	0	3	1

Table 24. *Screening practices for hepatitis B in sex workers (GP and SHS surveys).*

HBV: sex workers		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	7	3	4	0	5	2
	Variable or not routinely	0	1	4	1	4	0
	Rarely or never	0	0	1	0	2	0
	Unsure	3	0	0	0	3	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	9	4	6	2	1	2
	Variable or not routinely	1	0	0	1	0	0
	Rarely or never	0	0	2	0	0	0
	Unsure	0	1	0	0	0	0

From a broader perspective, most (more than two thirds) GP and SHS survey participants from the UK, Germany and Spain reported very commonly offering hepatitis B testing to sex workers compared to public health experts. Discrepancies between the surveyed expert groups on standard practices are found in other countries.

Hepatitis C screening of Sex Workers [See ***Table 25 & 26***]

Recommending hepatitis C testing to sex workers is not done on a regular basis according to most of the public health expert respondents. Many experts were unsure of the current practices and most in the Netherlands mentioned that it was not offered.

The majority of GPs in the UK, Germany, and the Netherlands and both respondents in Spain stated that it was very common to recommend hepatitis C testing to sex workers. In Italy most responses varied between it being very common to being variable. The respondent in Hungary mentioned it not being routine practice.

Six UK respondents in the SHS survey reported recommending hepatitis C screening to sex workers only sporadically, while the other four did this very commonly in their practices. Responses in Germany were diverse with no apparent tendency towards one answer. In the Netherlands 6 of 8 respondents stated that they rarely or never offer the test to this patient group. In contrast, all three respondents in Hungary, the one in Italy, and one in Spain answered that it was routine to recommend this screening to sex workers.

When looking at the responses from a broader perspective, it can be seen that the common practices between the GPs and SHS providers within a country differ in every survey country. Responses of public health experts within countries also presented a diverse picture except in the Netherlands where most said that the test was not offered.

Table 25. *Screening practices for hepatitis C in sex workers (GS survey).*

HCV: sex workers		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	2	2	0	0	2	1
	Yes - sporadically / rarely	4	4	0	2	1	3
	No	1	1	5	0	2	0
	Unsure	2	7	2	0	3	4

Table 26.*Screening practices for hepatitis C in sex workers (GP and SHS surveys).*

HCV: sex workers		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	6	3	5	0	5	2
	Variable or not routinely	2	1	3	1	6	0
	Rarely or never	0	0	1	0	2	0
	Unsure	2	0	0	0	1	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	4	2	0	3	1	1
	Variable or not routinely	6	2	2	0	0	0
	Rarely or never	0	0	6	0	0	0
	Unsure	0	1	0	0	0	1

Hepatitis B screening of Men Who Have Sex with Men [See ***Table 27 & 28***]

As regards current practices of screening MSM for hepatitis B, public health expert respondents in the UK and Hungary were divided between hepatitis B screening being regularly offered and it being offered on a sporadic basis. In the Netherlands most participants stated that this group was routinely recommended screening, as well as 4 out of 8 in Spain. Answers from Germany and Italy were diverse with sporadic screening and uncertainty being the most common answers.

Responses of the GPs to the question whether screening is being offered to homosexual men, varied widely both within and between countries. The responses generally ranged from a very common practice to being offered variably.

Responses of SHS providers were quite similar in that all respondents in the UK and the majority in Italy, Spain, Germany and the Netherlands answered that it was very common to offer a test for hepatitis B to homosexual men. Only in Hungary 2 out of 3 respondents reported it being a variable practice.

Table 27. *Screening practices for hepatitis B in men who have sex with men (GS survey).*

HBV: MSM		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	4	3	5	1	2	4
	Yes - sporadically / rarely	4	5	1	1	2	2
	No	0	1	1	0	1	0
	Unsure	1	5	0	0	3	2

Table 28. *Screening practices for hepatitis B in men who have sex with men (GP and SHS surveys).*

HBV: MSM		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	6	2	4	0	5	0
	Variable or not routinely	2	2	5	1	5	1
	Rarely or never	0	0	0	0	3	0
	Unsure	2	0	0	0	1	1
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	10	4	6	1	1	2
	Variable or not routinely	0	0	1	2	0	0
	Rarely or never	0	0	1	0	0	0
	Unsure	0	1	0	0	0	0

When comparing the responses it can be seen that while most (> 3/4) SHS survey respondents in the survey countries, (except Hungary), routinely offer hepatitis B screening to men who have sex with men, public health experts and GPs in these respective countries provided diverse answers.

Hepatitis C screening of Men Who Have Sex with Men [See ***Table 29 & 30***]

The two public health experts in Hungary along with approximately half in the UK, Germany, and the Netherlands responded that hepatitis C screening was only offered sporadically to

men who have sex with men. Approximately one third of experts in the UK, Germany, the Netherlands, Italy, and Spain were uncertain of the standard practices.

As to whether GPs offered this test to homosexual men, responses in all countries, except Hungary, varied between only sporadically offering the test to commonly offering it.

Answers from SHS respondents in the UK, Germany, the Netherlands, and Hungary to whether hepatitis C testing was offered to homosexual men were nearly equally diverse. However half of the respondents in the UK said it was very common to recommend screening while half of the respondents in the Netherlands said it was rarely or never offered. The one participant in Italy and one in Spain stated that it was routine practice.

Table 29. *Screening practices for hepatitis C in men who have sex with men (GS survey).*

HCV: MSM		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	2	2	0	0	2	1
	Yes - sporadically / rarely	5	6	4	2	2	1
	No	0	1	1	0	1	3
	Unsure	2	5	2	0	3	3

Table 30. *Screening practices for hepatitis C in men who have sex with men (GP and SHS surveys).*

HCV: MSM		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	2	2	4	0	5	1
	Variable or not routinely	5	2	4	1	6	1
	Rarely or never	0	0	1	0	3	0
	Unsure	3	0	0	0	0	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	5	5	1	1	1	1
	Variable or not routinely	3	3	3	2	0	0
	Rarely or never	2	2	4	0	0	0
	Unsure	0	0	0	0	0	1

When comparing the responses of the three expert groups, it can be seen that screening practices differ between the different expert groups within the study countries. Similarities in practices could be observed in Hungary where all three groups (apart from one SHS respondent) said that screening was practiced sporadically. In the UK the responses given by the public health experts resembled those given by the GPs but differed from those given by the SHS providers.

HIV-positive patients

Hepatitis B screening [See ***Table 31 & 32***]

Public health experts, GPs and SHS providers were asked how common it was to screen HIV-positive patients for hepatitis B. Most SHS experts (more than four fifths) reported that it was very common practice to offer hepatitis B screening to these patients, except in the Netherlands where only half said so. A similar response was also given by most of the GPs. Although quite large proportions of public health experts also said that screening for hepatitis B was common, the responses in the UK, Germany and Netherlands were mixed, with approximately a third in the UK and the Netherlands saying that it was offered sporadically.

Table 31. *Screening practices of hepatitis B in patients with HIV (GS survey).*

HBV: HIV+ patients		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	5	6	4	2	6	6
	Yes - sporadically / rarely	3	3	3	0	0	1
	No	0	1	0	0	0	0
	Unsure	1	4	0	0	2	1

Table 32. *Screening practices of hepatitis B in patients with HIV (GP and SHS surveys).*

HBV: HIV+ patients		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	8	3	6	0	11	1
	Variable or not routinely	0	1	2	1	0	1
	Rarely or never	0	0	0	0	1	0
	Unsure	2	0	1	0	2	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	8	4	4	3	1	2
	Variable or not routinely	1	0	3	0	0	0
	Rarely or never	0	0	1	0	0	0
	Unsure	1	1	0	0	0	0

Hepatitis C screening [See ***Table 33 & 34***]

Between half and three quarters of public health experts in the UK, Hungary, Italy, and Spain reported that hepatitis C screening was offered regularly to patients with HIV. Simultaneously, half in Germany and Hungary and 3/7 in the Netherlands stated that it was offered sporadically. The most common answer given by GPs in 5 countries (greater than 3/7) was that it was very common to offer the test to these patients, except in Hungary where the respondent GP stated that it was not routinely

offered. More than half of SHS participants also responded that it was very common to offer a testing, except in Germany where 2 out of 5 respondents reported that it was very common practice and the same proportion said it was variable practice.

Table 33. *Screening practices of hepatitis C in patients with HIV (GS survey).*

HCV: HIV+ patients		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	6	4	2	1	4	6
	Yes - sporadically / rarely	1	7	3	1	0	0
	No	0	0	0	0	0	1
	Unsure	2	3	2	0	4	1

Table 34. *Screening practices of hepatitis C in patients with HIV (GP and SHS surveys).*

HCV: HIV+ patients		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	5	3	4	0	10	2
	Variable or not routinely	3	1	2	1	2	0
	Rarely or never	0	0	1	0	1	0
	Unsure	2	0	2	0	1	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	8	2	4	3	1	1
	Variable or not routinely	1	2	2	0	0	0
	Rarely or never	0	0	2	0	0	0
	Unsure	1	1	0	0	0	1

Individuals with abnormal liver function test (LFT) results or exhibiting clinical symptoms

Hepatitis B screening [See ***Table 35 - 38***]

Public health experts and GPs were asked how common it was to screen patients with an abnormal or repeated abnormal LFT for hepatitis B. Nearly all public health experts in Italy and Spain responded that patients with abnormal LFT results were routinely offered a hepatitis B test. In the UK, Germany, and the Netherlands nearly half of participants stated that this was variably offered to these patients. Responses from Hungary were divided between routine and irregular practices.

A first time abnormal LFT result would very commonly prompt approximately half the GP respondents in every country and the one in Hungary to screen a patient for hepatitis B, while the others stated that this would not routinely be the case. A second abnormal LFT result, on the other hand, would alert most GPs to recommend a hepatitis B test to their patients.

Table 35. *Screening practices of hepatitis B in patients with abnormal LFT results (GS survey).*

HBV: patients with abnormal LFT results		**UK** (n= 9)	**DE** (n= 14)	**NL** (n= 7)	**HU** (n= 2)	**IT** (n= 8)	**ES** (n=8)
GS	Yes - on a regular basis	2	4	2	1	6	7
	Yes - sporadically / rarely	4	6	3	1	1	0
	No	1	0	0	0	0	1
	Unsure	2	4	2	0	1	0

Table 36. *Screening practices of hepatitis B in patients with abnormal LFT results (GP survey).*

HBV: patients with abnormal LFT results		**UK** (n= 10)	**DE** (n= 4)	**NL** (n= 9)	**HU** (n= 1)	**IT** (n= 14)	**ES** (n= 2)
GP: 1st LFT	Very common	4	2	4	1	9	1
	Variable or not routinely	5	2	4	0	3	0
	Rarely or never	0	0	1	0	2	1
	Unsure	1	0	0	0	0	0
GP: 2nd LFT	Very common	6	4	8	1	9	1
	Variable or not routinely	3	0	1	0	5	0
	Rarely or never	0	0	0	0	0	1
	Unsure	1	0	0	0	0	0

Public health experts and GPs were also asked how common it would be to screen a patient exhibiting symptoms suggestive of a liver pathology for hepatitis B. More than three fifths of public health experts from 5 countries and both from Hungary reported that recommending hepatitis B screening was a routine practice when patients manifest symptoms. Nearly all GPs in the six study countries said that they would routinely recommend a hepatitis B test to patients who exhibited clinical symptoms.

Table 37. *Screening practices of hepatitis B in symptomatic patients (GS survey).*

HBV: symptomatic patients		**UK** (n= 9)	**DE** (n= 14)	**NL** (n= 7)	**HU** (n= 2)	**IT** (n= 8)	**ES** (n=8)
GS	Yes - on a regular basis	6	9	5	2	6	6
	Yes - sporadically / rarely	2	2	0	0	1	0
	No	0	0	0	0	0	1
	Unsure	1	3	2	0	1	1

Table 38. *Screening practices of hepatitis B in symptomatic patients (GP survey).*

HBV: symptomatic patients		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	8	4	8	1	13	2
	Variable or not routinely	1	0	1	0	0	0
	Rarely or never	0	0	0	0	0	0
	Unsure	1	0	0	0	1	0

Hepatitis C screening [See ***Table 39 – 42***]

Public health experts and GPs were asked how common it was to screen patients with an abnormal or repeated abnormal liver function test (LFT) for hepatitis C. Public health expert respondents in Hungary, 9 of 14 in Germany, and greater than 3/7 in the UK and the Netherlands reported that hepatitis C testing was offered sporadically to patients with an abnormal LFT result, while most respondents in Spain (5/8) and several in Italy (3/8) stated that the standard was to regularly offer this test to these patients. Less than half of experts in the survey countries apart from Hungary were uncertain of the standard practices.

A second or repeat abnormal LFT would prompt the majority of GPs in the study countries to screen for hepatitis C. Incidentally, a first time abnormal LFT result would only lead half of the GPs to request for a hepatitis C test apart from Italy and Hungary where most would ask for a hepatitis C test regardless.

Table 39. *Screening practices of hepatitis C in patients with abnormal LFT results (GS survey).*

HCV: patients with abnormal LFT results		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	2	1	1	0	3	5
	Yes - sporadically / rarely	4	9	3	2	3	1
	No	1	0	0	0	0	1
	Unsure	2	4	3	0	2	1

Table 40. *Screening practices of hepatitis C in patients with abnormal LFT results (GP survey).*

HCV: patients with abnormal LFT results		**UK** (n= 10)	**DE** (n= 4)	**NL** (n= 9)	**HU** (n= 1)	**IT** (n= 14)	**ES** (n= 2)
GP: 1st LFT	Very common	4	2	3	1	9	1
	Variable or not routinely	4	2	3	0	4	1
	Rarely or never	0	0	3	0	1	0
	Unsure	2	0	0	0	0	0
GP: 2nd LFT	Very common	6	4	5	1	11	1
	Variable or not routinely	2	0	3	0	3	1
	Rarely or never	0	0	1	0	0	0
	Unsure	2	0	0	0	0	0

Public health experts and GPs were also asked how common it would be to screen an individual exhibiting symptoms indicating hepatitis C. Responses of the public health experts were mixed and ranged between regular to sporadic screening. Only in Spain most experts stated that this test was routinely offered to symptomatic patients. Several experts were uncertain of the standard practices.

All GP respondents in Germany, Hungary, and Spain reported that they very commonly screen symptomatic patients for hepatitis C. In the Netherlands, UK and Italy, the majority stated that they practiced this as well.

Table 41. *Screening practices of hepatitis C in symptomatic patients (GS survey).*

HCV: symptomatic patients		**UK** (n= 9)	**DE** (n= 14)	**NL** (n= 7)	**HU** (n= 2)	**IT** (n= 8)	**ES** (n=8)
GS	Yes - on a regular basis	3	6	1	1	3	6
	Yes - sporadically / rarely	4	4	3	1	3	0
	No	0	0	0	0	0	1
	Unsure	2	4	3	0	2	1

Table 42. *Screening practices of hepatitis C in symptomatic patients (GP survey).*

HCV: symptomatic patients		**UK** (n= 10)	**DE** (n= 4)	**NL** (n= 9)	**HU** (n= 1)	**IT** (n= 14)	**ES** (n= 2)
GP	Very common	5	4	5	1	12	2
	Variable or not routinely	2	0	3	0	1	0
	Rarely or never	0	0	1	0	1	0
	Unsure	3	0	0	0	0	0

Contacts of hepatitis B and C patients in the general population and different risk groups

Hepatitis B screening [See ***Table 43 & 44***]

For a comprehensive overview of the common practices in each country regarding screening of household and/or sexual contacts of patients with hepatitis B, responses from the GP, SHS, AS, and Specialist surveys are compared to answers from public health experts in the general survey.

In the UK, screening was offered to all contacts according to all respondents in the SHS survey and most in the AS (3/4) and Specialist (7/9) surveys, as well as more than half of public health experts and two fifths of GPs. Of all respondents in Germany, all GPs, nearly all specialists (8/9) and most AS care providers (2/3) reported that all contacts were offered a test. This contrasts with the opinion of most (10/14) public health experts in the general survey who said that only a selection of contacts was screened.

The majority of respondents in the Netherlands in all surveys, except the SHS survey (1/8), responded similarly to the public health experts saying that all contacts were offered a hepatitis B screening. Responses from all surveyed expert groups in Hungary showed common contact tracing practices among the majority of respondents (more than two thirds) and all public health experts (2). Answers for Italy and Spain varied, in Italy most respondents in the AS survey (2/3) reported that this test was offered to selective contacts, while more than half of participants in the other survey groups stated that this test was offered to every contact. In Spain most specialists (3/4) and half of the SHS respondents (1) and GPs (1) responded similarly to most (5/8) public health experts that this screening was recommended to all contacts.

Table 43. *Hepatitis B screening practices in household or sexual contacts of HBV positive patients (GS survey).*

HBV: contacts of HBV+ patients		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	5	2	6	2	5	5
	Yes - sporadically / rarely	3	10	1	0	2	2
	No	0	1	0	0	0	0
	Unsure	1	1	0	0	1	1

Table 44. *Hepatitis B screening practices in household or sexual contacts of HBV positive patients (ANC, GP, AS, SHS, and Sp surveys).*

HBV: contacts of HBV+ patients		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Yes – all contacts	4	4	8	1	13	1
	Yes - a selection of contacts	1	0	1	0	0	0
	No	0	0	0	0	1	1
	Unsure	5	0	0	0	0	0
		(n= 4)	(n= 3)	(n= 4)	(n= 3)	(n= 3)	(n=1)
AS	Yes – all contacts	3	2	4	2	0	0
	Yes - a selection of contacts	0	0	0	1	2	0
	No	1	0	0	0	1	1
	Unsure	0	1	0	0	0	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Yes – all contacts	10	2	1	2	1	1
	Yes - a selection of contacts	0	1	4	0	0	0
	No	0	0	1	0	0	1
	Unsure	0	2	2	1	0	0
		(n= 10)	(n= 9)	(n= 22)	(n= 10)	(n= 9)	(n=4)
Sp	Yes – all contacts	7	8	18	7	8	3
	Yes - a selection of contacts	2	0	4	0	1	1
	No	0	0	0	0	0	0
	Unsure	1	1	0	3	0	0

Several experts who answered that only selective contacts were offered the test, mentioned a number of selection criteria other than household members or sexual partners. A GP in the Netherlands selected patients based on referral from public health services. An SHS respondent in Germany mentioned selecting patients based on whether they have access to insurance based health care services or not. One AS respondent in Hungary said that it was offered if it is prescribed as one of the standard tests to be carried out. Specialists stated these selection criteria:

- The decision lies with clinics of higher level care (IT)
- First line / close relatives (NL)
- Referred by a GP or public health services (NL)

- Patients themselves inform their contacts to visit their GPs (UK)
- Referred by their GPs (IT)
- Sexual partners (IT).

Hepatitis C screening [See ***Table 45 & 46***]

For a more comprehensive overview of the standard practices pertaining to hepatitis C screening of household and/or sexual contacts of hepatitis C positive patients, in each country, responses from participants of the general survey were compared to responses from GP, SHS, AS, and Specialist surveys.

Responses from all survey groups, including the public health experts, were very diverse within each of the six study countries. Responses for the UK and Spain were too diverse to draw any conclusions. In Germany most of the specialists, asylum seeker care providers and all GPs said that all contacts of hepatitis B pos. patients were offered screening. Half of the public health experts from the general screening survey however said that only a selection of contacts was screened.

Respondents in the Netherlands also provided differing answers. However, trends are seen in that about half of the GPs, AS survey respondents and specialists reported offering the test to all contacts. In contrast, none of the public health experts and SHS survey respondents stated that it was standard practice to offer testing regularly to all contacts.

In Hungary the GP and approximately two thirds of SHS and Specialist survey respondents answered that the test was offered to all contacts, which is similar to 1 of the 2 public health experts. On the other hand, 2 of 3 AS survey respondents said that screening was only offered to a selection of contacts. In Italy nearly all of the GP, SHS, and Sp survey respondents stated that all contacts were offered screening, while only 3 of 8 public health experts answered similarly and none of the AS survey respondents did so.

Table 45. *Hepatitis C screening practices in household or sexual contacts of HCV positive patients (GS survey).*

HCV: contacts of HCV+ patients		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	1	3	0	1	3	4
	Yes - sporadically / rarely	2	7	2	0	4	1
	No	4	2	2	1	0	2
	Unsure	2	2	3	0	1	1

Table 46. *Hepatitis C screening practices in household or sexual contacts of HCV positive patients (GP, AS, SHS, and Sp surveys).*

HCV: contacts of HCV+ patients		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Yes – all contacts	2	4	5	1	10	1
	Yes - a selection of contacts	0	0	1	0	1	0
	No	2	0	1	0	1	1
	Unsure	6	0	2	0	2	0
		(n= 4)	(n= 3)	(n= 4)	(n= 3)	(n= 3)	(n=1)
AS	Yes – all contacts	2	2	2	1	0	0
	Yes - a selection of contacts	0	0	1	2	2	1
	No	2	0	0	0	1	0
	Unsure	0	1	1	0	0	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Yes – all contacts	3	2	0	2	1	1
	Yes - a selection of contacts	4	0	4	0	0	0
	No	0	1	1	0	0	1
	Unsure	3	2	3	1	0	0
		(n= 10)	(n= 9)	(n= 22)	(n= 10)	(n= 9)	(n=4)
Sp	Yes – all contacts	1	7	9	7	7	3
	Yes - a selection of contacts	5	1	6	0	2	1
	No	3	0	5	1	0	0
	Unsure	1	1	2	2	0	0

Respondents who stated that only a selection of contacts was offered hepatitis C screening were asked to elaborate on their criteria for selection. SHS providers in the UK reported IDU contacts as a criterion. AS survey respondents mentioned the following criteria:

- The standard range of tests (HU)
- Family relation (NL)
- Children (ES)
- Close partners (HU).

Selection criteria mentioned by specialists were:

- If risks are anticipated (NL)
- Personal professional consideration (NL)
- Advised/referred by a GP, GUM, or other clinics (UK, NL, ES)
- Close contact such as close relatives, sexual partners, and children (UK, NL, IT).

