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Hepatitis B Vaccination Practices among At-Risk Adults in Six European Countries

Master of Public Health Thesis

By

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Statutory Declaration

I hereby declare that I am the individual author of this thesis, which is now submitted for assessment and partial fulfillment leading to the award of Master of Public Health at Hamburg University of Applied Sciences.

I certify that, to the best of my knowledge, this thesis was completed with reasonable care to ensure that the work is original and does not violate any law of copyright.

Hamburg, August 2013

Signed by

Vinh Nguyen

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Abstract

Background: Countries in Western and Northern Europe are categorized as low prevalence countries with hepatitis B. However the problems with hepatitis B infection are increasingly recognized, especially among distinct groups of adults. For instance, new infections are concentrated in injecting drug users, inmates, and immigrants from high endemic regions. Vaccination is the best way to prevent hepatitis B infection and its consequences. At-risk adults are recommended to receive this vaccination. This study aims to analyze the current vaccination practices (regarding provision, copayment, and responsibility) for various groups of at-risk individuals in six European countries: the United Kingdom, Germany, Netherlands, Hungary, Italy and Spain.

Methods: Online questionnaires were carried out in the six countries. In total 1181 experts from six different health professions (public health professionals, general practitioners, sexual health service providers, health specialists, antennal care providers and asylum seeker care providers) were invited to participate. The collected data was analyzed with IBM SPSS Statistics 21 software.

Results: The surveys were completed by 286 respondents. In general, the vaccination practices for at-risk individuals greatly vary among the countries. And, within the country, the practices greatly differ between health professionals. Generally, the majority of the respondents in most of the countries stated that hepatitis B vaccination is either being given commonly or sometimes and free of charge to prioritized at-risk groups (such as IDUs, sex workers, MSM, HIV positive patients, and contacts of positive hepatitis B patients). There were considerable matches between the current practices and the current national polices (guidelines or recommendations) for some at-risk groups in some countries. However, to some degree, gaps between the practices and the policies for certain at-risk groups in some countries were observed.

***Conclusion*:** From the results of this study, policy makers can review how well their current national policies regarding hepatitis B vaccination for specific at-risk individuals are applied in practice by particular groups of health professionals. Depending on the nation health systems, local situations and priority settings, if necessary, policy makers may consider to newly develop or adjust policies to meet specifically target groups of at-risk individuals.

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List of Abbreviations

CDC	United States Centers for Disease Control and Prevention
EU	European Union
HBV	Hepatitis B virus
HCV	Hepatitis C virus
IDUs	Injecting Drug Users
MSM	Homosexual Men
WHO	World Health Organization
WP4	Work Package four

Country Codes

DE	Germany
ES	Spain
HU	Hungary
IT	Italy
NL	the Netherlands
UK	the United Kingdom

1 INTRODUCTION

Hepatitis B virus infection

Hepatitis B is an inflammatory disease of the liver caused by an infection of the Hepatitis B Virus (HBV). Hepatitis B is recognized as the most serious type of viral hepatitis and a major public health problem. The disease can range in severity from an acute illness with a mild condition lasting a few weeks to a chronic illness with a serious condition lasing a lifetime. Chronic infection can put people at high risk of death from cirrhosis and liver cancer (1), (2).

The risk that a HBV infection develops into chronic illness depends on the age of infection. The younger individuals who become infected with HBV are the more likely to develop chronic infections. Chronic infection is observed in 90% of infants infected during the first year of life; 30–50% of children infected between one to four years of age, and 1 to 10% of those infected at older age or as adults (1).

According to the CDC, the incidence of HBV acute infection among children and adolescents has been declined by 96% due to the successful implementation of childhood vaccination programs. Currently, estimated 95% of new infections occur among unvaccinated adults (3).

Epidemiology of hepatitis B worldwide

The World Health Organization (WHO) estimates that more than 2 billion individuals worldwide (one third of the world's population) has been infected with the hepatitis B virus and more than 350 million suffer from chronic infections. Annually, about 600 000 die due to HBV- related diseases (1).

The WHO has categorized endemic of countries based upon the prevalence of hepatitis B surface antigen (HBsAg) accordingly: high (>8%), intermediate (2-8%), and low (<2%) (4).

- High endemic areas include: most of Asia and the Pacific Basin (excluding Japan, Australia, and New Zealand), sub-saharan Africa, parts of the Middle East, and some countries in Eastern Europe.
- Intermediate endemic areas include: Southern parts of Eastern and Central Europe, the remainder of the Middle East and Indian sub-continent, Central and South America.
- Low endemic areas include: Western and Northern Europe, North America, parts of South America, Australia (4).

Epidemiology of hepatitis B in Europe

In Europe, HBV infection has been increasingly recognized as a public health threat. Within the WHO European region, about 14 million people are chronically infected with hepatitis B, in comparison with 1.5 million infected by HIV. Moreover, 36 000 people die each year because of HBV-related diseases (5) (6).

The prevalence of HBV infection (based on HBsAg) varies by country. For instance, IT has the highest prevalence rate of 2.0% followed by: Turkey (1.5%), DE (0.6%), UK (0.4%), NL (0.4%), and finally, ES (0.3%) (7). The prevalence of HBV infection in the low prevalence countries may be underrepresented because high risk groups are not represented in the samples and migrants are underrepresented in population prevalence studies (8).

Annually about 7 000 to 8 000 cases are confirmed in 27 EU/EEA Member States. The most affected age group is the 22 - 44 year olds, followed by 15 - 24 year olds. The cases are concentrated in distinct sub-populations, such as: injecting drug users, sex workers, men who have sex with men, inmates, individuals with HIV infection, and immigrants from high endemic regions (8).

In the current context of rapid global migration, individuals moving from high and intermediate endemic countries to low endemic countries can be a determining factor (9). The increasing number of immigrants moving to Europe, often from highly endemic regions, is contributing to the transition in the hepatitis B epidemiology of low endemic countries (10).

Transmission routes

HBV is usually transmitted through direct blood-to-blood contact, semen, or body fluids from a HBV-infected person. Furthermore, HBV can also be passed from an infected mother to her baby during the delivery process. However, HBV is not spread by contaminated food or water, and cannot be spread casually (e.g. talking, touching, coughing, sneezing) in the workplace. Transmission routes of HBV infection is the same as those of the HIV, but the infectivity of HBV is 50 to 100 times higher. Unlike HIV, HBV is able to survive outside the body (e.g. on razor blades, toothbrushes or earrings) for at least seven days without losing its infectivity (1) (2) (4).

Patterns of transmission differ between high prevalence and low prevalence countries:

In high prevalence countries, the common modes of infection are: perinatal (from mother to baby at birth); early childhood infections (unapparent infection through close

interpersonal contact with infected household contacts); unsafe medical practices; unsafe blood transfusions; and unprotected sexual contact (1) (2).

In low prevalence countries – in many developed countries (e.g. those in Western Europe and North America), the majority of infections are transmitted during young adulthood by sexual activity and injecting drug use. HBV is a major infectious occupational hazard of health workers (1) (2).

At-risk individuals

Everyone at any age is at some risk for a HBV infection. However, some groups are at higher risk because of their lifestyles, occupations, or other factors. A list of groups of people who are considered being at higher risk of HBV infection includes: (11) (12) (13)

- infants born to infected mothers
- adopted children from endemic countries
- injection drug users sharing unsterile needles
- sexually active heterosexuals (more than 1 partner in the past six months)
- commercial sex workers
- men who have sex with men,
- health care workers and public safety workers
- staff and clients of institutions for the developmentally disabled
- inmates and staff of correctional facilities and prisons
- patients with specific medical conditions, such as haemophiliacs and those frequently receiving blood or blood products, haemodialysis patients and candidates for haemodialysis, transplant patients and candidates for transplant and chronic non-hepatitis B liver disease patients
- individuals diagnosed with a sexually transmitted disease (STD)
- people sharing unsterile medical or dental equipment
- people providing or receiving acupuncture and/or tattooing with unsterile medical devices
- sex contacts or close household members of an infected person
- immigrants or refugees from countries of intermediate or high endemic areas
- persons who plan to travel to areas of intermediate or high hepatitis B endemic areas
- any individual who may have other risk factors not included on this list.

Hepatitis B vaccination

Vaccination is the best way to prevent an HBV infection. The vaccine against hepatitis B was introduced in 1982 and since then has proven to be safe and highly effective. Hepatitis B vaccine is usually given in a series of separate three doses over 6 months. The completing vaccination with three doses is 95% effective at inducing immunity to prevent HBV infection. Protection can last at least 20 years and is possibly lifelong (1) (14).

In 1992, WHO recommended to implement universal hepatitis B vaccination for all infants in countries with an HBV prevalence rate greater than 5%. In areas where mother-to-infant spread of HBV is common, infants are advised to be given the first dose of hepatitis B vaccine as soon as possible after birth delivery (e.g. within 24 hours). In 1997, all countries were recommended to implement universal vaccination for all children and unvaccinated adolescents younger than 18 years old (1). Individuals in high risk groups should also be vaccinated (1) (15).

By July 2011, 179 countries implemented routine hepatitis B vaccination as part of their childhood vaccination programs – significant progress compared with 31 countries in 1992. Despite the success of universal vaccination, some countries still remain reluctant to introduce such a policy. For instance, eight countries in northern Europe (Denmark, Finland, Iceland, Ireland, Norway, Sweden, NL and UK) have not yet implemented universal vaccination for hepatitis B. These countries comprehensively implemented a targeted vaccination approach, offer selective vaccination programs for only individuals who are considered to be at-high risk of infection (16).

Policies in the six countries

Among the six countries (namely UK, DE, NL, HU, IT, ES) selected in this study, depending on epidemiological situation of HBV infection and program considerations, two very different strategies for hepatitis B vaccination are applied: universal childhood vaccination (DE, HU, IT, ES) or selective immunization for individuals at-risk (NL, UK). In addition to universal childhood vaccination programs, DE, HU, IT and ES offer hepatitis B vaccination for at-risk individuals. Although, universal childhood vaccination is not implemented in NL and UK these countries have extensive vaccination programs for at increased risk groups (15). Details about current hepatitis B vaccination and co-payment policies for specific at-risk individuals were summarized in Table 1-1 and Table 1-2.

All the six countries recommend hepatitis vaccination to at-risk individuals, who are determined as such by their lifestyle. Hepatitis B vaccination is recommended for all IDUs, commercial sex workers, MSM and inmates of closed facilities (such as prisons, correctional facilities) (15) (17).

All the six countries recommend hepatitis B vaccination of individuals who are at-risk by their occupation. Vaccination for health care workers including students and laboratory staff is recommended in all these countries. Other occupations (other than health care) with high risk exposure are recommended for hepatitis B vaccination; however different countries may have different priorities to specific occupational groups. Vaccination for police, emergency, and rescue services is recommended in UK, DE, HU, IT and ES, but not in NL. Notably, in UK, police and emergency service staff are offered vaccine after a risk assessment. In DE, vaccination is recommended for staff of asylum seeking institutions, social workers with possible contact to contaminated blood, and voluntary first-aid workers. Similarly, IT recommends the vaccination to religious persons or voluntaries that provide assistance to ill persons and people working with blood products. In ES, workers with potentially in contact with body fluids, garbage collectors, tattoo practitioners are recommended vaccination (17).

The current hepatitis policies for other groups who are at-risk by other factors (such as patients with relevant medical conditions, and migrants from HBV endemic regions) were also searched and reviewed. However, policies for some very specific groups were not very clear.

All the six countries have special policies to screen all pregnant women for hepatitis B to ensure that babies born to HBV positive mothers are vaccinated (17). However, generally, hepatitis B negative pregnant women are not vaccinated.

Who pays for HBV vaccination can limit access to vaccination to some at-risk groups of the society. Individual copayment or contribution for hepatitis B vaccination may influence the decision of at-risk individuals whether they decide or not to have the hepatitis B vaccination. Individuals may rationalize to have hepatitis B vaccination when it is free. At the same time, they may reject the vaccination when a copayment is either required or unaffordable. Access to vaccination should be free of charge for at least the main risk groups plus newborns (14). The current policies about payment for hepatitis B vaccination from at-risk individuals are presented in Table 1-2.

Table 1 - 1: Vaccination policies for hepatitis B for at-risk individuals (17)

At-risk individuals	UK*	DE	NL*	HU	IT	ES
Individuals who are at-risk by lifestyle						
Injecting Drug Users (IDUs)	Yes	Yes	Yes	Yes	Yes	Yes
Sex workers	Yes	Yes	Yes	Yes	Yes	Yes
Homosexual men (MSM)	Yes	Yes	Yes	Yes	Yes	Yes
Residents/inmates of closed facilities (e.g. prisoners, psychiatric hospitals etc.)	Yes	Yes	Yes	No	Yes	Yes
Individuals who are at-risk by occupation						
Workers in medical services: health care, hospital or clinic staff	Yes	Yes	Yes	Yes	Yes	Yes
Students in health care professions	Yes	Yes	Yes	Yes	Yes	Yes
Workers in occupations with high exposure risk (other than health care)	Yes	Yes	No?	Yes	Yes	Yes
Patients with medical conditions						
HIV positive patients	No ?	Yes?	No?	Yes?	Yes?	Yes?
Hepatitis C positive patients	Yes?	Yes?	Yes?	Yes?	Yes?	Yes?
Patients with abnormal liver function test	?	?	?	?	?	?
Patients exhibiting signs and symptoms of hepatitis	?	?	?	?	?	?
Individuals who are at-risk by other factors						
Household and/or sexual contacts of hepatitis B positive patients	Yes	Yes	Yes	Yes	Yes	Yes
Migrants from hepatitis B endemic regions	?	?	?	?	?	?
Individuals concerned that they may have been exposed to hepatitis B infection	?	?	?	?	?	?
General populations						
Pregnant women (antenatal screening)	?	?	?	?	?	?

Note:

Yes = hepatitis B is recommended

No = hepatitis B is not recommended

? = unsure or not found

Table 1 - 2: Copayment policies for hepatitis B vaccination from at-risk individuals (17)

At-risk individuals	UK*	DE	NL*	HU	IT	ES
Individuals who are at-risk by lifestyle						
Injecting Drug Users (IDUs)	Free	Free	Free	Sub	Free	Free
Sex workers	Free	Free	Free	Sub	Free	Free
Homosexual men (MSM)	Free	Free	Free	Sub	Free	Free
Residents/inmates of closed facilities (e.g. prisoners, psychiatric hospitals etc.)	Free	Free	Free	Sub	Free	Free
Individuals who are at-risk by occupation						
Workers in medical services: health care, hospital or clinic staff	Free	Free	Free	Free	Free	Free
Students in health care professions	Free	Free	Free	Free	Free	Free
Workers in occupations with high exposure risk (other than health care)	Free	Free	?	Free	Free	Free
Patients with medical condition						
HIV positive patients	?	?	?	?	?	?
Hepatitis C positive patients	?	?	?	?	?	?
Patients with abnormal liver function test	?	?	?	?	?	?
Patients exhibiting signs and symptoms of hepatitis	?	?	?	?	?	?
Individuals who are at-risk by other factors						
Household and/or sexual contacts of hepatitis B positive patients	Free	Free	Free	Sub	Free	Free
Migrants from hepatitis B endemic regions	?	?	?	?	?	?
Individuals concerned that they may have been exposed to hepatitis B infection	?	?	?	?	?	?
General populations						
Pregnant women (antenatal screening)	?	?	?	?	?	?

Note:

Free = individual copayment is not required for hepatitis B vaccination

Sub = partially individual is required for hepatitis B vaccination

? = unsure or not found

Rationale of this study

This study is a part of the Work Package 4 of the project 'HepScreen: Screening for hepatitis B and C among migrants in the European Union'. The HepScreen project co-funded by the Health Programme of the EU aims to analyze and communicate to public health professionals the tools and conditions necessary for implementing successfully intervention programs for hepatitis B and C in the EU, especially for migrants. The Work Package 4 aims to collect and analyze information on hepatitis B and C related practices: screening, counseling, referral, treatment, and vaccination for various groups of at-risk individuals (not only the at-risk group of migrants). The focus of this thesis is on hepatitis B vaccination.

The main objective of this thesis is to explore the current practices of hepatitis B vaccination by different health professional groups for different at-risk individuals in six European countries (UK, DE, NL, HU, IT and ES).

The specific objectives are to analyze:

- Whether after screening for hepatitis B, at-risk individuals with negative screening result are vaccinated?
- If the at-risk individuals are vaccinated whether personal copayment/contribution is required for the vaccination?
- If the at-risk individuals are found being positive for hepatitis B, whether negative contacts of the hepatitis B positive patients are vaccinated?
- Who has the main responsibility for vaccination of hepatitis B negative contacts?
- Gaps and/or matches between the actual practices and the current national policies (guidelines or recommendations)?

Expected deliverables of this paper

The introduction part presents general knowledge about hepatitis B, current national policies about hepatitis B vaccination for different at-risk groups in the six countries. **The results part** describes in details the results of the surveys. Hepatitis B vaccination, copayment and responsibility practices for various at-risk groups in each country are described. The copayment practices result does not include the groups of individuals who are deemed at- risk by their occupation. The responsibility practices result only includes the at-risk group of negative contacts of positive hepatitis B patients. **The discussion and conclusion part** analyzes and describes gaps and/or matches between the actual practices and the current policies.

2 METHODS and MATERIALS

Study design

To explore the current vaccination practices for at-risk individuals, cross-sectional online surveys addressing different groups of health professionals in the six countries using the appropriate national language (UK, DE, NL, HU, IT and ES) were conducted. Six different health professional groups representing the views of professionals within their specialty were identified and contacted by email to complete the questionnaires online.

Six different surveys (see Appendices) aiming at six different health professional groups include:

- *A public health professionals survey* (PH survey) to address national public health and/or infectious disease surveillance officials and heads of patient associations
- *A general practitioners survey* (GP survey) to address general practitioners (primary care practitioners)
- *A sexual health service and/or genitor-urinary medicine providers survey* (SHS survey) to address professionals working in the field of sexual health
- *A gastroenterology and/or hepatology specialists survey* (SP survey) to address specialists working in the field of gastroenterology and/or hepatology
- *An antenatal care providers survey* (ANC survey) to address national associations for midwives and heads of gynecological associations
- *An asylum seeker care providers survey* (ASC survey) to address professionals working in the field of health care for asylum seekers

The surveys were conducted between July and September 2012. In total, 1181 experts were invited to participate in the surveys.