Health services responsible for screening contacts of patients with HBV or HCV [See ***Annex Table A.9***]

Respondents who answered that hepatitis B or C screening was offered to contacts of asylum seekers with HBV or HCV were asked which health services had the main responsibility for the screening. Experts in the UK stated that GPs and community nurses have the main responsibility for the screening. In Germany the responsibility lies with the GPs. Respondents in the Netherlands and Hungary identified public health services or health protection units as being responsible. Of note, that none of the participants mentioned health services at receiving centers or national border control as having the main responsibility for hepatitis B or C screening in asylum seekers.

Respondents in the GP survey who stated that hepatitis B or C positive patients were offered screening stated that this responsibility belongs mainly to either GPs or public health services/health protection units in all study countries.

Participants in the SHS survey provided more varying answers. SHS itself is mentioned only in the UK, the Netherlands, and Spain. In other countries either GPs or public health services/health protection units were reported to be the responsible health services. Infectious disease specialists were only mentioned by a respondent in Hungary.

Specialists in all study countries mentioned GPs as having the main responsibility of screening contacts of patients with HBV or HCV, in some countries more than others such as the UK and Germany. In the Netherlands half of the specialists said public health services/health protection units as the responsible health services, although 5 of 22 also mentioned GPs. In Hungary and Italy most specialists reported hospitals or clinics as being responsible for the screening.

Several respondents suggested other health care providers such as:

- GPs in collaboration with public health services {a GP (UK) and a specialist (NL)}
- GPs for household contacts and SHS for sexual contacts {an SHS provider (UK)}
- Prevention units at hospitals {a specialist (ES)}.

Role of Antenatal care providers in tracing contacts of Hepatitis B positive pregnant women *[See* ***Table 47 & Annex Table A.10****]*

Approximately two thirds of ANC survey respondents in the Netherlands, Hungary, and Italy reported that all household or sexual contacts of hepatitis B positive pregnant women were offered hepatitis B testing. In the UK, Germany, and Spain approximately a third answered similarly.

Table 47. *Hepatitis B screening practices in household or sexual contacts of HBV positive pregnant women (ANC survey).*

HBV: contacts of HBV+ patients		**UK** (n=8)	**DE** (n=36)	**NL** (n=6)	**HU** (n=4)	**IT** (n=25)	**ES** (n=8)
ANC	Yes – all contacts	2	14	4	3	15	3
	Yes - a selection of contacts	1	2	0	0	2	0
	No	1	5	1	1	4	1
	Unsure	4	15	1	0	4	4

ANC survey respondents were asked which health services had the main responsibility for the screening contacts of HBV positive pregnant women. In the UK, Germany, the Netherlands, and Hungary, the majority of respondents and some (5/17) in Italy stated that the public health services or health protection units were responsible. Most respondents in Italy (8/17) and Spain (2/3) and some (4/16) in Germany reported that GPs were responsible for screening contacts. Options like a gynecologist or infectious disease specialist were hardly mentioned by the survey participants.

Midwives' role in contact tracing [See ***Annex Table A.11 & A.12***]

ANC survey respondents who answered that contacts of pregnant women with HBV were offered hepatitis B screening were asked whether midwives were involved in the tracing and screening process. A third of the German respondents (11/35), and most in Spain (5/8) and Italy (16/24) reported that midwives were involved in contact tracing. In contrast, most respondents in the UK (6/8) and Netherlands (4/6) and half of the respondents from Hungary (2/4) said that midwives were not involved in contact tracing. More than half of German participants were not sure.

The same question as above was asked regarding hepatitis C screening in contacts of hepatitis C positive pregnant women. More than 60% of respondents in Italy, Spain, and the Netherlands reported that midwives were involved in the process, while all participants from the UK and 2 of 3 in Hungary said that midwives were not involved. The 2 German respondents were unsure.

Role of sexual health services in contact tracing [See ***Annex Table A.13***]

All SHS respondents in the UK, most in the Netherlands (5/8), one of the two in Spain, and the one in Italy stated that professionals in their discipline were involved in tracing contacts of patients with HBV or HCV. In contrast, all three respondents from Hungary, and a third of respondents from the Netherlands said that they were not involved in contact tracing. In Germany 4 of the 5 of participants expressed their uncertainty on this issue.

Screening patients infected with viral hepatitis for other hepatitis viruses

Screening hepatitis B positive patients for hepatitis C [See ***Annex Table A.14-16***]

Public health experts, GPs, and SHS providers were asked how common it is to screen hepatitis B positive patients for hepatitis C. While most GPs stated that it was common practice to screen hepatitis B positive patients for hepatitis C, responses of public health experts (except Spain) and SHS providers (except the UK) varied from common to being unsure of the current practice. In Spain most public health experts and in UK most SHS providers also stated HCV screening in this situation as common practice.

AS care respondents and specialists were asked if all patients with HBV were offered screening for HCV. AS care providers in the UK and most in the Netherlands and Italy and nearly all specialists in the 6 countries stated that all HBV positive patients were offered an HCV test. AS survey respondents in Germany were mostly unsure of the common practices. One AS respondent in the Netherlands and Hungary mentioned that patients were selected, with the former stating that it was based on assessed risk.

Screening hepatitis C positive patients for hepatitis B [See ***Annex Table A.16-18***]

The same experts as above were asked how common it is to screen hepatitis C positive patients for hepatitis B. Most public health experts in Italy, Spain, and the two in Hungary reported that patients with chronic hepatitis C were offered hepatitis B screening on a regular basis. In the Netherlands, UK and Germany however the experts were almost equally divided between screening being offered regularly and being offered only sporadically. GPs in Hungary and Spain, as well as most GPs (more than two thirds) in the other countries reported hepatitis C screening being offered commonly to hepatitis B patients. Nearly all SHS survey respondents provided responses similar to the GPs except for the Netherlands where half said that it was only offered sporadically.

All specialists in the six study countries stated that all hepatitis C patients were offered hepatitis B screening, which was similar to the response given by the AS survey respondents from UK and the

Netherlands and most from Italy. AS survey respondents from Germany and Hungary were often unsure of the common practice. Specialists who reported screening only a selection of hepatitis C patients for hepatitis B mentioned the following criteria:

- If risks are anticipated (NL)
- Advised by a GP, GUM, or other clinics (UK, ES, NL).

Health services with the main responsibility of screening for other hepatitis viruses [See ***Annex Table A.19 & A.20***]

AS and specialist survey respondents who answered that patients with HBV or HCV were offered screening for the other virus were asked which health services were mainly responsible for this task. None of the AS survey respondents mentioned health services at receiving centres or national border controls. However, both groups named GP practices and public health services or health protection units, while nearly all specialists in all study countries (except Germany) also identified hospitals or clinics as being responsible.

Some AS respondents suggested other professional entities such as:

- GPs in collaboration with public health services (NL)
- Practicing nurses (UK).

Several specialists suggested health services such as:

- All of the listed health services (UK)
- Hospitals, public health services or clinics at penitentiary facilities (ES)
- The physician who did the initial diagnosis (NL).

Occupational risk groups

Hepatitis B screening of Workers In Medical Services [See ***Annex Table A.21***]

In 5 survey countries the majority of public health experts stated that it was standard practice to regularly offer a hepatitis B screening to future employees of medical services. Consequently, the UK was an exception with less than half (4/9) of the experts stating this. A third of respondents in the UK also reported that this was not routine practice. One or two respondents in Germany, the Netherlands, and Italy mentioned that this group at-risk was not offered hepatitis B testing.

Hepatitis C screening of Workers in Medical Services [See ***Annex Table A.22***]

The two public health experts in Hungary, as well as several respondents in other countries stated that hepatitis C screening was sporadically offered to health care workers. Experts in other countries did not show consensus in their answers although slightly distinctive patterns are seen in

the UK, where 4 of 9 experts stated that this screening was not offered to these workers, and in the Netherlands, where they reported that it was not offered or they were unsure of the standard practice.

Hepatitis B screening of Students in Health Care Professions [See ***Annex Table A.21***]

In the UK, the Netherlands, and Italy this test was regularly offered to student in health care professions according to approximately half of the public health experts. Most German respondents and a few from other countries reported that this was only offered sporadically. In Spain 4 of 8 experts and a few in other countries except the UK stated that it was not offered. Approximately a third of experts in the UK and Germany expressed uncertainty of the standard practices.

Hepatitis C screening of Students in Health Care Professions [See ***Annex Table A.22***]

A similar pattern to hepatitis C screening practices standard in medical workers is also observed in the results regarding students in health care except for a small difference in Germany and Spain, where more respondents stated that hepatitis C screening was not offered to this group at-risk.

Hepatitis B screening of Workers Other Than Health Care before Employment in Occupations with High Exposure Risk [See ***Annex Table A.21***]

Many public health experts in the UK, Germany, the Netherlands, and Spain claimed that hepatitis B screening was only offered to variably people in this group. In contrast, most Italian experts and a few from the UK, Germany, and Spain stated that the testing was regularly recommended to such persons. Most experts from the Netherlands and one participant from Germany, Italy, and Spain reported that the test was not offered at all. A number of participants in the UK and Germany and one in every other country expressed uncertainty regarding this group at-risk.

Hepatitis C screening of Workers Other Than Health Care before Employment in Occupations with High Exposure Risk [See ***Annex Table A.22***]

The pattern is again seen in the results regarding other workers relevant in health care, only with a difference in Hungary, where the two respondents disagreed between this screening being offered sporadically and not offered, and 4 of 8 experts in Italy reporting that it was offered on a regular basis.

Residents in closed facilities (e.g. residents of psychiatric hospitals, prison inmates)

Hepatitis B screening [See ***Annex Table A.23***]

In the UK (4/9), Germany (5/14), and Italy (3/8) public health experts stated that this screening was not routinely offered to this group at-risk. No respondents in the Netherlands and Hungary mentioned offering this test as regular practice, and 4 of 8 experts in the Netherlands stated that it was not offered. On the other hand, most experts in Spain (5/8) and a few of them in the UK, Germany, and Italy answered that it was regularly offered. Many German experts (6/14) and a few from other countries demonstrated their uncertainty in this circumstance.

Hepatitis C screening [See ***Annex Table A.24***]

None of the participants in Germany, the Netherlands, and Hungary and a few in the three other countries mentioned hepatitis C screening being routinely recommended to residents in closed facilities. Many respondents in the UK (4/9) and Germany (6/14) stated that it was sporadically offered, while the same proportion was uncertain. Answers from Italy and Spain varied widely with hardly any distinctive tendency. Responses in the Netherlands were divided between the test not being offered (4/7) and that they were unsure (3/7) of the common practices. In Hungary one respondent answered that the test was sporadically offered to this at-risk group, while the other said it was not offered.

General population (Patient's request)

GPs and SHS providers were asked how common it was to screen individuals who out of concern that they may have been exposed to hepatitis viruses, request for a hepatitis B or hepatitis C test.

Hepatitis B screening [See ***Annex Table A.25***]

The majority of GP respondents in the UK (8/10), Germany (3/4), the Netherlands (8/9), and Italy (9/14), as well as the one respondent in Hungary and 1 of 2 in Spain reported that they would very commonly test for hepatitis B on a patient's request.

A majority of SHS survey respondents in the UK, Germany and Spain stated very commonly testing concerned patients. However, in the Netherlands, Hungary, and Italy more respondents said they did not routinely test such patients.

Hepatitis C screening [See ***Annex Table A.26***]

When patients who were concerned that they may have been exposed to hepatitis viruses requested for hepatitis C screening, more than two thirds of GP respondents in all study countries, apart from Hungary reported very commonly screening for hepatitis C. The GP in Hungary was uncertain about the common practice in this case.

Responses of the SHS providers were quite diverse. While a majority of SHS survey respondents in the UK (6/10) reported very commonly offering hepatitis C screening based on a personal request, 2 of 3 respondents in Hungary and the one in Italy said that they do not routinely offer this screening. Half of the respondents in the Netherlands stated that they rarely or never offer a test.

Hepatitis C screening of blood transfusion recipients before 1991 [See ***Annex Table A.27*****]**

Public health experts in the UK (4/9), Germany (6/14), Italy (4/8), and Spain (4/8) most commonly stated that hepatitis C screening was recommended sporadically to pre-1991 blood transfusion recipients. Most in the Netherlands (4/7) said that the test was not recommended, and in Hungary experts answered either the test being offered sporadically or not offered to this group at-risk.

Discussion

The goal of this study is to obtain perspective on the current HBV and HCV screening practices among vulnerable and at-risk population groups in six European countries: Germany, Hungary, Italy, Spain, the UK, and the Netherlands. A survey among health care experts was conducted through questionnaires, which development was based on a systematic literature review prior to this study.

Results from this study mainly suggest that health professionals lack consensus on HBV and HCV screening among targeted groups as recommended in the European guideline for hepatitis B and C management[40]. In Spain, the Netherlands, the UK where national HBV and HCV screening policies are available, and in Germany where only national HBV screening policy is available[63], practices are still quite diverse and do not reflect a uniform implementation of these policies.

The results also demonstrate widely diverse HBV and HCV screening practices by health professionals in and between the study countries. Diversity is also seen regarding the identified at-risk groups who were recommended screening. For example, more GPs and SHS providers in the

UK offer HBV regularly than HCV testing to MSM, and more GPs in the UK and the Netherlands regularly offer HBV testing than HCV to symptomatic patients. This could suggest a lack of awareness of at-risk individuals who should be recommended HBV or HCV screening, but are in fact not. Admittedly, personal judgment based on knowledge and experience may play a major role in the health professionals' decision. Several respondents disclosed the criteria they apply in selecting individuals indicating an extent of awareness of hepatitis B and C risk factors. For example, a specialist in the Netherlands mentioned only close relatives and one in Italy mentioned only sexual partners of HBV-positive persons are recommended HBV screening. Nonetheless, screening practices remain diverse throughout, and it very likely contributes to missed cases and potential vaccination opportunities.

Of all the identified groups at-risk, only in cases of HBV screening in pregnant women is consensus among nearly all health professionals in all study countries observed. Practices among other groups at-risk vary, among some groups more than others. Some tendencies in recommending HBV or HCV screening are apparent within one expert group. For instance, in the UK more SHS providers than GPs commonly offer HBV testing to sex workers and MSM. Also in the UK, more AS care providers than general experts stated that asylum seekers are offered HBV and HCV testing (albeit only sporadically). These suggest that their area of expertise may have made them privy to knowledge on the risks more relevant to their patients.

The study provides an overview of HBV and HCV screening practices in diverse health care settings or expertise in European countries. Such an international scale study has never been reported. The European overview gained through this study will be useful in uncovering the gaps in practices specific to the settings and their expertise.

This survey also separately addresses groups who are identified as being at-risk of contracting HBV and or HCV. This approach could show the extent of the awareness of health care providers on which groups at-risk should be offered screening. IOM reviewed studies on US health providers' awareness of viral hepatitis to draw up a national strategy proposal to prevent and control hepatitis B and C[80]. As in the review where a lack of awareness among health care providers in the US exists in this respect, the findings of this survey likely suggest that the situation is not much more advanced among European health care providers. Hence, the results of this study will be useful in designing strategies to be implemented throughout Europe. In addition, the questionnaires specifically include people with migrant backgrounds, a group that has been silently posing a public health threat in Europe. The study was conducted in countries in the west and east of Europe where

the general prevalence of HBV and HCV are low but they receive high numbers of migrants from other countries within or outside of EU where a higher estimated endemicity exists.

The results of the study are discussed in more detail according to the following at-risk groups:

Pregnant women

Hepatitis B screening

Screening of pregnant women for HBV is part of the national policy in all survey countries[63], and it is mirrored in the results in this study as reported by nearly all ANC providers and general experts. However, a very small minority remain uncertain of the standard of practice.

This aberration found among few general experts and ANC providers in Germany, as well as one general expert in Spain and one ANC provider in Italy may not seem significant at first. However, in view of the fact that one, pregnant women are specifically targeted by the national policies on HBV screening[63], second, the respondents are health professionals, and third, the low number of total respondents, this result begs to question the extent of uniform knowledge among all health care providers.

Moreover, regional differences reported by respondents in Italy and the uncertainty expressed by several respondents in, again, Italy, Germany, and Spain, indicate that there is indeed a need of more rigorous dissemination of the standard antenatal care policy regarding HBV screening practices in pregnant women among health professionals in these countries.

Hepatitis C screening

On the other hand, HCV screening in pregnant women is not routine antenatal screening, except in Spain[10]. Results from the survey confirm that this test is not regularly recommended to pregnant women by most ANC providers in all the study countries except Italy and Spain. Interestingly, general experts in Spain provided diverse answers in the matter, while most in Italy confirm the standard regular practice reported by ANC providers. This suggests that they are aware of the potential risk of HCV among pregnant women. In addition, only ANC providers in Hungary were certain that there were no regional differences in the standard practice of HCV screening in pregnant women.

The imperfect unanimity in HBV testing among pregnant women may be due to non-clinical involvement in their care. Meanwhile, the diversity in HCV testing is not unexpected as there are no HCV screening national policies targeted to pregnant women[63] other than in Spain[10]. These practices

of recommending screening may likely reflect the personal judgment and experience of the respondents, especially in Italy where the estimated HCV prevalence is high in some of its regions[10]. On the contrary, in Spain where the estimated HCV prevalence is high and HCV screening is part of its antenatal care[10], the small lack of regularity in practices may indicate a lack of awareness of this recommended practice among local ANC health providers. However, as the number of respondents is quite low, further studies are needed to investigate the reasons to these irregularities.

Of note, HCV screening is not free according to most respondents who offer this service. This factor does not seem to hinder these ANC providers in recommending the test to their patients, implying their awareness of the importance of this screening.

Migrants

Hepatitis B screening

New migrants (new immigrants and permanent/long-term visa applicants from HBV endemic regions)

Varying answers from general experts regarding this matter depict the general inconsistency of HBV screening practices in new migrants within the study countries. However, there are a few interesting tendencies toward one practice. In Italy more regular practice is observed, which contrasts that in the Netherlands. Meanwhile, in Germany and Spain most of the respondents were not sure. These phenomena may be partly explained by the different health systems of each country. For example, in Italy the local Department of Prevention has the autonomy on their regional health care organization[83]. Perhaps there is a policy on recommending regular HBV screening on new migrants that prompts such practices but available only in Italian for regions known as points of entry for migrants.

There are no national policies targeting new migrants in all survey countries[10,63]. One proposal had been drafted for the National Screening Committee in the UK in 2010[84] but the Royal College of General Practitioners has denied to support its recommendations on account of insufficient supporting evidence[85]. This contradicting standpoint among experts in the UK may be projected in the uncertainty expressed by most respondents in all the countries in this survey. However, interestingly, none of the 14 general experts in Germany (the most number of national respondents in this survey group) stated that it was regular practice to screen new migrants for HBV. This result could be seen as a lack of awareness among these experts on the potential chronic HBV risks brought about by new migrants. It also contradicts the WHO report on Germany's view that this disease is an urgent public health issue[23].

Resident migrants (long-term citizens with a migrant background from HBV endemic regions)

As there are also no identified national policies naming resident migrants as individuals at-risk[10], it is understandable that answers varied extensively. However, in light of copious evidence of high prevalence rates among migrants, as well as another study on 13.065 children by the Robert Koch Institute (RKI) in Germany demonstrating the potential risks of HBV infection in children born from parents with a migrant background[86], the need for an explicit inclusion of these individuals in HBV screening country policies is warranted.

Migrants from HBV endemic regions

Question addressed to GPs and SHS providers did not specify the difference between new and resident migrants. Results suggest that in practice, GPs and SHS providers view having a migrant background from an endemic area as an indicator for HBV screening. This is indeed an encouraging finding. However, diversity remains and a uniform action is essential to attain a higher finding of chronic hepatitis B cases among this at-risk group and vaccinating the eligible ones.

Hepatitis C screening

New migrants and resident migrants from HCV endemic regions

Varying answers again indicate that general experts do not have uniformed knowledge on standard HCV screening practices among new and resident migrants. Of note, none of the experts in the UK, Germany, and the Netherlands (new migrants), or all study countries except Italy (resident migrants) stated that screening was offered on a regular basis.

In addition, more experts in the Netherlands seem to favor testing resident migrants for HCV instead of new migrants, albeit only sporadically. The low number of respondents obscures the significance of this difference, but perhaps it is worth noting as it might indicate a higher awareness of the potential risks among resident migrants.

Migrants from HCV endemic regions

Although responses also vary, most GPs and many SHS providers tend to recommend HCV testing to migrants. This implies that health professionals consider a migrant background as an indicator for HCV screening. It may be prompted by the awareness that there is a proportion of migrant sex workers who are at risk of contracting and transmitting this disease[46]. However, its lack of unanimity calls actions to improve the vigilance of health professionals and reach more conformed practices of HCV screening among migrants from endemic areas.

Copayment from migrants for HBV or HCV screening

The 6 study countries have different systems in governmental health care funding, but they all provide care for emergencies and acute illnesses. Screening as part of preventive medicine, however, falls short in this respect. When screening is included in national health policies, more focus is given on noninfectious diseases such as breast cancer and coronary heart disease risk factors. Infectious disease screening focuses mainly on HIV, while routine hepatitis B screening is only part of the policies integral to antenatal care[87]. As shown by responses from general experts, some cases of HBV screening in new and resident migrants are offered free of charge, but many experts are still uncertain whether this status entitles them to free HBV testing. As for HCV screening, the uncertainty is obvious.

Responses from most GPs and most SHS providers to HBV or HCV screening contradict each other, especially in Spain, where all GP respondents stated that they were free for migrants but all SHS providers reported the opposite. The criteria provided in selecting which migrant is eligible for free screening convey the idea that being a migrant is not enough as a basis for recommending screening. The migrant also has to fit other criteria in the country's recommended guideline or is entitled to free screening as part of their health insurance.

In the latest WHO report on global policies on viral hepatitis there was no specific statement of free HBV screening for migrants in all countries. Free HBV and or HCV screening is only available to citizens belonging to risk groups[63]. Reports on country health systems by the European Observation on Health Systems and Policies mention that infectious disease prophylaxis and health promotion are available to residents (registered migrants) because they are obligated to participate in a basic insurance scheme[83,87,88,89,90,91,92,93]. This obligatory insurance coverage could be either from their country of origin or from their new resident country, which means that the benefits and services may vary. Moreover, free HBV or HCV screening in adults except for pregnant women is not mentioned in the 6 countries health system reviews, despite quite comprehensive benefits and services available in the basic health care systems[83,87-93]. This unspecified national health financing scheme and different health care coverage owned by individual migrants may likely be the cause of ambiguous knowledge on the funding of HBV and HCV screening among health professionals.