Data analysis

The data was analyzed with IBM SPSS Statistics 21 software. Descriptive analyses were performed.

3 RESULTS

3.1 Overall Response Rate

3.1.1 Overall response rate to each survey in each country

The six different survey questionnaires were sent to a total of 1181 experts in the six selected survey countries. Each identified expert received one questionnaire survey depending on his/her field of expertise. There were a total of 286 completed responses.

The response rates to the six surveys varied noticeably by country (Overall, NL: 54%, HU: 28%, IT: 36%, ES: 32%, UK: 19%, and DE: 15%) (Table 3.1-1).

The response rates to the six surveys also varied considerably by survey. For instance, in the UK, the public health survey had a 28% complete rate, the specialists survey 24%, the sexual health service survey 23%, the antenatal care survey 22%, while the general practitioners survey 12%, asylum seeker care survey 11% (Table 3.1-1).

Table 3.1-1: Overall response rate (n responses/ n invites) (Adapted from Work Package 4 Report)

	PH survey	GP survey	SHS survey	SP survey	ANC survey	ASC survey	Total (per country)
UK	9/32 28%	10/81 12%	10/43 23%	10/41 24%	8/37 22%	4/35 11%	51/269 19%
DE	14/60 23%	4/129 3%	5/14 36%	9/80 11%	36/175 21%	3/22 14%	71/480 15%
NL	7/11 64%	9/20 45%	8/14 57%	22/46 48%	6/6 100%	4/7 57%	56/104 54%
HU	2/9 22%	1/6 17%	3/9 33% *	10/37 27%	4/14 29%	3/8 38%	23/83 28%
IT	8/16 50%	14/45 31%	1/12 8%	9/15 60%	25/63 40%	3/17 18%	60/168 36%
ES	8/27 30%	2/15 13%	2/8 25% *	4/8 50%	8/4 200% *	1/7 14%	25/77 32%
Total							286/1181 24%

*Overestimate as some additional respondents were invited but the exact number is not known

3.2 Vaccination Practices – Results

3.2.1 Individuals who are at-risk by lifestyle

Injecting drug users (IDUs)

Public health experts, general practitioners and sexual health service providers were asked whether after screening for hepatitis B, IDUs with negative screening result are vaccinated against hepatitis B.

Overall, majority (greater than 60% with the exception of HU at 33.3%) of the respondents from all the countries stated that hepatitis B vaccination for IDUs is offered either commonly (referring to the answer 'Yes') or sometimes (Table 3.2-1). However, the result patterns differed by country. In UK and ES, the number of respondents who answered 'common' is far more than those who answered 'sometimes'. At the same time, in NL and IT, the number of experts stating 'common' is moderately more than those saying 'sometimes'. By contrast, in DE and HU, the number of experts answering 'common' is less than those answering 'sometimes'.

Table 3.2-1: Vaccination practices for IDUs - Overall

	Yes/ Common	Sometimes	No	Unsure	Total
UK	21 72.4%	6 20.7%	0 0.0%	2 6.9%	29 100.0%
DE	5 21.7%	10 43.5%	2 8.7%	6 26.1%	23 100.0%
NL	10 41.7%	7 29.2%	3 12.5%	4 16.7%	24 100.0%
HU	0 0.0%	2 33.3%	1 16.7%	3 50.0%	6 100.0%
IT	10 43.5%	6 26.1%	2 8.7%	5 21.7%	23 100.0%
ES	8 66.7%	1 8.3%	1 8.3%	2 16.7%	12 100.0%

Table 3.2-1 has been further broken down to the respective country, beginning with UK:

UK – Nearly all of the respondents (in sum, 27/29; 93.1%) stated that hepatitis B vaccination for IDUs is offered either commonly (21/29; 72.4%) or sometimes (6/29; 20.7%) (Table 3.2-2). Most of the general practitioners (8/10; 80%) and all of the sexual health service providers (10/10; 100%) stated this vaccination practice is offered commonly. Most of the public health experts (nearly 90%) also stated that this

vaccination practice is given either commonly or sometimes. However, the number of public health experts answering 'common' (3/9; 33.3%) is less than those answering 'sometimes' (5/9; 55.6%).

Table 3.2-2: Vaccination practices for IDUs in UK

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	3 33.3%	5 55.6%	0 0.0%	1 11.1%	9 100.0%
GP survey	8 80.0%	1 10.0%	0 0.0%	1 10.0%	10 100.0%
SHS survey	10 100.0%	0 0.0%	0 0.0%	0 0.0%	10 100.0%
Total	21 72.4%	6 20.7%	0 0.0%	2 6.9%	29 100.0%

DE – Majority (in sum, 15/23; 65.2%) of the respondents mentioned that hepatitis B vaccination for IDUs is offered either commonly (only 5/23; 21.7%) or sometimes (10/23; 43.5%) (Table 3.2-3). All of the general practitioners and sexual health service providers respectively mentioned this vaccination practice being offered either commonly (3/4; 75% and 2/5; 40%) or sometimes (1/4; 25% and 3/5; 60%). None of the public health experts stated that vaccination is given commonly, while 6/14 (42.9%) stated vaccination is given sometimes; and relatively high number (6/14; 42.9%) of the public health experts are unsure.

Table 3.2-3: Vaccination practices for IDUs in DE

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	0 0.0%	6 42.9%	2 14.3%	6 42.9%	14 100.0%
GP survey	3 75.0%	1 25.0%	0 0.0%	0 0.0%	4 100.0%
SHS survey	2 40.0%	3 60.0%	0 0.0%	0 0.0%	5 100.0%
Total	5 21.7%	10 43.5%	2 8.7%	6 26.1%	23 100.0%

NL – High percentage (in sum, 17/24; 70.9%) of the respondents answered that IDUs are given hepatitis B vaccination either commonly (10/24; 41.7%) or sometimes (7/24; 29.2%) (Table 3.2-4). Public health experts (in sum, 100%) are the group most stated this practice being offered either commonly (3/7; 42.9%) or sometimes (4/7; 57.1%). However, sexual health service providers (5/8; 62.5%) are the group most mentioned this practice is offered commonly. Just more than half (5/9; 55.5%) of the general practitioners stated this practice being given either commonly or sometimes, relatively high number (3/9; 33.3%) of the respondents was unsure.

Table 3.2-4: Vaccination practices for IDUs in NL

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	3 42.9%	4 57.1%	0 0.0%	0 0.0%	7 100.0%
GP survey	2 22.2%	3 33.3%	1 11.1%	3 33.3%	9 100.0%
SHS survey	5 62.5%	0 0.0%	2 25.0%	1 12.5%	8 100.0%
Total	10 41.7%	7 29.2%	3 12.5%	4 16.7%	24 100.0%

HU – None of the 6 respondents mentioned hepatitis B vaccination is given to IDUs commonly, 2/6 (33.3%) mentioned vaccination is given sometimes (Table 3.2-5). Relatively high number (3/6; 50%) of the respondents was unsure.

Table 3.2-5: Vaccination practices for IDUs in HU

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
GP survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
SHS survey	0 0.0%	1 33.3%	0 0.0%	2 66.7%	3 100.0%
Total	0 0.0%	2 33.3%	1 16.7%	3 50.0%	6 100.0%

IT – High percentage (in sum, 16/23; 69.6%) of the respondents presented that IDUs are offered vaccination against hepatitis B either commonly (10/23; 43.5%) or sometimes (6/23; 26.1%) (Table 3.2-6). General practitioners are the dominant group most stated this practice is being offered either commonly (7/14; 50%) or sometimes (3/14; 21.4%).

Table 3.2-6: Vaccination practices for IDUs in IT

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	3 37.5%	2 25.0%	0 0.0%	3 37.5%	8 100.0%
GP survey	7 50.0%	3 21.4%	2 14.3%	2 14.3%	14 100.0%
SHS survey	0 0.0%	1 100.0%	0 0.0%	0 0.0%	1 100.0%
Total	10 43.5%	6 26.1%	2 8.7%	5 21.7%	23 100.0%

ES – Most (in sum, 9/12; 75%) of the respondents stated that hepatitis B vaccination for IDUs is offered either commonly (8/12; 66.7%) and sometimes (1/12; 8.3%) (Table 3.2-7). Public health experts (5/8; 62.5%) and sexual health service providers (2/2; 100%) are the groups most mentioned this practice being offered commonly.

Table 3.2-7: Vaccination practices for IDUs in ES

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	5 62.5%	1 12.5%	0 0.0%	2 25.0%	8 100.0%
GP survey	1 50.0%	0 0.0%	1 50.0%	0 0.0%	2 100.0%
SHS survey	2 100.0%	0 0.0%	0 0.0%	0 0.0%	2 100.0%
Total	8 66.7%	1 8.3%	1 8.3%	2 16.7%	12 100.0%

Sex workers

Public health experts, general practitioners and sexual health service providers were asked whether after hepatitis B screening, commercial sex workers with negative screening result are vaccinated.

The overall pattern of hepatitis B vaccination practices for sex workers is similar to that of IDUs; most (in total greater than 70%) of the respondents from most of the countries (except HU 50%, and IT approximately 50%) stated the vaccination is given to sex workers either commonly or sometimes (Table 3.2-8). The patterns of answers are diverse by country. In UK, NL and ES, very high percentages (in sum, about 80%) of total respondents stated that vaccination for IDUs is offered either commonly or

sometimes; and the numbers of the respondents answering 'common' are far more than those answering 'sometimes'. In contrast, in DE, HU and IT, the numbers of the respondents answering 'common' are less than those answering sometimes.

Table 3.2-8: Vaccination practices for sex workers - Overall

	Yes/ Common	Sometimes	No	Unsure	Total
UK	19 65.5%	5 17.2%	1 3.4%	4 13.8%	29 100.0%
DE	6 26.1%	10 43.5%	2 8.7%	5 21.7%	23 100.0%
NL	15 62.5%	4 16.7%	0 0.0%	5 20.8%	24 100.0%
HU	0 0.0%	3 50.0%	1 16.7%	2 33.3%	6 100.0%
IT	5 21.7%	7 30.4%	5 21.7%	6 26.1%	23 100.0%
ES	6 50.0%	4 33.3%	0 0.0%	2 16.7%	12 100.0%

UK – Most (in sum, 24/29; 82.7%) of the respondents declared Hepatitis B vaccination for sex workers is offered either commonly (19/29; 65.5%) or sometimes (5/29; 17.2%) (Table 3.2-9). Among the health professional groups, sexual health service providers are the most (10/10; 100%) stated this vaccination practice is offered commonly. General practitioners (in sum, 80%) are the second most group mentioned the vaccination is given either commonly (7/10; 70%) or 'sometimes' (1/10; 10%). Although two thirds of public health experts (overall, 66.6%) stated the vaccination is given either commonly (2/9; 22.2%) or sometimes (4/9; 44.4%); the number of the respondents saying 'common' is less than those saying 'sometimes'.

Table 3.2-9: Vaccination practices for sex workers in UK

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	2 22.2%	4 44.4%	1 11.1%	2 22.2%	9 100.0%
GP survey	7 70.0%	1 10.0%	0 0.0%	2 20.0%	10 100.0%
SHS survey	10 100.0%	0 0.0%	0 0.0%	0 0.0%	10 100.0%
Total	19 65.5%	5 17.2%	1 3.4%	4 13.8%	29 100.0%

DE – Majority (totaling 16/23, 69.6%) of the respondents presented that after screening sex workers are offered vaccination against hepatitis B either commonly (6/23; 26.1%) or sometimes (10/23; 43.5%) (Table 3.2-10). This result pattern of sex workers is similar to the result pattern of IDUs. All of the respondents from general practitioners and sexual health service groups stated this practice is applied either common or sometimes. Remarkably, in sum only half of the public health experts stated this vaccination practice is given either commonly (1/14; 7.1%) or sometimes (6/14, 42.9%); a relatively high percentage (5/14; 35.7%) of the public health expert respondents was unsure.

Table 3.2-10: Vaccination practices for sex workers in DE

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	1 7.1%	6 42.9%	2 14.3%	5 35.7%	14 100.0%
GP survey	3 75.0%	1 25.0%	0 0.0%	0 0.0%	4 100.0%
SHS survey	2 40.0%	3 60.0%	0 0.0%	0 0.0%	5 100.0%
Total	6 26.1%	10 43.5%	2 8.7%	5 21.7%	23 100.0%

NL – Most (in sum, 19/24; 79.2%) of the respondents mentioned that the vaccination for sex workers is offered either commonly (15/24; 62.5%) or sometimes (4/24; 16.7%) (Table 3.2-11). Similar to UK, most of the respondents from sexual health service providers group mentioned this practice is offered commonly (7/8; 87.5%). Interestingly, in contrast to UK (6/9; 66.6%) and DE (7/14; 50%), public health experts from NL (7/7; 100%) dominantly mentioned this vaccination practice is applied either commonly (6/7; 85.7%) or sometimes (1/7; 14.3%). A remarkably high number (nearly half, 4/9; 44.4%) of the general practitioners was unsure.

Table 3.2-11: Vaccination practices for sex workers in NL

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	6 85.7%	1 14.3%	0 0.0%	0 0.0%	7 100.0%
GP survey	2 22.2%	3 33.3%	0 0.0%	4 44.4%	9 100.0%
SHS survey	7 87.5%	0 0.0%	0 0.0%	1 12.5%	8 100.0%
Total	15 62.5%	4 16.7%	0 0.0%	5 20.8%	24 100.0%

HU – None of the respondents mentioned this vaccination practice for sex workers is offered commonly (Table 3.2-12). Half (3/6) of the respondents reported the vaccination being offered sometimes. And a relatively high number (2/6; 33.3%) of the respondents was unsure.

Table 3.2-12: Vaccination practices for sex workers in HU

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
GP survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
SHS survey	0 0.0%	2 66.7%	0 0.0%	1 33.3%	3 100.0%
Total	0 0.0%	3 50.0%	1 16.7%	2 33.3%	6 100.0%

IT – In sum about half of the respondents (12/23; 52.1%) stated this vaccination practice is given either commonly or sometimes. Noticeably the answers of the respondents were very diverse (Table 3.2-13).

Table 3.2-13: Vaccination practices for sex workers in IT

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	2 25.0%	2 25.0%	1 12.5%	3 37.5%	8 100.0%
GP survey	3 21.4%	5 35.7%	3 21.4%	3 21.4%	14 100.0%
SHS survey	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1 100.0%
Total	5 21.7%	7 30.4%	5 21.7%	6 26.1%	23 100.0%

ES – Most (in sum 10/12; 83.3%) of the respondents mentioned this vaccination practice for sex workers is offered either commonly (6/12; 50%) or sometimes (4/12; 33.3%) (Table 3.2-14).

Table 3.2-14: Vaccination practices for sex workers in ES

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	3 37.5%	3 37.5%	0 0.0%	2 25.0%	8 100.0%
GP survey	1 50.0%	1 50.0%	0 0.0%	0 0.0%	2 100.0%
SHS survey	2 100.0%	0 0.0%	0 0.0%	0 0.0%	2 100.0%
Total	6 50.0%	4 33.3%	0 0.0%	2 16.7%	12 100.0%

Homosexual men (MSM)

Public health experts, general practitioners and sexual health service providers were asked whether after screening for hepatitis B infection, MSM with negative screening result are vaccinated against hepatitis B.

Overall, the result patterns of MSM are similar to the result patterns of IDUs and sex workers. In summary, most of the respondents from most of the countries especially from UK, NL (more than 80% respectively) and ES (75%) stated that hepatitis B vaccination for MSM is offered either commonly or sometimes (Table 3.2-15).

Table 3.2-15: Vaccination practices for MSM - Overall

	Yes/ Common	Sometimes	No	Unsure	Total
UK	18 62.1%	6 20.7%	1 3.4%	4 13.8%	29 100.0%
DE	3 13.0%	11 47.8%	2 8.7%	7 30.4%	23 100.0%
NL	15 62.5%	5 20.8%	1 4.2%	3 12.5%	24 100.0%
HU	0 0.0%	3 50.0%	1 16.7%	2 33.3%	6 100.0%
IT	7 30.4%	8 34.8%	4 17.4%	4 17.4%	23 100.0%
ES	6 50.0%	3 25.0%	1 8.3%	2 16.7%	12 100.0%

UK – Most (24/29; 82.8%) of the total respondents mentioned the vaccination for MSM is offered either commonly (18/29; 62.1%) or sometimes (6/29; 20.7%) (Table 3.2-16).

Among the three health professional groups surveyed, sexual health service providers are the group most (10/10; 100%) stating this practice is commonly offered. This result of MSM surveyed with sexual health service providers is similar to that of IDUs and sex workers. The answers from general practitioners and public health experts are similar; about one third (or 40%) of the respondents stated this vaccination practice is given commonly, and another third of the respondents (exactly 30%) mentioned this practice is offered sometimes.

Table 3.2-16: Vaccination practices for MSM in UK

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	4 44.4%	3 33.3%	1 11.1%	1 11.1%	9 100.0%
GP survey	4 40.0%	3 30.0%	0 0.0%	3 30.0%	10 100.0%
SHS survey	10 100.0%	0 0.0%	0 0.0%	0 0.0%	10 100.0%
Total	18 62.1%	6 20.7%	1 3.4%	4 13.8%	29 100.0%

DE – More than half (in sum 14/23; 60.8%) of the respondents presented that after screening for hepatitis B, MSM are vaccinated either commonly (only 3/23; 13.0%) or sometimes (11/23; 47.8%) (Table 3.2-17). In general, this result of MSM is quite similar to that of IDUs and sex workers. High percentage of the respondents from general practitioners and sexual health service groups stated this practice is offered either commonly or sometimes. In contrast, only a minority (6/14; 42.9%) of the public health experts mentioned this practice is given either commonly or sometimes; a remarkably high number (6/14; 42.9%) of them was unsure.