Asylum seekers

Hepatitis B screening

General experts in our survey provided a diverse picture in HBV screening within their countries, with very few in proportion (except in Italy) stating that it was offered regularly. These

results possibly stem from the different health care provision by each country, and perhaps even its regions[94]. A survey on European country policies in 2005 was done among representatives of a country's health ministry or NGOs involved in asylum seekers' health care. The survey found that medical screening was available free of charge to asylum seekers arriving in 23 EU countries, including the six in this study. It also found that though screening for infectious diseases existed, their delivery varied between the diseases and the countries, and some were compulsory while others were voluntary. HBV screening was mentioned by only a few countries, while HCV screening was not reported at all[94].

Furthermore, differences between regions or federal states are reported in Germany and Italy[94]. Interestingly, a number of asylum seekers' care providers from not only these two countries, but also the UK, and the Netherlands reported the existence of regional differences. This begs the question on whether there are regional differences in these countries, or whether the practices simply differ from the national policies. Nonetheless, inconsistency with the reported national policies in the UK and the Netherlands requires further study beyond the scope of this survey.

Another analysis on asylum seekers health care country policies reported that policies in Italy, Spain, the UK, and the Netherlands entitle asylum seekers to health care as nationals (citizens). However, the analysis also mentioned that it may take them quite a long time to complete the necessary registration as the case in Spain (due to a prolonged process), and in Germany they must be staying for over 48 months to receive this entitlement[95]. The testing and treatment of STIs are accessible free of charge in all study countries, except Hungary; therefore, the availability of HBV testing depends on whether it is included in the STI list in the country or not[93,95]. The results in this report further explain the lack of regular HBV screening reported by general experts.

These reasons may also contribute to the lack of routine practice apparent among GPs (except in Italy). In the Netherlands and the UK asylum seekers are referred to GPs when they need medical care. Considering the many illnesses asylum seekers may suffer from, namely HIV and mental illnesses due to trauma[96], GPs may hesitate to recommend HBV screening in the face of other relatively more urgent diseases.

Regular practices reported by GPs in Italy may be related to the strict vaccination policies in the country. Mandatory vaccination in Italy[23] may have promoted more routine HBV screening recommendation. In addition, health professionals in regions that frequently receive asylum seekers or refugees may be more aware of the health risks they bring about. A recent report on Lampedusa, an island in Italy that had recently been receiving large numbers of refugees from African countries[46]

found that the centre is quite equipped in terms of health professionals and medical supplies. The report did not specify viral hepatitis as one of the diseases that must be reported. However, it did mention *jaundice*, which is a typical manifestation of viral hepatitis, as a symptom that is part of their surveillance protocol.

Hepatitis C screening

Diverse results regarding HCV screening recommendation again signifies a lack of consensus among health professionals, similar to HBV screening. Interestingly, however, fewer general experts in the UK, Germany, the Netherlands, and Spain reported regular recommendation of the test. These results, however diverse, confirm to an extent the finding in another study done on health ministries and NGOs' (Non-governmental organizations) respresentatives of 23 EU countries regarding asylum seekers' care[94], that HCV screening is not offered to asylum seekers.

On the other hand, one asylum seekers' care provider each in the UK and the Netherlands stated that HCV testing was offered on a regular basis, when none said so for HBV. Results from other countries are similarly diverse as for HBV. All in all, they suggest that in practice more care providers are concerned about HCV among asylum seekers although their country's national policies did not put it into recommendation.

The discrepancy between known policy and practices may be influenced by regional differences, or the possibility of it, as reported from all study countries except Hungary. More asylum seekers' care providers in Germany and Italy confirmed the finding in the country policies comparison study[94] that regional differences indeed exist, and more so in comparison to HBV screening.

Behavioral risk groups (IDUs, sex workers, MSM)

Hepatitis B and C screening

The practices of the participating health experts differ at times from guidelines concerning HBV and HCV screening recommendation in IDUs, sex workers, and MSM in their respective countries. However, it is encouraging that although reported practices vary, GPs and sexual health care providers are more inclined to offer HBV and or HCV screening to IDUs, sex workers, and MSM than as known by general experts.

If the responding professionals do not practice day-to-day medicine, the lack of regular HBV or HCV screening recommendation may be partially explained by unawareness of available guidelines. If GPs are indeed aware of the risk factors, it is very likely that they have other medical

judgments for not offering a testing. Specifically for GPs and SHS providers, it can be assumed that they are aware how hepatitis B is more relevant to sexual practices than hepatitis C. This idea is suggested by the much higher number of GPs recommending HCV than HBV screening to IDUs and the higher number of SHS providers recommending HBV than HCV testing to sex workers in the Netherlands.

Of note, results in the UK demonstrate a general lack of routine practices of HCV testing in comparison to HBV (except SHS providers on IDUs). The GPs are more consistent in testing for HBV among IDUs, but not as much regarding HCV. This occurs in spite of ongoing programs to promote public awareness on hepatitis C in the UK[60] and the publication of a policy solely dedicated to fight HCV in England, in which past and present IDUs are clearly highlighted as the main group at-risk for transmitting HCV in the country[69].

HIV positive patients

Hepatitis B and C screening

Health professionals do not always offer HBV and HCV screening to HIV-positive individuals. This does not comply with international guidelines on HIV patient management[97,98] and HBV and HCV screening recommendations[40]. Only in Italy and Spain is a degree of consensus observed between general experts, GPs, and SHS providers. In the other four countries, more GPs and SHS providers commonly offer both testing than known by general experts. These suggest that some expert groups have better awareness of HIV positive individuals as a group at-risk of contracting both HBV and HCV, perhaps due to more exposure to such patients in their practices.

On a positive note, current practices show a high frequency of HBV and HCV recommendation to HIV positive patients, although less so in the Netherlands. This implies that most health care providers in GP or SHS settings are indeed aware of this group at risk. This is very likely due to rigorous campaigns against HIV, which also benefits efforts against other diseases with similar transmission routes or overlapping at-risk groups. For example, a Canadian review on needle exchange programs in prisons in several countries have concluded that they are effective in simultaneously preventing both HIV and HCV infection among IDUs in prisons[99].

Individuals with abnormal liver function test (LFT) results or exhibiting clinical symptoms

Hepatitis B and C screening

Diverse answers from general experts and GPs indicate that there is no consensus regarding HBV and HCV screening regarding individuals with abnormal LFT results. However, some general

trends are observed. General experts in Germany, the UK, and the Netherlands tend to believe that HBV and HCV testing are only occasionally offered to such persons. On the other hand, nearly all experts in Spain believe that the standard is routine HBV and HCV testing, and those in Italy believe so regarding HBV.

These may imply that general experts in the UK, Germany, and the Netherlands have personal considerations in this regard (when they coincidentally practices medicine) or are not fully aware of the recommendations for HBV and HCV screening among such individuals[40]. As further confirmed by responses regarding symptomatic persons, nearly all general experts stated that in such cases HBV test is regularly recommended.

Results also show that most GPs prefer to wait until a second abnormal LFT results or hepatitis symptoms to manifest before recommending HBV and HCV testing. This implies that GPs in general are aware of the risks of HBV and HCV infection but they require more evidence before recommending HBV or HCV tests. Yet, not many GPs in the UK and the Netherlands recommend HCV testing despite patients presenting viral hepatitis signs and symptoms.

Contacts

Hepatitis B and C screening

Most health services providers, especially specialists, would recommend screening contacts of HBV positive individuals for HBV as well. Interestingly, in Germany most general experts reported variable recommendation as opposed to the majority of all other survey groups. A divergence between common practices and known standard is also evident between SHS providers in comparison to other professionals in the Netherlands, as well as between asylum seekers' care providers and to other expert groups in Italy and Spain.

These discrepancies may be due to other selective criteria not mentioned in the survey, as many respondents have mentioned other criteria to decide on which contacts are recommended screening. At the same time, they may be caused by the lack of detailed definition in available guidelines. Last but not least, they may be a result of a lack of knowledge among health professionals in certain health care settings. For example, larger proportions of specialists in all countries reported recommending screening to all household and sexual contacts than any other professionals (except asylum seekers' care providers in the UK and Germany).

In case of household and sexual contacts of HCV positive individuals, more diverse and less routine screening offered to contacts are observed. This perhaps indicates that health professionals are aware that though uncommon, it is possible to contract HCV through sexual contact. This

indication is also suggested by the selection criteria reported by several respondents. For instance, they only select close family members, children or sexual contacts of HCV positive individuals.

Of note, experts have different ideas on who is responsible for the testing of contacts of either HBV or HCV positive patients. Although a degree of agreement is evident among experts, the overall diversity calls for attention as ambiguous responsible services in this case may result in inconsistent contract tracing. This diversity may likely be due to different health systems in each country[83,87-93]. Such detailed information is unfortunately unattainable from literature found on each country's health system. Nevertheless, if this reason plays a role in the lack of routine contact tracing, then health professionals need to be aware of the importance of a clear contact tracing pathway.

Hepatitis B or C positive individuals

Hepatitis B and C screening

Larger proportions of specialists and asylum seekers' care providers than GPs and SHS providers offer HBV or HCV screening to individuals infected with the other viral hepatitis. In terms of HCV testing among HBV positive individuals, only general experts in Spain show a similar inclination towards regular testing. In case of HBV testing among HCV positive individuals, only general experts in Italy and Spain demonstrate similar knowledge. These results likely signify that health professionals whose expertise more often involve viral hepatitis patients have better knowledge on the risks pertaining HBV and HCV infection. Although this is potentially due to their personal judgment in each case rather than a lack of knowledge, yet, responses among even specialists remain varied,. More diverse responses in GPs and SHS providers indicate a need to achieve more vigilant practices of health care providers in these primary care settings.

Diversity in who are responsible for testing these individuals according to AS care providers and specialists implies that there is no clear standard pathway for such individuals to follow. This may be seen as flexibility and convenience in directing individuals where to go for their tests. However, with such flexibility also comes the possibility of lost cases.

Occupational risk groups

Hepatitis B and C screening

Varying yet higher tendencies towards regular HBV screening recommendation among health care workers before employment are observed in all countries. Regular HCV screening, however, is much less reported by general experts. Furthermore, HBV and HCV screening is seldom or not at all

practiced. The lack of screening for both viral hepatitis is likely due to policies on HBV vaccination[15,63,100] and recommendations to improve safety among workers in health care services[15,43]. Even so, the 2012 European Consensus proposal continues to recommend screening before taking up a post as a health care worker as transmission could also occur due to infected health care workers[86].

Residents of confined facilities

Hepatitis B and C screening

To the knowledge of most general experts (except HBV in Spain), HBV and HCV screening are not regularly offered to people working or living in confined facilities such as nursing homes, prisons, and mental institutions. This suggests that most of these experts may not be aware of any recommendations to offer HBV and HCV screening to such persons[15,59].

Patients' request

Hepatitis B and C screening

Results signify that most GPs and SHS providers consent to their patients' request for HBV and HCV testing, although much less often according to SHS providers about HCV. This shows that in practice, when patients are aware of their risks then most health professionals will suggest testing. The fact that HCV testing is not offered as frequently by SHS providers is likely due to their awareness that HCV is not commonly transmitted sexually.

Blood transfusion recipient pre-1991

Hepatitis C screening

There is a general lack of regular HCV testing offered to this group at-risk. This may be explained by the current strict policies on routine HBV and HCV testing posed on blood banks[63] since 1991. Consequently general experts may not be aware of this risk in this particular population.

Recommendations

The overall view presented from this study clearly depicts inhomogeneous practices of HBV and HCV screening among at-risk groups in six European countries. In several cases they demonstrate common awareness of the risks and manage individuals belonging to at-risk groups according to known guidelines. This is indeed an encouraging implication; however, the fact remains that current practices lack consensus on who needs to be recommended HBV and HCV screening. It

is perhaps due to the non-obligatory nature of the recommendation. There are indeed policies and guidelines on hepatitis B and C prevention and control, but they are still lacking conformity. Moreover, if policies have yet to be established, policy makers should adopt EU and WHO recommendations[40,79] and enforce its practices.

Another glance at the results suggests that health professionals in all health care settings may not be fully aware of the chronic hepatitis B and C at-risk groups in the general population. Admittedly, several at-risk groups are specific to a health care setting or expertise. Even so, a consistent holistic approach from health professionals to patients who are at-risk of HBV or HCV infection is necessary in finding chronic viral hepatitis cases. Therefore, in spite of their previous professional training in the field of hepatitis B and C as reported in the 2013 WHO Global policy on the prevention and control of viral hepatitis[63], further training programs are mandatory to increase the awareness of health professionals and promote stringent practices in HBV and HCV screening in targeted population groups.

Limitations

Results of the study should be interpreted with caution as it has several limitations. The major encountered challenge is the small number of responses, particularly in some expert groups in some countries. This causes complexity in extracting a general overview of the standard practices in one country, let alone all study countries. A representative depiction of the standard practices in countries where the health care policy may differ between regions such as Italy or Germany is further restricted. Moreover, the disproportionate number of responses within expert groups between countries complicates the comparison of practices between groups of similar expertise.

The online survey data collection and the comprehensiveness of the questionnaire may have hindered a higher uptake of respondents. The impersonal nature of the online questionnaire completion may have restricted the number of respondents who are actually involved in day-to-day practices to participate in the survey. In addition, it may also have limited a more comprehensive understanding or justification of their answers.

Another limitation to interpreting the results and their implications is that compared literature are only those in English and available online. It is entirely possible that there are national or regional policies and other studies that are in the native languages of the study countries.

Conclusion

Viral hepatitis poses a public health threat in Europe in spite of its low prevalence rates in the general population. Primary prevention efforts against hepatitis B have so far been successful due to the availability of its vaccine and vaccinations programs throughout Europe. However, due to the nature of these infections, many infected people are unaware of their condition. Its asymptomatic chronic nature and following complications cause a great burden of disease to the infected individuals, their family, and society by way of the country's health system. Fortunately, reliable screening tests and treatment for chronic cases for both hepatitis B and C are available. Therefore, early detection is of utmost importance and can easily be achieved through screening.

Coordinated screening of the general population is not recommended due to HBV and HCV low prevalence rates. However, certain groups in the population have been identified as being vulnerable or at-risk of contraction or transmission. These groups have a much higher HBV or HCV prevalence rates and therefore, screening programs targeted to these groups are highly recommended.

Of the all at-risk groups, people with migrant backgrounds from endemic countries are a potential "new" threat to their new resident countries. In recent decades, European countries that have successfully lower the HBV and HCV prevalence rates have been receiving numerous migrants from other European countries or other regions with higher HBV and HCV endemicity. The receptive countries need to be aware of this and act accordingly to advert astronomical future health burdens.

Despite its recognition as a new threat, reported chronic viral hepatitis cases among people with migrant backgrounds are only a slice of the whole truth. Estimates projected that there may be numerous undetected cases, either among migrants or other at-risk groups. In order to find them, not only the public but also health professionals need to be aware of the risks of chronic viral hepatitis among individuals in their care. People with chronic viral hepatitis are often unaware of the disease, thus putting them at greater risk. There are indeed ongoing programs to promote public awareness. Unfortunately, these programs seem to be falling short in promoting essential uniform awareness among health care providers, as concluded by a literature review in the US. The review gathered US studies that reflected a lack of awareness among health care providers on screening recommendations for hepatitis B and C with a subsequent proposal to alleviate this[80]. However, not much is known about the awareness of health care providers and current practices in screening of hepatitis B and C at-risk groups in Europe.

This study provided insight on this essential information gap. The results have demonstrated that health care providers in Europe, to an extent, are aware of the groups vulnerable or at risk for chronic hepatitis B and C infection. However, their practices remain varied widely within and between their areas of expertise, not to mention between countries. The only vulnerable group that nearly reached a consensus in routine HBV screening was pregnant women. Other at-risk groups receive inconsistent screening recommendations, although some more consistent than others, depending on the country or the health care setting.

The lack of consensus in practices is clearly not in line with international recommendations in hepatitis B and C management[14,17,40,61,62]. Indeed, health professionals are entitled to their own personal judgment when treating patients. Nevertheless, continued diverse practices will not prevent future burden of diseases in this region. Consequently, strategies to increase the awareness of health care providers and their vigilance in screening for HBV and HCV are mandatory to prevent and control viral hepatitis in Europe.

Interpretation of the results of this study is not without limitations. Even so, this study has revealed that there is undoubtedly a need to improve targeted viral hepatitis screening practices by health care providers in Europe. Now there is stronger evidence that despite comprehensive training and medical education, health care professionals would potentially benefit from mass-implemented refreshment trainings to fight hepatitis B and C in Europe.

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ANNEX

Table A.1. *International recommendations on who should be screened for and or vaccinated against HBV.*

WHO (groups at risk)	CDC	European Guideline
Infants born to infected mothers	All pregnant women and infants born to HBsAg-positive mothers	
Young children in day-care or residential settings with other children in endemic areas		
Sexual or household contacts of infected persons	Household contacts and sex partners of HBV-infected persons	Sexual assault victims or sexual partners of HBsAg-positive patients
Health care workers	Persons who are the source of blood or body fluid exposures that might warrant postexposure prophylaxis (e.g., needlestick injury to a health care worker)	
Patients and employeed in haemodialysis centres		
Injection drug users sharing unsterile needles	Injection-drug users	Injection-drug users
People sharing unsterile medical or dental equipment		
People providing or receiving acupuncture and or tattooing with unsterile medical devices		
Persons living in regions or travelling to regions with endemic hepatitis		
Sexually active heterosexuals		sex workers and heterosexual people with multiple sex partners
Men who have sex with men	Men who have sex with men	Men who have sex with men
	Persons with selected medical conditions who require immunosuppresive therapy	All patients prior to immunomodulatory therapies and chemotherapy
	People with HIV infection	All HIV-positive patients
	Persons born in geographic regions with HBsAg prevalence of ≥2%	Patients from highly endemic areas
	US born persons not vaccinated as infants whose parents were born in geographic regions with HBsAg prevalence of ≥8%	
	Persons with elevated ALT/AST of unknown	Patients showing symptoms of acute hepatitis

	etiology	
		Patients requesting sexually transmitted illnesses testing (when local prevalence is >1%)

Sources:
-World Health Organization. Hepatitis B. 2002. WHO. http://who.int/emc.

-Central for Disease Control. Testing and Public Health Management of Persons with Chronic Hepatitis B Virus Infection (Revised April 2011). 2011. http://www.cdc.gov/hepatitis/HBV/TestingChronic.htm

-Brook G, et al. European guideeline for the management of hepatitis B and C virus infections, 2010. International Journal of STD & AIDS. 2010; 21: 669-678.

Table A.2. *International recommendations on who should be screened for HCV.*

WHO (groups at risk)	CDC	European Guideline
People who have received blood, blood products or organs before screening of HCV was implemented, or where screening was not yet widespread	People who were prior recipients of transfusions or organ transplant, including those who were notified that their donor was later tested positive for HCV and who received transfusions or organ transplants before July 1992)	Haemophiliac men or other patients who received blood or blood products pre-1991 and in people sustaining a needle-stick injury if the donor is HCV-positive or unknown
Current or former injecting drug users (even those who injected drugs many years ago)	Currently injecting or ever injected drug users (once or a few times many years ago)	Active or inactive injecting drug users
People on long-term haemodialysis	People who have certain medical condition, including persons who received clotting factor concentrates produced before 1987, who were ever on long-term hemodialysis	
Health care workers	Healthcare, emergency medical, and public safety workers after needle sticks, sharps, or mucosal exposures to HCV-positive blood	
HIV-positive people		All HIV-infected persons
People with abnormal liver tests or liver disease	People with persistently abnormal LFT	Patients showing symptoms of acute hepatitis
Infants born to infected mothers	Children born to HCV-positive women	
	Pregnant women*	
	Household (nonsexual) contacts of HCV-positive persons*	
	General population*	
		Sexual partners of HCV-positive patients
		Men who have sex with men, especially with an HIV-infected person
		Female sex workers
		Tattoo recipients
		Alcoholics
		Ex-prisoners

* Testing is not recommended without known risk factors for infection

Sources:

-World Health Organization. Hepatitis C. 2002. WHO. http://who.int/emc.

-Central for Disease Control. Testing Recommendations for Chronic Hepatitis C Virus Infection. (Revised May 2013). 2013. http://www.cdc.gov/hepatitis/hcv/guidelinesc.htm

-Brook G, et al. European guideeline for the management of hepatitis B and C virus infections, 2010. International Journal of STD & AIDS. 2010; 21: 669-678.

Table A.3. *Country recommendations on who should be screened for and or vaccinated against HBV.*

Risk factors	Germany	Hungary	Italy	Spain	Nether-lands	UK
Persons with elevated Liver Function Test (LFT) or showing liver disease manifestations	X					X
Patients with liver chirrosis or fibrosis	X					
Patients with Hepatocelular carcinoma (HCC)	X					
Patients with chronic liver diseases						X
Persons with a migration background from regions of high HBsAg prevalence	X				X	X
Families adopting children from regions of high HBsAg prevalence						X
Family or household contacts i.e. sexual partners of HBV+ patients	X		X	X		Xg
Healthcare workers	X		X	Xd	X	Xd
Patients in psychiatric institutions or other confined institutions, including prisons	X			Xe		Xe
Male having sex with other males (MSM)	X		X	X	X	X
Persons with multiple sexual partners and or sex workers	X			Xf	X	X
Injecting drug users (IDU)	Xa		X	X	X	X
Dialysis patients	X		Xc	X		Xc
HIV+ and or HCV+ patients	X					Xh
Organ transplant recipients (before and after)	X					
Blood and or organ donor	Xb	X	X	X	X	X
Patients undergoing immunosupressive therapy or chemotherapy	X					
Pregnant women	X	X	X	X	X	X
Newborns from HBsAg+ mothers	X					X
Travellers to regions of high HBsAg prevalence				X		X
Blood transfusion or blood product recipients			X	X		X

Xa: Specifically includes active and previous IDUs

Xb: Includes sperm donor

Xc: Includes polytransfused patients (Italy) and haemophylic patients (UK)

Xd: Includes public safety workers with frequent blood contact (Spain) and needle-stick injury victims and other occupational risk groups (UK)

Xe: Includes the staff (Spain & UK) and specifically people with severe learning disabilities (UK)

Xf: Includes people with history of STI

Xg: Includes sex workers and sex assault victims

Xh: Only HIV-positive persons

Sources:

-*European Centre for Disease Prevention and Control. Hepatitis B and in the EU Neighbourhood: Prevalence, Burden of Disease and Screening Policies. 2010. ECDC. Stockholm, Sweden.*

-*Comberg M, et al. Prophylaxis, Diagnosis and Therapy of Hepatitis B Virus Infection - The German Guideline. Z Gastroenterol. 2011; 49: 871-930.*

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-*Peralta PSO. Meeting News: Hepatitis vaccination policy, vaccine coverage and impact of immunization programmes in Spain. Viral Hepatitis. 2007; 15(2): 14-17*

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-*Hahne S and de Knegt R. Meeting News: HBV vaccination in the Netherlands - Risk group approach. Viral Hepatitis. 2009; 17(2): 19-21.*

-*Clinical Effectiveness Group British Association of Sexual Health and HIV. United Kingdom National Guideline on the Management of the Viral Hepatitides A, B & C 2008. 2008. BASHH. London, UK.*

-*Thomas H, et al. Meeting News: Hepatitis B prevention: current practice in the United Kingdom. Viral Hepatitis. 2006; 14(2): 6-7.*

Table A.4. *Country recommendations on who should be screened for HCV.*

Risk factors	Germany	Hungary	Italy	Spain	Nether-lands	UK
Haemodyalisis patients	X		X		X	
Blood coagulation factors recepients before 1987						
Blood transfusion or organ transplant recipients before 1990-1992 (depending on the country)	X		X		X	X
Household and or sexual partners of HCV+ patients	X		X			X
Persons with multiple sex partners			Xc		X	X
MSM					X	X
Sex workers						X
Pregnant women			Xd	X		X
Blood donor	Xa	X	X	X	X	X
Healthcare workers	X		X			X
Persons receiving medical and or dental procedures abroad where HCV is common and hygiene may be poor			Xe			X
Persons at risk of re-using blood contaminated equipment (tatooing and skin piercing equipment or razors)			X			X
IDUs	Xb				X	X
Patients with elevated transaminase or showing symptoms of chronic hepatitis						X
Prison inmates	X					X
HIV+ and or HBV+ patients	X					Xf
Persons with a migration background from regions of high HBsAg prevalence	X					
Alcoholics						X

Xa: Includes organ donors

Xb: Specifically includes active and previous users

Xc: Includes persons who have ever been diagnosed with an STI

Xd: Done in Liguria

Xe: Not only procedures abroad and includes hospitalization

Xf: Only HIV-positive patients

Sources:

-European Centre for Disease Prevention and Control. Hepatitis B and in the EU Neighbourhood: Prevalence, Burden of Disease and Screening Policies. 2010. ECDC. Stockholm, Sweden.

-Sarrazin C, et al. Prophylaxis, Diagnosis and Therapy of Hepatitis C Virus (HCV) Infection: The German Guidelines on the Management of HCV Infection. Z Gastrolenterol. 2010; 48: 289-351.

-Crovari P. Meeting News: Epidemiology of hepatitis C virus infection in Italy. Viral Hepatitis. 2003; 11(2): 12-13.

-de Knegt R et al. Meeting News: Prevention and treatment approaches in HCV risk groups. Viral Hepatitis. 2009; 17(2):15-16.

-*Clinical Effectiveness Group British Association of Sexual Health and HIV. United Kingdom National Guideline on the Management of the Viral Hepatitides A, B & C 2008. 2008. BASHH. London, UK.*

-*Department of Health. Hepatitis C Action Plan for England. 2004. Department of Health. London, UK.*

Table A.5. *Copayment requirement from pregnant women for hepatitis B and C screening (ANC survey).*

Copayment: pregnant women		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n=8)	(n=35)	(n=6)	(n=4)	(n=24)	(n=8)
HBV	Yes – contribution required from all	0	0	0	0	0	0
	Only free for some	0	0	0	0	1	0
	No – free for all	8	35	6	4	23	8
		(n=3)	(n=2)	(n=1)	(n=3)	(n=19)	(n=7)
HCV	Yes – contribution required from all	3	0	1	2	17	7
	Only free for some	0	0	0	1	2	0
	No – free for all	0	1	0	0	0	0
	Unsure	0	1	0	0	0	0

Table A.6. *Copayment requirements from new and resident migrants for hepatitis B screening (GS survey).*

Copayment for Hep B screening from new and resident migrants		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 4)	(n= 2)	(n= 2)	(n= 2)	(n= 4)	(n=4)
New migrants	Yes – contribution required from all	0	0	0	1	0	0
	Only free for some	1	0	0	0	0	0
	No – free for all	1	1	1	0	2	3
	Unsure	2	1	1	1	2	1
		(n= 4)	(n= 6)	(n= 4)	(n= 1)	(n= 4)	(n=5)
Resident migrants	Yes – contribution required from all	0	1	0	0	1	0
	Only free for some	0	1	2	0	0	0
	No – free for all	2	2	2	1	1	5
	Unsure	2	2	0	0	2	0

Table A.7. *Copayment requirements from new and resident migrants for hepatitis C screening (GS survey).*

Copayment for Hep C screening from new and resident migrants		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 3)	(n= 3)	(n= 0)	(n= 2)	(n= 4)	(n=3)
New migrants	Yes – contribution required from all	0	0	0	0	0	0
	Only free for some	0	0	0	0	0	0
	No – free for all	0	0	0	0	0	0
	Unsure	3	3	0	2	4	3
		(n= 3)	(n= 3)	(n= 3)	(n= 1)	(n= 4)	(n=3)
Resident migrants	Yes – contribution required from all	0	0	0	0	0	0
	Only free for some	0	0	0	0	0	0
	No – free for all	0	0	0	0	0	0
	Unsure	3	3	3	1	4	3

Table A.8. *Copayment requirements from migrants for hepatitis B/ C screening (GP and SHS surveys).*

Copayment for Hep B/C screening from migrants		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 8)	(n= 4)	(n= 7)	(n= 1)	(n= 9)	(n= 2)
GP: Migrants	Yes – contribution required from all	0	0	1	0	1	0
	Only free for some	0	0	1	1	2	0
	No – free for all	6	4	4	0	5	2
	Unsure	2	0	1	0	1	0
		(n= 9)	(n= 4)	(n= 5)	(n= 2)	(n= 1)	(n= 2)
SHS: Migrants	Yes – contribution required from all	9	0	3	1	0	2
	Only free for some	0	3	1	1	1	0
	No – free for all	0	0	0	0	0	0
	Unsure	0	1	1	0	0	0

Table A.9. *Health services responsible for hepatitis B or C screening in contacts of patients with HBV or HCV (ANC, GP, AS, SHS, Sp surveys).*

Health services responsible for Hep B/C screening of contacts of HBV/HCV+ patients		**UK** (n=5)	**DE** (n=4)	**NL** (n=8)	**HU** (n=1)	**IT** (n=13)	**ES** (n=1)
GP	**General Practitioner(s)**	2	2	2	1	9	1
	Public Health Service/ Health Protection Unit	1	2	5	0	4	0
	Sexual Health Services/GUM	1	0	0	0	0	0
	Hospitals or clinics	0	0	0	0	0	0
	Other	1	0	1	0	0	0
	Unsure	0	0	0	0	0	0
		(n=2)	(n=2)	(n=4)	(n=3)	(n=2)	(n=1)
AS	**Health Service at receiving centre/national border control**	0	0	0	0	0	0
	General Practitioner(s)	1	2	0	0	0	0
	Public Health Service/Health Protection Unit	0	0	2	1	0	0
	Sexual Health Services/GUM	0	0	0	0	0	0
	Hospitals or clinics	0	0	0	0	0	0
	Community or Practice Nurses	1	0	0	0	0	0
	Other	0	0	0	0	0	0
	Unsure	0	0	2	2	2	1
		(n= 10)	(n= 3)	(n= 6)	(n= 2)	(n= 1)	(n= 1)
SHS	**General Practitioner(s)**	1	0	2	0	0	0
	Public Health Service/ Health Protection Unit	1	2	2	1	1	0
	Infectious Disease specialists	0	0	0	1	0	0
	Gastroenterologists/ Hepatologists	0	0	0	0	0	0
	Sexual Health Services/GUM	2	0	1	0	0	1

	Hospitals or clinics	0	0	0	0	0	0
	Other	3	0	0	0	0	0
	Unsure	3	1	1	0	0	0
		(n= 10)	(n= 8)	(n= 22)	(n= 8)	(n= 9)	(n=4)
Sp	**General Practitioner(s)**	7	5	5	1	3	3
	Public Health Service/Health Protection Unit	1	0	11	1	0	0
	Sexual Health Services/GUM	1	0	0	0	0	0
	Hospitals or clinics	0	1	0	6	5	0
	Other	1	0	4	0	1	1
	Unsure	0	2	2	0	0	0

Table A.10. *Health services responsible for screening household or sexual contacts of pregnant women with HBV (ANC survey).*

Health services responsible for Hep B screening of contacts of HBV+ pregnant women		**UK** (n=3)	**DE** (n=16)	**NL** (n=4)	**HU** (n=3)	**IT** (n=17)	**ES** (n=3)
ANC	**General Practitioner(s)**	0	4	0	1	8	2
	Public Health Service/Health Protection Unit	2	5	3	2	5	0
	Infectious Disease specialists	0	2	0	0	0	1
	Gastroenterologists/ Hepatologists	1	0	0	0	1	0
	Obstetricians/Gynaecologists	0	3	0	0	1	0
	Other	0	0	1	0	0	0
	Unsure	0	2	0	0	2	0

Table A.11. *Contact tracing of pregnant women with HBV involves midwives (ANC survey).*

Midwives involved in contact tracing of HBV+ women	**UK** (n=8)	**DE** (n=35)	**NL** (n=6)	**HU** (n=4)	**IT** (n=24)	**ES** (n=8)
Yes	0	11	2	2	16	5
No	6	6	4	2	6	1
Unsure	2	18	0	0	2	2

Table A.12.*Contact tracing of pregnant women with HCV involves midwives (ANC survey).*

Midwives involved in contact tracing of HCV+ women	**UK** (n=3)	**DE** (n=2)	**NL** (n=1)	**HU** (n=3)	**IT** (n=19)	**ES** (n=7)
Yes	0	0	1	1	12	5
No	3	0	0	2	4	1
Unsure	0	2	0	0	3	1

Table A.13. *Role of sexual health services in tracing contacts of patients with HBV or HCV (SHS survey).*

SHS involved in contact tracing of HBV/HCV+ patients	**UK** (n= 10)	**DE** (n= 5)	**NL** (n= 8)	**HU** (n= 3)	**IT** (n= 1)	**ES** (n= 2)
Yes	10	0	5	0	1	1
No	0	1	3	3	0	1
Unsure	0	4	0	0	0	0

Table A.14. *Screening hepatitis B positive patients for hepatitis C (GS Survey).*

HBV+ patients: Screen for HCV		**UK** (n= 9)	**DE** (n= 14)	**NL** (n= 7)	**HU** (n= 2)	**IT** (n= 8)	**ES** (n=8)
GS	Yes - on a regular basis	3	3	1	1	4	6
	Yes - sporadically / rarely	4	8	3	1	0	0
	No	0	0	1	0	0	0
	Unsure	2	3	2	0	4	2

Table A.15. *Screening hepatitis B positive patients for hepatitis C (GP and SHS surveys).*

HBV+ patients: Screen for HCV		**UK** (n= 10)	**DE** (n= 4)	**NL** (n= 9)	**HU** (n= 1)	**IT** (n= 14)	**ES** (n= 2)
GP	Very common	6	3	7	1	11	1
	Variable or not routinely	3	1	1	0	3	1
	Rarely or never	0	0	1	0	0	0
	Unsure	1	0	0	0	0	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	7	2	2	1	1	1
	Variable or not routinely	2	2	1	1	0	0
	Rarely or never	0	0	4	0	0	0
	Unsure	1	1	1	1	0	1

Table A.16. *Screening hepatitis B positive patients for hepatitis C (AS and Sp survey).*

HBV+ patients: Screen for HCV		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 4)	(n= 3)	(n= 4)	(n= 3)	(n= 3)	(n= 1)
AS	Yes – all patients	4	1	3	1	2	0
	Yes - a selection of patients	0	0	1	1	0	0
	No	0	0	0	0	1	0
	Unsure	0	2	0	1	0	1
		(n= 10)	(n= 9)	(n= 22)	(n= 10)	(n= 9)	(n=4)
Sp	Yes - all	9	9	21	6	8	3
	Yes - a selection of patients	0	0	0	1	0	0
	No	0	0	0	0	1	0
	Unsure	1	0	1	3	0	1

Table A.17. *Screening hepatitis C positive patients for hepatitis B (GS Survey).*

HCV+ patients: Screen for HBV		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	4	5	3	2	6	7
	Yes - sporadically / rarely	4	6	3	0	0	0
	No	0	0	0	0	0	1
	Unsure	1	3	1	0	2	0

Table 20. *Screening hepatitis C positive patients for hepatitis B (GP and SHS surveys).*

HCV+ patients: Screen for HBV		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	8	3	7	1	10	2
	Variable or not routinely	1	1	1	0	2	0
	Rarely or never	0	0	0	0	1	0
	Unsure	1	0	1	0	1	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	8	4	3	2	1	2
	Variable or not routinely	1	0	4	0	0	0
	Rarely or never	0	0	1	0	0	0
	Unsure	1	1	0	1	0	0

Table A.18. *Screening hepatitis C positive patients for hepatitis B (AS and Sp survey).*

HCV+ patients: Screen for HBV		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 4)	(n= 3)	(n= 4)	(n= 3)	(n= 3)	(n= 1)
AS	Yes - all	4	1	4	1	2	0
	Yes - a selection of patients	0	0	0	1	0	0
	No	0	0	0	0	1	0
	Unsure	0	2	0	1	0	1
		(n= 10)	(n= 9)	(n= 22)	(n= 10)	(n= 9)	(n=4)
Sp	Yes - all	10	9	22	7	7	4
	Yes - a selection of patients	0	0	0	1	2	0
	No	0	0	0	0	0	0
	Unsure	0	0	0	2	0	0

Table A.19. *Health services responsible for screening HBV or HCV positive patients for other hepatitis viruses (AS survey).*

Responsible health services for screening for other hepatitis viruses		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 4)	(n= 1)	(n= 4)	(n= 2)	(n= 2)	(n=0)
AS	**Health Service at receiving centre/national border control**	0	0	0	0	0	0
	General Practitioner(s)	3	0	3	0	1	0
	Public Health Service/Health Protection Unit	0	1	0	2	0	0
	Sexual Health Services/GUM	0	0	0	0	0	0
	Hospitals or clinics	0	0	0	0	0	0
	Community or practice nurse	1	0	0	0	0	0
	Other	0	0	1	0	0	0
	Unsure	0	0	0	0	1	0

Table A.20. *Health services responsible for screening HBV or HCV positive patients for other hepatitis viruses (Sp survey).*

Responsible health services for screening for other hepatitis viruses		**UK** (n= 10)	**DE** (n= 9)	**NL** (n= 22)	**HU** (n= 8)	**IT** (n= 9)	**ES** (n=3)
Sp	**General Practitioner(s)**	0	5	3	0	1	1
	Public Health Service/Health Protection Unit	0	0	2	0	0	0
	Sexual Health Services/GUM	0	0	0	1	0	0
	Hospitals orclinics	9	2	14	6	8	2
	Other	1	0	3	1	0	1
	Unsure	0	2	0	0	0	0

Table A.21. *Standard screening practices of hepatitis B in occupational risk groups (GS survey).*

HBV: occupational risk groups		**UK** (n= 9)	**DE** (n= 14)	**NL** (n= 7)	**HU** (n= 2)	**IT** (n= 8)	**ES** (n=8)
Health care workers	Yes - on a regular basis	4	8	4	2	5	4
	Yes - sporadically / rarely	3	3	1	0	0	2
	No	0	1	2	0	1	0
	Unsure	2	2	0	0	2	2
Students in health care	Yes - on a regular basis	4	3	3	1	3	2
	Yes - sporadically / rarely	2	5	1	0	2	1
	No	0	2	2	1	2	4
	Unsure	3	4	1	0	1	1
Other workers	Yes - on a regular basis	2	3	1	1	5	3
	Yes - sporadically / rarely	4	5	2	0	1	3
	No	0	1	3	0	1	1
	Unsure	3	5	1	1	1	1

Table A.22. *Standard screening practices of hepatitis C in occupational risk groups (GS survey).*

HCV: occupational risk groups		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
Health care workers	Yes - on a regular basis	2	3	0	0	2	2
	Yes - sporadically / rarely	1	5	0	2	3	2
	No	4	4	4	0	1	2
	Unsure	2	2	3	0	2	2
Students in health care	Yes - on a regular basis	3	1	0	0	2	1
	Yes - sporadically / rarely	1	2	0	0	2	0
	No	3	5	4	2	2	5
	Unsure	2	6	3	0	2	2
Other workers	Yes - on a regular basis	1	2	0	0	4	2
	Yes - sporadically / rarely	1	4	0	1	2	1
	No	4	2	4	1	1	2
	Unsure	3	6	3	0	1	3

Table A.23. *Screening practices of hepatitis B in residents of closed facilities (GS survey).*

HBV: residents of closed facilities		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	3	2	0	0	2	5
	Yes - sporadically / rarely	4	5	1	2	3	2
	No	1	1	4	0	1	0
	Unsure	1	6	2	0	2	1

Table A.24. *Screening practices of hepatitis C in residents of closed facilities (GS survey).*

HCV: residents of closed facilities		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	1	0	0	0	3	2
	Yes - sporadically / rarely	4	6	0	1	2	3
	No	2	2	4	1	1	2
	Unsure	2	6	3	0	2	1

Table A.25. *Hepatitis B screening of people who request for a test (GP and SHS survey).*

HBV: patients' request		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	8	3	8	1	9	1
	Variable or not routinely	1	1	1	0	3	1
	Rarely or never	0	0	0	0	1	0
	Unsure	1	0	0	0	1	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	6	4	3	1	0	2
	Variable or not routinely	3	1	5	2	1	0
	Rarely or never	1	0	0	0	0	0
	Unsure	0	0	0	0	0	0

Table A.26. *Hepatitis C screening of people who request for a test (GP and SHS survey).*

HCV: patients' request		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 10)	(n= 4)	(n= 9)	(n= 1)	(n= 14)	(n= 2)
GP	Very common	8	3	6	0	11	2
	Variable or not routinely	1	1	3	0	2	0
	Rarely or never	0	0	0	0	1	0
	Unsure	1	0	0	1	0	0
		(n= 10)	(n= 5)	(n= 8)	(n= 3)	(n= 1)	(n= 2)
SHS	Very common	6	2	2	1	0	1
	Variable or not routinely	3	1	1	2	1	0
	Rarely or never	1	1	4	0	0	0
	Unsure	0	1	1	0	0	1

Table A.27. *Screening practices of hepatitis C in patients who received blood transfusion before 1991 (GS survey).*

HCV: pre-1991 blood recipents		**UK**	**DE**	**NL**	**HU**	**IT**	**ES**
		(n= 9)	(n= 14)	(n= 7)	(n= 2)	(n= 8)	(n=8)
GS	Yes - on a regular basis	2	2	0	0	2	2
	Yes - sporadically / rarely	4	6	1	1	4	4
	No	2	2	4	1	1	1
	Unsure	1	4	2	0	1	1

General screening and patient management practices for Hepatitis B and C

Welcome text

You have been approached to complete this survey as an expert in your professional field of public health, and/or as part of your involvement in a national or regional level organisation that represents clinicians and/or public health professionals. It is from this representative position that we would like you to respond to the survey. We are interested in the general or routine viral hepatitis related screening and clinical management practices in your country.

This survey has been sent to experts in seven different countries in the EU. We recognise that practices will differ between the seven countries and have tried to reflect this diversity in the structure and answering options. Although there may be aspects of the survey that are not applicable to the situation in your country, the structure of the survey will enable you to reflect that in your answers.

The survey will take approximately 15-20 minutes. It is possible to stop and complete the survey at a later time.

Please be assured that your responses will be kept anonymous.

Section 1: Respondent profile

These questions relate to your involvement in a national or regional level organisation that represents clinicians and/or public health professionals and/or patients.

1. What is the name of your organisation? ……..

2. What type of organisation is it?
   - NGO
   - National Government
   - Regional Government
   - Clinical Association
   - Professional Organisation
   - University
   - Patient association
   - Other (please specify): …….

3. What is your Job Role/Job Title: …….

4. Do you also have clinical responsibilities and are directly involved in the care of patients?
   - Yes
   - No [skip to section 2]

5. What type of medical facility do you work in?
   - GP practice
   - Public health service/health protection unit
   - Clinic (outside a hospital)
   - General hospital
   - University/Teaching hospital
   - Health care service at receiving center/national border control

6. What is your medical specialism/clinical role?
    - General Practitioner
    - Infectious Disease specialist
    - Gastroenterologist/Hepatologist
    - Gynaecologist/Obstetrician
    - Other (please specify): ……

7. How often do you see patients with a chronic hepatitis B or hepatitis C infection?
    - Never
    - A few patients per year (1-10)
    - On a monthly basis
    - On a weekly basis

Section 2: Hepatitis B screening/testing practices:

8. In your experience what is the **standard screening/testing practice for hepatitis B** in your country? Is screening/testing for hepatitis B offered to the following subgroups?