Table 3.2-17: Vaccination practices for MSM in DE

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	0 0.0%	6 42.9%	2 14.3%	6 42.9%	14 100.0%
GP survey	2 50.0%	1 25.0%	0 0.0%	1 25.0%	4 100.0%
SHS survey	1 20.0%	4 80.0%	0 0.0%	0 0.0%	5 100.0%
Total	3 13.0%	11 47.8%	2 8.7%	7 30.4%	23 100.0%

NL – Similar to the result of IDUs and sex workers, most (in sum, 20/24; 83.3%) of the respondents stated that vaccination for MSM is offered either commonly (15/24; 62.5%) or sometimes (5/24; 20.8%) (Table 3.2-18). Nearly all of the respondents from public health experts (6/7; 85.7%) and sexual health service providers (7/8; 87.5%) mentioned that this vaccination practice is offered commonly. However, only about one fifth (2/9; 22.2%) of the general practitioners mentioned this practice being applied commonly, and two fifth (4/9; 44.4%) mentioned this practice being offered sometimes.

Table 3.2-18: Vaccination practices for MSM in NL

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	6 85.7%	1 14.3%	0 0.0%	0 0.0%	7 100.0%
GP survey	2 22.2%	4 44.4%	1 11.1%	2 22.2%	9 100.0%
SHS survey	7 87.5%	0 0.0%	0 0.0%	1 12.5%	8 100.0%
Total	15 62.5%	5 20.8%	1 4.2%	3 12.5%	24 100.0%

HU – None of the respondents mentioned this vaccination practice is offered commonly. Half (3/6) of the respondents reported this was offered sometimes (Table 3.2-19).

Table 3.2-19: Vaccination practices for MSM in HU

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
GP survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
SHS survey	0 0.0%	2 66.7%	0 0.0%	1 33.3%	3 100.0%
Total	0 0.0%	3 50.0%	1 16.7%	2 33.3%	6 100.0%

IT – Overall, majority (in sum, 15/23; 65.2%) of the respondents stated that the vaccination is offered either commonly (7/23; 30.4%) or sometimes (8/23; 34.8%) for MSM (Table 3.2-20).

ES – Majority (in sum 9/12; 75.5%) of the respondents mentioned this vaccination practice for MSM is offered as either commonly (6/12; 50%) or sometimes (3/12; 25.5%) (Table 3.2-21).

Table 3.2-20: Vaccination practices for MSM in IT

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	2 25.0%	3 37.5%	1 12.5%	2 25.0%	8 100.0%
GP survey	5 35.7%	4 28.6%	3 21.4%	2 14.3%	14 100.0%
SHS survey	0 0.0%	1 100.0%	0 0.0%	0 0.0%	1 100.0%
Total	7 30.4%	8 34.8%	4 17.4%	4 17.4%	23 100.0%

Table 3.2-21: Vaccination practices for MSM in ES

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	3 37.5%	2 25.0%	1 12.5%	2 25.0%	8 100.0%
GP survey	1 50.0%	1 50.0%	0 0.0%	0 0.0%	2 100.0%
SHS survey	2 100.0%	0 0.0%	0 0.0%	0 0.0%	2 100.0%
Total	6 50.0%	3 25.0%	1 8.3%	2 16.7%	12 100.0%

Residents/inmates of closed facilities

Public health experts were asked whether after screening residents/inmates of closed facilities (e.g. prisoners, psychiatric hospitals etc.) are vaccinated.

Overall, majority (more than half) of the respondents from most of the countries (except NL) stated that this vaccination practice is offered either commonly or sometimes (Table 3.2-22). However, the result is diverse by country, as described:

UK – The majority (in sum; 7/9; 77.7%) of the public health experts stated that this practice being offered either commonly (3/9; 33.3%) or sometimes (4/9; 44.4%).

DE – None of the respondents stated the vaccination is given commonly. However, more than half of the respondents (8/14; 57.1%) mentioned this practice is offered sometimes.

NL – A low number (in sum, less than half) of the respondents stated this vaccination practice is given either commonly (1/7; 14.3%) or sometimes (2/7; 28.6%). Remarkably, the largest fraction (3/7; 42.9%) of the respondents stated 'unsure'.

HU – There are only two respondents and their answers were different. One mentioned 'sometimes', one mentioned 'no'.

IT – In sum half (in sum 4/8; 50%) of the respondents mentioned this vaccination is given either commonly (2/8; 25%) or sometimes (2/8; 25%).

ES – Most (in sum, 6/8; 75%) of the public health experts mentioned this vaccination practice is offered either commonly (5/8; 62.5%) or sometimes (1/8; 12.5%). Remarkably, the number of public health experts saying 'common' is far more than those saying 'sometimes'.

Table 3.2-22: Vaccination practices for residents/inmates of closed facilities – PH survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	3 33.3%	4 44.4%	1 11.1%	1 11.1%	9 100.0%
DE	0 0.0%	8 57.1%	2 14.3%	4 28.6%	14 100.0%
NL	1 14.3%	2 28.6%	1 14.3%	3 42.9%	7 100.0%
HU	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
IT	2 25.0%	2 25.0%	1 12.5%	3 37.5%	8 100.0%
ES	5 62.5%	1 12.5%	0 0.0%	2 25.0%	8 100.0%

3.2.2 Individuals who are at-risk by occupation

Health care workers

Public health experts were asked whether after screening for hepatitis B infection, health care workers with negative screening result are vaccinated.

Nearly all of the public health experts presented that this practice is offered either commonly or sometimes, UK (8/9; 88.8%), DE (11/14; 78.6%), NL (7/7; 100%), HU (2/2; 100%), IT (6/8; 75%) and ES (7/8; 87.5%) (Table 3.2-23). Particularly, the number

of the respondents answering 'common' is much more than those answering 'sometimes', except UK.

Table 3.2-23: Vaccination practices for health care workers – PH survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	4 44.4%	4 44.4%	0 0.0%	1 11.1%	9 100.0%
DE	7 50.0%	4 28.6%	1 7.1%	2 14.3%	14 100.0%
NL	6 85.7%	1 14.3%	0 0.0%	0 0.0%	7 100.0%
HU	2 100.0%	0 0.0%	0 0.0%	0 0.0%	2 100.0%
IT	6 75.0%	0 0.0%	1 12.5%	1 12.5%	8 100.0%
ES	6 75.0%	1 12.5%	0 0.0%	1 12.5%	8 100.0%

Students in health care

Similar to the result of hepatitis B vaccination for health care workers, most of respondents from all the countries presented that this practice is offered either commonly or sometimes, the NL (7/7; 100%), HU (2/2; 100%), DE (11/14; 78.6%), the UK (7/9; 77.7%), IT (6/8; 75%) and ES (5/8; 62.5%) (Table 3.2-24). In ES, notably, a relatively high percentage (3/8; 37.5%) of the respondents was unsure.

Table 3.2-24: Vaccination practices for students in health care – PH survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	4 44.4%	3 33.3%	0 0.0%	2 22.2%	9 100.0%
DE	5 35.7%	6 42.9%	1 7.1%	2 14.3%	14 100.0%
NL	7 100.0%	0 0.0%	0 0.0%	0 0.0%	7 100.0%
HU	2 100.0%	0 0.0%	0 0.0%	0 0.0%	2 100.0%
IT	5 62.5%	1 12.5%	0 0.0%	2 25.0%	8 100.0%
ES	5 62.5%	0 0.0%	0 0.0%	3 37.5%	8 100.0%

Other occupations with high exposure risk

Public health experts were asked whether individuals with high exposure risk (other than health care) are vaccinated before employment.

In most of the countries (except ES), there is the slight reduction in numbers of public health experts stated hepatitis B vaccination being offered for other occupations, compared to the results of health care workers and students.

However, overall, still majority (in sum, more than 50%) of the respondents from all the countries stated that this vaccination practice is offered either commonly or sometimes (Table 3.2-25). Nevertheless, the results are diverse by country.

UK and DE – More than half of the respondents mentioned this vaccination practice is given either commonly or sometimes, UK (in sum 5/9; 55.5%) and DE (in sum, 9/14; 64.2%).

NL – High number (5/7; 71.5%) of the respondents mentioned this practice is offered either commonly (3/7; 42.9%) or sometimes (2/7; 28.6%).

HU – There were only two respondents. The answers of them are diverse. One expert mentioned 'common', one mentioned 'sometimes'.

IT and ES – The results of IT and ES are similar. Most of the respondents from IT (6/8; 75%) and ES (7/8; 87.5%) stated that this vaccination practice is commonly offered.

Table 3.2-25: Vaccination practices for other occupations with high exposure risk

	Yes/ Common	Sometimes	No	Unsure	Total
UK	2 22.2%	3 33.3%	1 11.1%	3 33.3%	9 100.0%
DE	3 21.4%	6 42.9%	2 14.3%	3 21.4%	14 100.0%
NL	3 42.9%	2 28.6%	0 0.0%	2 28.6%	7 100.0%
HU	1 50.0%	0 0.0%	1 50.0%	0 0.0%	2 100.0%
IT	6 75.0%	0 0.0%	1 12.5%	1 12.5%	8 100.0%
ES	7 87.5%	0 0.0%	0 0.0%	1 12.5%	8 100.0%

3.2.3 Patients with medical condition

HIV positive patients

Public health experts, general practitioners and sexual health service providers were asked whether after hepatitis B screening, HIV positive individuals with negative screening result are vaccinated against hepatitis B.

Overall, very high percentages of the respondents from most of the countries (especially UK, NL and ES, equal or greater to 80%) stated that vaccination for HIV positive individuals are offered either commonly or sometimes, except HU (33.3%). (Table 3.2-26). Particularly, in most of the countries (except DE, HU), the number of the respondents answered 'common' is far more than those answered 'sometimes'.

Table 3.2-26: Vaccination practices for HIV positive patients - Overall

	Yes/ Common	Sometimes	No	Unsure	Total
UK	18 62.1%	5 17.2%	0 0.0%	6 20.7%	29 100.0%
DE	8 34.8%	7 30.4%	2 8.7%	6 26.1%	23 100.0%
NL	13 54.2%	6 25.0%	1 4.2%	4 16.7%	24 100.0%
HU	1 16.7%	1 16.7%	1 16.7%	3 50.0%	6 100.0%
IT	13 56.5%	3 13.0%	0 0.0%	7 30.4%	23 100.0%
ES	9 75.0%	1 8.3%	0 0.0%	2 16.7%	12 100.0%

UK – Most (in sum, 23/29; 79.3%) of the respondents mentioned that HIV positive individuals are vaccinated either commonly (18/29; 62.1%) or sometimes (5/29; 17.2%) (Table 3.2-27). Among different health professional groups, sexual health service providers (9/10; 90%) and general practitioners (6/10; 60%) are the groups most stated that this practice is applied commonly. Also, high percentage (7/9; 77.7%) of public health experts stated this vaccination is given either commonly (3/9; 33.3%) or sometimes (4/9; 44.4%).

Table 3.2-27: Vaccination practices for HIV positive patients in UK

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	3 33.3%	4 44.4%	0 0.0%	2 22.2%	9 100.0%
GP survey	6 60.0%	1 10.0%	0 0.0%	3 30.0%	10 100.0%
SHS survey	9 90.0%	0 0.0%	0 0.0%	1 10.0%	10 100.0%
Total	18 62.1%	5 17.2%	0 0.0%	6 20.7%	29 100.0%

DE – Majority (in sum, 15/23; 65.2%) of the respondents stated that vaccination for HIV positive individuals are offered either commonly (8/23; 34.8%) or sometimes (7/23; 30.4%) (Table 3.2-28). Dissimilar to UK and the other countries, in DE general practitioners (4/4; 100%) are the dominant group most mentioned this practice being offered *commonly*. All of the sexual health service providers also stated vaccination is given either commonly or sometimes. In contrast, minority (in sum 6/14; less than 50%) of the public health experts mentioned so; and relatively high percentage (6/14; 42.9%) of them were unsure.

Table 3.2-28: Vaccination practices for HIV positive patients in DE

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	2 14.3%	4 28.6%	2 14.3%	6 42.9%	14 100.0%
GP survey	4 100.0%	0 0.0%	0 0.0%	0 0.0%	4 100.0%
SHS survey	2 40.0%	3 60.0%	0 0.0%	0 0.0%	5 100.0%
Total	8 34.8%	7 30.4%	2 8.7%	6 26.1%	23 100.0%

NL – Most (in sum, 19/24; 79.2%) of the respondents mentioned that hepatitis B vaccination for HIV positive individuals are offered either as often (13/24; 54.2%) or sometimes (6/24; 25.0%) (Table 3.2-29). Sexual health service providers (6/8; 75%) are the dominant group most mentioned this vaccination practice is given commonly.

Table 3.2-29: Vaccination practices for HIV positive patients in NL

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	4 57.1%	2 28.6%	0 0.0%	1 14.3%	7 100.0%
GP survey	3 33.3%	4 44.4%	0 0.0%	2 22.2%	9 100.0%
SHS survey	6 75.0%	0 0.0%	1 12.5%	1 12.5%	8 100.0%
Total	13 54.2%	6 25.0%	1 4.2%	4 16.7%	24 100.0%

HU – A minority (equaling, 2/6; 33.3%) of the respondents stated this vaccination practice is given either commonly or sometimes (Table 3.2-30). The number of respondents was only 6. Half of them were unsure. The answers from the other half were diverse.

Table 3.2-30: Vaccination practices for HIV positive patients in HU

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	1 50.0%	0 0.0%	1 50.0%	0 0.0%	2 100.0%
GP survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
SHS survey	0 0.0%	1 33.3%	0 0.0%	2 66.7%	3 100.0%
Total	1 16.7%	1 16.7%	1 16.7%	3 50.0%	6 100.0%

IT – A high percentage (equaling 16/23; 69.5%) of the respondents mentioned that hepatitis B vaccination for HIV positive individuals are offered either commonly (13/23; 55.6%) or sometimes (3/23; 13.0%) (Table 3.2-31). Particularly, the majority of public health experts (5/8; 62.5%) and general practitioners (8/14; 57.1%) stated this practice is given commonly.

Table 3.2-31: Vaccination practices for HIV positive patients in IT

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	5 62.5%	0 0.0%	0 0.0%	3 37.5%	8 100.0%
GP survey	8 57.1%	2 14.3%	0 0.0%	4 28.6%	14 100.0%
SHS survey	0 0.0%	1 100.0%	0 0.0%	0 0.0%	1 100.0%
Total	13 56.5%	3 13.0%	0 0.0%	7 30.4%	23 100.0%

ES – Most (in sum, 10/12; 83.3%) of the respondents stated that hepatitis B vaccination is offered for HIV positive individuals either commonly (9/12; 75%) or sometimes (1/12; 8.3%) (Table 3.2-32). A high percentages (6/8; 75%) of the public health experts mentioned this practice is given commonly. There were only two respondents from the sexual health services providers group, who stated that this practice is offered commonly.

Table 3.2-32: Vaccination practices for HIV positive patients in ES

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	6 75.0%	0 0.0%	0 0.0%	2 25.0%	8 100.0%
GP survey	1 50.0%	1 50.0%	0 0.0%	0 0.0%	2 100.0%
SHS survey	2 100.0%	0 0.0%	0 0.0%	0 0.0%	2 100.0%
Total	9 75.0%	1 8.3%	0 0.0%	2 16.7%	12 100.0%

Hepatitis C positive patients

Four different health profession groups: public health experts, general practitioners, sexual health service providers, and specialists were asked whether after screening hepatitis C positive individuals are vaccinated against hepatitis B.

Overall, the majority respondents (in total greater than 55%) from all the countries (especially the UK and ES both at 80% respectively) stated that hepatitis B vaccination for hepatitis C positive individuals are offered either commonly or sometimes (Table 3.2-33). However, the mainstream of answers differs by country. In the UK and ES, the number of the respondents answered ‘common’ is more than those answered

'sometimes'. In the other countries (DE, NL, HU, IT), the number of the respondents stated 'common' is slightly more than those stated 'sometimes'.

Table 3.2-33: Vaccination practices for hepatitis C positive patients - Overall

	Yes/ Common	Sometimes	No	Unsure	Total
UK	22 56.4%	10 25.6%	1 2.6%	6 15.4%	39 100.0%
DE	13 40.6%	11 34.4%	2 6.3%	6 18.8%	32 100.0%
NL	20 43.5%	11 23.9%	6 13.0%	9 19.6%	46 100.0%
HU	6 37.5%	3 18.8%	2 12.5%	5 31.3%	16 100.0%
IT	13 40.6%	8 25.0%	5 15.6%	6 18.8%	32 100.0%
ES	10 62.5%	3 18.8%	1 6.3%	2 12.5%	16 100.0%

UK – Most (in sum, 32/39; 82%) of the respondents stated that hepatitis B vaccination for hepatitis C positive individuals are offered either commonly (22/39; 56.4%) or sometimes (10/39; 25.6%) (Table 3.2-34). Among the different health professional groups, sexual health service providers (in sum, 9/10; 90%) and health specialists (in sum, 10/10; 100%) are the dominant groups most stated this vaccination practice is given either commonly or sometimes. Public health experts (in sum 6/9; 66.6%) are the group least stated so.

Table 3.2-34: Vaccination practices for hepatitis C positive patients in UK

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	2 22.2%	4 44.4%	1 11.1%	2 22.2%	9 100.0%
GP survey	6 60.0%	1 10.0%	0 0.0%	3 30.0%	10 100.0%
SHS survey	7 70.0%	2 20.0%	0 0.0%	1 10.0%	10 100.0%
SP survey	7 70.0%	3 30.0%	0 0.0%	0 0.0%	10 100.0%
Total	22 56.4%	10 25.6%	1 2.6%	6 15.4%	39 100.0%

DE – Majority (exactly 24/32; 75%) of the respondents stated that vaccination for hepatitis C positive individuals are offered either commonly (13/32; 40.6%) or sometimes

(11/32; 34.4%) (Table 3.2-35). Among the different health professional groups, general practitioners (in sum, 4/4; 100%) and health specialists (9/9; 100%) are the groups most stated this vaccination practice is given and particularly commonly. Although most (overall 80%) of sexual health service providers also stated this practice is delivered either commonly or sometimes; the number of experts who answered with 'commonly' (1/5; 20%) was much less than the number who responded with 'sometimes' (3/5; 60%). Public health experts were the group who least responded (in sum, 7/14; 50%) indicating this vaccination practice being offered.