	Yes - on a regular basis	**Yes - sporadically / rarely**	**No**	**Unsure**
Pregnant women (antenatal screening)				
Household and/or sexual contacts of hepatitis B positive patients				
Before employment in medical services: health care, hospital or clinic staff				
Students in health care professions				
Before employment in occupations with high exposure risk (other than health care)				
Residents/inmates of closed facilities (e.g. prisoners, psychiatric hospitals etc.)				
HIV positive patients				
Hepatitis C positive patients				
Injecting Drug Users (IDUs)				
Sex workers				
Homosexual men (MSM)				
Patients with abnormal liver function test				
Jaundiced patients or those exhibiting signs and symptoms of hepatitis				
Asylum seekers from hepatitis B endemic regions				
New immigrants and permanent/ long-term visa applicants from hepatitis B endemic regions (other than asylum seekers)				
Resident migrants from hepatitis B endemic regions (long term citizens with a migrant background)				

9. [If YES to screening/testing of Asylum seekers]
   Is **individual co-payment/contribution** required for screening from Asylum seekers?
   - No – free for all
   - Yes - only free for some (indicate for which subgroups co-payment is **not** required): ….
   - Yes – contribution required from all
   - Unsure

10. [If YES to screening/testing of new immigrants]
    Is **individual co-payment/contribution** required for screening from new immigrants and permanent/ long-term visa applicants (other than asylum seekers)?
    - No – free for all
    - Yes - only free for some (indicate for which subgroups co-payment is **not** required): ….
    - Yes – contribution required from all
    - Unsure

11. [If YES to screening/testing of resident migrants]
    Is **individual co-payment/contribution** required for screening from resident migrants (long term citizens with a migrant background)?
    - No – free for all
    - Yes - only free for some (indicate for which subgroups co-payment is **not** required): ….
    - Yes – contribution required from all
    - Unsure

12. After screening, are hepatitis B negative individuals **vaccinated**?

	Yes	**Some-times**	**No**	**Unsure**
Pregnant women (antenatal screening)				
Household and/or sexual contacts of hepatitis B positive patients				
Before employment in medical services: health care, hospital or clinic staff				
Students in health care professions				
Before employment in occupations with high exposure risk (other than health care)				
Residents/inmates of closed facilities (e.g. prisoners, psychiatric hospitals etc.)				
HIV positive patients				
Hepatitis C positive patients				
Injecting Drug Users (IDUs)				
Sex workers				
Homosexual men (MSM)				
Patients with abnormal liver function test				
Jaundiced patients or those exhibiting signs and symptoms of hepatitis				
Asylum seekers from hepatitis B endemic regions				
New immigrants and permanent/ long-term visa applicants from hepatitis B endemic regions (other than asylum seekers)				
Resident migrants from hepatitis B endemic regions (long term citizens with a migrant background)				

13. [If Yes or Sometimes to vaccination of Asylum seekers]
    Is **individual co-payment/contribution** required for **vaccination** from Asylum seekers?
    - No – free for all
    - Yes - only free for some (indicate for which subgroups co-payment is **not** required):…..
    - Yes – contribution required from all
    - Unsure

14. [If Yes or Sometimes to vaccination of new immigrants]
    Is **individual co-payment/contribution** required for **vaccination** from new immigrants and permanent/ long-term visa applicants (other than asylum seekers)?
    - No – free for all
    - Yes - only free for some (indicate for which subgroups co-payment is **not** required):…….
    - Yes – contribution required from all
    - Unsure

15. [If Yes or Sometimes to vaccination of resident migrants]
    Is **individual co-payment/contribution** required for **vaccination** from resident migrants (long term citizens with a migrant background)?
    - No – free for all
    - Yes - only free for some (please indicate for which subgroups co-payment is **not** required):…
    - Yes – contribution required from all
    - Unsure

Section 2: Hepatitis C screening/testing practices:

16. In your experience what is the **standard screening/testing practice for hepatitis C** in your country?
    Is screening/testing for hepatitis C offered to the following subgroups?

	Yes - on a regular basis	Yes - sporadically / rarely	No	Unsure
Pregnant women (antenatal screening)				
Household and/or sexual contacts of hepatitis C positive patients				
Before employment in medical services: health care, hospital or clinic staff				
Students in health care professions				
Before employment in occupations with high exposure risk (other than health care)				
Residents/inmates of closed facilities (e.g. prisoners, psychiatric hospitals etc.)				
People who received a blood transfusion before 1991				
HIV positive patients				
Hepatitis B positive patients				
Injecting Drug Users (IDUs)				
Sex workers				
Homosexual men (MSM)				
Patients with abnormal liver function test				
Jaundiced patients or those exhibiting signs and				

	Yes - on a regular basis	Yes - sporadically / rarely	No	Unsure
symptoms of hepatitis				
Asylum seekers from hepatitis C endemic regions				
New immigrants and permanent/ long-term visa applicants from hepatitis C endemic regions (other than asylum seekers)				
Resident migrants from hepatitis C endemic regions (long term citizens with a migrant background)				

17. [If YES to screening/testing of Asylum seekers]
    Is **individual co-payment/contribution** required for screening from Asylum seekers?
    - No – free for all
    - Yes - only free for some (indicate for which subgroups co-payment is **not** required): ……
    - Yes – contribution required from all
    - Unsure

18. [If YES to screening/testing of new immigrants]
    Is **individual co-payment/contribution** required for screening from new immigrants and permanent/ long-term visa applicants (other than asylum seekers)?
    - No – free for all
    - Yes - only free for some (indicate for which subgroups co-payment is **not** required): ……
    - Yes – contribution required from all
    - Unsure

19. [If YES to screening/testing of resident migrants]
    Is **individual co-payment/contribution** required for screening from resident migrants (long term citizens with a migrant background)?
    - No – free for all
    - Yes - only free for some (indicate for which subgroups co-payment is **not** required): ……
    - Yes – contribution required from all
    - Unsure

Section 3: Awareness raising / outreach campaigns

20. Are you aware of any campaigns or outreach programmes that aim to increase awareness of and promote screening for hepatitis B and/or C among migrant or ethnic minority groups in your country?
    - Yes (please give details below)
    - Not in detail/not personally but I know people who are aware of migrant-specific hepatitis screening programmes (please give details below)
    - No – I'm not aware of any
    - No – I know there are none
    - Unsure

21. [if Yes or Not in detail: Option to give details for up to 5 campaigns]

Name and Job Role of Coordinator	

Organisation	
Contact details	
Name of the campaign:	
Nationality/ethnicity of target population(s)	
Setting(s) where target population are contacted (e.g. mosque, church, community centre, shops, online, home etc.)	
Year and duration (e.g. weeks/months/years/ongoing)	
Website	

Section 4: General or routine practices

In this section, we are interested in **general or routine practices** – what happens in the care and management of most **hepatitis B and C positive** patients.

22. How common is it that the health services listed below would provide disease-related **counselling** for newly diagnosed patients covering issues such as contact tracing, prevention of onward transmission, safe sexual practices, etc.?

	Very common	Variable or not routinely	Rarely or never	Unsure
The diagnosing primary health care service provider				
The diagnosing clinic (e.g. sexual health clinic, anti-natal clinic, IDU clinic)				
Public health service/health protection unit				
The specialist service they are referred to				

23. How common is it that the health services listed below would have **materials about viral hepatitis** available to patients in **the national language**?

	Very common	Variable or not routinely	Rarely or never	Unsure
The diagnosing primary health care service provider				
The diagnosing clinic (e.g. sexual health clinic, anti-natal clinic, IDU clinic)				
Public health service/health protection unit				
The specialist service they are referred to				

24. How common is it that the health services listed below would have **materials about viral hepatitis the other languages** available to patients?

	Very common	Variable or not routinely	Rarely or never	Unsure
The diagnosing primary health care service provider				
The diagnosing clinic (e.g. sexual health clinic, anti-natal clinic, IDU clinic)				
Public health service/health protection unit				
The specialist service they are referred to				

25. How common is it that the health services listed below would have **interpreter services via a telephone** available to viral hepatitis patients?

	Very common	Variable or not routinely	Rarely or never	Unsure
The diagnosing primary health care service provider				
The diagnosing clinic (e.g. sexual health clinic, anti-natal clinic, IDU clinic)				
Public health service/health protection unit				
The specialist service they are referred to				

26. How common is it that the health services listed below would have **face to face interpreter services** available to viral hepatitis patients?

	Very common	Variable or not routinely	Rarely or never	Unsure
The diagnosing primary health care service provider				
The diagnosing clinic (e.g. sexual health clinic, anti-natal clinic, IDU clinic)				
Public health service/health protection unit				
The specialist service they are referred to				

27. How common is it that the health services listed below would **provide antiviral treatment** in your country?

	Very common	Variable or not routinely	Rarely or never	Unsure
General practitioner				
Hospital				
Specialist clinic (outside a hospital)				
Gynaecologist (for pregnant women)				
Public health service/health protection unit				

28. Is there a list of nationally certified centres/centres of excellence for the management and treatment of chronic hepatitis B and C?
    - ○ Yes (please give details): ……..
    - ○ No
    - ○ Unsure

<u>Section 5: Professional practice and training for Hepatitis B</u>

29. Are there any official national guidelines about **Hepatitis B** screening and patient management in place in your country? If yes, please give name and publisher.
    - ☐ General Hepatitis B guidelines: ……
    - ☐ Specific guidelines for general practitioners: ……..
    - ☐ Specific guidelines for public health services: ……..
    - ☐ Specific guidelines for migrants: ……

- ☐ Specific guidelines for refugee and asylum seekers: ……
- ☐ Specific guidelines for antenatal services or pregnant women: ……
- ☐ Specific guidelines for specialists: ……
- ☐ Other hepatitis B guidelines: ……

30. [If General hepatitis B guideline was selected]
    Does this general hepatitis B guideline include information about (tick all that apply):
    - ☐ I don't know the details
    - ☐ Clinical indications and risk factors to prompt a test for hepatitis B
    - ☐ Pre-test information and advice for patients
    - ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐ Onward referral of chronic viral hepatitis patients to other services
    - ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐ Assessment of liver disease
    - ☐ Treatment strategies

31. [If Specific guidelines for public health services was selected]
    Does this specific guideline for public health services include information about (tick all that apply):
    - ☐ I don't know the details
    - ☐ Clinical indications and risk factors to prompt a test for hepatitis B
    - ☐ Pre-test information and advice for patients
    - ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐ Onward referral of chronic viral hepatitis patients to other services
    - ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐ Assessment of liver disease
    - ☐ Treatment strategies

32. [If Specific guidelines for migrants was selected]
    Does this specific guideline for migrants include information about (tick all that apply):
    - ☐ I don't know the details
    - ☐ Clinical indications and risk factors to prompt a test for hepatitis B
    - ☐ Pre-test information and advice for patients
    - ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐ Onward referral of chronic viral hepatitis patients to other services
    - ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐ Assessment of liver disease
    - ☐ Treatment strategies

Section 5: Professional practice and training for Hepatitis C

33. Are there any official national guidelines about **Hepatitis C** screening and patient management in place in your country? If yes, please give name and publisher.
    - ☐ General Hepatitis C guidelines: ……
    - ☐ Specific guidelines for general practitioners: ……..
    - ☐ Specific guidelines for public health services: ……
    - ☐ Specific guidelines for migrants: ……

- ☐ Specific guidelines for refugee and asylum seekers: ……
- ☐ Specific guidelines for antenatal services or pregnant women: ……
- ☐ Specific guidelines for specialists: ……
- ☐ Other hepatitis C guidelines: ……

34. [If General hepatitis C guideline was selected]
Does this general hepatitis B guideline include information about (tick all that apply):
- ☐ I don't know the details
- ☐ Clinical indications and risk factors to prompt a test for hepatitis C
- ☐ Pre-test information and advice for patients
- ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
- ☐ Onward referral of chronic viral hepatitis patients to other services
- ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
- ☐ Assessment of liver disease
- ☐ Treatment strategies

35. [If Specific guidelines for public health services was selected]
Does this specific guideline for public health services include information about (tick all that apply):
- ☐ I don't know the details
- ☐ Clinical indications and risk factors to prompt a test for hepatitis C
- ☐ Pre-test information and advice for patients
- ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
- ☐ Onward referral of chronic viral hepatitis patients to other services
- ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
- ☐ Assessment of liver disease
- ☐ Treatment strategies

36. [If Specific guidelines for migrants was selected]
Does this specific guideline for migrants include information about (tick all that apply):
- ☐ I don't know the details
- ☐ Clinical indications and risk factors to prompt a test for hepatitis C
- ☐ Pre-test information and advice for patients
- ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
- ☐ Onward referral of chronic viral hepatitis patients to other services
- ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
- ☐ Assessment of liver disease
- ☐ Treatment strategies

Section 6: Barrier questions

Uptake of screening among at risk groups

37. To what extent do you agree with the following statements as explanations of the current low uptake of hepatitis B and C screening among people from a migrant or ethnic minority background in your country.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Limited awareness and knowledge about hepatitis B and C in general (including the ways of transmission) and their consequences (e.g. the link to liver cancer)					
Subjective feeling of being healthy and hence unlikely to be infected with hepatitis B/C					
First generation migrants from intermediate and high hepatitis B and C endemicity countries are not aware that they have a significantly higher risk of being infected with hepatitis B/C					
Limited awareness that screening and subsequent treatment can prevent future complications					
Fear of social stigma and discrimination if found to be hepatitis B/C positive (e.g. fear of losing job)					
Lack of information about where to go for a test					
Lack of access to free/affordable health care					
Language barriers when visiting health services (limited availability of translated materials or interpreter services)					

If you think there are other explanations, please give details in the box below.

Screening offered by primary health care provides

38. To what extent do you agree with the following statements as explanations of why migrants are not being screened/tested for hepatitis B/C at the point of first contact with primary health care services/GPs in your country.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Health services are unable to identify patients with migration-related risk factors (such as country of birth or ethnic origin) as this data is not routinely collected					

Primary care providers/GPs are not aware that migrants from intermediate and high hepatitis B and C endemic countries have a significantly higher risk and should be offered screening					
Patients refuse testing despite primary care providers/GPs offering screening					
Limited awareness among primary health care providers/GPs about the scope of new, improved anti-viral treatments that can potentially cure the disease or significantly reduce disease progression					
Primary care providers/GPs rarely have translated materials about viral hepatitis or interpreter services available for patients					
Hepatitis screening of asymptomatic risk groups is generally not covered under the general health care service/insurance scheme in my country					
There is limited guidance available to primary health care professionals/GPs on screening for viral hepatitis among at risk groups					
Health care professionals/GPs do not have time to offer screening					

If you think there are other explanations, please give details in the box below.

Disease-related counselling, onward referral and clinical management of hepatitis B/C patients.

39. To what extent do you agree with the following statements as explanations of why hepatitis B/C cases do not reach specialized health care (e.g. hepatologists) for further investigation and treatment in your country.

Statements	**Strongly disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
In antenatal screening programmes the focus is mainly on vaccination of the baby of hepatitis B positive mothers, not on hepatitis care for the women testing positive					
Time constraints affect health care professionals/GPs ability to provide patients with disease-related counselling and referral advice					
Some health care services are not reimbursed for providing disease-related counselling and referral advice to patients					
Newly diagnosed patients generally do not receive comprehensive counselling on the consequences of the disease, treatment options and referral, and hence do not seek specialist care					

There are too few specialists to whom the patients can be referred to for specialized care					
The antiviral treatment itself is generally not covered under the general health care service/insurance scheme in my country					
Patients are referred to the specialist but refuse further investigation or treatment					
There is limited guidance available to primary health care professionals about onward referral, counselling and patient management of hepatitis B/C patients					
Although training on viral hepatitis management is available for health care providers, uptake is generally low among professionals.					
Patients from a migrant or ethnic minority background face language barriers when visiting health services (limited availability of translated materials or interpreter services)					

If you think there are other explanations, please give details in the box below:

Comments

If you have any comments in general or regarding the screening, counseling, referral and/or treatment of Hepatitis B/C in your country, we would be grateful to learn more and benefit from your experience. Please write any remarks in the text box below.

Thank you for completing this survey.

Antenatal screening

Welcome text

You have been approached to complete this survey as an expert in your professional field of antenatal care, and/or as part of your involvement in a national or regional level organisation that represents clinicians and/or public health professionals. It is from this representative position that we would like you to respond to the survey. We are interested in the general or routine viral hepatitis related screening and clinical management practices in your country.

This survey has been sent to experts in seven different countries in the EU. We recognise that practices will differ between the seven countries and have tried to reflect this diversity in the structure and answering options. Although there may be aspects of the survey that are not applicable to the situation in your country, the structure of the survey will enable you to reflect that in your answers.

The survey will take approximately 15-20 minutes. It is possible to stop and complete the survey at a later time.

Please be assured that your responses will be kept anonymous.

Section 1: Respondent profile

These questions relate to your involvement in a national or regional level organisation that represents clinicians and/or public health professionals and/or patients.

1. What is the name of your organisation? ……..

2. What type of organisation is it?
   - NGO
   - National Government
   - Regional Government
   - Clinical Association
   - Professional Organisation
   - University
   - Patient association
   - Other (please specify): …….

3. What is your Job Role/Job Title: …….

4. Do you also have clinical responsibilities and are directly involved in the care of patients?
   - Yes
   - No [skip to section 2]

5. What type of medical facility do you work in?
   - GP practice
   - Public health service/health protection unit
   - Clinic (outside a hospital)
   - General hospital
   - University/Teaching hospital
   - Health care service at receiving center/national border control

6. What is your medical specialism/clinical role?
    - General Practitioner
    - Infectious Disease specialist
    - Gastroenterologist/Hepatologist
    - Gynaecologist/Obstetrician
    - Other (please specify): ……

7. How often do you see patients with a chronic hepatitis B or hepatitis C infection?
    - Never
    - A few patients per year (1-10)
    - On a monthly basis
    - On a weekly basis

Section 2: Hepatitis B screening/testing practices:

8. In your experience what is the **standard antenatal screening/testing practice for hepatitis B** in your country? Is hepatitis B screening/testing offered to pregnant women?
    - Yes – to all on a regular basis
    - Yes – but only sporadically
    - No
    - Unsure
9. [If YES to screening/testing of pregnant women]
   Is co-payment/contribution required from pregnant women for antenatal hepatitis B screening/testing?
    - No - free for all
    - Yes - contribution required from all
    - Only free for some (please indicate which women)
    - Unsure
10. [If YES to screening/testing of pregnant women]
    After screening, are hepatitis B negative women **vaccinated** (i.e. those not already vaccinated)?
    - Yes – post birth by the antenatal care provider
    - Yes – post birth by another health care service provider
    - Seldom – only under special circumstances
    - No – generally not
    - Unsure
11. [If Yes or Seldom to vaccination of pregnant women]
    Is **individual co-payment/contribution** required from women for hepatitis B **vaccination**?
    - No - free for all
    - Yes - contribution required from all
    - Only free for some (please indicate which women)
    - Unsure
12. In your experience, do antenatal hepatitis B screening/testing practices differ between administrative regions in your country?
    - Yes – screening practices differ between regions
    - No – screening practices are the same across the country
    - Unsure

Section 2: Hepatitis C screening/testing practices:

13. In your experience what is the **standard screening/testing practice for hepatitis C** in your country?
    Is screening/testing for hepatitis C offered to pregnant women?
    - Yes – to all on a regular basis
    - Yes – but only sporadically
    - No
    - Unsure
14. [If YES to screening/testing of pregnant women]
    Is **individual co-payment/contribution** required from pregnant women for antenatal hepatitis C screening/testing?
    - No – free for all
    - Yes – contribution required from all
    - Only free for some (please indicate which subgroups)
    - Unsure
15. In your experience, do antenatal hepatitis C screening/testing practices differ between administrative regions in your country?
    - Yes – screening practices differ between regions
    - No – screening practices are the same across the country
    - Unsure

Section 3: Pre-test information and advice (counselling) before testing

16. Who provides pregnant women with information and advice (counselling) before a test for viral hepatitis?
    - ☐ Pre-test information is not provided
    - ☐ Midwives
    - ☐ Medical assistants
    - ☐ Obstetrician/Gynaecologist
    - ☐ General Practitioners
    - ☐ Public health services/health protection units
    - ☐ Infectious Disease specialists (not located in public health services/health protection units.)
    - ☐ Others
17. Content of pre-test information
    How common is it to provide information and advice to pregnant women on the following hepatitis B related topics before screening/testing for hepatitis B:

	Very common	Variable or not routinely	Rarely or never	Unsure
The need to vaccinate the baby post birth				
General information about the virus				
The test itself				
Implications of a positive test				
Future effect on relationships/social network				
Support available to patient				
Treatment options				

Section 4: Part 1: Disease-related advice and guidance (counselling) following a positive result:

18. **Who informs** pregnant women of a positive result?
    - Midwives
    - General Practitioners
    - Public health services/health protection units
    - Infectious disease specialists specialists (not in public health services/health protection units)
    - Specialists (e.g. Gastroenterologists/Hepatologists)
    - Obstetricians/Gynaecologists
    - Other
    - Unsure
19. **Who has the main responsibility** for providing disease-related advice and guidance (**counselling**) to pregnant women following a positive diagnosis of viral hepatitis in your country?
    - Midwives/maternity units
    - Obstetricians/Gynaecologists
    - General Practitioners
    - Public health services/health protection units
    - Infectious disease specialists specialists (not in public health services/health protection units)
    - Specialists (e.g. Gastroenterologists/Hepatologists)
    - Other

20. [If YES to hepatitis B screening/testing offered to pregnant women]
    Are **midwives/antenatal care providers** involved in the care of hepatitis B positive pregnant women for any of the following:

	Yes	No	Unsure
Disease-related advice and guidance (counselling)			
Screening/testing for other hepatitis viruses			
Contact tracing			
Patient management			

21. [If YES to hepatitis C screening/testing offered to pregnant women]
    Are midwives/antenatal care providers involved in the care of hepatitis C positive pregnant women for any of the following:

	Yes	No	Unsure
Disease-related advice and guidance (counselling)			
Screening/testing for other hepatitis viruses			
Contact tracing			
Patient management			

22. Are pregnant women **referred to other health services/professionals** for disease-related advice and guidance (**counselling**) following a positive diagnosis for viral hepatitis?
    - Yes - mostly pre birth
    - Yes - mostly post birth
    - No
    - Unsure

23. [If YES to referring pregnant women for hepatitis C counselling]

Which health services/professionals are they **referred to**?