Table 3.2-35: Vaccination practices for hepatitis C positive patients in DE

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	1 7.1%	6 42.9%	2 14.3%	5 35.7%	14 100.0%
GP survey	3 75.0%	1 25.0%	0 0.0%	0 0.0%	4 100.0%
SHS survey	1 20.0%	3 60.0%	0 0.0%	1 20.0%	5 100.0%
SP survey	8 88.9%	1 11.1%	0 0.0%	0 0.0%	9 100.0%
Total	13 40.6%	11 34.4%	2 6.3%	6 18.8%	32 100.0%

NL – Majority (in sum, 31/46; 67.4%) of the total respondents mentioned that hepatitis B vaccination for hepatitis C positive patients are offered either commonly (20/46; 43.5%) or sometimes (11/46; 23.9%) (Table 3.2-36). Health specialists (in sum, 20/22; 90%) are the group most stated this vaccination practice is given either commonly (13/22; 59.1%) or sometimes (7/22; 31.8%). In contrast, remarkably, only a minority (in sum, 3/9; 33.3%) of the respondents from the general practitioners mentioned this vaccination practice being offered either commonly or sometimes. And, a relatively high number (4/9; 44.4%) of the general practitioners were unsure. Additionally, half (exactly 4/8; 50%) of the sexual health service providers stated this vaccination practice is given either commonly or sometimes.

Table 3.2-36: Vaccination practices for hepatitis C positive patients in NL

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	2 28.6%	2 28.6%	0 0.0%	3 42.9%	7 100.0%
GP survey	2 22.2%	1 11.1%	2 22.2%	4 44.4%	9 100.0%
SHS survey	3 37.5%	1 12.5%	2 25.0%	2 25.0%	8 100.0%
SP survey	13 59.1%	7 31.8%	2 9.1%	0 0.0%	22 100.0%
Total	20 43.5%	11 23.9%	6 13.0%	9 19.6%	46 100.0%

HU – Just more than half (in total, 9/16; 56.3%) of the respondents mentioned that vaccination for hepatitis C positive individuals are offered either commonly (6/16; 37.5%) or sometimes (3/16; 18.8%) (Table 3.2-37). Quite a high number of the respondents were unsure (6/19; 31.6%). Health specialists (in sum, 7/10; 70%) are the group who stated most that this vaccination is given in practice.

Table 3.2-37: Vaccination practices for hepatitis C positive patients in HU

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	1 50.0%	0 0.0%	1 50.0%	0 0.0%	2 100.0%
GP survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
SHS survey	0 0.0%	1 33.3%	0 0.0%	2 66.7%	3 100.0%
SP survey	5 50.0%	2 20.0%	1 10.0%	2 20.0%	10 100.0%
Total	6 37.5%	3 18.8%	2 12.5%	5 31.3%	16 100.0%

IT – Majority (in sum, 21/32; 65.6%) of the respondents mentioned that vaccination for hepatitis C positive individuals are offered either commonly (13/32; 40.6%) or sometimes (8/32; 25.0%) (Table 3.2-38). Different from UK and DE, public health experts are the group which most often stated that the vaccination is given either commonly or sometimes. Interestingly, only a relatively small number of health specialists (in sum, 5/9; 55.5%) stated a vaccination is offered either commonly (2/9; 22.2%) or sometimes

(3/9; 33.3%). This result of IT health specialist pattern differs very much from that of UK, DE, NL and HU.

Table 3.2-38: Vaccination practices for hepatitis C positive patients in IT

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	5 62.5%	0 0.0%	0 0.0%	3 37.5%	8 100.0%
GP survey	6 42.9%	4 28.6%	2 14.3%	2 14.3%	14 100.0%
SHS survey	0 0.0%	1 100.0%	0 0.0%	0 0.0%	1 100.0%
SP survey	2 22.2%	3 33.3%	3 33.3%	1 11.1%	9 100.0%
Total	13 40.6%	8 25.0%	5 15.6%	6 18.8%	32 100.0%

ES – Most (in sum, 13/16; 81.3%) of the respondents mentioned that hepatitis B vaccination for hepatitis C positive individuals are offered either commonly (10/16; 62.5%) or sometimes (3/16; 18.8%) (Table 3.2-39). Like UK and DE, sexual health service providers and health specialists were the groups with the highest responses of this practice occurring either commonly or sometimes. By contrast, none of the two general practitioners stated this vaccination practice is offered.

Table 3.2-39: Vaccination practices for hepatitis C positive patients in ES

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	6 75.0%	1 12.5%	0 0.0%	1 12.5%	8 100.0%
GP survey	0 0.0%	0 0.0%	1 50.0%	1 50.0%	2 100.0%
SHS survey	2 100.0%	0 0.0%	0 0.0%	0 0.0%	2 100.0%
SP survey	2 50.0%	2 50.0%	0 0.0%	0 0.0%	4 100.0%
Total	10 62.5%	3 18.8%	1 6.3%	2 12.5%	16 100.0%

Hepatitis C positive asylum seekers

Asylum seeker care providers were asked whether after screening for hepatitis B, hepatitis C positive asylum seekers with negative screening result are vaccinated against hepatitis B. Generally, there were only small numbers of responses in all the countries (Table 3.2-40). At the same time, the answers from the respondents were diverse by country. In UK and HU respectively, majority (3/4; 75% and 2/3; 66.7%, respectively) of the respondents stated this vaccination practice is given either commonly or sometimes. In DE (1/3; 33.3%), NL (1/4; 25%), IT (1/3; 33.3%) and ES (0/1), only minority of the respondents stated so.

Table 3.2-40: Vaccination practices for hepatitis C positive asylum seekers – ASC survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	2 50.0%	1 25.0%	0 0.0%	1 25.0%	4 100.0%
DE	0 0.0%	1 33.3%	0 0.0%	2 66.7%	3 100.0%
NL	1 25.0%	0 0.0%	1 25.0%	2 50.0%	4 100.0%
HU	0 0.0%	2 66.7%	0 0.0%	1 33.3%	3 100.0%
IT	1 33.3%	0 0.0%	1 33.3%	1 33.3%	3 100.0%
ES	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%

Patients with abnormal liver function test (LFT)

Public health experts were asked whether after screening, hepatitis B negative patients with abnormal liver function test are offered vaccination (Table 3.2-41). Remarkably, relatively high percentage of the respondents from all the countries IT (4/8; 50%), the UK (4/9, 44.4%), NL (3/7; 42.9%), DE (5/14; 35%) and ES (2/8; 25%) were unsure.

UK, DE and NL respectively – Only small numbers (1/9; 11.1%, 6/14; 42.9% and 1/7; 14.3%) of the respondents mentioned hepatitis B vaccination is offered; especially none of the respondents mentioned this practice is offered commonly.

HU – There are only two respondents. Their answers were contradictory as one answered ‘sometimes’, and the other answered ‘no’.

IT – Half of the respondents stated that patients with abnormal liver function test are offered hepatitis B vaccination either commonly (2/8; 25%) or sometimes (2/8; 25%). The other half respondents were unsure.

ES – A high percentage (exactly, 75%) of the public health experts mentioned this practice is offered either commonly (2/8; 25%) or sometimes (4/8; 50%). This result pattern is very different when compared to UK and NL.

Table 3.2-41: Vaccination practices for patients with abnormal LFT - PH Survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	0 0.0%	1 11.1%	4 44.4%	4 44.4%	9 100.0%
DE	0 0.0%	6 42.9%	3 21.4%	5 35.7%	14 100.0%
NL	0 0.0%	1 14.3%	3 42.9%	3 42.9%	7 100.0%
HU	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
IT	2 25.0%	2 25.0%	0 0.0%	4 50.0%	8 100.0%
ES	2 25.0%	4 50.0%	0 0.0%	2 25.0%	8 100.0%

General practitioners were also asked whether patients with initial abnormal liver function tests and those with repeated abnormal liver function tests are offered vaccination. Overall, only a minority of the general practitioners stated that vaccination is given to patients with abnormal liver function test, except in UK (about 50%), and DE (about 75%). Interestingly, extremely few of the respondents mentioned this practice is offered commonly (Table 3.2-42).

UK – Quite different from the results from public health experts (only 1/9; 11.1%), half of the general practitioners (5/10; 50%) reported this practice is given (Table 3.2-42).

DE – As opposed to the responses from the public health experts (6/14; 42.9%), the majority (3/4; 75%) of the general practitioners stated that this practice is given either commonly or sometimes. For patients with abnormal liver function first test, the vaccination is given only sometimes (3/4; 75%). For patients with abnormal liver function second test, it is given either commonly (2/4; 50%) or sometimes (1/4; 25%).

NL – Quite similar to the result of public health experts, none of the general practitioners stated that vaccination is given for both patients with abnormal liver function first test

and those with second test. Most (7/9; 77.8%) of the respondents mentioned this vaccination practice is not given.

IT – Although in total nearly half of the general practitioners stated this vaccination is given to both patients with LFT first test and LFT second test, the number of the respondents mentioned 'common' is quite less than the number of those mentioned 'sometimes'. ES – quite different from the result of public health experts, none of the two general practitioners, who responded, stated this practice is given.

Table 3.2-42: Vaccination practices for patients with abnormal LFT - GP Survey

		Yes/ Common	Sometimes	No	Unsure	Total
UK	1st abnormal LFT	0 0.0%	5 50.0%	2 20.0%	3 30.0%	10 100.0%
	2nd abnormal LFT	1 10.0%	5 50.0%	2 20.0%	2 20.0%	10 100.0%
DE	1st abnormal LFT	0 0.0%	3 75.0%	0 0.0%	1 25.0%	4 100.0%
	2nd abnormal LFT	2 50.0%	1 25.0%	0 0.0%	1 25.0%	4 100.0%
NL	1st abnormal LFT	0 0.0%	0 0.0%	7 77.8%	2 22.2%	9 100.0%
	2nd abnormal LFT	0 0.0%	0 0.0%	7 77.8%	2 22.2%	9 100.0%
HU	1st abnormal LFT	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	2nd abnormal LFT	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
IT	1st abnormal LFT	1 7.1%	5 35.7%	6 42.9%	2 14.3%	14 100.0%
	2nd abnormal LFT	2 14.3%	5 35.7%	4 28.6%	3 21.4%	14 100.0%
ES	1st abnormal LFT	0 0.0%	0 0.0%	1 50.0%	1 50.0%	2 100.0%
	2nd abnormal LFT	0 0.0%	0 0.0%	1 50.0%	1 50.0%	2 100.0%

Patients exhibiting signs and symptoms of hepatitis

Public health experts and general practitioners were asked whether after screening for hepatitis B, patients with signs and symptoms of hepatitis are offered vaccination.

Only minority (about or less than half) of the respondents from all the countries (particularly NL) stated that this practice is offered either commonly or sometimes (Table 3.2-43). In NL, high numbers of the public health experts (4/7; 57.1%) and general practitioners (6/9; 66.7%) answered this vaccination practice is not offered.

Table 3.2-43: Vaccination practices for patients exhibiting signs and symptoms of hepatitis

		Yes/ Common	Sometimes	No	Unsure	Total
UK	PH survey	0 0.0%	1 11.1%	4 44.4%	4 44.4%	9 100.0%
	GP survey	1 10.0%	4 40.0%	1 10.0%	4 40.0%	10 100.0%
DE	PH survey	0 0.0%	6 42.9%	2 14.3%	6 42.9%	14 100.0%
	GP survey	1 25.0%	1 25.0%	2 50.0%	0 0.0%	4 100.0%
NL	PH survey	0 0.0%	0 0.0%	4 57.1%	3 42.9%	7 100.0%
	GP survey	0 0.0%	1 11.1%	6 66.7%	2 22.2%	9 100.0%
HU	PH survey	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
	GP survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
IT	PH survey	1 12.5%	2 25.0%	0 0.0%	5 62.5%	8 100.0%
	GP survey	0 0.0%	4 28.6%	7 50.0%	3 21.4%	14 100.0%
ES	PH survey	0 0.0%	4 50.0%	1 12.5%	3 37.5%	8 100.0%
	GP survey	1 50.0%	0 0.0%	1 50.0%	0 0.0%	2 100.0%

3.2.4 Individuals who are at-risk by other factors

Contacts of hepatitis B positive patients

All of the six different health professionals: antenatal care providers, asylum seeker care providers, public health experts, general practitioners, sexual health service providers, and health care specialists were asked whether after screening, hepatitis B negative contacts (specifically household and/or sexual contacts) of hepatitis B positive individuals are vaccinated. Specifically, antenatal care providers were asked about vaccination practices for negative contacts of hepatitis B positive women. Asylum seeker care providers were asked about vaccination practices for negative contacts of hepatitis B positive asylum seekers. The results of the surveys with antenatal care providers and asylum seeker care providers are described in details in the next sub-sections.

Overall, a majority (greater than 60%) of the respondents from most of the countries (except DE with just a little under half 33/71; 46.5%) answered that hepatitis B vaccination for negative contacts of hepatitis B positive individuals are offered either commonly or sometimes (Table 3.2-44).

The results were quite diverse by health profession. For example, the public health experts, sexual health service providers and specialists in all the countries were the groups that mostly stated that vaccination for hepatitis B negative contacts are given. In contrast, antenatal care providers were the group least stating the highest percentage of doubt, as remarkably more than 60% of the antenatal care providers from UK, DE, IT, ES were unsure about this practice.

Table 3.2-44: Vaccination practices for contacts of Hepatitis B positive patients - Overall

	Yes/ Common	Sometimes	No	Unsure	Total
UK	28 54.9%	7 13.7%	1 2.0%	15 29.4%	51 100.0%
DE	21 29.6%	12 16.9%	5 7.0%	33 46.5%	71 100.0%
NL	37 66.1%	10 17.9%	3 5.4%	6 10.7%	56 100.0%
HU	14 60.9%	2 8.7%	2 8.7%	5 21.7%	23 100.0%
IT	31 51.7%	8 13.3%	2 3.3%	19 31.7%	60 100.0%
ES	13 52.0%	2 8.0%	0 0.0%	10 40.0%	25 100.0%

UK – Generally, a high percentage (in sum, 35/51; 68.6%) of the respondents stated that vaccination is given to hepatitis B negative contacts either commonly (28/51; 54.9%) or sometimes (7/51; 13.7%) (Table 3.2-45). Sexual health service providers (8/10; 80%) and specialists (8/10; 80%) are the dominant groups most mentioned that vaccination for all negative contacts is offered commonly. Antenatal care providers were the group with the lowest number of respondents: one respondent stated this practice is offered commonly (1/8; 12.5%) while the other remarked sometimes (1/8; 12.5%).

Table 3.2-45: Vaccination practices for contacts of Hepatitis B positive patients in UK

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	5 55.6%	3 33.3%	0 0.0%	1 11.1%	9 100.0%
GP survey	4 40.0%	0 0.0%	1 10.0%	5 50.0%	10 100.0%
SHS survey	8 80.0%	1 10.0%	0 0.0%	1 10.0%	10 100.0%
SP survey	8 80.0%	1 10.0%	0 0.0%	1 10.0%	10 100.0%
ANC survey	1 12.5%	1 12.5%	0 0.0%	6 75.0%	8 100.0%
ASC survey	2 50.0%	1 25.0%	0 0.0%	1 25.0%	4 100.0%
Total	28 54.9%	7 13.7%	1 2.0%	15 29.4%	51 100.0%

DE – A minority (in sum, 33/71; 46.5%) of the respondents stated to having given hepatitis B negative contacts either commonly (21/71; 29.6%) or sometimes (12/71; 16.9%); remarkably, relatively high percentage (33/71; 46.5%) of the respondents are unsure (Table 3.2-46). Specialists (7/9; 66.7%) were the dominant health professional group mentioning this vaccination practice is given commonly. Also, a high percentage of public health experts (in sum, 11/14; nearly 80%) and sexual health service providers (in sum, 3/5; 60%) stated this practice is given either commonly or sometimes.

In contrast, only small percentage of antenatal care providers (9/36; 25%), and none of the three the asylum seeker care providers mentioned that vaccination is given for all negative contacts. The answers from general practitioners are contradictory, with half of the respondents (2/4; 50%) stated ‘common’, the other half (2/4; 50%) stated ‘no’.

Table 3.2-46: Vaccination practices for contacts of Hepatitis B positive patients in DE

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	2 14.3%	9 64.3%	1 7.1%	2 14.3%	14 100.0%
GP survey	2 50.0%	0 0.0%	2 50.0%	0 0.0%	4 100.0%
SHS survey	2 40.0%	1 20.0%	0 0.0%	2 40.0%	5 100.0%
SP survey	6 66.7%	0 0.0%	0 0.0%	3 33.3%	9 100.0%
ANC survey	9 25.0%	1 2.8%	2 5.6%	24 66.7%	36 100.0%
ASC survey	0 0.0%	1 33.3%	0 0.0%	2 66.7%	3 100.0%
Total	21 29.6%	12 16.9%	5 7.0%	33 46.5%	71 100.0%

NL – A very high percentage of the respondents (in sum, 47/56; 84%) mentioned that vaccination is given to hepatitis B negative contacts of positive individuals either commonly (37/56; 66.1%) or sometimes (10/56; 17.9%) (Table 3.2-47).

Table 3.2-47: Vaccination practices for contacts of Hepatitis B positive patients in NL

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	6 85.7%	1 14.3%	0 0.0%	0 0.0%	7 100.0%
GP survey	5 55.6%	2 22.2%	2 22.2%	0 0.0%	9 100.0%
SHS survey	3 37.5%	2 25.0%	0 0.0%	3 37.5%	8 100.0%
SP survey	17 77.3%	4 18.2%	0 0.0%	1 4.5%	22 100.0%
ANC survey	4 66.7%	0 0.0%	0 0.0%	2 33.3%	6 100.0%
ASC survey	2 50.0%	1 25.0%	1 25.0%	0 0.0%	4 100.0%
Total	37 66.1%	10 17.9%	3 5.4%	6 10.7%	56 100.0%

NL (continued) – Dominantly, all of the public health experts and specialists stated this vaccination is given for negative contacts of positive individuals either commonly or sometimes. Particularly, most of the public health experts (6/7; 85.7%) and specialists (17/22; 77.3%) answered this vaccination practice is given commonly. A high percentage (at least 60%) of all the other professionals also mentioned this practice is given either commonly or sometimes.