- ☐ Public health services/health protection units
- ☐ Infectious Disease specialists (not in public health services/health protection units)
- ☐ Gastroenterologists/Hepatologists
- ☐ Obstetrician/Gynaecologists
- ☐ General Practitioner
- ☐ Other:

Section 4: Part 2: Content of disease-related advice and guidance (counselling):

24. How common is it to include the following topics in **disease-related advice and guidance (counselling)** to hepatitis B positive **pregnant women:**

	Very common	Variable or not routinely	Rarely or Never	Unsure
General information about the disease				
Hygiene measures to protect transmission to others				
Contact tracing				
Other tests required				
What to expect, onward referral				
Treatment options, benefits and side effects				
The importance of a healthy lifestyle, especially the damaging role of alcohol consumption				
Mental health promotion and staying positive				
Patient organisations / support groups				
The need to vaccinate the baby post birth				
Breastfeeding				
Implications for delivery				

Section 5: Screening/testing positive patients for other hepatitis viruses:

25. [If YES to hepatitis C screening/testing offered to pregnant women]
Are hepatitis B positive women screened/tested for hepatitis C:

- o Yes - pre birth
- o Yes - post birth
- o No
- o Unsure

Section 6: Referral and clinical management:

26. Which hepatitis B positive women are referred to onward care for chronic viral hepatitis?

- o All women
- o A selection based on clinical indicators
- o None

27. [If YES to hepatitis C screening/testing offered to pregnant women]

- o All women

- o A selection based on clinical indicators
- o None

28. [If answered a selection based on clinical indicators to question 27]
    What are these clinical indicators?
    - ☐ Viral load
    - ☐ HBe antigen status
    - ☐ ALT
    - ☐ Unsure
    - ☐ Other:

29. Who can midwives/maternity services refer chronic viral hepatitis cases to?
    - ☐ Unsure
    - ☐ Directly to the Gynaecologist
    - ☐ Directly to specialist secondary care
    - ☐ Referral to specialist secondary care via GP
    - ☐ Referral to specialist secondary care is via another service (please give details)

30. [If answered referral is via another service]
    If referral to specialist secondary care is via another service, please give details here_____

Section 7: Contact tracing and vaccination:

31. Is **hepatitis B screening** offered to **household and/or sexual contacts** of hepatitis B positive women?
    - o No
    - o Yes – All contacts
    - o Yes – a selection of contacts (please specify)
    - o Unsure

32. [If YES to hepatitis B screening/testing offered to household and/or sexual contacts of hepatitis B positive women]
    Are hepatitis B negative contacts (**household and/or sexual contacts**) of hepatitis B positive women vaccinated?
    - o No
    - o Yes – All hepatitis B negative contacts
    - o Yes – a selection of hepatitis B negative contacts (please specify)
    - o Unsure

33. [If YES to hepatitis B screening/testing offered to household and/or sexual contacts of hepatitis B positive women]
    Who has the main responsibility for the screening/testing of contacts for hepatitis B?
    - o Public health services/health protection units
    - o Infectious disease specialists (not in public health services/health protection units)
    - o Gastroenterologists/Hepatologists
    - o Obstetrician/Gynaecologists
    - o General Practitioner
    - o Other

34. [If YES to vaccination of hepatitis B negative contacts of hepatitis B positive women]
    Who has the main responsibility for the vaccination of contacts?
    - o Public health services/health protection units
    - o Infectious disease specialists (not in public health services/health protection units)
    - o Gastroenterologists/Hepatologists
    - o Obstetrician/Gynaecologists
    - o General Practitioner
    - o Other

Section 8: Professional practice and training:

35. How common is it for midwives/antenatal care providers to have the following available:
    Please choose the appropriate response for each item:

	Very common	Variable or not routinely	Rarely or never	Unsure
Materials about viral hepatitis in the national language				
Materials about viral hepatitis in other languages				
Interpreter services via a telephone				
Face to face interpreter services				

36. Is training available for antenatal care providers to improve knowledge and skills about viral hepatitis?
    - o Yes (please give details)
    - o No
    - o Unsure

Section 8: Professional practice and training for Hepatitis B:

37. Are there any official national guidelines about **hepatitis B** screening and patient management in place in your country? If yes, please give name and publisher.

Guidelines	
☐ General Hepatitis B guidelines	
☐ Specific guidelines for antenatal services or pregnant women	
☐ Other hepatitis B guidelines	

38. [If YES to official national guidelines about Hepatitis B screening and patient management in place in your country]
    Does this specific guideline for antenatal services or pregnant women include information about:
    - ☐ Pre-test information and advice for patients
    - ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐ Onward referral of chronic viral hepatitis patients to other services
    - ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐ Assessment of liver disease
    - ☐ Treatment strategies

Section 8: Professional practice and training for Hepatitis C:

39. Are there any official national guidelines about **hepatitis C** screening and patient management in place in your country? If yes, please give name and publisher.

Guidelines	
☐ General Hepatitis C guidelines	
☐ Specific guidelines for antenatal services or pregnant women	
☐ Other hepatitis C guidelines	

40. [If YES to official national guidelines about Hepatitis C screening and patient management in place in your country]
    Does this specific guideline for antenatal services or pregnant women include information about:
    - ☐ Pre-test information and advice for patients
    - ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐ Onward referral of chronic viral hepatitis patients to other services
    - ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐ Assessment of liver disease
    - ☐ Treatment strategies

Section 9: Barrier questions:

Disease-related counselling, onward referral and clinical management of hepatitis B/C positive pregnant women.

41. To what extent do you agree with the following statements as explanations of why pregnant women infected with chronic hepatitis B/C do not reach specialized health care (e.g. hepatologists) for further investigation and treatment in your country.

Statements	**Strongly disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
There is confusion among health professionals about which services are involved at what stage of care for pregnant women infected with chronic hepatitis and hence patients get lost in the referral process					
The focus is mainly on vaccination of the baby, not on treatment of the women testing positive					
Other than the consequences for the baby (such as vaccination), newly diagnosed pregnant women generally do not receive counselling on the consequences of the disease.					
There are few specialists to whom pregnant women can be referred to for specialized care					
Referral to the specialist is postponed until after birth					
The antiviral treatment itself is generally not covered under the general health care service/insurance scheme in my country					

Patients are referred to the specialist but refuse further investigation or treatment					
There is limited guidance available to primary health care professionals about onward referral, counselling and patient management of hepatitis B/C patients					
Although training on viral hepatitis management is available to antenatal care providers, uptake is generally low among professionals.					
Women from a migrant or ethnic minority background face language barriers when visiting health services (limited availability of translated materials or interpreter services)					

42. If you think there are other explanations, please give details in the box below.

Comments

43. If you have any comments in general or regarding the screening, counseling, referral and/or treatment of Hepatitis B/C in your country, we would be grateful to learn more and benefit from your experience. Please write any remarks in the text box below.

Thank you for completing this survey.

Asylum seekers

Welcome text

You have been approached to complete this survey as an expert in your professional field of antenatal care, and/or as part of your involvement in a national or regional level organisation that represents clinicians and/or public health professionals. It is from this representative position that we would like you to respond to the survey. We are interested in the general or routine viral hepatitis related screening and clinical management practices in your country.

This survey has been sent to experts in seven different countries in the EU. We recognise that practices will differ between the seven countries and have tried to reflect this diversity in the structure and answering options. Although there may be aspects of the survey that are not applicable to the situation in your country, the structure of the survey will enable you to reflect that in your answers.

The survey will take approximately 15-20 minutes. It is possible to stop and complete the survey at a later time.

Please be assured that your responses will be kept anonymous.

Section 1: Respondent profile

These questions relate to your involvement in a national or regional level organisation that represents clinicians and/or public health professionals and/or patients.

1. What is the name of your organisation? ……..

2. What type of organisation is it?
   - NGO
   - National Government
   - Regional Government
   - Clinical Association
   - Professional Organisation
   - University
   - Patient association
   - Other (please specify): …….

3. What is your Job Role/Job Title: …….

4. Do you also have clinical responsibilities and are directly involved in the care of patients?
   - Yes
   - No [skip to section 2]

5. What type of medical facility do you work in?
   - GP practice
   - Public health service/health protection unit
   - Clinic (outside a hospital)
   - General hospital
   - University/Teaching hospital
   - Health care service at receiving center/national border control

6. What is your medical specialism/clinical role?
    - General Practitioner
    - Infectious Disease specialist
    - Gastroenterologist/Hepatologist
    - Gynaecologist/Obstetrician
    - Other (please specify): ……

7. How often do you see patients with a chronic hepatitis B or hepatitis C infection?
    - Never
    - A few patients per year (1-10)
    - On a monthly basis
    - On a weekly basis

Section 2: Hepatitis B screening/testing practices:

8. In your experience what is the standard **hepatitis B screening/testing practice for asylum seekers** in your country? Is hepatitis B screening carried out among asylum seekers?
    - No
    - Yes – on a regular basis
    - Only in cases where indicated (please specify)
    - Unsure
9. [If YES to hepatitis B screening carried out among asylum seekers]
   Are hepatitis B **negative individuals vaccinated**?
    - No
    - Yes – all
    - Yes – a selection (please indicate which people)
    - Unsure
10. [If YES to vaccination of hepatitis B negative individuals]
    Is **individual co-payment/contribution** required?
    - Yes – contribution required from all
    - No – free for all
    - Only free for some (please indicate which people)
    - Unsure
11. In your experience, do asylum seeker related hepatitis B screening/testing practices differ between administrative regions in your country?
    - Yes – screening practices differ between regions
    - No – screening practices are the same across the country
    - Unsure

Section 2: **Hepatitis C** Screening /testing practices:

12. In your experience what is the standard hepatitis C **screening/testing practice for asylum seekers** in your country? Is hepatitis C screening carried out among asylum seekers?
    - No
    - Yes – on a regular basis
    - Only in cases where indicated (please specify)
    - Unsure
13. In your experience, do asylum seeker related hepatitis C screening/testing practices differ between administrative regions in your country?
    - Yes – screening practices differ between regions
    - No – screening practices are the same across the country
    - Unsure

Section 3: **Pre-test** information and advice (counselling) before testing:

14. Who provides asylum seekers with information and advice **before a test** for viral hepatitis?

- ☐ Pre-test information is not provided
- ☐ Health care service at receiving centres/national border control
- ☐ General Practitioners
- ☐ Public health services/health protection units
- ☐ Infectious disease specialists (not located in health care service at receiving centre/national border control)
- ☐ Voluntary organizations
- ☐ Unsure
- ☐ Others (please specify)

Content of pre-test information

15. [If Pre-test information is provided]
    How common is it to provide information and advice (counselling) to asylum seekers on the following topics before screening/testing for hepatitis B or hepatitis C:

	Very common	Variable or not routinely	Rarely or never	Unsure
Modes of transmission				
General information about the virus				
The test itself				
Implications of a positive test				
Access to health care				
Future effect on relationships / social network				
Support available to patient				
Treatment options				

Section 4: Part 1: Desease-related advice and guidance (counselling) following a positive result:

16. Who informs the patient of a positive result?

- ○ Health care service at receiving centres/national border control
- ○ General Practitioners
- ○ Public health services/health protection units
- ○ Infectious disease specialists (not in public health services/health protection units)
- ○ Specialists (e.g. Gastroenterologists/Hepatologists)
- ○ Other (please specify)
- ○ Unsure

17. Who has the **main responsibility** for providing **disease-related counselling/advice and guidance** to asylum seeker patients following a positive diagnosis for viral hepatitis?

- ○ Health care service at receiving centres/national border control
- ○ General Practitioners
- ○ Public health services/health protection units
- ○ Infectious disease specialists (not in public health services/health protection units)
- ○ Specialists (e.g. Gastroenterologists/Hepatologists)
- ○ Other (please specify)
- ○ Unsure

Section 4: Part 2: Content of disease-related advice and guidance (counselling) following a positive result:

18. How common is it to include the following topics in disease-related advice and guidance to asylum seeker following a positive test result for hepatitis B and/or C:

	Very common	Variable or not routinely	Rarely or never	Unsure
General information about the disease				
Hygiene measures to protect transmission to others				
Contact tracing				
Other tests required				
What to expect, onward referral				
Treatment options, benefits and side effects				
The importance of a healthy lifestyle, especially the damaging role of alcohol consumption				
Mental health promotion and staying positive				
Patient organisations / support groups				
Access to health care				

Section 5: Screening/testing positive patients for other hepatitis viruses:

19. Are **hepatitis B positive patients** screened/tested for hepatitis C?
    - o No
    - o Yes – all patients
    - o Yes – a selection of patients (please specify which)
    - o Unsure
20. Are **hepatitis C positive patients** screened/tested for hepatitis B?
    - o No
    - o Yes – all patients
    - o Yes – a selection of patients (please specify which)
    - o Unsure
21. [If YES to screening hepatitis B positive patients for hepatitis C or YES to screening hepatitis C positive patients for hepatitis B]

Who has the main responsibility for screening/testing of hepatitis B or hepatitis C positive patients for other hepatitis viruses?

- o Health care service at receiving centres/national border control
- o General Practicitioners
- o Public health services/health protection units
- o Hospitals/clinics
- o Sexual Health Services
- o Other (please specify)

22. Are **hepatitis C positive patients** who are found to be hepatitis B negative vaccinated against hepatitis B?
    - o No
    - o Yes – all patients
    - o Yes – a selection of patients (please specify which)
    - o Unsure

23. [If YES to vaccination of hepatitis C positive patients who are found to be hepatitis B negative vaccinated against hepatitis B]

Who has the main responsibility for vaccination of hepatitis C positive patients found hepatitis B negative?

- o Health care service at receiving centres/national border control
- o General Practicitioners
- o Public health services/health protection units
- o Hospitals/clinics
- o Sexual Health Services
- o Other (please specify)

Section 6: Referral and clinical management:

24. Can asylum seeker patients be referred to secondary care?
    - o Yes – All chronically infected patients
    - o Yes – A selection based on clinical indicators
    - o No
    - o Unsure
25. [If answered YES – A selection based on clinical indicators
    What are these clinical indicators?
    - ☐ Viral load
    - ☐ HBe antigen status
    - ☐ ALT
    - ☐ Unsure
    - ☐ Other (please specify)
26. Which services can refer asylum seeker patients to secondary care? Select all those that apply.
    - ☐ Health care service at receiving centre/national border control
    - ☐ Maternity units
    - ☐ General Practice
    - ☐ Public health services/health protection units
    - ☐ Hospitals/clinics
    - ☐ Sexual health services
    - ☐ Unsure
    - ☐ Other (please specify)

Section 7: Contact tracing and vaccination:

27. Is **hepatitis B screening/testing** offered to **contacts** (household and/or sexual contacts) of asylum seekers **hepatitis B** positive patients?
    - o No
    - o Yes – all contacts
    - o Yes – a selection of contacts (please specify)
    - o Unsure
28. [If hepatitis YES to HBV screening offered to contacts of asylum seeker hepatitis B positive patients]
    Are **hepatitis B negative contacts** (household and/or sexual contacts) of hepatitis B positive patients **vaccinated**?
    - o No
    - o Yes – all hepatitis B negative contacts
    - o Yes – a selection of hepatitis B negative contacts (please specify)
    - o Unsure

29. [If YES to vaccination of hepatitis B negative contacts of hepatitis B positive patients]
Who has the main responsibility for the vaccination of contacts?
    - General Practitioners
    - Public health services/health protection units
    - Hospitals/clinics
    - Sexual Health Services
    - Hospital/clinics
    - Other (please specify)
    - Unsure

30. Is **hepatitis C screening/testing** offered to **contacts** (household and/or sexual contacts) of asylum seekers **HCV** positive patients?
    - No
    - Yes – all contacts
    - Yes –a selection of contacts (please specify)
    - Unsure

31. [If YES to hepatitis B or C screening/testing offered to contacts of asylum seeker hepatitis positive patients]

Who has the main responsibility for screening/testing of contacts for hepatitis B or hepatitis C positive patients for other hepatitis viruses?

- Health care service at receiving centres/national border control
- General Practicitioners
- Public health services/health protection units
- Sexual Health Services
- Hospitals/clinics
- Other (please specify)
- Unsure

Section 8: Professional practice and training:

32. How common is it for **asylum seeker medical care services to have the following available:**

	Very common	Variable or not routinely	Rarely or never	Unsure
Materials about viral hepatitis in the national language				
Materials about viral hepatitis in other languages				
Interpreter services via a telephone				
Face to face interpreter services				

33. Is training available for staff working with asylum seekers to improve their knowledge and skills in identifying and dealing with viral hepatitis?
    - Yes (please give details)
    - No
    - Unsure

Make a comment on your choice here _____

Section 8: Professional practice and training for Hepatitis B:

34. Are there any official national guidelines **about hepatitis B** screening and patient management in place in your country? If yes please give name and publisher.

Guidelines	
☐ General hepatitis B guidelines	

☐ Specific guidelines for refugees and asylum seekers	
☐ Other hepatitis B guideline	

35. [If there are official national guidelines about hepatitis B screening and patient management in place in your country]
    Does this specific hepatitis B guideline for refugee and asylum seekers include information about:
    - ☐Clinical indications and risk factors to prompt a test for hepatitis B
    - ☐Pre-test information and advice for patients
    - ☐Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐Onward referral of chronic hepatitis B patients to other services
    - ☐Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐Assessment of liver disease
    - ☐Treatment strategies

Section 8: Professional practice and training for Hepatitis C:

36. Are there any official national guidelines in place in your country **about hepatitis C** screening and patient management? If yes please give name and publisher.

Guidelines	
☐ General hepatitis C guidelines	
☐ Specific guidelines for refugees and asylum seekers	
☐ Other hepatitis C guideline	

37. [If YES to official national guidelines about hepatitis C screening and patient management in place in your country]
    Does this specific hepatitis C guideline for refugee and asylum seekers include information about:
    - ☐Clinical indications and risk factors to prompt a test for hepatitis C
    - ☐Pre-test information and advice for patients
    - ☐Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐Onward referral of chronic hepatitis B patients to other services
    - ☐Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐Assessment of liver disease
    - ☐Treatment strategies

Section 9: Barrier questions:

Uptake of screening among at risk groups

38. To what extent do you agree with the following statements as explanations of the current low uptake of hepatitis B and C screening among people from a migrant or ethnic minority background in your country.

Statements	**Strongly disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**

Limited awareness and knowledge about hepatitis B and C in general (including the ways of transmission) and their consequences (e.g. the link to liver cancer)					
Subjective feeling of being healthy and hence unlikely to be infected with hepatitis B/C					
First generation migrants from hepatitis B and C endemicity countries are not aware that they have a significantly higher risk of being infected with hepatitis B/C					
Limited awareness that screening and subsequent treatment can prevent future complications					
Fear of social stigma and discrimination if found to be hepatitis B/C positive (e.g. fear of losing job)					
Lack of information about where to go for a test					
Lack of access to free/affordable health care					
Language barriers when visiting health services (limited availability of translated materials or interpreter services)					

39. If you think there are other explanations, please give details in the box below.

Screening offered by primary health care provides

40. To what extent do you agree with the following statements as explanations of why migrants are not being screened/tested for hepatitis B/C at the point of first contact with primary health care services/GPs in your country.

Statements	**Strongly disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
Health services are unable to identify patients with migration-related risk factors (such as country of birth or ethnic origin) as this data is not routinely collected					
Primary care providers/GPs are not aware that migrants from hepatitis B and C endemic countries have a significantly higher risk and should be offered screening					
Patients refuse testing despite primary care providers/GPs offering screening					
Limited awareness among primary health care providers/GPs about the scope of new, improved anti-viral treatments that can potentially cure the disease or significantly reduce disease progression					
Primary care providers/GPs rarely have translated materials about viral hepatitis or interpreter services available for patients					

Hepatitis screening of asymptomatic risk groups is generally not covered under the general health care service/insurance scheme in my country					
There is limited guidance available to primary health care professionals/GPs on screening for viral hepatitis among at risk groups					
Health care professionals/GPs do not have time to offer screening					

41. If you think there are other explanations, please give details in the box below.

Disease-related counselling, onward referral and clinical management of hepatitis B/C patients.

42. To what extent do you agree with the following statements as explanations of why hepatitis B/C cases do not reach specialized health care (e.g. hepatologists) for further investigation and treatment in your country.

Statements	**Strongly disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
In antenatal screening programmes the focus is mainly on vaccination of the baby of hepatitis B positive mothers, not on hepatitis care for the women testing positive					
Time constraints affect health care professionals/GPs ability to provide patients with disease-related counselling and referral advice					
Some health care services are not reimbursed for providing disease-related counselling and referral advice to patients					
Newly diagnosed patients generally do not receive comprehensive counselling on the consequences of the disease, treatment options and referral, and hence do not seek specialist care					
There are too few specialists to whom the patients can be referred to for specialized care					
The antiviral treatment itself is generally not covered under the general health care service/insurance scheme in my country					
Patients are referred to the specialist but refuse further investigation or treatment					
There is limited guidance available to primary health care professionals about onward referral, counselling and patient management of hepatitis B/C patients					
Although training on viral hepatitis management is available for health care providers, uptake is generally low among professionals.					

Patients from a migrant or ethnic minority background face language barriers when visiting health services (limited availability of translated materials or interpreter services)					

43. If you think there are other explanations, please give details in the box below:

Comments

44. If you have any comments in general or regarding the screening, counseling, referral and/or treatment of Hepatitis B/C in your country, we would be grateful to learn more and benefit from your experience. Please write any remarks in the text box below.

Thank you for completing this survey.

HEPscreen
SCREENING FOR HEPATITIS B AND C
AMONG MIGRANTS IN THE EUROPEAN UNION

General Practice

Welcome text

You have been approached to complete this survey as an expert in your professional field of public health, and/or as part of your involvement in a national or regional level organisation that represents clinicians and/or public health professionals. It is from this representative position that we would like you to respond to the survey. We are interested in the general or routine viral hepatitis related screening and clinical management practices in your country.

This survey has been sent to experts in seven different countries in the EU. We recognise that practices will differ between the seven countries and have tried to reflect this diversity in the structure and answering options. Although there may be aspects of the survey that are not applicable to the situation in your country, the structure of the survey will enable you to reflect that in your answers.

The survey will take approximately 15-20 minutes. It is possible to stop and complete the survey at a later time.

Please be assured that your responses will be kept anonymous.

Section 1: Respondent profile

These questions relate to your involvement in a national or regional level organisation that represents clinicians and/or public health professionals and/or patients.

1. What is the name of your organisation? ……..

2. What type of organisation is it?
   - NGO
   - National Government
   - Regional Government
   - Clinical Association
   - Professional Organisation
   - University
   - Patient association
   - Other (please specify): …….

3. What is your Job Role/Job Title: …….

4. Do you also have clinical responsibilities and are directly involved in the care of patients?
   - Yes
   - No [skip to section 2]

5. What type of medical facility do you work in?
   - GP practice
   - Public health service/health protection unit
   - Clinic (outside a hospital)
   - General hospital
   - University/Teaching hospital
   - Health care service at receiving center/national border control

6. What is your medical specialism/clinical role?
    - General Practitioner
    - Infectious Disease specialist
    - Gastroenterologist/Hepatologist
    - Gynaecologist/Obstetrician
    - Other (please specify): ……

7. How often do you see patients with a chronic hepatitis B or hepatitis C infection?
    - Never
    - A few patients per year (1-10)
    - On a monthly basis
    - On a weekly basis

Section 2: Indications/risk factors for screening

8. How common is it for **GPs** to test for hepatitis **B** when patients present with the following indications or risk factors:

	Very common	Variable or not routinely	Rarely or never	Unsure
A request from a patient concerned that they may have been exposed				
Migrants from hepatitis B endemic areas				
Injecting Drug Users (IDUs)				
Sex workers				
Homosexual men (MSM)				
HIV positive patients				
Hepatitis C positive patients				
Patients with abnormal liver function tests				
Second (repeat) abnormal liver function test				
Jaundiced patients or those exhibiting signs and symptoms of hepatitis				

9. [If YES to testing for hepatitis B to any of the mentioned subgroups]
   Are hepatitis B **negative individuals vaccinated**?

	Yes	Sometimes	No	Unsure
A request from a patient concerned that they may have been exposed				
Migrants from hepatitis B endemic areas				
Injecting Drug Users (IDUs)				
Sex workers				
Homosexual men (MSM)				
HIV positive patients				
Hepatitis C positive patients				
Patients with abnormal liver function tests				
Second (repeat) abnormal liver function test				
Jaundiced patients or those exhibiting signs and symptoms of hepatitis				

10. [If YES to **vaccination of hepatitis B negative individuals**]
Is **individual co-payment/contribution** required for vaccination?

	Yes	No	Unsure
A request from a patient concerned that they may have been exposed			
Migrants from hepatitis B endemic areas			
Injecting Drug Users (IDUs)			
Sex workers			
Homosexual men (MSM)			
HIV positive patients			
Hepatitis C positive patients			
Patients with abnormal liver function tests			
Second (repeat) abnormal liver function test			
Jaundiced patients or those exhibiting signs and symptoms of hepatitis			

11. How common is it for **GPs** to test for hepatitis **C** when patients present with the following indications or risk factors:

	Very common	Variable or not routinely	Rarely or never	Unsure
A request from a patient concerned that they may have been exposed				
Migrants from hepatitis C endemic areas				
Injecting Drug Users (IDUs)				
Sex workers				
Homosexual men (MSM)				
HIV positive patients				
Hepatitis B positive patients				
Patients with abnormal liver function tests				
Second (repeat) abnormal liver function test				
Jaundiced patients or those exhibiting signs and symptoms of hepatitis				

12. [If YES to testing for hepatitis B or C to any of the mentioned subgroups]
is **individual co-payment/contribution** required for hepatitis B or C screening from migrants from hepatitis B or C endemic areas?
    - Yes – contribution required from all
    - No – free for all
    - Only free for some (please indicate for which subgroups co-payment is not required)_____
    - Unsure

Section 3: Pre-test information and advice (counselling) before testing:

Content of pre-test information

13. How common is it for **GPs** to provide information and advice (counselling) on the following topics **before testing** a patient for hepatitis B and/or C:

	Very common	Variable or not routinely	Rarely or never	Unsure
Modes of transmission				
General information about the virus				
The test itself				
Implications of a positive test				
Future effect on relationships/social network				
Support available to patient				
Treatment options				

Section 4: Part 1: Disease-related advice and guidance (counselling) following a positive result:

14. Who informs the patient of a positive result?
    - ○ The GP requesting the test
    - ○ Community or practice nurses
    - ○ Infectious disease specialists
    - ○ Hepatologists/Gastroenterologists
    - ○ Others (please specify)
    - ○ Unsure

15. Are patients provided with disease-related advice and guidance (counselling) **by their GP** following a positive test result?
    - ○ Always
    - ○ Often
    - ○ Sometimes
    - ○ Never
    - ○ Unsure

16. Are patients referred to **other health services/ specialists** for disease-related advice and guidance (counselling) following a positive diagnosis for viral hepatitis in primary care/by a GP?
    - ○ Yes
    - ○ Sometimes
    - ○ No
    - ○ Unsure

17. [If YES or SOMETIMES to referral of positive patients]
    Which services/professionals are they referred to? Please choose all that apply
    - ☐ Public health services/health protection units
    - ☐ Infectious Disease specialists (not in public health services/health protection units)
    - ☐ Gastroenterologists/Hepatologists
    - ☐ Others (please specifiy)

Section 4: Part 2: Content of disease-related advice and guidance (counselling)

18. How common is it for **GPs** to include the following topics in disease-related advice and guidance (counselling) following a positive test result for hepatitis B and/or C:

	Very common	Variable or not routinely	Rarely or never	Unsure
General information about the disease				
Hygiene measures to protect transmission to others				
Contact tracing				
Other tests required				
What to expect, onward referral				
Treatment options, benefits and side effects				
The importance of a healthy lifestyle, especially the damaging role of alcohol consumption				
Mental health promotion and staying positive				
Patient organisations / support groups				

Section 5: Referral and clinical management:

19. Which hepatitis B or hepatitis C positive patients are referred **from GPs to specialist care** for chronic viral hepatitis?
    - ○ All patients
    - ○ A selection based on clinical indicators
    - ○ Unsure

20. [If are referred to specialist care only a selection based on clinical indicators)
    What are these clinical indicators? Please choose all that apply.
    - ☐ Viral load
    - ☐ HBe antigen status
    - ☐ ALT
    - ☐ Unsure
    - ☐ Other (please specify)

21. How common is it that the following patients would be **referred back to their GP** from specialist care?

Patient category	Very common	Variable or not routinely	Rarely or never	Unsure
Those who do not qualify for treatment after the initial evaluation				
Those undergoing antiviral treatment				
Those who have sustained virological response due to treatment				
Those who are non responders to treatment				

22. How common is it that a **GP** would be involved in monitoring the following indicators in a patient **undergoing antiviral treatment**?

Patient indications	Very common	Variable or not routinely	Rarely or	Unsure

			never	
ALT levels				
Viral load				
Side effects				

Section 6: Contact tracing and vaccination:

23. Is **hepatitis B screening/testing** offered to **contacts** (household and/or sexual contacts) of **hepatitis B** positive patients?
    - ○ No
    - ○ Yes – all contacts
    - ○ Yes – a selection of contacts (please specify)_____
    - ○ Unsure

24. [If YES to hepatitis B screening offered to contacts of hepatitis B positive patients]
    Are **hepatitis B negative contacts** (household and/or sexual contacts) of **hepatitis B** positive patients **vaccinated**?
    - ○ No
    - ○ Yes – all hepatitis B negative contacts
    - ○ Yes – a selection of hepatitis B negative contacts (please specify)
    - ○ Unsure

25. [If YESto vaccination of hepatitis B negative contacts]
    Who has the main responsibility for the **vaccination of contacts**?
    - ○ General Practitioners
    - ○ Public health services/health protection units
    - ○ Sexual Health Services
    - ○ Hospitals/clinics
    - ○ Other (please specify)
    - ○ Unsure

26. Is **hepatitis C screening** offered to **contacts** (household and/or sexual contacts) of **hepatitis C** positive patients?
    - ○ No
    - ○ Yes – all contacts
    - ○ Yes – a selection of contacts (please specify)
    - ○ Unsure

27. [If YES to screening offered to contacts of hepatitis B or C positive patients]
    Who has the main responsibility for the screening/testing of contacts for hepatitis B and/or C?
    - ○ General Practitioners
    - ○ Public health services/health protection units
    - ○ Sexual Health Services
    - ○ Hospitals/clinics
    - ○ Other (please specify)

Section 7: Professional practice and training:

28. How common is it for GPs to have the following available for patients:

	Very	Variable or	Rarely	Unsure

	common	not routinely	or never	
Materials about viral hepatitis in the national language				
Materials about viral hepatitis in other languages				
Interpreter services via a telephone				
Face to face interpreter services				

29. Is training available for GPs to improve their knowledge and skills in viral hepatitis?
    - ○ Yes (please give details)
    - ○ No
    - ○ Unsure

    Make a comment on your choice here_____

Section 7: Professional practice and training for hepatitis B:

30. Are there any official national guidelines about **Hepatitis B** screening and patient management in place in your country? If yes, please give name and publisher.

Guidelines	
General hepatitis B guidelines	
Specific hepatitis B guidelines for general practitioners	
Other hepatitis B guidelines	

31. Does this specific guideline for general practitioners include information about: (please choose all that apply)
    - ☐ Clinical indications and risk factors to prompt a test for hepatitis B
    - ☐ Pre-test information and advice for patients
    - ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐ Onward referral of chronic viral hepatitis patients to other services
    - ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐ Assessment of liver disease
    - ☐ Treatment strategies

32. Are there any official national guidelines about **Hepatitis C** screening and patient management in place in your country? If yes, please give name and publisher.

Guidelines	
General hepatitis C guidelines	
Specific hepatitis C guidelines for general practitioners	
Other hepatitis C guidelines	

33. Does this specific guideline for general practitioners include information about: (please choose all that apply)
    - ☐ Clinical indications and risk factors to prompt a test for hepatitis C
    - ☐ Pre-test information and advice for patients

- ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
- ☐ Onward referral of chronic viral hepatitis patients to other services
- ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
- ☐ Assessment of liver disease
- ☐ Treatment strategies

Section 8: Barrier questions

Uptake of screening among at risk groups

34. To what extent do you agree with the following statements as explanations of the current low uptake of hepatitis B and C screening among people from a migrant or ethnic minority background in your country.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Limited awareness and knowledge about hepatitis B and C in general (including the ways of transmission) and their consequences (e.g. the link to liver cancer)					
Subjective feeling of being healthy and hence unlikely to be infected with hepatitis B/C					
First generation migrants from hepatitis B and C endemic countries are not aware that they have a significantly higher risk of being infected with hepatitis B/C					
Limited awareness that screening and subsequent treatment can prevent future complications					
Fear of social stigma and discrimination if found to be hepatitis B/C positive (e.g. fear of losing job)					
Lack of information about where to go for a test					
Lack of access to free/affordable health care					
Language barriers when visiting health services (limited availability of translated materials or interpreter services)					

35. If you think there are other explanations, please give details in the box below.

Screening offered by primary health care provides

36. To what extent do you agree with the following statements as explanations of why migrants are not being screened/tested for hepatitis B/C at the point of first contact with primary health care services/GPs in your country.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Health services are unable to identify patients with migration-related risk factors (such as country of birth or ethnic origin) as this data is not routinely collected					
Primary care providers/GPs are not aware that migrants from hepatitis B and C endemic countries have a significantly higher risk and should be offered screening					
Patients refuse testing despite primary care providers/GPs offering screening					
Limited awareness among primary health care providers/GPs about the scope of new, improved anti-viral treatments that can potentially cure the disease or significantly reduce disease progression					
Primary care providers/GPs rarely have translated materials about viral hepatitis or interpreter services available for patients					
Hepatitis screening of asymptomatic risk groups is generally not covered under the general health care service/insurance scheme in my country					
There is limited guidance available to primary health care professionals/GPs on screening for viral hepatitis among at risk groups					
Health care professionals/GPs do not have time to offer screening					

37. If you think there are other explanations, please give details in the box below.

Disease-related counselling, onward referral and clinical management of hepatitis B/C patients.

38. To what extent do you agree with the following statements as explanations of why hepatitis B/C cases do not reach specialized health care (e.g. hepatologists) for further investigation and treatment in your country.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
In antenatal screening programmes the focus is mainly on vaccination of the baby of hepatitis B positive mothers, not on hepatitis care for the women testing positive					
Time constraints affect health care professionals/GPs ability to provide patients with disease-related counselling and referral advice					

Some health care services are not reimbursed for providing disease-related counselling and referral advice to patients					
Newly diagnosed patients generally do not receive comprehensive counselling on the consequences of the disease, treatment options and referral, and hence do not seek specialist care					
There are too few specialists to whom the patients can be referred to for specialized care					
The antiviral treatment itself is generally not covered under the general health care service/insurance scheme in my country					
Patients are referred to the specialist but refuse further investigation or treatment					
There is limited guidance available to primary health care professionals about onward referral, counselling and patient management of hepatitis B/C patients					
Although training on viral hepatitis management is available for health care providers, uptake is generally low among professionals.					
Patients from a migrant or ethnic minority background face language barriers when visiting health services (limited availability of translated materials or interpreter services)					

39. If you think there are other explanations, please give details in the box below:

Comments

40. If you have any comments in general or regarding the screening, counseling, referral and/or treatment of Hepatitis B/C in your country, we would be grateful to learn more and benefit from your experience. Please write any remarks in the text box below.

Thank you for completing this survey.

Screening for viral hepatitis in Sexual Health Services / by Genito-Urinary Medicine (GUM) specialist clinics.

Welcome text

You have been approached to complete this survey as an expert in your professional field of sexual health care, and/or as part of your involvement in a national or regional level organisation that represents clinicians and/or public health professionals. It is from this representative position that we would like you to respond to the survey. We are interested in the general or routine viral hepatitis related screening and clinical management practices in your country.

This survey has been sent to experts in seven different countries in the EU. We recognise that practices will differ between the seven countries and have tried to reflect this diversity in the structure and answering options. Although there may be aspects of the survey that are not applicable to the situation in your country, the structure of the survey will enable you to reflect that in your answers.

The survey will take approximately 15-20 minutes. It is possible to stop and complete the survey at a later time.

Please be assured that your responses will be kept anonymous

Section 1: Respondent profile

These questions relate to your involvement in a national or regional level organisation that represents clinicians and/or public health professionals and/or patients.

1. What is the name of your organisation? ……..

2. What type of organisation is it?
   - NGO
   - National Government
   - Regional Government
   - Clinical Association
   - Professional Organisation
   - University
   - Patient association
   - Other (please specify): …….

3. What is your Job Role/Job Title: …….

4. Do you also have clinical responsibilities and are directly involved in the care of patients?
   - Yes
   - No [skip to section 2]

5. [If YES to have clinical responsibilities and to be directly involved in the care of patients]
   What type of medical facility do you work in?
   - GP practice
   - Public health service/health protection unit
   - Clinic (outside a hospital)
   - General hospital

- University/Teaching hospital
- Health care service at receiving center/national border control

6. [If YES to have clinical responsibilities and to be directly involved in the care of patients] What is your medical specialism/clinical role?
   - General Practitioner
   - Infectious Disease specialist
   - Gastroenterologist/Hepatologist
   - Gynaecologist/Obstetrician
   - Other (please specify): ……

7. [If YES to have clinical responsibilities and to be directly involved in the care of patients] How often do you see patients with a chronic hepatitis B or hepatitis C infection?
   - Never
   - A few patients per year (1-10)
   - On a monthly basis
   - On a weekly basis

Section 2: Indications/risks factors for screening:

8. How common is it for professionals **in your speciality** to test for **hepatitis B** in the following circumstances?

	Very common	Variable or not routinely	Rarely or never	Unsure
A request from a patient concerned that they may have been exposed				
Migrants from hepatitis B endemic areas				
Injecting Drug Users (IDUs)				
Sex workers				
Homosexual men (MSM)				
HIV positive patients				
Hepatitis C positive patients				

9. [If 'VERY COMMON' or 'VARIABLE OR NOT ROUTINELY' to **screening** of any subgroups was selected] After screening, are **hepatitis B negative** individuals **vaccinated**?

	Yes	Sometimes	No	Unsure
A request from a patient concerned that they may have been exposed				
Migrants from hepatitis B endemic areas				
Injecting Drug Users (IDUs)				
Sex workers				
Homosexual men (MSM)				
HIV positive patients				
Hepatitis C positive patients				

10. [If YES or SOMETIMES to **vaccination** of hepatitis B negative individuals was selected] Is **individual co-payment/contribution** required for vaccination?

	Yes	No	Unsure
A request from a patient concerned that they may have been exposed			
Migrants from hepatitis B endemic areas			
Injecting Drug Users (IDUs)			
Sex workers			
Homosexual men (MSM)			
HIV positive patients			
Hepatitis C positive patients			

11. How common is it for professionals in your speciality to test for **hepatitis C** in the following circumstances?

	Very common	Variable or not routinely	Rarely or never	Unsure
A request from a patient concerned that they may have been exposed				
Migrants from hepatitis C endemic areas				
Injecting Drug Users (IDUs)				
Sex workers				
Homosexual men (MSM)				
HIV positive patients				
Hepatitis C positive patients				

12. [If 'VERY COMMON' or 'VARIABLE OR NOT ROUTINELY' to **screening** of any subgroups was selected] Is **individual co-payment/contribution** required for **hepatitis B or C screening** from migrants from hepatitis B or C endemic areas?
    - Yes – contribution required from all
    - No – free for all
    - Only free for some (please indicate for which subgroups co-payment is not required)
    - Unsure

Section 3: Pre-test information and advice (counselling) before testing:

Content of pre-test information

13. How common is it for **sexual health services/professionals in your speciality** to provide information and advice on the following topics **before testing** a patient for hepatitis B:

	Very common	Variable or not routinely	Rarely or never	Unsure
General information about the virus				
The test itself				
Implications of a positive test				
Future effect on relationships / social network				
Support available to patient				
Treatment options				
Modes of transmission				

Content of pre-test information

14. How common is it for **sexual health services/professionals in your speciality** to provide information and advice on the following topics **before testing** a patient for hepatitis C:

	Very common	Variable or not routinely	Rarely or never	Unsure
General information about the virus				
The test itself				
Implications of a positive test				
Future effect on relationships / social network				
Support available to patient				
Treatment options				
Modes of transmission				

Section 4: Part 1: Disease-related advice and guidance (counselling) following a positive result:

15. Who has the **main responsibility** for providing **disease-related counselling/advice and guidance** to patients following a positive diagnosis for viral hepatitis?
    - Sexual health services/GUM clinics
    - General practitioners
    - Public health services/health protection units
    - Infectious Disease specialists (not in public health services/heath protection units)
    - Specialists (e.g. Gastroenterologists/Hepatologists)
    - Other (please specify)
    - Unsure
16. Are sexual health services/GUM clinics involved in the care of hepatitis B and/or hepatitis C positive patients for any of the following:

	Yes	No	Unsure
Disease-related advice and guidance (counselling)			
Screening/testing for other hepatitis viruses			
Contact tracing			
Patient management			

Section 4: Part 2: Content of disease-related advice and guidance (counselling):

17. How common is it for **sexual health services** to include the following topics in disease-related advice and guidance (counselling):

	Very common	Variable or not routinely	Never	Unsure
General information about the disease				
Hygiene measures to prevent transmission to others				
Contact tracing				
Other tests required				
What to expect, onward referral				
Treatment options, benefits and side effects				
The importance of a healthy lifestyle, especially the damaging role of alcohol consumption				
Mental health promotion and staying positive				

Patient organisations / support groups				

Section 5: Referral and clinical management:

18. Which hepatitis B or hepatitis C positive patients are referred by sexual health services to specialist care for chronic viral hepatitis?
    - o All patients
    - o A selection based on clinical indicators
    - o None – referral to specialist care is via another service
19. [If answered a selection based on clinical indicators to question 19]
    What are these clinical indicators?
    - ☐ Viral load
    - ☐ HBe antigen status
    - ☐ ALT
    - ☐ Unsure
    - ☐ Other (please, specify)
20. Who can sexual health services refer chronic viral hepatitis cases to?
    - o Directly to specialist secondary care
    - o Referral to specialist secondary care via GP
    - o Referral to specialist secondary care via another service (please give details)
    - o Unsure
21. [If answered referral is via another service]
    If referral to specialist secondary care is via another service, please give details.

Section 6: Contact tracing and vaccination:

22. Is **hepatitis B screening/testing** offered to **contacts** (**household and/or sexual)** of hepatitis B positive patients?
    - o No
    - o Yes – all contacts
    - o Yes – a selection of contacts (please specify)
    - o Unsure
23. [If YES to vaccination offered to hepatitis B negative contacts of hepatitis B positive patients]
    Are **hepatitis B negative contacts** (household and/or sexual contacts) of **hepatitis B positive** patients vaccinated?
    - o No
    - o Yes – all hepatitis B negative contacts
    - o Yes – a selection of hepatitis B negative contacts (please specify)
    - o Unsure

24. [If YES to vaccination of hepatitis B negative contacts of hepatitis B positive patients]
    Who has the main responsibility for the vaccination of contacts?
    - o General Practitioners
    - o Public health services/health protection units
    - o Sexual Health Services

- Hospitals/clinics
- Other

25. Is **hepatitis C screening/testing** offered to **contacts** (household and/or sexual contacts) **of hepatitis C positive patients**?
    - No
    - Yes – all contacts
    - Yes – a selection of contacts (please specify)
    - Unsure
26. [If YES to hepatitis B screening offered to contacts of hepatitis C positive patients]
    Who has the main responsibility for the screening/testing of contacts for hepatitis B and C?
    - General Practitioners
    - Public health services/health protection units
    - Sexual Health Services
    - Hospitals/clinics
    - Other
    - Unsure

Section 7: Professional practice and training:

27. How common is it for sexual health services/GUM clinics to have the following available for patients

	Very common	Variable or not routinely	Rarely or never	Unsure
Materials about viral hepatitis in the national language				
Materials about viral hepatitis in other languages				
Interpreter services via a telephone				
Face to face interpreter services				

28. Is training available for sexual health service staff to improve their knowledge and skills in viral hepatitis?
    - Yes (please give details)
    - No
    - Unsure

Make a comment on your choice here:

Section 7: Professional practice and training for hepatitis B:

29. Are there any official national guidelines about **Hepatitis B** screening and patient management in place in your country? If yes, please give name and publisher:
    - ☐ General Hepatitis B guidelines: ……
    - ☐ Specific guidelines for sexual health services/GUM clinics: ……
    - ☐ Other hepatitis B guidelines: ……

30. [If there are official national guidelines about **Hepatitis B** screening and patient management in place in your country]

Does this specific guideline for sexual health services/GUM clinics include information about:

- ☐ Clinical indications and risk factors to prompt a test for hepatitis B
- ☐ Pre-test information and advice for patients
- ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
- ☐ Onward referral of chronic viral hepatitis patients to other services
- ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
- ☐ Assessment of liver disease
- ☐ Treatment strategies

Section 7: Professional practice and training for Hepatitis C:

31. Are there any official national guidelines about **Hepatitis C** screening and patient management in place in your country? If yes, please give name and publisher.
    - ☐ General Hepatitis C guidelines: ……
    - ☐ Specific guidelines for sexual health services/GUM clinics: ……
    - ☐ Other hepatitis C guidelines: ……

32. [If there are official national guidelines about **Hepatitis C** screening and patient management in place in your country]
    Does this specific guideline for sexual health services/GUM clinics include information about:

    - ☐ Clinical indications and risk factors to prompt a test for hepatitis C
    - ☐ Pre-test information and advice for patients
    - ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐ Onward referral of chronic viral hepatitis patients to other services
    - ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐ Assessment of liver disease
    - ☐ Treatment strategies

Section 8: Barrier questions:

Uptake of screening among at risk groups

33. To what extent do you agree with the following statements as explanations of the current low uptake of hepatitis B and C screening among people from a migrant or ethnic minority background in your country.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Limited awareness and knowledge about hepatitis B and C in general (including the ways of transmission) and their consequences (e.g. the link to liver cancer)					
Subjective feeling of being healthy and hence unlikely to be infected with hepatitis B/C					
First generation migrants from hepatitis B and C endemic countries are not aware that they have a					

significantly higher risk of being infected with hepatitis B/C					
Limited awareness that screening and subsequent treatment can prevent future complications					
Fear of social stigma and discrimination if found to be hepatitis B/C positive (e.g. fear of losing job)					
Lack of information about where to go for a test					
Lack of access to free/affordable health care					
Language barriers when visiting health services (limited availability of translated materials or interpreter services)					

34. If you think there are other explanations, please give details in the box below.

Screening offered by primary health care provides

35. To what extent do you agree with the following statements as explanations of why migrants are not being screened/tested for hepatitis B/C at the point of first contact with primary health care services/GPs in your country.