HU – High percentage (in sum, 16/23; 69.6%) of the respondents mentioned that hepatitis B vaccination for negative contacts of positive hepatitis B individuals is commonly given (14/23; 60.9%) and sometimes (2/23; 8.7%) (commonly.

Table 3.2-48). Sexual health service providers (2/3; 66.7%) and specialists (7/10; 70%) were the groups having the highest responses of offering the vaccination for all negative contacts commonly.

Table 3.2-48: Vaccination practices for contacts of Hepatitis B positive patients in HU

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	1 50.0%	0 0.0%	0 0.0%	1 50.0%	2 100.0%
GP survey	1 100.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%
SHS survey	2 66.7%	0 0.0%	0 0.0%	1 33.3%	3 100.0%
SP survey	7 70.0%	0 0.0%	1 10.0%	2 20.0%	10 100.0%
ANC survey	2 50.0%	0 0.0%	1 25.0%	1 25.0%	4 100.0%
ASC survey	1 33.3%	2 66.7%	0 0.0%	0 0.0%	3 100.0%
Total	14 60.9%	2 8.7%	2 8.7%	5 21.7%	23 100.0%

IT – A high percentage of the respondents (in sum, 39/60; 65.3%) stated that negative contacts of hepatitis B positive individuals are offered hepatitis B vaccination either commonly (31/60; 51.7%) or sometimes (8/60; 13.3%) (Table 3.2-49). Public health experts (8/8) and specialists (9/9) are the dominant health professional groups presenting with vaccination given to all negative contacts either commonly or sometimes. Moderate high percentage (9/14; 64.3%) of the general practitioners stated so.

Table 3.2-49: Vaccination practices for contacts of Hepatitis B positive patients in IT

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	5 62.5%	3 37.5%	0 0.0%	0 0.0%	8 100.0%
GP survey	7 50.0%	2 14.3%	2 14.3%	3 21.4%	14 100.0%
SHS survey	1 100.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%
SP survey	8 88.9%	1 11.1%	0 0.0%	0 0.0%	9 100.0%
ANC survey	10 40.0%	0 0.0%	0 0.0%	15 60.0%	25 100.0%
ASC survey	0 0.0%	2 66.7%	0 0.0%	1 33.3%	3 100.0%
Total	31 51.7%	8 13.3%	2 3.3%	19 31.7%	60 100.0%

ES – A moderately high percentage (in sum, 15/25; 60%) of the respondents stated that negative contacts of hepatitis B positive individuals are offered hepatitis B vaccination either commonly (13/25; 52%) or sometimes (2/25; 8%) (Table 3.2-50). Specialists (4/4; 100%) and public health experts (5/8; 62.5%) were the groups most mentioning this vaccination practice is offered commonly. In contrast, notably, a high number of antenatal care providers (5/8; 62.5%) were unsure about the practice.

Table 3.2-50: Vaccination practices for contacts of Hepatitis B positive patients in ES

	Yes/ Common	Sometimes	No	Unsure	Total
PH survey	5 62.5%	1 12.5%	0 0.0%	2 25.0%	8 100.0%
GP survey	0 0.0%	1 50.0%	0 0.0%	1 50.0%	2 100.0%
SHS survey	1 50.0%	0 0.0%	0 0.0%	1 50.0%	2 100.0%
SP survey	4 100.0%	0 0.0%	0 0.0%	0 0.0%	4 100.0%
ANC survey	3 37.5%	0 0.0%	0 0.0%	5 62.5%	8 100.0%
ASC survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
Total	13 52.0%	2 8.0%	0 0.0%	10 40.0%	25 100.0%

Contacts of hepatitis B positive women

Antenatal care providers were ask whether after screening, negative contacts of hepatitis B positive women are vaccinated against hepatitis B.

Although the result patterns differ by country, similarities between countries exist.

UK, DE – Only minority (approximately one fourth) of the antenatal care providers from the UK (in sum, 2/8; 25%) and DE (in sum, 10/36; 27.8%) stated that this vaccination practice is given (Table 3.2-51). Overall, most of the respondents from UK (6/8; 75%) and DE (24/36; 66.7%) were unsure.

NL, HU – A majority of the respondents from NL (4/6; 66.7%) and HU (2/4; 50%) stated that this vaccination is given for negative contacts of hepatitis B positive women commonly.

IT, ES – About two fifths of the respondents from IT (10/25; 40%) and ES (3/8; 37.5%) stated this vaccination is given commonly, while the rest were unsure.

Table 3.2-51: Vaccination practices for contacts of Hepatitis B positive women – ANC survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	1 12.5%	1 12.5%	0 0.0%	6 75.0%	8 100.0%
DE	9 25.0%	1 2.8%	2 5.6%	24 66.7%	36 100.0%
NL	4 66.7%	0 0.0%	0 0.0%	2 33.3%	6 100.0%
HU	2 50.0%	0 0.0%	1 25.0%	1 25.0%	4 100.0%
IT	10 40.0%	0 0.0%	0 0.0%	15 60.0%	25 100.0%
ES	3 37.5%	0 0.0%	0 0.0%	5 62.5%	8 100.0%

Contacts of hepatitis B positive asylum seekers

Asylum seeker care providers were asked whether after screening, hepatitis B negative contacts of hepatitis B positive asylum seekers from hepatitis B endemic regions are vaccinated.

Majority of the respondents from most of the countries (UK 3/4; 75%; NL 3/4; 75%; HU 3/3; 100%; and IT 2/3; 66.7%; except DE, ES) stated that vaccination is given either

commonly or sometimes to negative contacts of hepatitis B positive asylum seekers (Table 3.2-52). In DE, 2 of the 3 respondents were unsure. In ES, there was only one respondent, who was unsure.

Table 3.2-52: Vaccination practices for contacts of Hepatitis B positive asylum seekers – ASC survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	2 50.0%	1 25.0%	0 0.0%	1 25.0%	4 100.0%
DE	0 0.0%	1 33.3%	0 0.0%	2 66.7%	3 100.0%
NL	2 50.0%	1 25.0%	1 25.0%	0 0.0%	4 100.0%
HU	1 33.3%	2 66.7%	0 0.0%	0 0.0%	3 100.0%
IT	0 0.0%	2 66.7%	0 0.0%	1 33.3%	3 100.0%
ES	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%

Asylum seekers from hepatitis B endemic regions

Public health experts and asylum seeker care providers were asked whether after screening with negative result, asylum seekers from hepatitis B endemic regions are vaccinated against hepatitis B.

Only a few public health experts from most of the countries (except HU) mentioned this practice is offered either commonly or sometimes (Table 3.2-53). Many of the respondents from the UK (4/9; 44.4%), DE (8/14; 57.1%), IT (4/8; 50%) and ES (6/8; 75%) were unsure. Remarkably, relatively high number of public health experts from NL confirmed that this practice is *not* offered. In HU, there were only two respondents, with different answers: one responded 'sometimes', while the other one answered 'no'.

By contrast to the results of survey with the public health experts, in sum, all of the care providers for asylum seeker in most of the countries (except IT) stated that asylum seekers from hepatitis B endemic regions are vaccinated either commonly or sometimes (Table 3.2-54). Remarkably, in IT all of the asylum seeker care providers who responded (3/3) were unsure.

Table 3.2-53: Vaccination practices for asylum seekers - PH Survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	0 0.0%	2 22.2%	3 33.3%	4 44.4%	9 100.0%
DE	0 0.0%	2 14.3%	4 28.6%	8 57.1%	14 100.0%
NL	1 14.3%	1 14.3%	3 42.9%	2 28.6%	7 100.0%
HU	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
IT	1 12.5%	1 12.5%	2 25.0%	4 50.0%	8 100.0%
ES	2 25.0%	0 0.0%	0 0.0%	6 75.0%	8 100.0%

Table 3.2-54: Vaccination practices for asylum seekers - ASC Survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	1 25.0%	3 75.0%	0 0.0%	0 0.0%	4 100.0%
DE	2 66.7%	1 33.3%	0 0.0%	0 0.0%	3 100.0%
NL	2 50.0%	2 50.0%	0 0.0%	0 0.0%	4 100.0%
HU	2 66.7%	1 33.3%	0 0.0%	0 0.0%	3 100.0%
IT	0 0.0%	0 0.0%	0 0.0%	3 100.0%	3 100.0%
ES	1 100.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%

Migrants from hepatitis B endemic regions

Public health experts were asked whether new immigrants and resident migrants (long term citizens with a migrant background) (other than asylum seekers) from hepatitis B endemic regions are vaccinated against hepatitis B.

A minority of the respondents (less than 25%) from most of the countries (except HU and IT, less than 50%) mentioned this practice is offered either commonly or sometimes

(Table 3.2-55 and Table 3.2-56). Remarkably, high percentages of the respondents were unsure about this practice.

Table 3.2-55: Vaccination practices for new immigrants – PH Survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	0 0.0%	2 22.2%	3 33.3%	4 44.4%	9 100.0%
DE	0 0.0%	3 21.4%	2 14.3%	9 64.3%	14 100.0%
NL	0 0.0%	1 14.3%	2 28.6%	4 57.1%	7 100.0%
HU	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
IT	2 25.0%	2 25.0%	2 25.0%	2 25.0%	8 100.0%
ES	2 25.0%	0 0.0%	0 0.0%	6 75.0%	8 100.0%

Table 3.2-56: Vaccination practices for resident migrants – PH Survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	0 0.0%	2 22.2%	3 33.3%	4 44.4%	9 100.0%
DE	0 0.0%	3 21.4%	2 14.3%	9 64.3%	14 100.0%
NL	0 0.0%	2 28.6%	2 28.6%	3 42.9%	7 100.0%
HU	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
IT	1 12.5%	2 25.0%	2 25.0%	3 37.5%	8 100.0%
ES	1 12.5%	2 25.0%	0 0.0%	5 62.5%	8 100.0%

General practitioners and sexual health service providers were also asked whether after screening, migrants (not specified by new and long-term migrants) from hepatitis B endemic regions are vaccinated.

UK, DE – Different from the outcome pattern of public health experts, a very high percentage (75% to 80%) of general practitioners and sexual health service providers stated that this practice is offered either commonly or sometimes (Table 3.2-57).

NL – The outcome pattern of NL is completely different when compared to other countries. A majority of the general practitioners (5/9; 56%) and sexual health service providers (6/8; 75%) confirmed that this practice is *not* offered. HU – A majority of the respondents were unsure. Consequently, there was only one general practitioner, who responded 'unsure'. Also, two thirds of the respondents from sexual health service providers are unsure. IT – High percentage of general practitioners (9/14; 64.3%) stated that vaccination is given to migrants sometimes. ES – There are only two answers from general practitioners group; one stated 'commonly', one stated 'no'. Two out of two sexual health services providers stated this vaccination practice is given commonly.

Table 3.2-57: Vaccination practices for migrants – GP survey and SHS survey

		Yes/ Common	Sometimes	No	Unsure	Total
UK	GP survey	4 40.0%	4 40.0%	0 0.0%	2 20.0%	10 100.0%
	SHS survey	6 60.0%	2 20.0%	2 20.0%	0 0.0%	10 100.0%
DE	GP survey	3 75.0%	0 0.0%	1 25.0%	0 0.0%	4 100.0%
	SHS survey	1 20.0%	3 60.0%	0 0.0%	1 20.0%	5 100.0%
NL	GP survey	1 11.1%	2 22.2%	5 55.6%	1 11.1%	9 100.0%
	SHS survey	0 0.0%	0 0.0%	6 75.0%	2 25.0%	8 100.0%
HU	GP survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	SHS survey	0 0.0%	1 33.3%	0 0.0%	2 66.7%	3 100.0%
IT	GP survey	0 0.0%	9 64.3%	1 7.1%	4 28.6%	14 100.0%
	SHS survey	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1 100.0%
ES	GP survey	1 50.0%	0 0.0%	1 50.0%	0 0.0%	2 100.0%
	SHS survey	2 100.0%	0 0.0%	0 0.0%	0 0.0%	2 100.0%

A request from a patient concerned of exposure

General practitioners and sexual health service providers were asked whether after screening individuals concerned with personal exposure to hepatitis B are vaccinated.

UK – Nearly all of the general practitioners (in sum, 9/10; 90%) and the sexual health services providers (in sum, 8/10; 80%) stated that patients concerned are offered hepatitis B vaccination either commonly or sometimes (Table 3.2-58).

Table 3.2-58: Vaccination practices for patients requested – GP survey and SHS survey

		Yes/ Common	Sometimes	No	Unsure	Total
UK	GP survey	4 40.0%	5 50.0%	0 0.0%	1 10.0%	10 100.0%
	SHS survey	2 20.0%	6 60.0%	2 20.0%	0 0.0%	10 100.0%
DE	GP survey	2 50.0%	2 50.0%	0 0.0%	0 0.0%	4 100.0%
	SHS survey	0 0.0%	3 60.0%	0 0.0%	2 40.0%	5 100.0%
NL	GP survey	3 33.3%	1 11.1%	4 44.4%	1 11.1%	9 100.0%
	SHS survey	0 0.0%	2 25.0%	4 50.0%	2 25.0%	8 100.0%
HU	GP survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	SHS survey	2 66.7%	0 0.0%	0 0.0%	1 33.3%	3 100.0%
IT	GP survey	7 50.0%	7 50.0%	0 0.0%	0 0.0%	14 100.0%
	SHS survey	0 0.0%	1 100.0%	0 0.0%	0 0.0%	1 100.0%
ES	GP survey	0 0.0%	1 50.0%	1 50.0%	0 0.0%	2 100.0%
	SHS survey	2 100.0%	0 0.0%	0 0.0%	0 0.0%	2 100.0%

DE – All of the general practitioners (in sum, 4/4; 100%) with most of the sexual health services providers (in sum, 3/5; 60%) stated that the vaccination is offered either commonly or sometimes (Table 3.2-58).

NL – In contrast from the outcome pattern of the UK and DE, relatively high percentages of general practitioners (4/9; 44.4%) and sexual health services providers (4/8; 50%) mentioned that vaccination is *not* offered.

HU – Two thirds of respondents from the sexual health service providers stated vaccination for concerned patients is offered commonly.

IT – All of the general practitioners stated that vaccination for concerned patients is given either commonly (7/14; 50%) or sometimes (7/14; 50%).

ES – Both of the sexual health services providers stated vaccination is given commonly.

3.2.5 General populations

Pregnant Women

Public health experts and antenatal care providers were asked whether after screening, hepatitis B negative pregnant women are offered hepatitis B vaccination.

Most of the public health experts from the UK (7/9; 77.8%), the NL (5/7; 71.4%) and HU (2/2; 100%) stated that vaccination is *not* offered to pregnant women (Table 3.2-59). Answers from DE and IT and ES were diverse. Dominantly, a relatively high percentage of the respondents from DE (6/14; 42.9%) and ES (4/8; 50%) were unsure.

Table 3.2-59: Vaccination practices for pregnant women - PH survey

	Yes/ Common	Sometimes	No	Unsure	Total
UK	1 11.1%	0 0.0%	7 77.8%	1 11.1%	9 100.0%
DE	4 28.6%	2 14.3%	2 14.3%	6 42.9%	14 100.0%
NL	1 14.3%	1 14.3%	5 71.4%	0 0.0%	7 100.0%
HU	0 0.0%	0 0.0%	2 100.0%	0 0.0%	2 100.0%
IT	2 25.0%	3 37.5%	3 37.5%	0 0.0%	8 100.0%
ES	1 12.5%	1 12.5%	2 25.0%	4 50.0%	8 100.0%

Most of the antenatal care providers (in sum, more than 80%) from all the countries mentioned that this vaccination practice was generally *not* offered or seldom offered under circumstances (Table 3.2-60). It can be seen that the answers from antenatal care experts from the UK, the NL and HU are consistent to the answers from public health experts of those countries.

Table 3.2-60: Vaccination practices for pregnant women - ANC Survey

	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	Total
UK	0 0.0%	1 12.5%	0 0.0%	7 87.5%	0 0.0%	8 100.0%
DE	2 5.6%	2 5.6%	8 22.2%	20 55.6%	4 11.1%	36 100.0%
NL	0 0.0%	0 0.0%	2 33.3%	4 66.7%	0 0.0%	6 100.0%
HU	0 0.0%	0 0.0%	2 50.0%	2 50.0%	0 0.0%	4 100.0%
IT	1 4.0%	1 4.0%	3 12.0%	18 72.0%	2 8.0%	25 100.0%
ES	1 12.5%	0 0.0%	1 12.5%	5 62.5%	1 12.5%	8 100.0%

3.3 Copayment Practices – Results

3.3.1 Individuals who are at-risk by lifestyle

Injecting Drug Users (IDUs)

General practitioners and sexual health service providers were asked whether IDUs are required individual copayment for a hepatitis B vaccination.

Overall, the majority of general practitioners from most of the countries (except the NL and HU) stated that copayment is not required (Table 3.3-1). Most of the sexual health services providers from most of the countries (except HU) stated that copayment for hepatitis B vaccination offered to IDUs group is not required.

UK – Nearly all of the respondents from both general practitioners (8/10; 80%) and sexual health service providers (9/10; 90%) stated that copayment is not required.

DE – About half of the respondents from both professions general practitioners (2/4; 50%) and sexual health service providers (3/5; 60%) mentioned that copayment for hepatitis B vaccination is not required.

NL – The patterns of answers from the two professions are quite different. While a high percentage of the sexual health service providers (5/8; 62.5%) stated that copayment is not required, only one of general practitioners (1/9; 11.1%) stated so. Notably, a high percentage (6/9; 66.7%) of general practitioners were unsure

HU – There were only four respondents in total; most (3 out of 4) responded as being unsure.

IT – Most of the general practitioners (9/14; 64.3%) and sexual health service providers (1/1; 100%) mentioned that copayment for hepatitis B vaccination is not required.

ES – All of the four respondents from both professions (two respondents in each respective profession) mentioned that copayment is not required.