Statements	**Strongly disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
Health services are unable to identify patients with migration-related risk factors (such as country of birth or ethnic origin) as this data is not routinely collected					
Primary care providers/GPs are not aware that migrants from hepatitis B and C endemic countries have a significantly higher risk and should be offered screening					
Patients refuse testing despite primary care providers/GPs offering screening					
Limited awareness among primary health care providers/GPs about the scope of new, improved anti-viral treatments that can potentially cure the disease or significantly reduce disease progression					
Primary care providers/GPs rarely have translated materials about viral hepatitis or interpreter services available for patients					
Hepatitis screening of asymptomatic risk groups is generally not covered under the general health care service/insurance scheme in my country					
There is limited guidance available to primary health care professionals/GPs on screening for viral hepatitis among at risk groups					

Health care professionals/GPs do not have time to offer screening					

36. If you think there are other explanations, please give details in the box below.

Disease-related counselling, onward referral and clinical management of hepatitis B/C patients.

37. To what extent do you agree with the following statements as explanations of why hepatitis B/C cases do not reach specialized health care (e.g. hepatologists) for further investigation and treatment in your country.

Statements	**Strongly disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
In antenatal screening programmes the focus is mainly on vaccination of the baby of hepatitis B positive mothers, not on hepatitis care for the women testing positive					
Time constraints affect health care professionals/GPs ability to provide patients with disease-related counselling and referral advice					
Some health care services are not reimbursed for providing disease-related counselling and referral advice to patients					
Newly diagnosed patients generally do not receive comprehensive counselling on the consequences of the disease, treatment options and referral, and hence do not seek specialist care					
There are too few specialists to whom the patients can be referred to for specialized care					
The antiviral treatment itself is generally not covered under the general health care service/insurance scheme in my country					
Patients are referred to the specialist but refuse further investigation or treatment					
There is limited guidance available to primary health care professionals about onward referral, counselling and patient management of hepatitis B/C patients					
Although training on viral hepatitis management is available for health care providers, uptake is generally low among professionals.					
Patients from a migrant or ethnic minority background face language barriers when visiting health services (limited availability of translated materials or interpreter services)					

38. If you think there are other explanations, please give details in the box below.

Comments

39. If you have any comments about the survey in general or regarding the screening, counselling, referral and/or treatment of Hepatitis B/C in your country, we would be grateful to learn more and benefit from your experience. Please write any comments in the text box below.

Thank you for completing this survey.

Patient Management and Treatment in Secondary Care

Welcome text

You have been approached to complete this survey as an expert in your professional field of viral hepatitis care, and/or as part of your involvement in a national or regional level organisation that represents clinicians and/or public health professionals. It is from this representative position that we would like you to respond to the survey. We are interested in the general or routine viral hepatitis related screening and clinical management practices in your country.

This survey has been sent to experts in seven different countries in the EU. We recognise that practices will differ between the seven countries and have tried to reflect this diversity in the structure and answering options. Although there may be aspects of the survey that are not applicable to the situation in your country, the structure of the survey will enable you to reflect that in your answers.

The survey will take approximately 15 minutes. It is possible to stop and complete the survey at a later time.

Please be assured that your responses will be kept anonymous.

Section 1: Respondent profile

These questions relate to your involvement in a national or regional level organisation that represents clinicians and/or public health professionals and/or patients.

1. What is the name of your organisation? ……..

2. What type of organisation is it?
   - NGO
   - National Government
   - Regional Government
   - Clinical Association
   - Professional Organisation
   - University
   - Patient association
   - Other (please specify): …….

3. What is your Job Role/Job Title: …….

4. Do you also have clinical responsibilities and are directly involved in the care of patients?
   - Yes
   - No [skip to section 2]

5. [If YES to have clinical responsibilities and to be directly involved in the care of patients]
   What type of medical facility do you work in?
   - GP practice
   - Public health service/health protection unit
   - Clinic (outside a hospital)
   - General hospital
   - University/Teaching hospital

- Health care service at receiving center/national border control

6. [If YES to have clinical responsibilities and to be directly involved in the care of patients] What is your medical specialism/clinical role?
   - General Practitioner
   - Infectious Disease specialist
   - Gastroenterologist/Hepatologist
   - Gynaecologist/Obstetrician
   - Other (please specify): ……

7. [If YES to have clinical responsibilities and to be directly involved in the care of patients] How often do you see patients with a chronic hepatitis B or hepatitis C infection?
   - Never
   - A few patients per year (1-10)
   - On a monthly basis
   - On a weekly basis

Section 2: Referral to secondary care and disease-related advice and guidance (counselling):

8. In your experience, how common is it for professionals in your speciality to receive their hepatitis B/C patients from the following settings/specialities. If there are other settings/specialities, please give details.

	Very common	Variable or not routinely	Rarely or never	Unsure
General Practitioner				
Public health services/health protection units				
Sexual Health Services/Genito-urinary medicine clinics				
Midwives/Obstetrician/Gynaecologist				
Asylum seeker service				
Infectious Disease specialists				
Referral from an outreach screening programme				
Referral from centres testing injecting drug users				

9. If there are other settings/specialities, please give details.

10. Who has the **main responsibility** for providing disease-related **advice and guidance (counselling)** to patients following a positive diagnosis for viral hepatitis in your country?
    - General Practitioners
    - Public health services/health protection units
    - Infectious disease specialists (not in public health services/health protection units)
    - Specialists (e.g. Gastroenterologists/Hepatologists)
    - Other (please specify)

Section 3: Content of disease-related advice and guidance (counselling):

11. How common is it for **professionals in your speciality** to include the following topics in the consultation with a hepatitis B or C patient:

Consultation topics	Very common	Variable or not routinely	Rarely or never	Unsure
General information about the disease				
Hygiene measures to prevent transmission to others				
Contact tracing				
Other tests required				
Treatment options, benefits and side effects				
The importance of a healthy lifestyle, especially the damaging role of alcohol consumption				
Mental health promotion and staying positive				
Patient organisations / support groups				

Section 4: Screening/testing positive patients for other hepatitis viruses:

12. Are **hepatitis B positive patients** screened/tested for hepatitis C?
    - No
    - Yes – all patients
    - Yes – a selection of patients (please specify which)
    - Unsure
13. Are **hepatitis C positive patients** screened/tested for hepatitis B?
    - No
    - Yes – all patients
    - Yes – a selection of patients (please specify which)
    - Unsure
14. [If YES to screening/testing of hepatitis B/C positive patients for other viruses]
    Who has the **main responsibility** for screening/testing of **hepatitis B or hepatitis C positive patients** for other hepatitis viruses?
    - General Practitioners
    - Public health services/health protection units
    - Hospitals/clinics
    - Sexual Health Services
    - Other (please specify)
15. Are **hepatitis C positive patients** who are found to be hepatitis B negative **vaccinated** against hepatitis B?
    - No
    - Yes – all patients
    - Yes – a selection of patients (please specify)
    - Unsure
16. [If YES to hepatitis B vaccination of hepatitis C positive patients found to be hepatitis B negative]
    Who has the **main responsibility** for vaccination of **hepatitis C positive patients** found hepatitis B negative??
    - General Practitioners
    - Public health services/health protection units
    - Hospitals/clinics

- Sexual Health Services
- Other (please specify)

Section 5: Contact tracing and vaccination:

17. Is **hepatitis B screening/testing** offered to **contacts** (household and/or sexual contacts) of hepatitis B positive patients?
    - No
    - Yes –all contacts
    - Yes –a selection of contacts (please specify)
    - Unsure
18. Are **hepatitis B negative contacts** (household and/or sexual contacts) of hepatitis B positive patients vaccinated?
    - No
    - Yes –all hepatitis B negative contacts
    - Yes –a selection of hepatitis B negative contacts (please specify)
    - Unsure
19. [If YES to vaccination offered to hepatitis B negative contacts of hepatitis B positive patients] Who has responsibility for vaccination of **contacts**?
    - General Practitioners
    - Public health services/health protection units
    - Sexual Health Services
    - Hospitals/clinics
    - Other (please specify)
20. Is **hepatitis C screening/testing** offered to **contacts (household and/or sexual contacts) of hepatitis C positive patients**?
    - No
    - Yes –all contacts
    - Yes –a selection contacts (please specify)
    - Unsure
21. [If YES to screening/testing offered to contacts of hepatitis B/C positive patients] Who has the **main responsibility** for the screening/testing of contacts for hepatitis B and C?
    - General Practitioners
    - Public health services/health protection units
    - Sexual Health Services
    - Hospitals/clinics
    - Other (please specify)

Section 6: The role of the GP:

22. How common is it that the following patients would be **referred back to their GP** from specialist care?

Patient groups	Very common	Variable or not routinely	Rarely or never	Unsure
Those who do not qualify for treatment after the initial evaluation				
Those undergoing antiviral treatment				
Those who have sustained virological response				

due to treatment				
Those who are non responders to treatment				

23. How common is it that a **GP** would be involved in monitoring the following indicators in a patient **undergoing antiviral treatment**?

	Very common	Variable or not routinely	Rarely or never	Unsure
ALT levels				
Viral load				
Side effects				

Section 7: Diagnostics

24. How common is it for the following diagnostics to be used in the initial evaluation of a hepatitis B or C positive patient?

	Very common	Variable or not routinely	Rarely or never	Unsure
HBeAg and/or anti-HBe (for hepatitis B only)				
ALT				
Other biochemical markers (AST, GGT, serum albumin, etc)				
Quantitative viral load (hepatitis B DNA or hepatitis C RNA)				
Genotype				
Ultrasound				
Liver biopsy				
Transient elastography (e.g. fibroscan)				

Section 8: Treatment options:

25. Are there **limitations** on the use of the following antiviral drugs for **hepatitis B**?

HBV drugs	No limitations	Yes – some restrictions	Yes – totally limited / cannot be prescribed	Unsure
(Pegylated) Interferon alpha				
Lamivudine				
Telbivudine				
Adefovir				
Entecavir				
Tenofovir				

26. [If YES to some restriction on the use of Interferon alpha]
What are the **restrictions** for **Interferon alpha**?

- ☐ Can only be prescribed if resistance to another drug has developed
- ☐ Can only be prescribed for a limited duration

- ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
- ☐ Can only be prescribed in selected geographic areas
- ☐ Other restrictions, please give details:

27. [If YES to some restriction on the use of Lamivudine]
    What are the **restrictions** for **Lamivudine**?
    - ☐ Can only be prescribed if resistance to another drug has developed
    - ☐ Can only be prescribed for a limited duration
    - ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
    - ☐ Can only be prescribed in selected geographic areas
    - ☐ Other restrictions, please give details:

28. [If YES to some restriction on the use of Telbivudine]
    What are the **restrictions** for **Telbivudine**?
    - ☐ Can only be prescribed if resistance to another drug has developed
    - ☐ Can only be prescribed for a limited duration
    - ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
    - ☐ Can only be prescribed in selected geographic areas
    - ☐ Other restrictions, please give details:

29. [If YES to some restriction on the use of Adefovir]
    What are the **restrictions** for **Adefovir**?
    - ☐ Can only be prescribed if resistance to another drug has developed
    - ☐ Can only be prescribed for a limited duration
    - ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
    - ☐ Can only be prescribed in selected geographic areas
    - ☐ Other restrictions, please give details:

30. [If YES to some restriction on the use of Entecavir]
    What are the **restrictions** for **Entecavir**?
    - ☐ Can only be prescribed if resistance to another drug has developed
    - ☐ Can only be prescribed for a limited duration
    - ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
    - ☐ Can only be prescribed in selected geographic areas
    - ☐ Other restrictions, please give details:

31. [If YES to some restriction on the use of Tenofovir]
    What are the **restrictions** for **Tenofovir**?
    - ☐ Can only be prescribed if resistance to another drug has developed
    - ☐ Can only be prescribed for a limited duration
    - ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
    - ☐ Can only be prescribed in selected geographic areas
    - ☐ Other restrictions, please give details:

32. Are there **limitations** on the use of the following antiviral drugs for **hepatitis C**?

HCV drugs	No limitations	Yes – some restrictions	Yes – totally limited / cannot be prescribed	Unsure
(Pegylated) Interferon alpha				
Ribavirin				
Telaprevir				
Boceprevir				

33. [If YES to some restriction on the use of Interferon alpha]
What are the **restrictions** for **Interferon alpha**?
- ☐ Can only be prescribed if resistance to another drug has developed
- ☐ Can only be prescribed for a limited duration
- ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
- ☐ Can only be prescribed in selected geographic areas
- ☐ Other restrictions, please give details:

34. [If YES to some restriction on the use of Ribavirin]
What are the **restrictions** for **Ribavirin**?
- ☐ Can only be prescribed if resistance to another drug has developed
- ☐ Can only be prescribed for a limited duration
- ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
- ☐ Can only be prescribed in selected geographic areas
- ☐ Other restrictions, please give details:

35. [If YES to some restriction on the use of Telaprevir]
What are the **restrictions** for **Telaprevir**?
- ☐ Can only be prescribed if resistance to another drug has developed
- ☐ Can only be prescribed for a limited duration
- ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
- ☐ Can only be prescribed in selected geographic areas
- ☐ Other restrictions, please give details:

36. [If YES to some restriction on the use of Boceprevir]
What are the **restrictions** for **Boceprevir**?
- ☐ Can only be prescribed if resistance to another drug has developed
- ☐ Can only be prescribed for a limited duration
- ☐ Can only be prescribed by selected hospitals (e.g. tertiary centers)
- ☐ Can only be prescribed in selected geographic areas
- ☐ Other restrictions, please give details:

37. Is **treatment** restricted for any of the following patient groups?

Patient groups	No restrictions	Some restrictions	Significant restrictions	Yes completely restricted	Unsure
Undocumented migrants without health care coverage or health insurance					
Patients without health care coverage or health insurance (not i)					
Asylum seekers (still in application procedure)					
Injecting drug users (current users)					
Patients abusing alcohol (current abusers)					

Section 9: Professional practice and training:

38. How common is it for professionals in your speciality to have the following available for patients:

	Very common	Variable or not routinely	Rarely or never	Unsure
Materials about viral hepatitis in the national language				
Materials about viral hepatitis in other languages				
Interpreter services via a telephone				
Face to face interpreter services				

39. Is training available for professionals in your speciality to improve their knowledge and skills in the clinical management of viral hepatitis?
    - Yes (please give details)
    - No
    - Unsure

Make a comment on your choice here:

40. Is there a list of nationally certified centres/centres of excellence for the management and treatment of chronic hepatitis B and C?
    - Yes (please give details)
    - No
    - Unsure

Make a comment on your choice here:

Section 9: Professional practice and training for hepatitis B:

41. Are there any official national guidelines about **Hepatitis B** screening and patient management in place in your country? If yes, please give name and publisher:
    - ☐ General Hepatitis B guidelines: ……
    - ☐ Specific guidelines for specialists: ……
    - ☐ Other hepatitis B guidelines: ……

42. [If there are official national guidelines about Hepatitis B screening and patient management in your country]
    Does this specific guideline for specialists include information about:
    - ☐ Clinical indications and risk factors to prompt a test for hepatitis B
    - ☐ Pre-test information and advice for patients
    - ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐ Onward referral of chronic viral hepatitis patients to other services
    - ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐ Assessment of liver disease
    - ☐ Treatment strategies

Section 9: Professional practice and training for hepatitis B:

43. Are there any official national guidelines about **Hepatitis C** screening and patient management in place in your country? If yes, please give name and publisher:
    - ☐ General Hepatitis C guidelines: ……
    - ☐ Specific guidelines for specialists: ……
    - ☐ Other hepatitis C guidelines: ……

44. [If there are official national guidelines about Hepatitis C screening and patient management in your country]
    Does this specific guideline for specialists include information about:
    - ☐ Clinical indications and risk factors to prompt a test for hepatitis C
    - ☐ Pre-test information and advice for patients
    - ☐ Disease-related advice and guidance (counselling) for patients following positive diagnosis
    - ☐ Onward referral of chronic viral hepatitis patients to other services
    - ☐ Recommendations to tailor services or information for people from a migrant or ethnic minority background
    - ☐ Assessment of liver disease
    - ☐ Treatment strategies

Section 10: Barrier questions:

Uptake of screening among at risk groups

45. To what extent do you agree with the following statements as explanations of the current low uptake of hepatitis B and C screening among people from a migrant or ethnic minority background in your country.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Limited awareness and knowledge about hepatitis B and C in general (including the ways of transmission) and their consequences (e.g. the link to liver cancer)					
Subjective feeling of being healthy and hence unlikely to be infected with hepatitis B/C					
First generation migrants from hepatitis B and C endemicy countries are not aware that they have a significantly higher risk of being infected with hepatitis B/C					
Limited awareness that screening and subsequent treatment can prevent future complications					
Fear of social stigma and discrimination if found to be hepatitis B/C positive (e.g. fear of losing job)					
Lack of information about where to go for a test					
Lack of access to free/affordable health care					
Language barriers when visiting health services (limited availability of translated materials or interpreter services)					

46. If you think there are other explanations, please give details in the box below.

Screening offered by primary health care provides

47. To what extent do you agree with the following statements as explanations of why migrants are not being screened/tested for hepatitis B/C at the point of first contact with primary health care services/GPs in your country.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Health services are unable to identify patients with migration-related risk factors (such as country of birth or ethnic origin) as this data is not routinely collected					
Primary care providers/GPs are not aware that migrants from hepatitis B and C endemic countries have a significantly higher risk and should be offered screening					
Patients refuse testing despite primary care providers/GPs offering screening					

Limited awareness among primary health care providers/GPs about the scope of new, improved anti-viral treatments that can potentially cure the disease or significantly reduce disease progression					
Primary care providers/GPs rarely have translated materials about viral hepatitis or interpreter services available for patients					
Hepatitis screening of asymptomatic risk groups is generally not covered under the general health care service/insurance scheme in my country					
There is limited guidance available to primary health care professionals/GPs on screening for viral hepatitis among at risk groups					
Health care professionals/GPs do not have time to offer screening					

48. If you think there are other explanations, please give details in the box below.

Disease-related counselling, onward referral and clinical management of hepatitis B/C patients.

49. To what extent do you agree with the following statements as explanations of why hepatitis B/C cases do not reach specialized health care (e.g. hepatologists) for further investigation and treatment in your country.

Statements	**Strongly disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
In antenatal screening programmes the focus is mainly on vaccination of the baby of hepatitis B positive mothers, not on hepatitis care for the women testing positive					
Time constraints affect health care professionals/GPs ability to provide patients with disease-related counselling and referral advice					
Some health care services are not reimbursed for providing disease-related counselling and referral advice to patients					
Newly diagnosed patients generally do not receive comprehensive counselling on the consequences of the disease, treatment options and referral, and hence do not seek specialist care					
There are too few specialists to whom the patients can be referred to for specialized care					

The antiviral treatment itself is generally not covered under the general health care service/insurance scheme in my country					
Patients are referred to the specialist but refuse further investigation or treatment					
There is limited guidance available to primary health care professionals about onward referral, counselling and patient management of hepatitis B/C patients					
Although training on viral hepatitis management is available for health care providers, uptake is generally low among professionals.					
Patients from a migrant or ethnic minority background face language barriers when visiting health services (limited availability of translated materials or interpreter services)					

50. If you think there are other explanations, please give details in the box below.

Section 11: Awareness raising/outreach campaigns:

51. Are you aware of any campaigns or outreach programmes that aim to increase awareness of and promote screening for hepatitis B and/or C among migrant or ethnic minority groups in your country?

    - Yes (please give details below)
    - Not in detail/not personally but I know people who are aware of migrant-specific hepatitis screening programmes (please give details below)
    - No – I'm not aware of any
    - No – I know there are none

52. [if Yes or Not in detail: Option to give details for up to 5 campaigns]

Name and Job Role of Coordinator	
Organisation	
Contact details	
Name of the campaign:	
Nationality/ethnicity of target population(s)	
Setting(s) where target population are contacted (e.g. mosque, church, community centre, shops, online, home etc.)	
Year and duration (e.g. weeks/months/years/ongoing)	
Website	

Comments

53. If you have any comments about the survey in general or regarding the screening, counselling, referral and/or treatment of Hepatitis B/C in your country, we would be grateful to learn more and benefit from your experience. Please write any comments in the text box below.

Thank you for completing this survey.