Table 3.3-1: Copayment practices for IDUs – GP survey and SHS survey

		Yes	No	Unsure	Total
UK	GP survey	0 0.0%	8 80.0%	2 20.0%	10 100.0%
	SHS survey	0 0.0%	9 90.0%	1 10.0%	10 100.0%
DE	GP survey	1 25.0%	2 50.0%	1 25.0%	4 100.0%
	SHS survey	1 20.0%	3 60.0%	1 20.0%	5 100.0%
NL	GP survey	2 22.2%	1 11.1%	6 66.7%	9 100.0%
	SHS survey	1 12.5%	5 62.5%	2 25.0%	8 100.0%
HU	GP survey	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	SHS survey	0 0.0%	1 33.3%	2 66.7%	3 100.0%
IT	GP survey	2 14.3%	9 64.3%	3 21.4%	14 100.0%
	SHS survey	0 0.0%	1 100.0%	0 0.0%	1 100.0%
ES	GP survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%
	SHS survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%

Sex workers

General practitioners and sexual health service providers were asked whether sex workers are required copayment for hepatitis B vaccination.

In general, most of sexual health service providers from most of the countries confirmed that individual copayment is not required for hepatitis B vaccination for sex workers; similar to IDUs especially in the UK, IT and ES (Table 3.3-2). However, the answers from the general practitioners differed by country.

UK – Most of the respondents from both general practitioners (7/10; 70%) and nearly all of the sexual health service providers (9/10; 90%) stated that copayment is not required for hepatitis B vaccination of sex workers.

DE – The answers from the two professions are quite different. While only one of the general practitioners (1/4; 25%) mentioned that copayment is not required for hepatitis B vaccination, more than half of the sexual health service providers (3/5; 60%) mentioned it was.

NL – The outcome pattern from the two professions are quite different. While only one general practitioner (1/9; 11.1%) stated copayment is not required, a majority of the sexual health service providers (7/8; 87.5%) stated it as a requirement. Remarkably, a high percentage of public health experts (6/9; 66.7%) were unsure. This result pattern of sex workers is very similar to that of IDUs.

HU – Most of the respondents were unsure.

IT – Majority of the general practitioners (8/14; 57.1%) and the single sexual health service providers mentioned that copayment is not required.

ES – All four respondents from the both professions (two in each respectively) mentioned that copayment for hepatitis B vaccination is not required for sex workers.

Table 3.3-2: Copayment practices for sex workers – GP survey and SHS survey

		Yes	No	Unsure	Total
UK	GP survey	0 0.0%	7 70.0%	3 30.0%	10 100.0%
	SHS survey	0 0.0%	9 90.0%	1 10.0%	10 100.0%
DE	GP survey	2 50.0%	1 25.0%	1 25.0%	4 100.0%
	SHS survey	0 0.0%	3 60.0%	2 40.0%	5 100.0%
NL	GP survey	2 22.2%	1 11.1%	6 66.7%	9 100.0%
	SHS survey	0 0.0%	7 87.5%	1 12.5%	8 100.0%
HU	GP survey	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	SHS survey	1 33.3%	0 0.0%	2 66.7%	3 100.0%
IT	GP survey	3 21.4%	8 57.1%	3 21.4%	14 100.0%
	SHS survey	0 0.0%	1 100.0%	0 0.0%	1 100.0%
ES	GP survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%
	SHS survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%

Homosexual men (MSM)

General practitioners and sexual health service providers were asked whether MSM are required copayment for a hepatitis B vaccination.

Overall, the result pattern of MSM is quite similar to the outcome pattern of sex workers and IDUs. In most of the countries (except HU), majority of the sexual health services providers stated that copayment for a hepatitis B vaccination offered to MSM is not required (Table 3.3-3). The answers from general practitioners differ by country.

Table 3.3-3: Copayment practices for MSM – GP survey and SHS survey

		Yes	No	Unsure	Total
UK	GP survey	0 0.0%	5 50.0%	5 50.0%	10 100.0%
	SHS survey	0 0.0%	9 90.0%	1 10.0%	10 100.0%
DE	GP survey	2 50.0%	1 25.0%	1 25.0%	4 100.0%
	SHS survey	2 40.0%	2 40.0%	1 20.0%	5 100.0%
NL	GP survey	2 22.2%	3 33.3%	4 44.4%	9 100.0%
	SHS survey	0 0.0%	7 87.5%	1 12.5%	8 100.0%
HU	GP survey	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	SHS survey	1 33.3%	0 0.0%	2 66.7%	3 100.0%
IT	GP survey	3 21.4%	8 57.1%	3 21.4%	14 100.0%
	SHS survey	0 0.0%	1 100.0%	0 0.0%	1 100.0%
ES	GP survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%
	SHS survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%

3.3.2 Individuals who are at-risk by occupation

Questionnaires about copayment practices for the occupationally at-risk groups were not included in the surveys. Primarily because there is limitation of resources and the main focus of HEPscreen Project is about migrants. .

3.3.3 Patients with medical condition

HIV positive patients

In general, only few of the respondents from general practitioners and sexual health service providers from all the countries confirmed that copayment for hepatitis B vaccination is required for HIV positive individuals.

A high percentage of the respondents from most of the countries (except NL, HU) stated that copayment is not required (Table 3.3-4).

UK – Most of the respondents from both general practitioners (7/10; 70%) and sexual health service providers (9/10; 90%) stated that HIV positive individuals are not required to make individual copayments for hepatitis B vaccination.

DE – similar to UK, majority of the general practitioners (3/4; 75%) and more than half of the sexual health service providers (3/5; 60%) mentioned hepatitis B vaccination is offered without copayment.

NL – While only small number of general practitioners (2/9; 22.2%) stated that copayment is not required, half of the sexual health service providers (4/8; 50%) stated so. Relatively high numbers of the respondents from general practitioners (5/9; 55.6%) and sexual health service providers (3/8; 37.5%) were unsure.

HU – All of the four respondents are unsure about this practice.

IT – Most of the general practitioners (9/14; 64.3%) and the one sexual health service provider who responded mentioned copayment is not required.

ES – The same as the result of IDUs, all of the respondents (totaling four) mentioned that copayment is not required for hepatitis B vaccination for HIV positive patients.

Table 3.3-4: Copayment practices for HIV positive patients– GP survey and SHS survey

		Yes	No	Unsure	Total
UK	GP survey	0 0.0%	7 70.0%	3 30.0%	10 100.0%
	SHS survey	0 0.0%	9 90.0%	1 10.0%	10 100.0%
DE	GP survey	0 0.0%	3 75.0%	1 25.0%	4 100.0%
	SHS survey	0 0.0%	3 60.0%	2 40.0%	5 100.0%
NL	GP survey	2 22.2%	2 22.2%	5 55.6%	9 100.0%
	SHS survey	1 12.5%	4 50.0%	3 37.5%	8 100.0%
HU	GP survey	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	SHS survey	0 0.0%	0 0.0%	3 100.0%	3 100.0%
IT	GP survey	2 14.3%	9 64.3%	3 21.4%	14 100.0%
	SHS survey	0 0.0%	1 100.0%	0 0.0%	1 100.0%
ES	GP survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%
	SHS survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%

Hepatitis C positive patients

Similar to the result pattern of HIV positive individuals, a high percentage of the respondents of general practitioner and sexual health service providers from most countries surveyed (UK, DE, IT, ES; except NL and HU) stated that copayment is not required for hepatitis C positive individuals (Table 3.3-5). In NL, only a single general practitioner (1/11; 11.1%) and a couple of sexual health service providers (2/8; 25%) stated that hepatitis C positive individuals are not required to co-pay for the hepatitis B vaccination. More than half of the respondents are unsure. In HU, all of the four respondents were unsure.

Table 3.3-5: Copayment practices for hepatitis C positive patients– GP survey and SHS survey

		Yes	No	Unsure	Total
UK	GP survey	0 0.0%	7 70.0%	3 30.0%	10 100.0%
	SHS survey	0 0.0%	9 90.0%	1 10.0%	10 100.0%
DE	GP survey	1 25.0%	2 50.0%	1 25.0%	4 100.0%
	SHS survey	0 0.0%	3 60.0%	2 40.0%	5 100.0%
NL	GP survey	2 22.2%	1 11.1%	6 66.7%	9 100.0%
	SHS survey	2 25.0%	2 25.0%	4 50.0%	8 100.0%
HU	GP survey	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	SHS survey	0 0.0%	0 0.0%	3 100.0%	3 100.0%
IT	GP survey	2 14.3%	9 64.3%	3 21.4%	14 100.0%
	SHS survey	0 0.0%	1 100.0%	0 0.0%	1 100.0%
ES	GP survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%
	SHS survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%

Patients with abnormal liver function test (LFT)

General practitioners were asked whether copayment is required for hepatitis B vaccination for patients with abnormal liver function tests specified by the first and the second (repeated) test.

Overall, in all the countries, the result patterns of copayment for vaccination for consecutive LFT test patients are almost the same. For example, high percentages of the respondents from most of the countries (UK, DE, NL, HU; except IT and ES) were unsure (Table 3.3-6).

UK – Exactly half of the general practitioners (5/10; 50%) stated that patients with abnormal liver function tests are not required to make copayment for hepatitis B vaccination. Notably, the remaining half was unsure about the practice.

DE – Different from UK, half (2/4; 50%) of the respondents mentioned that copayment is required. At the same time, a high percentage of the respondents (1/4; 25% to 2/4; 50%) was unsure.

NL – Only one of the respondents (1/9; 11.1%) stated copayment for hepatitis B vaccination is not required. Two thirds of the respondents (6/9; 66.7%) were unsure.

HU – There was only one respondent, who responded as being unsure.

IT – Similar to UK, more than half of the general practitioners (8/14; 57.1%) stated that patients with abnormal liver function tests are not required to make copayment for hepatitis B vaccination.

ES – All two respondents mentioned no copayment was necessary.

Table 3.3-6: Copayment practices for patients with abnormal LFT – GP survey

		Yes	No	Unsure	Total
UK	1st abnormal LFT	0 0.0%	5 50.0%	5 50.0%	10 100.0%
	2nd abnormal LFT	0 0.0%	5 50.0%	5 50.0%	10 100.0%
DE	1st abnormal LFT	2 50.0%	0 0.0%	2 50.0%	4 100.0%
	2nd abnormal LFT	2 50.0%	1 25.0%	1 25.0%	4 100.0%
NL	1st abnormal LFT	2 22.2%	1 11.1%	6 66.7%	9 100.0%
	2nd abnormal LFT	2 22.2%	1 11.1%	6 66.7%	9 100.0%
HU	1st abnormal LFT	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	2nd abnormal LFT	0 0.0%	0 0.0%	1 100.0%	1 100.0%
IT	1st abnormal LFT	3 21.4%	8 57.1%	3 21.4%	14 100.0%
	2nd abnormal LFT	4 28.6%	6 42.9%	4 28.6%	14 100.0%
ES	1st abnormal LFT	0 0.0%	2 100.0%	0 0.0%	2 100.0%
	2nd abnormal LFT	0 0.0%	2 100.0%	0 0.0%	2 100.0%

Patients exhibiting signs and symptoms of hepatitis

The result of copayment for hepatitis B vaccination of symptomatic patients with hepatitis is similar to the result of abnormal LFT. A relatively high percentage of general practitioners from most of the countries UK (4/10; 40%), DE (2/4; 50%), NL (6/9; 66.7%), HU (1/1) stated being unsure (Table 3.3-7).

Table 3.3-7: Copayment practices for patients exhibiting signs and symptoms of hepatitis – GP survey

	Yes	No	Unsure	Total
UK	0 0.0%	6 60.0%	4 40.0%	10 100.0%
DE	0 0.0%	2 50.0%	2 50.0%	4 100.0%
NL	2 22.2%	1 11.1%	6 66.7%	9 100.0%
HU	0 0.0%	0 0.0%	1 100.0%	1 100.0%
IT	3 21.4%	8 57.1%	3 21.4%	14 100.0%
ES	0 0.0%	2 100.0%	0 0.0%	2 100.0%

3.3.4 Individuals who are at-risk by other factors

Asylum seekers from hepatitis B endemic regions

Public health experts and asylum seeker care providers were asked whether asylum seekers from hepatitis B endemic regions are required to make copayment for hepatitis B vaccination.

Overall, most of the respondents from both professions from all the countries were unsure about the practice (Table 3.3-8). Only few respondents of both the health professionals from all the countries mentioned copayment for hepatitis B vaccination is not required for all asylum seekers.

In UK, majority of the asylum seeker care providers (3/4; 75%) and two of the public health experts (2/9; 22.2%) stated that this vaccination is offered to some individuals for free. For example, the two public health experts specified that individuals who are considered at-risk with underlying liver condition according to NHS Green Book are vaccinated for free.

Table 3.3-8: Copayment practices for asylum seekers – PH survey and ASC survey

		Yes – contribution required from all	Only free for some	No – free for all	Unsure	Total
UK	PH survey	0 0.0%	2 22.2%	0 0.0%	7 77.8%	9 100.0%
	ASC survey	0 0.0%	3 75.0%	0 0.0%	1 25.0%	4 100.0%
DE	PH survey	2 14.3%	0 0.0%	0 0.0%	12 85.7%	14 100.0%
	ASC survey	0 0.0%	0 0.0%	0 0.0%	3 100.0%	3 100.0%
NL	PH survey	1 14.3%	1 14.3%	0 0.0%	5 71.4%	7 100.0%
	ASC survey	0 0.0%	2 50.0%	0 0.0%	2 50.0%	4 100.0%
HU	PH survey	0 0.0%	0 0.0%	1 50.0%	1 50.0%	2 100.0%
	ASC survey	0 0.0%	1 33.3%	0 0.0%	2 66.7%	3 100.0%
IT	PH survey	1 12.5%	0 0.0%	0 0.0%	7 87.5%	8 100.0%
	ASC survey	0 0.0%	0 0.0%	0 0.0%	3 100.0%	3 100.0%
ES	PH survey	2 25.0%	0 0.0%	0 0.0%	6 75.0%	8 100.0%
	ASC survey	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%

Migrants from hepatitis B endemic regions

The survey from public health professionals shows that most of these professionals from all the countries were unsure about the practice (Table 3.3-9 and Table 3.3-10). Furthermore, only a few of the respondents confirmed this vaccination practice is offered

free to all migrants. This result pattern is applied for both new immigrants and resident migrants, and similar to the result pattern of asylum seekers.

Table 3.3-9: Copayment practices for new immigrants from hepatitis B endemic regions – PH survey

	Yes – contribution required from all	Only free for some	No – free for all	Unsure	Total
UK	0 0.0%	2 22.2%	0 0.0%	7 77.8%	9 100.0%
DE	0 0.0%	1 7.1%	1 7.1%	12 85.7%	14
NL	0 0.0%	1 14.3%	0 0.0%	6 85.7%	7 100.0%
HU	1 50.0%	0 0.0%	0 0.0%	1 50.0%	2
IT	0 0.0%	0 0.0%	2 25.0%	6 75.0%	8 100.0%
ES	0 0.0%	0 0.0%	2 25.0%	6 75.0%	8 100.0%

Table 3.3-10: Copayment practices for resident migrants from hepatitis B endemic regions – PH survey

	Yes – contribution required from all	Only free for some	No – free for all	Unsure	Total
UK	0 0.0%	1 11.1%	1 11.1%	7 77.8%	9 100.0%
DE	0 0.0%	1 7.1%	2 14.3%	11 78.6%	14 100.0%
NL	0 0.0%	1 14.3%	0 0.0%	6 85.7%	7 100.0%
HU	1 50.0%	0 0.0%	0 0.0%	1 50.0%	2 100.0%
IT	0 0.0%	1 12.5%	1 12.5%	6 75.0%	8 100.0%
ES	0 0.0%	0 0.0%	3 37.5%	5 62.5%	8 100.0%

General practitioners and sexual health service providers were also asked whether individual copayment is required for hepatitis B vaccination for migrants (not specified

by new and long-term migrants) from hepatitis B endemic regions. Overall, these result patterns quite differ from the result pattern with public health experts and are diverse by country (Table 3.3-11).

UK, IT, ES – Most of the general practitioners and the sexual health service providers from UK (7/10; 70% and 9/10; 90% respectively), IT (9/14; 64.3% and 1/1) and ES (2/2; 100% and 2/2; 100%) presented that there is no requirement of copayment for hepatitis B vaccination.

Table 3.3-11: Copayment practices for immigrants - GP Survey & SHS Survey

		Yes	No	Unsure	Total
UK	GP survey	0 0.0%	7 70.0%	3 30.0%	10 100.0%
	SHS survey	1 10.0%	9 90.0%	0 0.0%	10 100.0%
DE	GP survey	0 0.0%	3 75.0%	1 25.0%	4 100.0%
	SHS survey	2 40.0%	1 20.0%	2 40.0%	5 100.0%
NL	GP survey	2 22.2%	2 22.2%	5 55.6%	9 100.0%
	SHS survey	3 37.5%	1 12.5%	4 50.0%	8 100.0%
HU	GP survey	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	SHS survey	0 0.0%	1 33.3%	2 66.7%	3 100.0%
IT	GP survey	3 21.4%	9 64.3%	2 14.3%	14 100.0%
	SHS survey	0 0.0%	1 100.0%	0 0.0%	1 100.0%
ES	GP survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%
	SHS survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%

DE – The answers were diverse as the health professional group. While most (11/14; 78.6%) of public health experts were unsure, the majority of the general practitioners (3/4; 75%) mentioned copayment is not required, as well as a single sexual health service providers (1/5; 20%) (Table 3.3-11).

NL and HU – The responses from general practitioners and sexual health service providers were quite consistent to that of public health experts: most responding as being unsure (Table 3.3-11).

A request from a patient concerned of exposure

General practitioners and sexual health service providers were asked whether individuals concerned about hepatitis B exposure are required to make copayment for hepatitis B vaccination. The result was diverse by country. Most of the respondents from UK, IT, ES stated copayment was not required (Table 3.3-12). At the same time, relatively high numbers of the respondents from NL and DE stated copayment was required.

UK – Most of the general practitioners (7/10; 70%) and sexual health service providers (9/10; 90%) mentioned that copayment for vaccination from patients concerned is *not* required.

DE – A relatively high percentage of the general practitioners (2/4; 50%) and sexual health service providers (2/5; 40%) mentioned that copayment is required for hepatitis B vaccination from patients concerned. Remarkably, a high percentage of sexual health service providers (3/5; 60%) was unsure.

NL – A relatively high percentage of the general practitioners (3/9; 33.3%) and sexual health service providers (5/8; 62.5%) stated that copayment for hepatitis B vaccination is required from patients concerned. Considerably, a high percentage of general practitioners (5/9; 55.6%) was unsure.

HU – There were only four responses. The answers from the respondents were quite diverse.

IT – Exactly half of the general practitioners (7/14; 50%) mentioned that copayment for vaccination from concerned patients is *not* required. By contrast, a relatively high percentage of the general practitioners (5/7; 35.7%) mentioned copayment is required.

ES – All of the respondents from the both professions mentioned that copayment is *not* required.

Table 3.3-12: Copayment practices for a request from patients concerned of exposure

		Yes	No	Unsure	Total
UK	GP survey	1 10.0%	7 70.0%	2 20.0%	10 100.0%
	SHS survey	1 10.0%	9 90.0%	0 0.0%	10 100.0%
DE	GP survey	2 50.0%	1 25.0%	1 25.0%	4 100.0%
	SHS survey	2 40.0%	0 0.0%	3 60.0%	5 100.0%
NL	GP survey	3 33.3%	1 11.1%	5 55.6%	9 100.0%
	SHS survey	5 62.5%	1 12.5%	2 25.0%	8 100.0%
HU	GP survey	0 0.0%	0 0.0%	1 100.0%	1 100.0%
	SHS survey	1 33.3%	1 33.3%	1 33.3%	3 100.0%
IT	GP survey	5 35.7%	7 50.0%	2 14.3%	14 100.0%
	SHS survey	0 0.0%	1 100.0%	0 0.0%	1 100.0%
ES	GP survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%
	SHS survey	0 0.0%	2 100.0%	0 0.0%	2 100.0%

3.3.5 General population

Pregnant Women

Antenatal care providers were asked whether individual copayment for hepatitis B vaccination is required from pregnant women.

Small percentage of the antenatal care providers from all the countries stated that hepatitis B vaccination is free for all pregnant women (Table 3.3-13). However, most of the respondents from UK (7/8; 87.5%), DE (27/36; 75.0%), IT (20/25; 80.0%), ES (6/8; 75.0%) as well as more than half of the respondents from NL and HU were unsure.

There were two antenatal care experts from DE specified that this vaccination is offered free to pregnant women who are working in medical professions. One of the respondents from NL mentioned this practice is offered free to pregnant women who also are in regular contact with Hepatitis B positive partners or children.

Table 3.3-13: Copayment practices for pregnant women – ANC survey

	Yes – contribution required from all	Only free for some	No – free for all	Unsure	Total
UK	0 0.0%	0 0.0%	1 12.5%	7 87.5%	8 100.0%
DE	0 0.0%	2 5.6%	7 19.4%	27 75.0%	36 100.0%
NL	0 0.0%	1 16.7%	1 16.7%	4 66.7%	6 100.0%
HU	0 0.0%	1 25.0%	1 25.0%	2 50.0%	4 100.0%
IT	0 0.0%	0 0.0%	5 20.0%	20 80.0%	25 100.0%
ES	0 0.0%	0 0.0%	2 25.0%	6 75.0%	8 100.0%

3.4 Responsibility for Vaccination of Negative Contacts - Results

Responsibility for vaccination of contacts of hepatitis B positive patients

Health specialists, general practitioners and sexual health service providers were asked who has the main responsibility for vaccination of hepatitis B negative contacts of hepatitis B positive patients (Table 3.4-1, Table 3.4-2 and Table 3.4-3). Overall, the answers were diverse by health profession, with many of the respondents being unsure. The results seems that either a 'health protection unit' or 'general practitioners' in UK, DE, H and ES have the main responsibility whereas it would solely be the 'health protection unit' in NL and IT.

UK – Ironically, most of the health specialists (7/10; 70%) mentioned that 'general practitioners' have the vaccination responsibility, whereas most of the general practitioners (7/10; 70%) were 'unsure'. The answers from sexual health service providers were fully diverse.

DE – Relatively high numbers of the respondents from health specialists (5/9; 55.6%), general practitioners (2/4; 50%) and sexual health service providers (2/5; 40%) were unsure. While, one third (3/9; 33.3%) of the health specialists mentioned this vaccination responsibility belonging to 'general practitioners'. By contrast, half of the general practitioners (2/4; 50%) and sexual health service providers (2/5; 40%) mentioned the responsibility belonging to 'health protection unit'.

NL – Nearly all (20/22; 90.9%) of the health specialists stated that this responsibility for vaccination of contacts of hepatitis B positive patients belonging to 'health protection unit'. Similarly, nearly half of general practitioners (5/9; 55.6%) and a portion of sexual health service providers (2/8; 25%) stated the same. Relatively high numbers of the general practitioners (4/9; 44.4%) and sexual health service providers (4/8; 50%) were unsure.

HU – Half of the health specialists (5/10; 50%) mentioned that 'general practitioners' having this vaccination responsibility. There was only one general practitioner referring to the 'health protection unit'. The answers from the three sexual health service providers were diverse.

IT – The answer 'health protection unit' was the dominant answer by the health specialists (6/9; 66.7%), general practitioners (6/14; 42.9%), and the single sexual health service provider (1 of 1).

ES – Majority (3/4; 75%) of the health specialists mentioned 'general practitioners' having this vaccination responsibility for negative contacts of hepatitis B positive

patients. Also, one of the two general practitioners also stated so. There were only two respondents from sexual health service providers, one stating 'hospitals or clinics' while the other one was 'unsure'.

Table 3.4-1: Who has responsibility for vaccination of contacts of hepatitis B positive patients - SP survey

	UK	DE	NL	HU	IT	ES
General Practitioner(s)	7 70.0%	3 33.3%	0 0.0%	5 50.0%	1 11.1%	3 75.0%
Public Health Service/Health Protection Unit	2 20.0%	0 0.0%	20 90.9%	1 10.0%	6 66.7%	0 0.0%
Hospitals or clinics	0 0.0%	1 11.1%	0 0.0%	1 10.0%	0 0.0%	0 0.0%
Other	0 0.0%	0 0.0%	1 4.5%	0 0.0%	1 11.1%	1 25.0%
Unsure	1 10.0%	5 55.6%	1 4.5%	3 30.0%	1 11.1%	0 0.0%
Total	10	9	22	10	9	4

Table 3.4-2: Who has responsibility for vaccination of contacts of hepatitis B positive patients - GP survey

	UK	DE	NL	HU	IT	ES
General Practitioner(s)	2 20.0%	0 0.0%	0 0.0%	0 0.0%	3 21.4%	1 50.0%
Public Health Service/Health Protection Unit	1 10.0%	2 50.0%	5 55.6%	1 100.0%	6 42.9%	0 0.0%
Sexual Health Services/GUM	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Hospitals or clinics	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Other	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Unsure	7 70.0%	2 50.0%	4 44.4%	0 0.0%	5 35.7%	1 50.0%
Total	10	4	9	1	14	2

Table 3.4-3: Who has responsibility for vaccination of contacts of hepatitis B positive patients - SHS survey

	UK	DE	NL	HU	IT	ES
General Practitioner(s)	2 20.0%	1 20.0%	2 25.0%	1 33.3%	0 0.0%	0 0.0%
Public Health Service/Health Protection Unit	2 20.0%	2 40.0%	2 25.0%	0 0.0%	1 100.0%	0 0.0%
Infectious Disease specialists	0 0.0%	0 0.0%	0 0.0%	1 33.3%	0 0.0%	0 0.0%
Sexual Health Services/GUM	2 20.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Hospitals or clinics	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 50.0%
Other	2 20.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Unsure	2 20.0%	2 40.0%	4 50.0%	1 33.3%	0 0.0%	1 50.0%
Total	10	5	8	3	1	2

Responsibility for vaccination of contacts of hepatitis B positive women

Antenatal care providers were asked who has responsibility for vaccination of hepatitis B negative contacts of hepatitis B positive women.

Most of the respondents from most of the countries (except NL) were unsure, UK (6/8; 75.0%), DE (26/36; 72.2%), ES (5/8; 62.5%), IT (15/25; 60%) and HU (2/4; 50%) (Table 3.4-4).

In NL, most (4/6; 66.7%) of the respondents stated that the health protection unit has this responsibility. Similarly a relatively high fraction of the respondents from HU (2/4; 50%) and IT (9/25; 36%) also mentioned health protection unit as having this responsibility.

Table 3.4-4: Who has responsibility for vaccination of contacts of hepatitis B positive women – ANC survey

	UK	DE	NL	HU	IT	ES
General Practitioner(s)	0 0.0%	4 11.1%	0 0.0%	0 0.0%	1 4.0%	1 12.5%
Public Health Service/Health Protection Unit	1 12.5%	2 5.6%	4 66.7%	2 50.0%	9 36.0%	1 12.5%
Infectious Disease specialists	0 0.0%	3 8.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Specialists: Gastroenterologists/Hepatologists	1 12.5%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Obstetricians/Gynaecologists	0 0.0%	1 2.8%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Community or Practice Nurses	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 12.5%
Unsure	6 75.0%	26 72.2%	2 33.3%	2 50.0%	15 60.0%	5 62.5%
Total	8	36	6	4	25	8

Responsibility for vaccination of contacts of hepatitis B positive asylum seekers

Asylum seeker care providers were asked who has responsibility for vaccination of hepatitis B negative contacts of hepatitis B positive asylum seekers.

The survey only received a small number of respondents (Table 3.4-5).

In UK, half (2/4; 50%) of the respondents mentioned that 'general practitioners' having this responsibility.

In DE, two of the three respondents were unsure; one mentioned 'general practitioners'.

In NL, similar to the result of antenatal care survey and the other health professionals surveys, most (3/4; 75%) of the respondents mentioned a 'health protection unit'.

Similarly, in HU, all of the three respondents also indicated a 'health protection unit.' In IT, the answers from the three respondents were different.

In ES, there was only one respondent, who stated being 'unsure'.

Table 3.4-5: Who has responsibility for vaccination of contacts of hepatitis B positive asylum seekers - AS Survey

	UK	DE	NL	HU	IT	ES
General Practitioner(s)	2 50.0%	1 33.3%	0 0.0%	0 0.0%	1 33.3%	0 0.0%
Public Health Service/Health Protection Unit	0 0.0%	0 0.0%	3 75.0%	3 100.0%	1 33.3%	0 0.0%
Community or Practice Nurses	1 25.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Hospitals or clinics	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Sexual Health Services/GUM	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Other	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Unsure	1 25.0%	2 66.7%	1 25.0%	0 0.0%	1 33.3%	1 100.0%
Total	4	3	4	3	3	1

4 DISCUSSION and CONCLUSION

The six different surveys targeting six different health professions were sent to 1181 experts in UK, DE, NL, HU, IT and ES and subsequently completed by 286 respondents. The surveys aimed to understand the current hepatitis B vaccination and copayment practices by different groups of health professionals for a variety of different at- risk groups. Comparing the current practices with the current national policies will give an understanding how well the national policies are applied in practice.

4.1 Vaccination Practices - Discussion

4.1.1 Individuals who are at-risk by lifestyle

Injecting Drug Users (IDUs), Sex workers and Homosexual men (MSM)

According to current national policies, all of the six countries recommend offering hepatitis B vaccination for IDUs, sex workers and MSM. Public health experts, general practitioners and sexual health service providers were surveyed to have an understanding of the current practices. Overall, the results of the surveys showed that majority (about 60% to 90%) of the respondents from most of the countries (UK, DE, NL, IT, ES; except HU) mentioned the hepatitis B vaccination is given to the above mentioned at-risk groups. These results indicate that the national policies and the current practices are well matched.

UK – Most of the respondents stated that hepatitis B vaccination is offered either commonly or sometimes for IDUs (27/29; 93.1%). sex workers (24/29; 82.7%) and MSM (24/29; 82.8%). These results suggest that the current policies and recommendations about hepatitis B vaccination for IDUs, sex workers and MSM would be well implemented in UK.

DE – Majority of the experts answered that hepatitis B vaccination is given to IDUs (15/23; 65.2%), sex workers (16/23, 69.6%) and MSM (14/23; 60.8%) either commonly or sometimes. Particularly, nearly all of the general practitioners and sexual health service providers stated so. In contrast, relatively high numbers of public health experts (about 40%) were unsure; suggesting that information about hepatitis vaccination for IDUs, sex workers and MSM may not be prominent to public health professionals.

NL – Most of the respondents stated that hepatitis B vaccination is offered for IDUs (17/24; 70.9%), sex workers (19/24; 79.2%) and MSM (20/24; 83.3%) either commonly or sometimes. Remarkably, general practitioners are the health professional group least stated so. Just about half of the general practitioners stated the vaccination is given either commonly or sometimes for IDUs and sex workers. Speculated that this result pattern

takes place because the country may have selective programs for these specific at-risk groups rather than primary care?

HU – In total, there were only 6 respondents from the public health experts, general practitioners and sexual health service providers. Only minority (2/6; 33.3% to 3/6; 50%) of the respondents mentioned vaccination is offered either commonly or sometimes. Relatively high numbers of the respondents were unsure. This result may suggest that hepatitis B vaccination policies for IDUs, Sex workers and MSM may be neither prominent nor well followed by health professionals in HU.

IT – Moderate numbers of the respondents answered vaccination is given either commonly or sometimes to IDUs (16/23; 69.6%), sex workers (12/23; 52.1%) and MSM (15/23; 65.2%).

ES – Most of the respondents stated hepatitis B vaccination is given to IDUs (9/12; 75%), sex workers (10/12; 83.3%) and MSM (9/12; 75.5%) either commonly or sometimes.

Residents/inmates of closed facilities

Most of the countries (except HU) recommend offering hepatitis B vaccination for residents/inmates of closed facilities (e.g. prisoners, psychiatric hospitals etc.).

The result of surveying public health experts showed that majority of the respondents mentioned hepatitis B vaccination being offered for residents/inmates of closed facilities either commonly or sometimes in most of the countries UK (7/9; 77.7%), DE (8/14; 57.1%), HU (1/2; 50%), IT (4/8; 50%), ES (6/8; 75%), except NL. In NL, minority (3/7; 43%) of the respondents stated so. In HU, there were only two respondents and their answers are contradicted, therefore it is not able to make a clear interpretation.

Prisons represent a good opportunity to vaccinate hard to reach groups, compared to other at-risk groups such as IDUs, sex workers and MSM in the community who may have less access to health care. The countries may have targeting vaccination program for prisons, thus, the answers from public health experts may not entirely represent the current practices for inmates in the surveyed countries. For instance, UK (England and Wales) has the Prison Infection Prevention Team - part of the Health Protection Agency having a program to deliver hepatitis B vaccine to all prisoners within 31 days entering the prison establishment (18).

4.1.2 Individuals who are at-risk by occupation

Health care workers and students in health care

Health care workers and students in health care who are frequently in contact with blood are certainly at high risk of hepatitis B infection. In the current policies, all the six countries recommend vaccinating health care workers and students against hepatitis B.

The result of the survey with public health experts showed that current practices are very much in line with the current policies. Most of the public health experts (in sum, more than 75%) from all the six countries stated that hepatitis B vaccination for workers and students in health care settings is offered either commonly or sometimes. Especially, in NL and HU, nearly all the experts (6/7; 85.7% and 2/2; 100% respectively) mentioned that this vaccination practice is given commonly.

Other occupations with high exposure risk

Overall, majority of the public health experts (in sum, more than 50%) from all the six countries (especially IT 6/8; 75% and ES 7/8; 87.5%) stated that hepatitis B vaccination is offered for other occupations with high exposure risk either commonly or sometimes. However, compared to the results of health care workers and students, there is a slight reduction in the number of the respondents from most of the countries (except ES) stating the vaccination was given. This pattern may have happened because the countries may not have a clear defined list of professions (other than health care professions) which are considered being at-risk of Hepatitis B infection and are recommended for the vaccination?

4.1.3 Patients with medical condition

HIV positive patients

Patients with immunosuppression are recommended to be vaccinated against hepatitis B in DE, HU, IT, and ES, but not recommended in UK and NL, according to the Venice II report (17). Probably, the report classified patients with immunosuppression including HIV positive patients?

Public health experts, general practitioners and sexual health service providers were surveyed. Overall, the results showed that very high percentages of the respondents stated that vaccination for HIV positive individuals are offered either commonly or sometimes in most of the countries UK (23/29; 79.3%), DE (15/23; 65.2%), NL (19/24; 79.2%), IT (16/23; 69.5%) and ES (10/12; 83.3%), except HU (2/6; 33.3%). Particularly, in most of the countries (except DE and HU), the number of the respondents answered ‘common’ is

far more than those answered 'sometimes'. The results may suggest that hepatitis B vaccination for HIV positive patients are well implemented in most of the countries (except HU).

Hepatitis C positive patients

The transmission routes of HCV are like that of HBV (19). HBV and HCV replicate in the same liver cell without interference. HBV and HCV co-infection speeds up liver disease progression and increases the risk of HCC (20). Therefore, HCV patients should be vaccinated against Hepatitis B.

Patients with chronic liver disease are recommended to be vaccinated to against HBV in all the six countries, according to the Venice II report (17). The report probably listed patients with chronic liver disease consisting of HCV positive patients?

The results of the surveys with public health experts, general practitioners, sexual health service providers, and specialists showed that most of the respondents from all the six countries stated hepatitis B vaccination for hepatitis C positive individuals being offered either commonly or sometimes, UK (32/39; 82%), DE (24/32; 75%), NL (31/46; 67.4%), HU (9/16; 56.3%), IT (21/32; 65.6%), ES (13/16; 81.3%).

Interestingly, in NL, relatively low numbers of general practitioners (in sum, 3/9; 33.3%) and sexual health service providers (in sum, 4/8; 50%) mentioned this vaccination practice being offered. At the same time, in HU relatively a low number of health specialists (in sum, 5/9; 55.5%) mentioned this vaccination practice being offered.

Patients with abnormal liver function test

Current policies about hepatitis B vaccination for patients with abnormal liver function test were not found via internet searches. Therefore, it is difficult to assess whether policies and practice coincide and identifying potential gaps. This section only describes the current practices.

The results of the surveys showed that only minority of the general practitioners reported this practice is given either commonly or sometimes in most of the countries UK (about 5/10; 50%), NL (0/9; 0%), HU (0/1; 0%), IT (about 6/14; 42.8%) and ES (0/2; 0%), excepting DE (3/4; 75%). Especially, very few experts in any of the six countries mentioned this practice being offered commonly.

Patients exhibiting signs and symptoms of hepatitis

The results of surveys with public health experts and general practitioners showed that only minority (approximately less than 50%) of the respondents from all the countries (especially NL 3/9; 33.3%) stated this practice being offered either commonly or sometimes.

4.1.4 Individuals who are at-risk by other factors

Contacts of hepatitis B positive patients

All of the six countries recommended offering hepatitis B vaccination for household and/or sexual contacts of positive hepatitis B individuals. The six different health professional groups were surveyed. Notice that antenatal care providers were asked about vaccination practices for negative contacts of hepatitis B positive women. Asylum seeker care providers were asked about vaccination practices for negative contacts of hepatitis B positive asylum seekers. Thus, the pooled results shown here can be potentially under-represented.

The results of the survey showed that majority of the respondents confirmed that vaccination is given to contacts of hepatitis B positive individuals in most of the countries UK (35/51; 68.6%), NL (47/56; 84%), HU (16/23; 69.6%), IT (39/60; 65.3%) and ES (15/25; 60%), except DE (33/71; 46.5%). Remarkably, there was a relatively high number of the respondents who were unsure about the practice, especially in DE (33/71; 46.5%) and in ES (10/25; 40%). At the same time, the results varied by health professional group. High percentages of specialists and sexual health service providers in most of the countries stated that this practice is given commonly. By contrast, low a percentage of antenatal care providers (less than 50%) in most of the countries (except NL 4/6; 66.7%) stated this practice was given. Furthermore, a very high percentage of this professional group was unsure. Information about vaccination policies may be neither exist nor prominent to antenatal care providers?

Asylum seekers from hepatitis B endemic regions

The results of hepatitis B vaccination practice for asylum seekers from hepatitis B endemic regions surveyed with public health experts differ very much from the results surveyed with asylum seeker care providers. Take into considerations that asylum seekers are a special group of individuals who are in contact with asylum seeker care providers more frequent than public health experts. Thus, the information from asylum seeker care providers would be more precise than the information from public health experts? While only minority (less than 30%) of the public health experts from most of the countries

(except HU, 1/2; 50%) stated that this vaccination is given to asylum seekers either commonly or sometimes, all of the asylum seeker care providers from most of the countries (except IT, 3/3 unsure) stated it was.

Migrants from hepatitis B endemic regions

Migrants from hepatitis B endemic regions are at higher risk of being infected by hepatitis B. For example, if infected, they can be HBV reservoirs and can potentially spread the disease to healthy individuals to any community they settle in. Expectantly, the at-risk immigrants should be recommended for vaccination in the six countries. However, information about the current policies has not found, therefore this study just described the current practices of hepatitis B vaccination for immigrants from hepatitis B endemic regions.

The results of the surveys with general practitioners and sexual health service providers showed that in most of the countries (UK 80%, DE about 80%, IT about 60%, ES 75%, except NL and HU) majority of the respondents stated hepatitis B vaccination is given to migrants from hepatitis B endemic regions either commonly or sometimes. By contrast, in NL, majority of the general practitioners (5/9; 56%) and sexual health service providers (6/8; 75%) mentioned that this practice is *not* offered. In HU, the majority (3 of 4) of the respondents were unsure. These results may suggest that information and/or guidelines about hepatitis B vaccination for migrants do not exist in NL and HU?

A request from a patient concerned of exposure

Most (generally 60% to 100%) of the general practitioners and sexual health service providers in most of the countries (especially UK, DE and IT; except NL) stated that vaccination is offered to concerned patients either commonly or sometimes. In NL, relatively high percentages of the general practitioners (4/9; 44.4%) and sexual health services providers (4/8; 50%) mentioned that this vaccination practice is *not* offered.

4.1.5 General populations

Pregnant Women

Pregnant women may not be considered to be at-risk for hepatitis B as they are among the general populations. However, to prevent hepatitis B infection to newborns, all pregnant women should be screened for hepatitis B. Unfortunately, the policies and guidelines of hepatitis B vaccination for pregnant women were not obtained through conventional internet searches.

The result of the surveys showed that most of the public health experts and antenatal care experts from all the countries stated that vaccination is generally not offered or seldomly offered.

4.2 Copayment Practices - Discussion

Individual copayment or contribution for hepatitis B vaccination may influence the decision of at-risk individuals whether they decide or not to have the hepatitis B vaccination. At-risk individuals may rationalize to have hepatitis B vaccination when it is free. At the same time, they may reject the vaccination when a copayment is either required or unaffordable. Therefore, copayment practices for hepatitis B vaccination by health service providers may play an important role. Health service providers may serve as a crucial link in assisting individuals assessing their own vulnerabilities to hepatitis B, and whether they would benefit from being vaccinated. The study surveyed different health professions to understand their current practices about hepatitis b vaccination copayment issue for specific at-risk groups.

4.2.1 Individuals who are at-risk by lifestyle

Injecting Drug Users (IDUs), Sex workers and Homosexual men (MSM)

As the current national policies, all the six countries offer free of charge hepatitis B vaccination for IDUs, sex workers, MSM.

The results of the surveys with general practitioners and sexual health service providers differed very much by country.

UK – Nearly all of the sexual health service providers (9/10; 90%) stated that copayment is not required from IDUs, sex workers and MSM. The answers from general practitioners vary a bit for the three at-risk groups: IDUs (8/10; 80%), sex workers (7/10; 70%) and MSM (5/10; 50%). The results illustrated the current copayment practices from that sexual health service providers are very much in line with the current policies.

DE – Overall, considerably low numbers of the both professions general practitioners (less than 2/4; 50%) and sexual health service providers (less than 3/5; 60%) mentioned that copayment for hepatitis B vaccination is not required from IDUs, sex workers and MSM. Additionally, the answers from the general practitioners were diverse. The results may suggest that information/guidelines about copayment for hepatitis B vaccination from these at-risk groups may not be prominent to general practitioners and sexual health service providers in DE.

NL – The patterns of answers from the two professions quite differ. High numbers of the sexual health service providers stated that copayment is not required from IDUs (5/8; 62.5%), sex workers (7/8; 87.5%) and MSM (7/8; 87.5%). Low numbers (less than 3/9; 33.3%) of the general practitioners stated copayment is not required, and relatively high numbers (4/9; 44.4% to 6/9; 66.7%) of them were unsure. Information/guidelines about hepatitis B copayment from IDUs, sex workers and MSM may not be prominent to general practitioners in NL.

IT – Majority of the general practitioners (8/14; 57.1%) and sexual health service providers (1/1) mentioned that copayment is not required from IDUs, sex workers and MSM.

HU – There were only 4 respondents in total of general practitioners and sexual health service providers. Most (3 out of 4) of the respondents were unsure.

ES – All of the 4 respondents from the both professions mentioned that copayment for hepatitis B vaccination is not required for IDUs, sex workers and MSM.

4.2.2 Individuals who are at-risk by occupation

Due to limitation of resources and the focus of the HEPscreen project being immigrants, questionnaires about copayment practice for this particular occupational at-risk group were not included in this study.

4.2.3 Patients with medical condition

HIV positive patients and HCV positive patients

A high percentage (generally more than 60% to 100%) of the respondents from general practitioners and sexual health service providers from most of the countries (UK, DE, IT, ES; except NL, HU) stated that copayment is not required from HIV positive individuals and HCV positive individuals.

High percentages of the respondents from NL (3/8; 37.5% to 6/9; 66.7%) and especially HU (in sum 4/4) were unsure. The result suggests that information about copayment policies may neither be existed or prominent in NL and HU?

Patients with abnormal liver function test and patients with symptoms of hepatitis

A relatively high percentage of the general practitioners from most of the countries (UK, DE, NL, HU; except IT and ES) were unsure. The results may suggest that information

and/or guidelines about copayment from these at-risks patients do not exist or are not prominent.

4.2.4 Individuals who are at-risk by other factors

Asylum seekers from hepatitis B endemic regions

Most (ranging 50% to 100%) of the respondents from the both professions public health experts and asylum seeker care providers from all the countries were unsure, suggesting the policies for this at-risk group may neither existed or be prominent.

Migrants from hepatitis B endemic regions

The results of surveys from the three health professional groups: public health experts, general practitioners and sexual health service providers showed that copayment practices for migrants are diverse by country and by health profession.

UK, IT, ES – Most of the public health experts from UK (7/9; 77.8%), IT (6/8; 75%) and ES (above 5/8; 62.5%) were unsure. Whereas most of the general practitioners and the sexual health service providers from UK (7/10; 70% and 9/10; 90% respectively), IT (9/14; 64.3% and 1/1) and ES (2/2; 100% and 2/2; 100%) presented that copayment is *not* required. The information from the general practitioners and the sexual health service providers may be considered more accurate due to their direct clinical involvement.

DE – The answers are diverse by health profession group. Most of public health experts (11/14; 78.6%) were unsure; while a majority of the general practitioners (3/4; 75%) mentioned copayment is *not* required. However, only a minority of sexual health service providers (1/5; 20%) mentioned so.

NL and HU – Majority of public health experts, general practitioners and sexual health service providers were unsure, suggesting policies about copayment for migrants may neither exist nor be well-known in these two countries.

A request from a patient concerned of exposure

The results of surveys of the general practitioners and sexual health service providers were diverse by country. Most (more than 50% to 100%) of the respondents from UK, IT, ES stated copayment is *not* required. By contrast, a relatively high number of the general practitioners and sexual health service providers respectively from NL (33.3% and 62.5%), DE (40% and 50%) stated that copayment is required. In HU, there were only four respondents in total; their answers were different from each other.

4.2.5 General populations

Pregnant Women

The results of the survey with antenatal care providers showed that most of the respondents from all the countries, particularly UK (7/8; 87.5%), DE (27/36; 75.0%), IT (20/25; 80.0%), ES (6/8; 75.0%), and more than half of the respondents from NL, HU were unsure. The results may suggest that the policies and guidelines about copayment for hepatitis B vaccination for pregnant women may not exist, probably because pregnant women are not identified at-risk group?

4.3 Responsibility for Vaccination of Negative Contacts - Results

Responsibility for vaccination of contacts of hepatitis B positive patients

Overall, the answers of the respondents from health specialists, general practitioners and sexual health service providers were different by health profession in most of the countries except NL and IT. Likely that either 'health protection unit' or 'general practitioners' in UK, DE, H and ES; 'health protection unit' in NL and IT have the main responsibility for vaccination of the negative contacts of hepatitis B positive patients. Remarkably many of the respondents in most of the countries were unsure. All the six countries may need to revise to make the policies to make them more prominent.

4.4 Strengths and limitations of this study

Limitations and potential biases

This study is a mix of qualitative and quantitative research methods. The surveys did not have concrete definitions of how often "common" and "sometimes" would be rated. Therefore, these answers "common" or "sometimes" would certainly depend on the respondents' personal perception, thus potentially causing variation among different respondents.

The participants were selected on the basic of their specialties and engagement to particularly relevant associations, not selected on the basis of randomization. Thus, these participants potentially may know the current hepatitis b vaccination practices better than the general health professionals would. Therefore, the results of this study may be overestimated.

Another aspect that was overlooked was whether public health experts were not involved in administrative work or clinical work, as this was not specified on the surveys. The answers from public health experts were based on their personal knowledge and observation rather than their actual practices.

Low response rate and/or low number of responses from some professional groups in certain countries is also a limitation. For example there was only one general practitioner who responded in HU, as well as only one response from sexual health service provider in IT, and only one response from asylum seeker care provider in ES. Therefore, certain results cannot be readily generalized to their respected professions and country. Although high response rate and/or high number of responses would make the results stronger; the few responses gathered still present a view of how current practices are happening.

The language of the study was English then translated into respected national languages of each participating country. While participants would potentially not have difficulties responding, there were several language barriers observed when attempting to access each countries' national policy. If the national policies are not available in English, they were missed out.

Strengths

The surveys were conducted by online questionnaires (translated in the national language) which were effective in delivery by means of time and resources. This online questionnaire method potentially supports the study to gain a larger total number of responses compared to an interview method. Although a direct research approach, such as a telephone interview method would force participants to respond and potentially boost

response rates, it would be constrained by time and resources. For example, a major resource limitation would be overcoming potential language barriers, and adequate staffing. Therefore less numbers of participants could potentially be contacted.

4.5 Conclusion

This study is a component (work package four) of the HEPscreen project, which provides evidence-based information about current Hepatitis B vaccination-related practices (including vaccination, copayment and responsibility practices) by different health professions for wide range of at-risk groups in the six European countries (specifically: UK, DE, NL, HU, IT and ES). Furthermore, the study analyzed matches or gaps between the current practices and the current policies. From the results of this study, policy makers can review how well the current national policies (guidelines or recommendations) about hepatitis B vaccination for specific at-risk individuals are applied in practice by particular groups of health professionals.

The vaccination practices varied among the six countries. Moreover, the practices also differed by different health professional groups. Generally, majority of the respondents in most of the countries stated that hepatitis B vaccination being given either commonly or sometimes and free of charge to the main at-risk groups (such as IDUs, sex workers, MSM, HIV positive patients, and contacts of positive hepatitis B patients).

For some at-risk groups, there were considerable matches between the current practices and the current polices. However, to a certain level, some gaps were also observed within some countries. There remains room for improvement to bridge those gaps. Improving policy implementation can contribute to the improvement of hepatitis B vaccination coverage for at-risk individuals. If necessary, policies would need to be newly developed or adapted to well meet specifically target groups of at-risk individuals.

To have the better complete picture of the actual hepatitis B vaccination practices aiming to improve vaccination coverage for at-risk adults, other studies focusing knowledge, awareness, perception and practices of at-risk individuals about hepatitis B vaccination would be valuable.

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6 APPENDICES

The online surveys contained numerous questions aiming to collect information on a wide range of hepatitis B and C related practices: screening, counseling, referral, treatment, and vaccination for various groups of at-risk individuals. The scope of this thesis is about hepatitis B vaccination; therefore, only relevant questions about hepatitis B vaccination are shown in the following appendices.

Appendix 1: Public health professionals survey (PH survey)

Appendix 2: General practitioners survey (GP survey)

Appendix 3: Sexual health service providers survey (SHS survey)

Appendix 4: Specialists survey (SP survey)

Appendix 5: Antenatal care providers survey (ANC survey)

Appendix 6: Asylum seeker care providers survey (ASC survey)

Appendix 1: Public health professionals survey (PH survey)

Hepatitis B screening/testing practices:

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?

o No – free for all

o Yes - only free for some (indicate for which subgroups co-payment is not required):…..

o Yes – contribution required from all

o 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)?

o No – free for all

o Yes - only free for some (indicate for which subgroups co-payment is not required):…….

o Yes – contribution required from all

o 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)?

o No – free for all

o Yes - only free for some (please indicate for which subgroups co-payment is not required):…

o Yes – contribution required from all

o Unsure

Appendix 2: General practitioners survey (GP survey)

Indications/risk factors for screening:

9. [If YES to testing for hepatitis B to any of **the mentioned subgroups**]

Are hepatitis B negative individuals vaccinated?

	Yes	Some-times	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			

Contact tracing and vaccination:

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?

o No

o Yes – all hepatitis B negative contacts

o Yes – a selection of hepatitis B negative contacts (please specify)

o Unsure

25. [If YES to vaccination of **hepatitis B negative contacts**]

Who has the main **responsibility** for the vaccination of contacts?

o General Practitioners

o Public health services/health protection units

o Sexual Health Services

o Hospitals/clinics

o Other (please specify)

o Unsure

Appendix 3: Sexual health service providers survey (SHS survey)

Indications/risks factors for screening:

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	Some-times	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			

Contact tracing and vaccination:

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

o Hospitals/clinics

o Other

Appendix 4: Specialists survey (SP survey)

Screening/testing positive patients for other hepatitis viruses:

15. 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)

o Unsure

Contact tracing and vaccination:

18. 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

19. [If YES to vaccination offered to **hepatitis B negative contacts of hepatitis B positive patients**]

Who has **responsibility** for vaccination of contacts?

o General Practitioners

o Public health services/health protection units

o Sexual Health Services

o Hospitals/clinics

o Other (please specify)

Appendix 5: Antenatal care providers survey (ANC survey)

Hepatitis B screening/testing practices:

10. [If YES to screening/testing of **pregnant women**]

After screening, are hepatitis B negative women vaccinated (i.e. those not already vaccinated)?

o Yes – post birth by the antenatal care provider

o Yes – post birth by another health care service provider

o Seldom – only under special circumstances

o No – generally not

o Unsure

11. [If Yes or Seldom to vaccination of **pregnant women**]

Is **individual co-payment/contribution** required from women for hepatitis B vaccination?

o No - free for all

o Yes - contribution required from all

o Only free for some (please indicate which women)

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

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

Appendix 6: Asylum seeker care providers survey (ASC survey)

Hepatitis B screening/testing practices:

9. [If YES to hepatitis B screening carried out among **asylum seekers**]

Are hepatitis B negative individuals vaccinated?

o No

o Yes – all

o Yes – a selection (please indicate which people)

o Unsure

10. [If YES to vaccination of **hepatitis B negative individuals**]

Is **individual co-payment/contribution** required?

o Yes – contribution required from all

o No – free for all

o Only free for some (please indicate which people)

o Unsure

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)

Contact tracing and vaccination:

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 patient**s]

Who has the main **responsibility** for the vaccination of contacts?

o General Practitioners

o Public health services/health protection units

o Hospitals/clinics

o Sexual Health Services

o Hospital/clinics

o Other (please specify)

o Unsure